

10.

ANEXO: PERGUNTAS E RESPOSTAS ATRAVÉS DE FERRAMENTA INFORMÁTICA FACILITANDO A IMPLEMENTAÇÃO



INTRODUÇÃO

Este instrumento informático procura **facilitar** caso se deseje implementar algumas das sugestões do relatório, quer fornecendo **argumentos** para serem utilizados junto dos parceiros sociais (governo e sindicatos), quer através de ferramentas para passar à prática.

Assim ele está organizado em termos de perguntas/temas e respostas, contendo estas um ou mais de quatro elementos:

- 1) Texto;
- 2) Quadros especialmente preparados;
- 3) Páginas retiradas de documentos estrangeiros; e
- 4) Documentos de trabalho completos sempre que tal se justifique.

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1. Case studies: exemplos paradigmáticos do impacto de sistemas de incentivos na produtividade

Resumo

Case studies	Nome da empresa	1.	2.	3.
Características		Vestfrost	Nucor	Arcelor Mittal
Dimensão		Dinamarquesa	EUA	Maior do mundo
Tipo de produção		Pequenas séries	Grandes séries	Todo o tipo



Vestfrost

gets new pay system

PlusLøn in practice



Vestfrost gets new pay system

In 2009, released three basic books on PlusLøn. One is an introduction to the payroll system, the other two are methods of PlusLøn respectively for workers and employees. A / S Vestfrost is the third booklet in a series of booklets on PlusLøn in practice. The project is implemented by the DI and CO-industry together and fi-financed by the Industrial Education & Cooperation Fund.



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A payroll system to motivate, retain and reward

Salary is not just salary. A modern salary system must both take account of employees' qualifications and experience and have the opportunity to reward and recognize the very good results.

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Company changing

From mass production, assembly line and piece-mer samarbejdsfor to new and niche products. At A / S Vestfrost everyday life changed dramatically. Now calls for both management and employees a modern pay system that reflects the new reality.

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PlusLon is the new pay system in the industry

Challenges that can lead to the resolution on the new pay system. Chromatography SK preparing PlusLon.

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Why new pay system in Vestfrost?

Vestfrost want to afska ff e piecework wages in favor of PlusLon with qualified kationslen and performance pay.

Interview with Plant Manager Bent Nielsen:

'Everyone should think more about the whole'.

Interview with union Irene Madsen:

'Our lives have changed a lot'.

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PlusLon requires commitment from all

The three phases of PlusLon; clarification, design and implementation.

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How did they at Vestfrost

Read about the three phases, the course at Vestfrost.

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Getting Started

Checklist for companies that are considering new pay system. Management and staff from Vestfrost gives concrete advice on to other companies who also want to update their payroll system.

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Vestfrost gets new pay system

A payroll system to motivate, retain and reward

Large and small companies have an attitude pay. Via the payroll system implemented employee performance and results. But what do you do when seniority, compositions or tradition does not reflect reality anymore? A modern payroll system can be adapted both fair and manageable.

Industry's reality has changed over the past several years; they produce across borders, collaborate with suppliers around the world, demand new skills, need increased flexibility and want to reward for good performance.

The employee's role is also changing. Many find that they can help to have a definition of the working day content they engage, take responsibility and training and make the extra effort when needed.

All these factors should be the company's payroll system also reflect.

Get inspiration for a modern pay system

DI and CO-industry consultant jointly on how the company can introduce simple, transparent and fair pay systems that also has room for flexibility and is motivating.

The consultants visited and guided all types of businesses - from large jobs in the food industry for the minor blacksmithing.

This booklet is an example of such advice and the process from start to finish with cooling manufacturer Vestfrost.

The booklet is also part of our overall package PlusLøn. Three other pamphlets expand on pay systems respectively, workers and employees and the specific method to introduce PlusLøn in the company.

So do not hesitate to contact us, if we are to help your company to introduce a modern payroll system.

The Spirit Vestfrost

- Established in 1963 as a manufacturer of freezers with sales to consumers in Scandinavia.
- Production and export of fridge / freezers grows sharply from 1970-1996
- In 2005 Vestfrost moves its large refrigerator production to the private market to Turkish Vestel, due to stiff competition and high labor costs.
- Many employees made redundant in Denmark.
- In 2008 sells Vestfrost refrigerator production to the private market to Turkish company.
- Vestfrost in Denmark will be niche manufacturer of refrigerators, chest freezers and special products to shops mm., for example, round coolers for water / soda at gas stations.
- Today exported 95 per cent. of production to more than 90 countries.
- The company in Esbjerg today has 240 employees.

Vestfrost vision

Vestfrost Solutions develops, produces and delivers reliable and business opti-programmed refrigeration and freezing solutions for customers in the global professional market.



Company changing

The Danish refrigeration and freezer manufacturer Vestfrost has moved from mass production to niche production. Now the payroll system updated and employees away from the traditional piecework. Follow the road to a modern payroll system.

Vestfrost has two factory buildings. They are located on either side of Falkevej. On one side of Falkevej they talk about 'doors'. 200 meters away on the other side of the road states 'Gates'. That's just how it is.

converters must be assembled under one roof. They must come both parts warehouse trucks and address when the doors fly over to the doors. And to think a little more to the community.

Vestfrost in Esbjerg produces for both wine storage appliances with doors to hotels and restaurants, and they produce freezers with doors - eg, for storing frozen fish in the Japanese market or for cooling of essential medicines to relief organizations in critical areas around the world.

New working conditions require new financing

From a production with many assembly lines and similar products, the company has far several product types, individual solutions and freezers that are not standard in large quantities.

And there is also some difference between the two productions, work style, employee culture and of course the end product. The pride of the individual employee is not to be mistaken. 'Over on the other side' and 'with us' are terms that are used in financing.

Vestfrost has undergone an evolution, and changed significantly. It requires a completely different approach to the work of the employees.

The company has long wanted to get a new salary system that can meet the changing working. And payroll consultants from DI and CO-industry has helped Vestfrost to ensure a constructive and useful payroll process to the target.

Brought together under one roof

It is planned that the two factories - one on each side of Falkevej - and the 240 em-

Vasconcellos gets new pay system

Plusløn is the new pay system in the industry

Neither the companies nor their employees are the same. Therefore, the pay system, of course, also be flexible. With PlusLøn you get a systematic approach to develop a framework for the company's payroll system. The goal is to create consistency between the efforts, results and earnings.

In 2002 PlusLøn introduced as inspiration for new pay systems in industrial companies. The goal was to provide more opportunities for putting together the front

various elements of pay, so it responded better to the individual company's everyday life. PlusLøn may cover both workers and employees.

Plusløn made up as follows:



Flexibility is the new pay system in the industry

A modern payroll system has a broad reach

Over the last decade, DI and CO-industry consultants come in contact with a large number of companies in various industries to inspire and provide guidance on how to develop new pay system. Whether instructions, the less wrought company or a major food producer, the frame is the same. But the content of the payroll system tailored to the individual business needs and current challenges.

The possibilities are endless with a modern wage system that can continuously adapted and targeted the wishes of management and employees priority.

Noticeable and visible change

The goal is that when the new pay system is introduced, there will be a number of tangible and visible benefits to both management and employees.

Productivity on the agenda

There is at present a tendency that companies have a special focus on productivity and thus become more concerned with performance pay. Where qualification wage is an investment in our people and the future, then performance-fully funded from day one, if the company wants to measure and reward for concrete action.

Here mention companies such as ..

- simple structure
- easy administration
- Wide support
- Clear link between effort and remuneration
- Supports corporate goals
- objective metrics
- High ceilings in the payroll system.

Why consider a new salary system?

Many different challenges may lead to the decision to introduce a new salary system. DI and COindustris consultants perceive eg. The companies mentioned reasons:

- Changed forms
- Outdated pay system, for example. piecework, unequal wages or salary alone seniority
- Complex and time-consuming payroll system
- No correlation between skills, efforts and achievements
- The ceiling has been reached in the wage system - no room for development
- Crisis, cutbacks, restructuring
- A desire or requirement of both employees and management
- Need for increased employee flexibility and competence
- Larger justice - too many subjective points.



Take your temperature once a year

When the new pay system is a reality, says the time is not quiet. Many factors can and will impact the system.

Here is a tool - Løntermometeret

- annually measure satisfaction with the payroll system. The conditions which are most important for employee satisfaction and motivation, is mapped to measure, the system may have problems. Both employees and management fills each his questionnaire to determine whether the system is working as intended. By measuring annually can monitor developments and adapt the system as needed. In this way, the company carefully document the effects of working with payroll systems.

A common interest in achieving a good result

The company's payroll system should be based on business objectives and opportunities - that is the business base. A prerequisite is that the payroll process sets the stage for a positive cooperation between management and employees in order to succeed with the new

payroll system. It is a common interest to achieve a good result.

How long will it take?

Most companies want to get a sense of how long it takes to introduce a new salary system.

Unfortunately no clear answer. A payroll process is just a process

- a parallel activity, which should be allocated forces and working. Like many different - sometimes unpredictable - factors come into play at work. Change to the new IT system along the way, there is change in ownership structure, you have the right data on the company, there is suddenly changed order books or something completely different.

A rough estimate is that the qualification should typically salary could be constructed of 4-6 months and wages result in 2-4 months.

Read more about the different phases in the payroll process and see how Vestfrost went to the task at hand, the 21st

Why new pay system in Vestfrost

Why new pay system in Vestfrost?

At Vestfrost in Esbjerg has several times taken inlet to introduce a new and more modern pay system. Both the plant manager Bent Nielsen and steward Irene Madsen felt it was high time.

Everyone should think more about the whole

For plant manager Bent Nielsen was obvious that something had to happen.

- Production at our factory has over a relatively short period changed significantly.

- Before we outsourced the traditional refrigerator production to Turkish Vestel in 2005, we produced similar products in large quantities to get customers. Today there is a higher degree of specialization and tailor-made products for several different customers with special requirements. Our niche as



The employees behind

- 180 alternates between production employees producing freezers and wine coolers
- 60 functionaries working with management, administration, economy, development, sales and purchasing.

Vestfrost gets new pay system

supplier of example, wine coolers requires that we are very flexible - from material selection and quality of appearance and delivery.

more challenges

It also requires something else of employees to be cooperation and exchange between several different functions. And it requires a completely different pay system.

Must work more along / across

- A large part of our staff has been working on group chords. They worked fast and stable and served well. But they are only focused on their own tasks and not had as much eye for the whole or been aware of contributing to overall production success. They have, in other words not been in solidarity with the other

employees. Today's requirements for employees differently, and it must also be reflected in salary.

- The chord-paid job, we have not so many anymore. Whereas previously were 4-5 employees of a function, there is typically only one to two employees today. Therefore exchanger almost all employees today between several different functions and have varying tasks.

- In the future it should be possible to reward when employees think of the whole and creates good results together. Many employees calls for even a more transparent pay system which takes account of it, says Bent Nielsen.



”

Our payroll system did not respond to a modern production, says plant manager Bent Nielsen, Vestfrost.

Why new pay system in Vestfrost

Our lives have changed a lot

The former shop steward at Vestfrost, Irene Madsen, has also pushed for a new salary system.

- Every time we start a new production - or a new variant of an existing product - we know that to invest some time in getting all the processes in place. There should be run a few units through so we can see where problems can arise. It can sometimes require overtime, which today can be converted into time off.

Simple, fair and manageable

- A new salary system must take into account that not all days are the same. And that production can vary very much. Previously, you could have some very fixed job where you had the same task day after day. But now that production has changed, then it also fixed, daily tasks. In future, it will also require a change of behavior in which employees must be even more flexible. A concrete wish is that there should be room to solve other tasks, if you have some spare time. Eg. a truck driver course also help on the floor if needed.

- There are of course differences in work styles, some are fast and effective where others have several quiet periods. Many say today that they are working for the community and help each other. But I think both that we can be even better to help each other and that in future we are going to put more emphasis on it.

The changed everyday - other tasks and greater flexibility - requires that our payroll system is 'simple, fair and clear', says Irene Madsen.

- Already today we can feel that because we have only one leader in the relatively large factory in refrigerators, it increases the sense of responsibility and independence. Of course, we are experiencing some bottlenecks, but often find employees themselves out how to solve things together. They draw on each other.

- At freezer factory, we have two supervisors, and it gives a little extra air. If in doubt or problems, they can go in and solve specific problems.



The tasks

Vestfrost production staff performing:

- Spray painting, sheet metal working, various types of assembly, quality control, inventory work on.
- The average length of service of an employee in production is 16 years old and the average age is 46 years.



The point of a new salary system is that there should be equal opportunities for all. Everyone should have the same pay, but they must have opportunities to influence their wages.

Plusløn requires commitment from all

Both management and staff are really on a task when introducing Plusløn in the company. It is a demanding process, when both values, routines, habits and new challenges to be up to return to put a new pay system in the lake.

From thought to action

A new salary system is not a commodity that can be pulled off the shelf. However, it is a thorough process consisting of three phases

- clarification, design and implement

ORIENTATION - which helps to provide clarity and consistency. During the process should be informed thoroughly to ensure support for the project. We have experienced that lack or unlucky communication

Development of a pay system with PlusLen



Plus ça change, plus ça change.

communications can create resentment against an otherwise good payroll system. And then the forces of good wasted.

The employees who must lead the system into practice must be prepared for the job as ambassadors.



Vasconcellos e Sá Associates, S.A. - Vasconcellos e Sá Associates, S.A. - Vasconcellos e Sá Associates, S.A.

Engaged in the process

To introduce a new salary system is very much about ensuring a good process along the way. We suggest that you select a number of employees and managers who partially

takes active part in all meetings of the payroll system. Simultaneously, they have an obligation to inform and, if necessary, involve other employees to build support for the project.





The union representative Bjarne Kirkeby says
of the initial stage:

“

A lot has happened - even mentally - in
the factory. In many employees were more
aware that it was not so much about the
individual's salary, more about the company's
survival. Where you previously stopped
working when we had produced the planned
180 units so you give it now extra mile and
work on.

How did they at Vestfrost

The required energy and many meetings with Vestfrost as they were in the process of establishing a new salary system. Instead, they have now been put exact words and descriptions of the qualifications that are the foundation of the payroll system.

Already in 2006/7 began employees and management at Vestfrost talking about getting a new salary system. The result was that it introduced new individual salaries, but there was some resistance.

Management and staff had different views on the basic principles. The factory manager was considering possible solutions, but the company did not come forward with a revised pay system, so the work stopped and the years passed.

It did not need to get a new salary system, but it could not be done without help.

In the summer of 2010, DI and CO-industry therefore contacted and a new payroll system process began.

In August 2010 they had the first meeting where a pay system committee was established with union representatives, factory manager, HR manager and consultants from DI and CO industry.

clarification phase started and there was talk of waste percentages, productivity versus efficiency, absences, training, employee culture in payroll Committee. Participants came during several meetings around the values that should permeate the new pay system.

The next step was to address construction phase, where the pay system takes shape.

Vestfrost decided to establish a lonssystem with basic pay, performance-related pay and.

How did they all Vestfrost?

A number of meetings were held where union representatives and factory managers discussed the factors on which qualification pay should be built.

The salary consultants from DI and CO industry recommended the company to take a starting point in:

- A working knowledge / flexibility
- Education
- Personal factors (accountability, creativity / initiative and interpersonal skills).

In the process of establishing a new pay system, the focus must be on both the individual's professional and personal qualifications. In the process, it is an important task that the company defines what, for example, mean with the ability to collaboration, flexibility and initiative, as it is precisely the type of personal qualifications that can trigger a paycheck.

VESTFROST SOLUTIONS
 Local agreement related pay

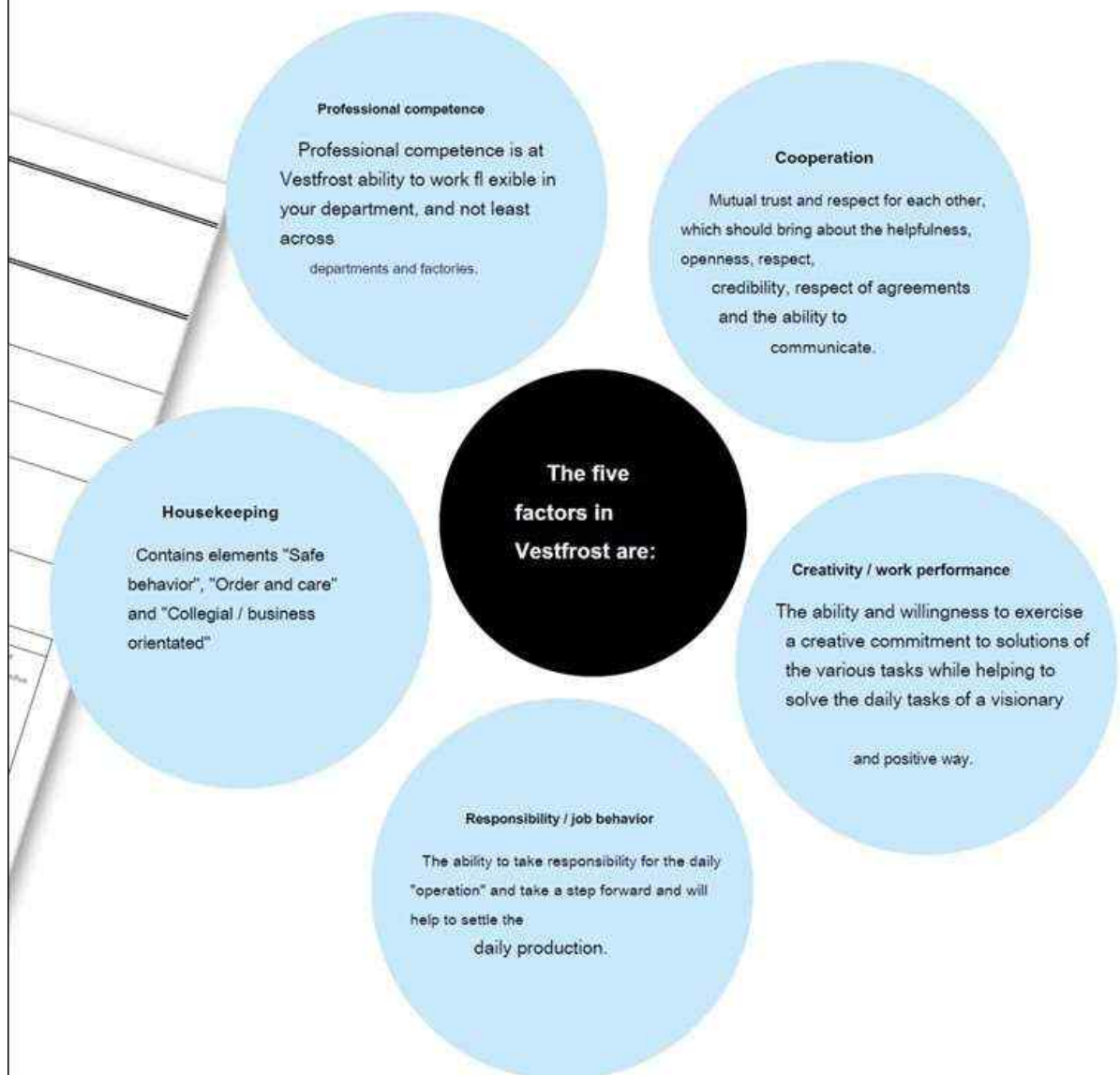
Definition	Step 1	Step 2	Step 3	Step 4	Step 5
Safe behavior Wears safety-related equipment. Contributes to a safe and healthy working environment.					
Order and care Contributes to the workplace in terms of cleanliness. Able to use resources and equipment efficiently.					
Krigelig / Business-oriented Contributes to and solves problems, seeking solutions to tasks. Proposes innovative and creative ideas. Organizing resources and procedures.					
Elaboration of qualifications: Safe behavior / compliance with safety					
Definition The ability to contribute to a good and safe working environment.	Step 1 Takes the many changes	Step 2	Step 3 Takes the many changes. Make often aware colleagues' varied stages in terms of the working environment. Always use recognized preventive equipment.	Step 4	Step 5 Planning and alert. One way of thinking of accidents. Local safety regulations and procedures.
Definition Clear risk always. Adaptability. Proactive.					
Definition Encourage others to use recognized preventive equipment.					
Definition Is not afraid to help others.	Step 1 Is not afraid to help others.	Step 2	Step 3 Is not afraid to help others.	Step 4	Step 5 Encourage others to use recognized preventive equipment.
Definition Is not afraid of equipping materials properly.					
Definition Understandable in use material culture.					
Definition Contributes to and solves problems. Always working conditions take into account. Always responsible for maintenance and preventive measures.	Step 1 Approach with others. Has a good team. Has working conditions in mind. Has ability to acknowledge errors.	Step 2	Step 3 Is good to cooperate with his colleagues. Offer assistance to colleagues in the tasks. Recognizing other views.	Step 4	Step 5 Can always cooperate with all his colleagues. Are good at finding solutions to tasks. Always responsible for mistakes. Make positive resources and problems.

Vestfrost gets new pay system

related pay

At Vestfrost was identified five elements to be included in qualified kationslønnen. That is, the five factors. That is, the five factors

foreman / her immediate superior in the future to assess employee after.



How did they at Vestfrost

Annual assessment interview

The five qualifying factors to be assessed each year of the employee's daily work manager, which can be given from 10 to 50 points for each qualifying factor.

Salary-committee for each qualification defined what the company considers when such, writes 'cooperation', 'order and diligence' or 'responsibility' and how the individual's abilities assessed respectively, positively or negatively through scoring.

- 50 points - When the employee engage in conduct and effort far exceeded expectations for the job.
- 40 points - employee engage in conduct and effort than expected in relation to the job
- 30 points - Employee live satisfactorily up to the expected behavior and effort to the job.
- 20 points - the employee did not quite live up to the expected behavior and action in relation to the job
- 10 points - Employee lives rarely up to the expected behavior and action in relation to the job.

after the interview

After an assessment interview, the employee shall have access to review his personal assessment scheme.

If the employee disagrees with the supervisor, he / she may appeal against the assessment, which can then be reconsidered. So far, only happened twice out of 157 completed assessment interviews.

Base Salary

Replaces current base salary and adapted in order to attract new employees to the company.

PERFORMANCE-RELATED

With both Base Salary and wage Qualification in place, lacked Vestfrost just to define contents of RBR. Performance pay is the company's way of rewarding employees for targeted action.

Also here were more opportunities and factors discussed, for what was supposed Vestfrost measure the good results:

- Productivity
- efficiency
- Quality
- number of complaints
- "Waste and is" (Waste is claimed

Vestfrost: poor utilization of the material and is discarded materials, items and products).

All five relevant factors, and they were each discussed, assessed and targeted.

Vestfrost has elected to measure the effectiveness

- that is, actual time spent in relation to the prescribed time.

In the daily consumption is incorporated hours for employees who belongs to store and quality. These departments also influence the effectiveness, if they help / serve their colleagues better on the production lines.

This was part of the overheads included in the performance measurement.

How did they at Vestfrost

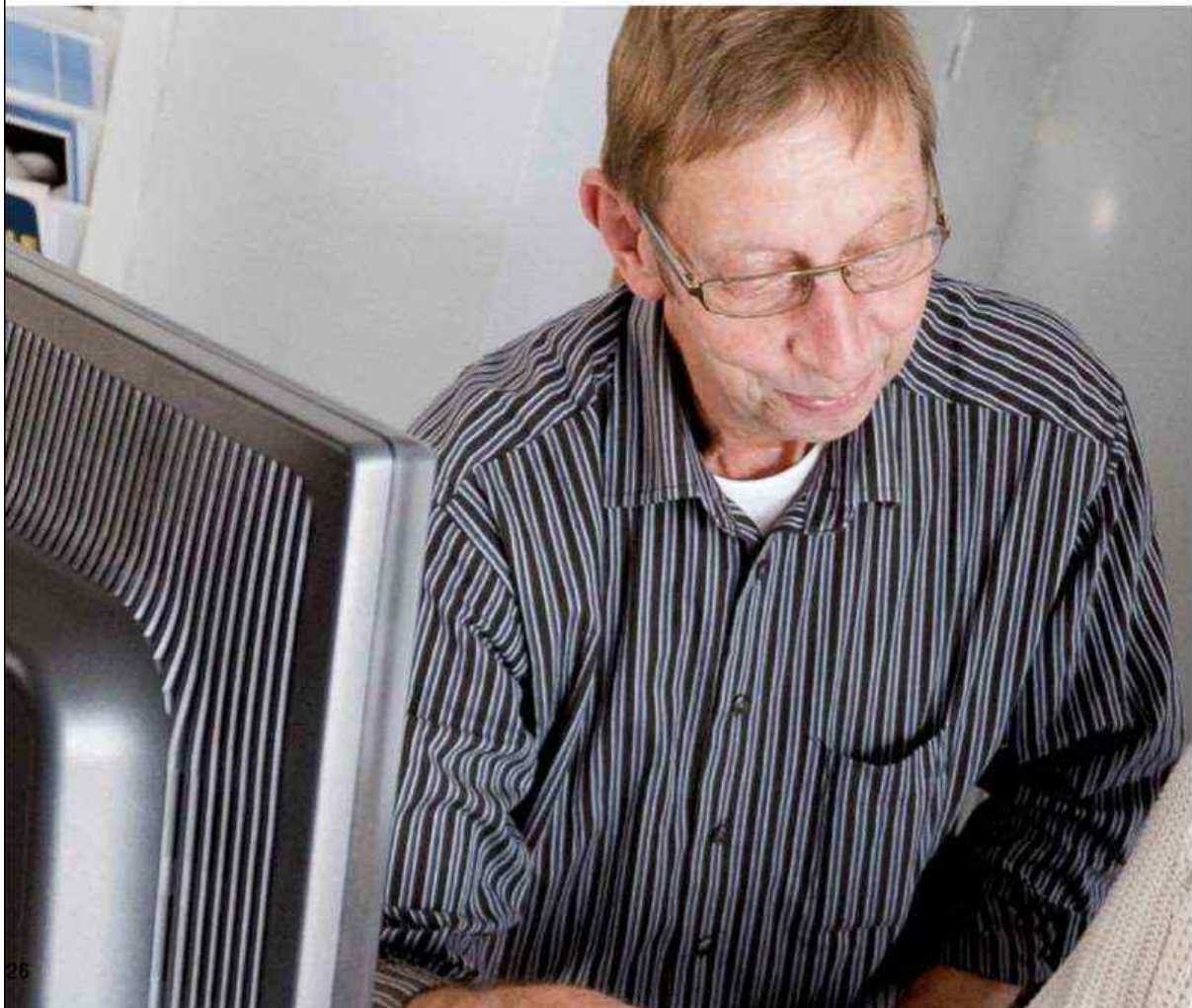
Education in the new pay system - why?

Education in the pay system is part of the design phase. Remuneration and supervisors learn how they specifically need to work on the assessment of qualifications and the qualifications conversation.

The goal of the course in the new pay system is to ensure that individual managers understand the system and can apply it in a uniform way.

At the same clothes the leaders better, so they feel a greater security in the implementation of the talks.

The courses are different from company to company depending on the payroll system. The training is very practical and can be completed in a single day.



Vestfrost gets new pay system

Vestfrost got tools

Chief consultant Allan K. Larsen, DI, has over the last 10 years been responsible for more than 40 courses in the new pay systems:

"A course is a good idea, too, because many employees might be quite skeptical of individual wage determination, which naturally leads to a wage, not previously experienced. It is important that union representatives participate in the course, so they know to laugh markets have gained some exercise, and shop stewards know what it is, leaders are diaper vet taught. "

At Vestfrost attended the two stewards with the operators to assess their employees and then interview any joint-bejderne. The leaders became even more aware of what was agreed with the trust the representatives, and they got some tools for both to complete assessments and to conduct interviews. An important point was the first to make the assessment of all of the workers, then compared assessments across: it now correct? If so, the conversation round to begin.

"My experience is that the right time for such a course is right before you are completely finished with the preparation of the system. Many courses have shown that there may need to adjust something before it is implemented, "said Allan K. Larsen.

"It is important that managers have a common understanding of what is the meaning of the terms used in the system. And especially that managers understand the same by the points system is selected. "



Getting Started

Developing an efficient payroll system should be a common task for management and employees. Pull on other companies' experiences, so you avoid the pitfalls.

Many companies take far in let before they decide to get a new salary system. But the decision itself is just the very first step. Be prepared that it is a demanding and sometimes lengthy collaborative process that lies ahead. Both managers and employees need to get to work when they need to discuss, define, negotiate and communicate a new salary system. But watch out - the thorough process is ultimately helps to ensure a good result.

Remember in the process:

- To ensure that the company has updated and reliable data on the company's production (time, bonuses, job roles, attendance rates, standard times, etc.)
- Set aside the time needed to process and prioritization of the work.
- If during the process introduces a new IT system (eg. ERP MRP systems), please note that it often takes longer than estimated.

- Have the necessary staff back-up. It can happen changes in staff during the process.
- Get support for the process from those involved - management and employees.
- Create understanding that it is important for the company to get a new salary system.
- Engage and retain key personnel in the process.
- Inform employees regularly about the new opportunities.
- Maintain change - optionally with Løntermometer as a utility.
- Pull on organizations lønkonsulenter in the process if you need coaching or counseling.

How to get started

Lessons from Vestfrost

Classic production companies are accustomed to being in control of all the facts before they do something new. - Sometimes you should probably just throw yourself into it and take some chances, says plant manager Bent Nielsen, when it comes to the evaluation of the payroll process, which he and union Bjarne Kirkeby elaborates here.



Steward Bjarne Kirkeby

- Reactions have been very different, and we knew from the start that they would be. Some have been very positive, some skeptical and others negative. The righteous element understands all be good when it is explained. And it was one of the main purposes of the new pay system; That it should be fairer.

In the Qualification section, we have continuously discussed assessments. Most employees seem well that they have to up and have max. points, but the system loses the its value if all when the ceiling. There should always be something to strive for and something to get better. Otherwise, we might far.

We must try us out and must constantly be better to evaluate employees. We have four foremen, today evaluates all employees on the qualification part. There we have used energy to get their assessments to be closer to each other.

it so that they all use the system in the same way. The result now is that the fires ratings are more evenly.

It has given us all - managers and employees - chest hair to be through the learning process.

We have talked about getting a new pay system in 6-8 years, so it has been a long and sometimes difficult birth. But now we have it and we are well on the way to get it to work. Fortunately, there is some flexibility so that we can change and correct it, which can be made even better when we gain even more experience.

The process has both called habituation and given us some challenges along the way. Our foremen should perhaps have had some extra training. And we should probably not have introduced a new IT system in the middle of it all.

Either way, requires a new salary system that is ready to work for it, for it requires a focused and dedicated effort from day one.

The result is a gain in many ways. The employees feel more appreciated and production business is a very big win.

Vasconcellos gets new pay system

No quick wins

A new salary system is not just about monetary terms - it's not a smart way to put its employees a pay cut or a brisk possibility that the company can save money here and now.

The payroll system has a much larger perspective. It's all about developing the entire cooperation of the company, increase engagement and community - and thus develop the company to the benefit of all.

It succeeds only when management and employees get together to develop a simple and fair pay system.

So he'll sense for everyone.



Factory manager Bent Nielsen

- Since the payroll system was finished, experienced we know that qualification wages caused some debate when it occurred to employees that no longer got the same pay or same assessment as his colleague, even though you performed more of the same tasks. It has frustrated some people, and some took it very closely.

But it is precisely the point of the system, that even if you actually perform the same tasks or equal seniority in the company, so there may be differences in wages.

The meaning of qualifying salary is just that you have to evaluate the individual's skills and development, for example. how actively participate in solving everyday problems and challenges? Fixes only what you need, or you come with proposals for new procedures etc.. - the type of action makes the that one can achieve a slightly higher rating.

So if you manage to change their behavior for the benefit of the common results and show flexibility so that it can trigger higher points.

initiative is rewarded

In the results section, we have for example. experienced employees in a particular production line even organized tasks in a different way, so they could save a person away. This means they could release an employee for other tasks, and all served thereby few more hours. The type of tasks for extra bonus because it's the whole team who have reached a better result.

What would you have done differently?

Payroll system process has taken a long time with us. In retrospect, we probably been too focused on knowing all the details in our calculation model, for example. what should we translate chord wage to when that would serve as performance pay?

There, we could have taken more chances, but we dare enough not skip out where we could bottoms.

DI and CO in said to us, you can always correct subsequent example. in RBR. It is an experience we can pass on to others.

Draw on the experience of others ...

Since 1997, DI invited business leaders and workers to get updated we on the payroll at an annual salary system conference in November.

Here sharing companies out of their challenges with the introduction of a new salary system, just as there are presentations on pay as motivator, and facts about the current economy made development indfl performance on the salary system in the company.

The day is obvious, if the company is considering introducing a new salary system. Exper books, workshops and networking provides a good overview of the area and the effort it requires.

Look more at: di.dk/Personale/Loen/Loensystemer/Pages/Lonsystemer.aspx





Motivating Steel Workers Works: The Case of Nucor

Manufacturing steel is not a glamorous job. The industry is beset by many problems, and more than 40 steel manufacturers have filed for bankruptcy in recent years. Most young employees do not view working at a steel mill as their dream job. Yet, one company distinguished itself from all the rest by remaining profitable for over 130 quarters and by providing an over 350% return on investment (ROI) to shareholders. The company is clearly doing well by every financial metric available and is the most profitable in its industry.

How do they achieve these amazing results? For one thing, every one of Nucor Corporation's (NYSE: NUE) 12,000 employees acts like an owner of the company. Employees are encouraged to fix the things they see as wrong and have real power on their jobs. When there is a breakdown in a plant, a supervisor does not have to ask employees to work overtime; employees volunteer for it. In fact, the company is famous for its decentralized structure and for pushing authority and responsibility down to lower levels in the hierarchy. Tasks that previously belonged to management are performed by line workers. Management listens to lower level employees and routinely implements their new ideas.

The reward system in place at Nucor is also unique, and its employees may be the highest paid steelworkers in the world. In 2005, the average Nucor employee earned \$79,000, followed by a \$2,000 bonus decided by the company's annual earnings and \$18,000 in the form of profit sharing. At the same time, a large percentage of these

earnings are based on performance. People have the opportunity to earn a lot of money if the company is doing well, and there is no upward limit to how much they can make. However, they will do much worse than their counterparts in other mills if the company does poorly. Thus, it is to everyone's advantage to help the company perform well. The same incentive system exists at all levels of the company. CEO pay is clearly tied to corporate performance. The incentive system penalizes low performers while increasing commitment to the company as well as to high performance.

Nucor's formula for success seems simple: align company goals with employee goals and give employees real power to make things happen. The results seem to work for the company and its employees. Evidence of this successful method is that the company has one of the lowest employee turnover rates in the industry and remains one of the few remaining nonunionized environments in manufacturing. Nucor is the largest U.S. minimill and steel scrap recycler.

Case written by [citation redacted per publisher request]. Based on information from Byrnes, N., & Arndt, M. (2006, May 1). The art of motivation. BusinessWeek. Retrieved April 30, 2010, from http://www.businessweek.com/magazine/content/06_18/b3982075.htm; Foust, D. (2008, April 7). The best performers of 2008. BusinessWeek. Retrieved April 30, 2010, from http://www.businessweek.com/magazine/toc/08_14/B4078bw50.htm?chan=magazine+channel_top+stories; Jennings, J. (2003). Ways to really motivate people: Authenticity is a huge hit with Gen X and Y. *The Secured Lender*, 59, 62–70; Marks, S. J. (2001). Incentives that really reward and motivate. *Workforce*, 80, 108–114.

Source:

https://saylordotorg.github.io/text_organizational-behavior-v1.1/s10-01-motivating-steel-workers-works.html

How Nucor Steel Rewards Performance and Productivity

by Gregory P. Smith

Last Updated: Feb 21, 2014

Would you believe that one of the few remaining steel companies in the U.S. has not laid off any employees in the last 28 years? Read how Nucor Steel's unique way of linking performance with productivity and simple employee relations policy has helped it meet its goals.

Nucor Steel, with 7000 non-union employees and nearly \$4.5 billion in sales, is one of the few remaining steel companies in the U.S. to remain competitive in its industry. It focuses on two clear goals: building steel manufacturing facilities economically, and operating the facilities productively.

To achieve these goals, Nucor has streamlined and decentralized management and allows each plant to operate as independent business units. Only four layers of management exist: Chairman, Vice Chairman and President; Vice President-General Manager; Department Managers; supervisor/Professional; and hourly employees. Only 22 employees eight managers and 14 administrative employees work in the corporate headquarters. Senior executives do not have company cars, dining rooms, executive parking spaces or corporate jets. Everyone from the janitors to the CEO has the same basic but generous benefits plan.

Nucor's employee relations philosophy is simple and effective:

1. Employees should have the opportunity to earn according their productivity.
2. If employees do their job well today, they should have a job tomorrow. (They haven't laid off employees in 28 years.)

3. Employees have a right to be treated fairly. The company listens to employees through crew meetings, department meetings, shop dinners and employee surveys.
4. Employees must have an avenue of appeal if they believe they have been treated unfairly. This complaint procedure allows employees to carry their complaints to the President of the company.

Nucor backs up its philosophy with a unique pay-for-performance compensation system. Salaried employees receive 0 to 25 percent of their salary based on the Return on Assets (ROA) of their plant. Employees earn money based on their individual productivity. While employees are paid a lower than industry average hourly rate, they qualify for an exceptional performance bonus if they exceed hourly quotas. For example, the steel industry average says an individual should be able to straighten 10 tons of steel an hour. Nucor's goal is to straighten 8 tons an hour. Employees get an additional 5 percent bonus for every ton over 8 tons they can straighten. They typically average 35 to 40 tons an hour. However, if they are late to work they lose their bonus for the day. And if they miss a day of work during the week they lose their bonus for the entire week.

Department Managers also have base salaries that are lower than what other plants pay. But they qualify for an annual bonus based on their plant's ROA that varies from 0 to 82 percent of their salary. They get an additional bonus based on the weekly production of their crews of 100 to 200 percent of base salary.

Senior officers have one compensation system. They do not get profit sharing, pensions, bonuses or retirement plans, and their base salaries are also set below industry averages. They receive one annual bonus based on the return of shareholders equity above certain minimum earnings. Paid 60 percent in stock and 40 percent in cash, the bonus ranges from 0 to several hundred percent of salary.

This unique way of rewarding productivity keeps Nucor's productivity high and its absenteeism at a low 1 to 1.5 percent a year. Employees see a direct correlation between what they do and their paychecks a major incentive, and a key strength of the program. In fact, this program prompts such high performance that employees were refusing to take time off. The company began forcing them to take time off by giving employees four extra days off a year. Even so, only half their employees use their four extra days!

About Author:

Greg new photoGreg Smith's cutting-edge keynotes, consulting and training programs have helped businesses accelerate organizational performance, reduce turnover, increase sales, hire better people and deliver better customer service. As President and Lead Navigator of Chart Your Course International he has implemented professional development programs for thousands of organizations globally. He has authored nine informative books including his latest book Fired Up! Leading Your Organization to Achieve Exceptional Results. He lives in Conyers, Georgia. Sign up for his free Navigator Newsletter by visiting <http://www.ChartCourse.com> or call (770) 860-9464.

100-Percent Bonuses Mean High Pay — Plus Low Labor Costs

by Susan Marks June 6, 2001

At Nucor Corp., a share-the-wealth approach also has been a success. Based in Charlotte, North Carolina, the steel producer had a record \$4.6 billion in revenues last year. It employs 8,000 people at 22 plants in nine states, and ranks among the Fortune 500.

Large Company

Name: Nucor Corp.

Location: Charlotte, North Carolina

Type of business: largest steel producer in the United States

Number of Employees: 8,000

The company pays much lower base wages — sometimes half of what the competition pays hourly workers — then uses weekly bonus cash payouts as an incentive. And they are not small amounts, either. Employees can earn 100 percent, 200 percent, and more of their regular hourly wage, with no cap, according to the amount of quality steel produced by, or passed through, a work team on a shift.

It's a production-driven system that wouldn't work for everyone. For non-union Nucor, however, it has worked since the 1960s, says James M. Coblin, vice president of human resources. "We have the highest productivity of any steel mill in the United States in terms of tons per employee or tons per hour. We have the highest-paid steelworkers on earth, and we have arguably among the lowest labor costs per ton produced. So that's pretty phenomenal if you can have the highest-paid employees but the lowest labor cost."

The secret to motivating people is money, he says. "If you give a bonus to somebody of 15 percent, of course they like it, or 20 percent, even 25 percent, of course they love it. But if you give them a bonus of 100 percent, you get their attention big-time, and when they start seeing 150 percent bonus or 160 percent bonus, they are focused on that bonus. And when they know it's not going to be changed, like ratcheting up the base when they really start producing or putting a ceiling on it ... they catch fire."

The average pay in the year 2000 for Nucor's steel mill employees was about \$63,000, and many of those people were high school graduates living in small towns like Darlington, South Carolina; Jewitt, Texas; and Waterloo, Indiana, very small communities where a dollar goes a long way, Coblin says.

In good times, when business is booming, every employee –from a receptionist to the CEO — shares in profits. Conversely, during down times there's sharing, too. The company doesn't lay off employees, but shuts down its production lines for one or two days a week. Salaried executives still work, but hourly employees aren't required to. About 80 percent of Nucor's employees are on this production-incentive plan. Other employees also have performance-based compensation:

Department managers earn annual incentive bonuses based primarily on the percentage of net income to dollars of assets employed for their divisions. These bonuses can be as much as 80 percent of a department manager's base pay.

Professional and clerical employees not on other plans earn bonuses based on their division's net income return on assets.

Senior officers earn lower base salaries, with their remainder of their compensation based on Nucor's annual overall percentage of net income to stockholder's equity, which is paid out in cash and stock.

Coblin says the Nucor system is about giving high wages to average people for outstanding production, and about giving responsibility and authority to lower-level

employees. It's the worker who drives production — and the bottom line — not the executives. That can be a tough concept for authoritative managers and companies to grasp.

Another key to Nucor's success is the simplicity of its incentive system, Coblin says. If every employee can understand and see how an incentive plan affects him each week, then it can succeed. If not, it won't work in the long term.

Beyond its bonus structure, Nucor also rewards employees with free dinners, jackets, and hats for outstanding production or safety records broken. Service awards are handed out every five years. Employees receive one share of stock for every year at Nucor. Workers are essential to the company's success, and are stockholders.

It's that ownership connection that is key to employee performance, NAM's Eisen adds. She calls Nucor an extraordinary company."They are using cash to incent. Other companies use benefits to incent. Who is the winner? I think you have to look at your own workforce."

Nucor's Reward System

All employees at steel giant Nucor are covered by one of four performance-related compensation systems. Each of the plans relate to specific goals and targets depending on the job. Nucor also periodically has issued an extraordinary bonus to all employees, except officers, in years of particularly strong company performance. This bonus has been as high as \$800 for each employee.

The four ongoing bonus plans include:

Production Incentive Plan: Operating and maintenance employees and supervisors at the facilities are paid weekly bonuses based on the productivity of their work group. The rate is calculated based on the capabilities of the equipment employed, and no

bonus is paid if the equipment is not operating. In general, the production incentive bonus can average from 80 to 150 percent of an employee's base pay. The vast majority of the company's employees are covered under this plan.

Department Manager Incentive Plan: Department managers earn annual incentive bonuses based primarily on the percentage of net income to dollars of assets employed for their division. These bonuses can be as much as 80 percent of a department manager's base pay.

Professional and Clerical Bonus Plan: This bonus is paid to employees who are not on the production or department manager plan and is based on the division's net income return on assets.

Senior Officers Incentive Plan: Nucor's senior officers do not have employment contracts. They do not participate in any pension, discretionary bonus, or retirement plans. Their base salaries are set lower than what executives receive in comparable companies. The remainder of their compensation is based on Nucor's annual overall percentage of net income to stockholder's equity and is paid out in cash and stock.

Workforce, June 2001, pp. 112-114



Our equity incentive plans

The Restricted Share Unit plan (RSU plan) and the Performance Share Unit plan (PSU plan), adopted at the annual shareholders' meeting on 10 May 2011, are designed to enhance the long-term performance of the company and to retain key employees. Yearly grants under the RSU plan and the PSU plan are subject to the approval of the annual general meeting of shareholders. The two plans are intended to complete ArcelorMittal's existing programme of annual performance-related bonuses, the reward system for short-term performance and achievements. Before 2011 equity incentives were in the form of stock options as described further below.

Both plans are intended to promote the alignment of interests between the company's shareholders and eligible employees by allowing them to participate in the success of the company.

Restricted Share Unit (RSU) plan

The RSU plan provides a retention incentive to eligible employees.

Awards made under the RSU plan are subject to 'cliff vesting' after three years, contingent upon the continued active employment of the employee with the ArcelorMittal group. The RSU plan is targeted at the 500 to 700 most senior managers across the ArcelorMittal group.

In 2016 no RSU were granted under this plan.

Performance Share Unit (PSU) plan

The PSU plan's main objective is to be an effective performance-enhancing scheme based on the employee's contribution to the achievement of the company's strategy.

Awards made under the PSU plan will be subject to the fulfillment of performance criteria over a three-year period from the date of award.

The allocation of long term incentives is reviewed by the board of directors' appointments, remuneration and corporate governance committee, comprised of three independent directors, which makes a recommendation to the full board of directors. The committee also decides the criteria for granting PSUs and makes its recommendation to the board of directors. The criteria are based on the principle of rewarding for performance upon the achievement of clear and measurable metrics for shareholder value creation.

Global Stock Option Plan

Before the general shareholders' meeting adopted the RSU-PSU proposal in May 2011, ArcelorMittal's equity based incentive plan took the form of a stock option plan called the Global Stock Option Plan.

The overall cap on stock options available for grant during any one-year period was approved yearly by the shareholders at the annual general meeting. The main differences between stock options and RSUs and PSUs are the following:

the stock options vest in tranches of one-third of the grant per year within three years of the date of the grant the eligible employee pays an exercise price in order to exercise a stock option, which is not the case for RSUs and PSUs.

The number of RSUs-PSUs that may be allocated to an eligible employee will be proportionately smaller than the number of stock options that would have been allocated to the employee. Information about historical stock option grants is available in ArcelorMittal's statutory annual reports and annual report on Form 20-F. The stock options awarded most recently (in 2010) are scheduled to expire in 2020.

Stock options information system (Restricted access)

Source:

<https://corporate.arcelormittal.com/investors/corporate-governance/equity-incentive-plans>

AGREEMENT

between

ArcelorMittal USA

and the

**United Steel, Paper and Forestry,
Rubber, Manufacturing, Energy,
Allied Industrial and Service
Workers International Union**

September 1, 2015

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ARTICLE ONE - AGREEMENT

Section A. Parties to the Agreement

1. This Agreement, dated as of September 1, 2015 for the Employees of ArcelorMittal USA (the Basic Labor Agreement, BLA, or the Agreement), is between ArcelorMittal USA (or the Company as further defined below) and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, or its successor (the Union or USW or United Steelworkers) on behalf of the Employees of the Company (as defined in Article Two, Section A (Coverage) at both facilities in East Chicago, Indiana; Cleveland, Ohio; Warren, Ohio; Riverdale, Illinois; Burns Harbor, Indiana; Conshohocken, Pennsylvania; Coatesville, Pennsylvania; Steelton, Pennsylvania; Virginia, Minnesota; Georgetown, South Carolina; and Weirton, West Virginia.
2. Except as otherwise provided in this Agreement, the Company shall include any current or future Affiliate of ArcelorMittal USA.
 - a. An Affiliate shall mean any business enterprise that Controls, is under the Control of, or is under common Control with ArcelorMittal USA.
 - b. Control of a business enterprise shall mean possession, directly or indirectly of either:
 - (1) fifty percent (50%) of the equity of the enterprise; or
 - (2) the power to direct the management and policies of said enterprise.
3. Except as otherwise provided in this Agreement the Company shall exclude (Excluded Entity): (i) the Parent (the publicly-traded entity); (ii) those of its Affiliates that are neither domiciled nor do business in the United States; (iii) the current affiliates associated with its investment in I/N Tek and I/N Kote, provided that such affiliates do not acquire or otherwise gain control of any additional entities; (iv) any current or future affiliates of ArcelorMittal USA which are established solely for the bona fide business purpose of securitizing or facilitating financing arrangements of ArcelorMittal USA or for participation in the trading, distribution or logistics of materials produced by ArcelorMittal USA Affiliates, and (v) Walker Wire USA provided that it neither expands its operations nor acquires an additional entity(ies).

Section B. Term of the Agreement

1. The effective date of the Agreement shall be September 1, 2015, (the Effective Date) except as otherwise expressly provided.

2. Except as otherwise provided below, this Basic Labor Agreement shall terminate at the expiration of sixty (60) days after either party shall give written notice of termination to the other party, but in any event shall not terminate earlier than September 1, 2018 (the Termination Date).
3. If either party gives such notice, it may include therein notice of its desire to negotiate with respect to Insurance, Pensions, Successorship and Supplemental Unemployment Benefits. If the parties do not reach agreement with respect to such matters by the Termination Date, either party may thereafter resort to strike or lockout, as the case may be, in support of its position with respect to such matters, as well as any other matter in dispute. This Paragraph shall apply to all such matters, including Insurance, Pensions, Successorship and Supplemental Unemployment Benefits, notwithstanding any contrary provision of existing agreements on those subjects.
4. Any notice to be given under this Agreement shall be given by certified mail and shall be postmarked by the required date. Mailing of notice to the Union should be addressed to the United Steelworkers, **60 Boulevard of the Allies**, Pittsburgh, Pennsylvania 15222; mailing of notice to the Company should be addressed to 250 West US Highway 12, MOB 2nd Floor, Burns Harbor, IN 46304. Either party may, by like written notice, change the address to which certified mail notice shall be given.

ARTICLE NINE - ECONOMIC OPPORTUNITY

Section A. Wages

1. Definitions:
 - a. Regular Rate of Pay as used in this Agreement shall mean the Base Rate of Pay plus incentive earnings.
 - b. Base Rate of Pay as used in this Agreement shall be the rates of pay as shown in Appendix A.

Section B. Incentive Plans

1. New incentive plans shall be designed to afford Employees the earnings opportunity generally available under existing plans. Modified incentive plans shall be designed to afford Employees the earning opportunity generally available under the plan being modified.
2. The Company shall establish new incentive plans to cover newly created jobs. The Company shall also modify existing incentive plans where new or changed conditions resulting from mechanical improvements made by the Company in the interest of improved methods or products, or from changes in equipment, manufacturing processes or methods, materials processed, or quality or manufacturing standards impact the earnings opportunity provided under an existing incentive plan. In all other circumstances, existing incentive plans shall remain unchanged. Such plans shall be installed within ninety (90) days of an Employee being assigned to work on a new or modified job.
3. Such new or modified incentive plans shall be established in accordance with the following procedure:
 - a. The Company will develop the proposed new incentive plan.
 - b. The proposed new plan will be submitted and explained to the Local Union Incentive Committee along with such additional Employees as the Committee shall deem appropriate. The explanation shall include all information reasonably required to understand how the new plan was developed. The Union shall be afforded a full opportunity to be heard with regard to the new plan.
 - c. Should agreement on a new plan not be reached, the new plan may be installed and the Employees affected shall give the plan a fair trial.

- d. The Local Union Incentive Committee may file a grievance at any time from ninety (90) to 180 days from the date of installation of a new plan. Such grievance shall be filed in Step 2 of the grievance procedure and shall be decided on the basis of the standard referred to in Paragraph 1 above.
 - e. In the event the Company does not install a new incentive plan on a timely basis, the Local Union Incentive Committee may file a grievance in Step 2 of the grievance procedure requesting that a new plan be installed. Any such grievance shall include a statement of the alleged changed condition(s), including approximate date(s) of such alleged change(s). If the Board decides that a change has occurred which requires new standards, it shall order the Company to develop and install an appropriate new plan and to appropriately compensate the grievant(s).
4. The Company shall be permitted to establish an interim rate which may be used while the new incentive plan is being developed. The interim rate shall consist of, in addition to the applicable Base Rate of Pay, a special hourly interim allowance equal to the percentage equivalent of the straight-time average hourly earnings above the Base Rate of Pay in Appendix A during the six (6) pay periods immediately preceding implementation of the interim rate. If the job involved is a new job, the interim rate shall be the applicable average interim rate found by relating the job requirements of such new job to the job requirements of the existing jobs under the previously existing incentive plan and shall be based solely on the incentive earnings of the related job(s) under the old plan.

Section C. Shift Premium

Employees shall receive a shift premium of twenty-five cents (\$0.25) for all hours worked by Employees designated as Shift Workers. Shift Workers are those Employees who are routinely scheduled at least half their shifts on other than the day shift (all eight (8) hour shifts starting between 6:00 a.m. and 9:00 a.m. are defined as the day shift).

Section D. Sunday Premium

All hours worked by an Employee on Sunday, shall be paid for on the basis of one and one-half (1½) times the Employee's Regular Rate of Pay. For the purpose of this Section, Sunday shall be deemed to be the twenty-four (24) hours beginning with the shift change hour nearest to 12:01 a.m. Sunday.

Section E. Profit Sharing

1. Introduction

The parties agree to establish a profit sharing plan (the Plan).

2. Level of Payout

The Company agrees that it will create a profit sharing pool (the Pool) consisting of 7.5% of the Company's Quarterly Profits, as defined below, and to distribute the Pool within forty-five (45) days of the end of each fiscal quarter, in the manner described below. The fourth (4th) quarter payment will be distributed within fifteen (15) days following the date of the auditor's opinion of the Company's annual audited financial statements, which may include an adjustment for the correction of errors in prior quarters.

3. Calculation of Profits

For the purposes of this Plan,

a. Profits shall be defined as Earnings Before Interest and Taxes of the Company, calculated on a consolidated basis in accordance with United States Generally Accepted Accounting Principles (GAAP), with the following exclusions:

- (1) **onerous contracts**, income or loss related to any charges or credits (whether or not identified as special credits or charges) for unusual, infrequently occurring or extraordinary items as defined by GAAP, including credits or charges for plant closures, business dispositions and asset sales that are not normal operating charges or credits of the Company;
- (2) any cost or expense associated with the Benefit Trust or other similar vehicle;
- (3) any cost or expense associated with the Plan or any other profit sharing or similar plan for any of the Company's employees;
- (4) any expense attributable to the allocation or contribution of stock to Company employees;
- (5) any payments, fees or other expenses that are not in the normal course of business paid directly or indirectly to any person or entity

who directly or indirectly owns or controls any equity or equity-like interest in the Company; and

(6) profits from Excluded Entities as defined in Article One Section A – Parties to the Agreement.

b. All transactions between the Company and the Parent or any of its Affiliates shall be conducted on an arm's length basis on commercially reasonable terms not less favorable to the Company than those that could be obtained from an unrelated third party.

4. Individual Entitlement

The Pool will be divided among all Employees (Participants) on the basis of the Hours (as defined below) of each such Participant in the calendar weeks within each fiscal quarter.

a. Hours shall include the following, but shall not exceed forty eight (48) hours for any week for any Participant: hours worked (including straight time and overtime hours), vacation and holiday hours at the rate of eight (8) hours for each holiday or day of vacation; hours shall also include those hours not scheduled less than forty (40) due to a scheduled reduced Work Week; hours on Union business; and hours, at the rate of eight (8) hours a day, while receiving Workers' Compensation benefits (based on the number of days absent from work while receiving such benefits).

b. Any payments made to a Participant pursuant to this Plan shall not be included in the Participant's earnings for purposes of determining any other pay, benefit or allowance of the Participant.

5. Administration of the Plan

a. The Plan will be administered by the Company in accordance with its terms and the costs of administration shall be the responsibility of the Company. Upon determination of each Quarterly Profit calculation, such calculation shall be forwarded to the Chair of the Union Negotiating Committee accompanied by a Certificate of Officer signed by the Chief Financial Officer of the Company, providing a detailed description of any adjustments made to Earnings Before Income and Taxes and stating that Profit was determined in accordance with GAAP and that Quarterly Profit was calculated in accordance with this Section.

- b. The Union, through the Chair of its Negotiating Committee or his/her designee, shall have the right to review and audit any information, calculation or other matters concerning the Plan. The Company shall provide the Union with any information reasonably requested in connection with its review. The reasonable actual costs incurred by the Union in connection with any such audit shall be paid from the Pool and deducted from the amount otherwise available under the Pool for distribution to Employees.
- c. In the event that a discrepancy exists between the Company's Profit Sharing calculation and the results obtained by the Union's review, the Chairs of the Union and Company Negotiating Committees shall attempt to reach an agreement regarding the discrepancy. In the event that they cannot resolve the dispute, either party may submit such dispute to final and binding arbitration under the grievance procedure provided in this Agreement.

6. Prompt Payment

Notwithstanding Paragraph 5, the Company shall comply with the requirements of Paragraphs 2 through 4 based on its interpretation of the appropriate payout. If the process described in Paragraph 5 results in a requirement for an additional payout, said payout shall be made no more than fourteen (14) days after the date of the agreed upon resolution or issuance of the arbitrator's decision.

7. Summary Description

The parties will jointly develop a description of the calculations used to derive profit sharing payments under the Plan for each quarter and distribute it to each Participant.

Section F. Inflation Recognition Payment

1. General Description

The below general description is qualified in its entirety by Paragraphs 2 through 6 below.

The purpose of the Inflation Recognition Payment (IRP) is to make quarterly lump-sum payments to Employees if cumulative inflation, as measured over the life of the Basic Labor Agreement, exceeds three percent (3%) per year.

At the end of each calendar quarter, the Consumer Price Index (CPI) for the final month of that quarter will be compared to a CPI Threshold (as found in the Table in Paragraph 5 below) which represents what the CPI would be if total inflation

2. Os quatro elementos a considerar na implementação de qualquer plano de incentivos: a quem; porquê; o quê; e como

Resumo

Os quatro elementos a considerar em todo e qualquer plano de incentivos são:

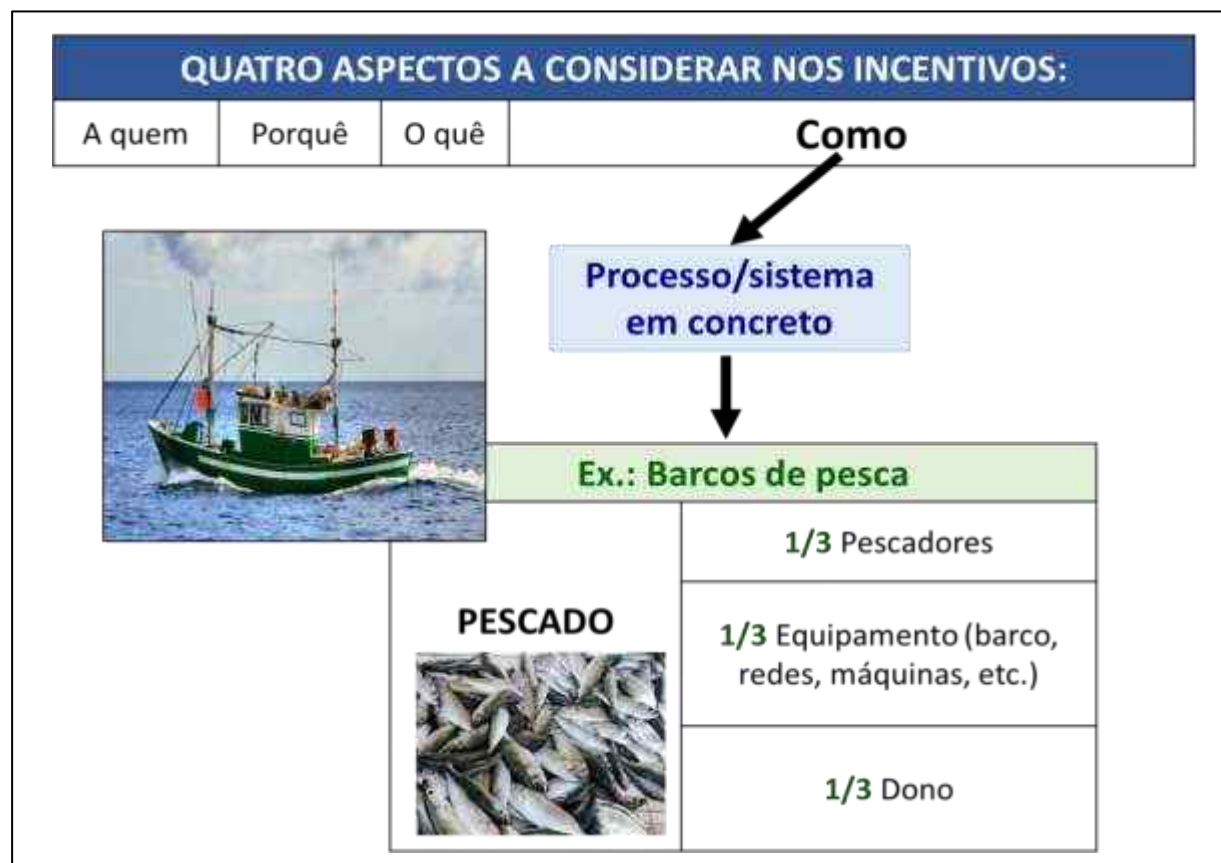
- A quem;
- Porquê;
- O quê;
- Como.

O documento em anexo analisa em detalhe: vantagens, sistemas individuais e de grupo, fabris, vendas e serviços, objectivos de lucro, custo, produtividade, qualidade, satisfação do cliente, etc.

QUATRO ASPECTOS A CONSIDERAR NOS INCENTIVOS:					
A quem		Porquê	O quê	Como	
Programas de incentivos	Departamentos	Apenas alguns departamentos dentro da fábrica	Toda a fábrica	Apenas outros departamentos (vendas, financeiro, etc.)	Toda a empresa (todos A + B + C + D + E)
	Quem beneficia				
	Empregados e supervisores	A	B	D	F
	Quadros médios e gestão de topo		C	E	

QUATRO ASPECTOS A CONSIDERAR NOS INCENTIVOS:										
A quem	Porquê	O quê	Como							
Em função de										
Objectivos quantitativos específicos	<table border="1"> <tr> <td rowspan="3">▽</td> <td rowspan="3">Gastos</td> <td>Matérias primas</td> </tr> <tr> <td>Equipamentos</td> </tr> <tr> <td>Consumíveis</td> </tr> <tr> <td colspan="3" style="text-align: center;">Desperdícios</td> </tr> </table>	▽	Gastos	Matérias primas	Equipamentos	Consumíveis	Desperdícios			Horas de execução / tempo de entrega
				▽	Gastos	Matérias primas				
						Equipamentos				
	Consumíveis									
	Desperdícios									
	Custo unitário									
Δ Qualidade (▽ quebras / defeitos)										
Δ Quantidade/productividade										
Margem da secção										
Global	ROA da fábrica									
	Lucro/margem da empresa como um todo ou sub-unidades e semelhantes (valorização na bolsa, etc.)									
	Receitas da empresa como um todo ou sub-unidades									
	Avaliação dos clientes / satisfação									
	Avaliação do superior hierárquico (ética de trabalho, etc.)									
Premiar desempenhos excepcionais (resolução de problemas, iniciativa para aproveitar oportunidades, espírito de entreatajuda, etc.)										

QUATRO ASPECTOS A CONSIDERAR NOS INCENTIVOS:			
A quem	Porquê	O quê	Como
		↓	
Tipos de prémios/incentivos	Monetários	Não monetários	
		Reconhecimento	Status
Bónus (% dos resultados obtidos)			
Aumentos salariais variáveis/diferenciados (não igual para todos)			
Acções da empresa			
Promoções			
Título da função			
Outros (empregado do mês/semestre/ano, medalhas e semelhantes, referência nas reuniões, newsletter, intranet, etc.)			



+PlusLøn



RESULT PAY

- reward and recognition



Preface

As inspiration for corporate payroll publisher DI and CO-industry jointly booklets on PlusLøn.

PlusLøn is not a payroll system, but an inspiration to payroll systems. PlusLøn thus provides a wide range of opportunities that each company can use as needed.

If you follow the guidelines in PlusLøn, the company's payroll system comply with formalities. It is not a guarantee that there can be problems, but it ensures that existing rules are respected.

Performance pay is part of PlusLøn and is a highly relevant tool with great advantage can be withdrawn from the toolbox and used in combination with other tools to promote productivity and competitiveness to the benefit of business and employees.

Performance pay is self-financing, as it seeks to cut costs and increase productivity and so agreement, the percentage to be awarded to employees and the company.

A good payroll system that both managers and employees sacrificing much attention, is a good prerequisite for good cooperation by creating common results. It creates momentum when the targets are met, and provides good opportunities to celebrate joint successes.

This booklet describes the capabilities of PlusLøn to work with RBR. This requires some knowledge of payroll systems. For those who do not know PlusLøn in advance, we recommend reading the pamphlet PlusLøn first. To those who are well-versed in pay systems, also recommended the two detailed methodological guidelines for PlusLøn, PlusLøn for workers and PlusLøn for salaried employees, which can be obtained from DI and CO industry.

DI and CO-industrial recommend PlusLøn as a starting point and offers to provide assistance in the development and introduction of new pay systems.

May 2012

Karsten Dybvad
Adm. Manager
DI

Thorkild E. Jensen
Chairman
Industrial Employees

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Why pay them on results?

The overall intention of remuneration for results is to create better results for the benefit of employees and the company.

Companies introduce performance pay for improving the performance and employees' earnings. Pay systems that pays for results, can translate into more customers, higher profits and a more motivated workforce.

The use of salary as a management tool has moved higher up the corporate agenda as a means to gain competitive advantage through new ways to fix wages and using incentive measures.

Seen from the company involves remuneration for results:

- Achieving the desired business objective
- Better development of the company
- Self-financed

Although performance pay is not a new idea, then signals the increasing prevalence and a significant change in many companies' perception of what salary can be used.

The view represents a recognition that the wage can be used to support business strategies.

From the employees' point of view entails remuneration for results:

- Increased job
- Personal development
- More salary

Performance pay can be individual or common to a group of employees. The choice depends on whether the employee creates results by independent work or as part of a group. For hourly workers are performance-usually common to a group of employees. Otherwise, the company easily that the necessary cooperation is lost.

Pay for performance is more direct than other forms of payment:

- Supports the business goals and visions
- Strengthen cooperation and communication within the company
- Reward and recognize employees' efforts

issues of management and employee involvement

The first and most important condition for payment by results is that the management wholeheartedly in favor of performance pay.

Before you begin to construct a RBR scheme, management should consider how ready and willing the company is to reward for results. If the goal is simply to introduce a further aspect of pay, there is no need for major managerial considerations. If the company on the other hand want to promote employee involvement and improvements through remuneration for results, it is important that the management wholeheartedly welcome and support the process.

As performance-related salary to a strategy involving the employees in achieving goals in a new way, leaders must be willing to formulate and implement such a strategy.

RBR does not by itself improvements in employee performance. Performance-reward improvements in **the current or the use of new processes¹**, which engages employees in activities that improve performance.

trends

Performance pay is an important piece of the trends that pervades businesses. Greater competitiveness through more flexible organization with decentralization and shorter decision paths. It draws a clear picture of the employees to be group-oriented, show greater commitment, be more flexible and take responsibility.

involvement

It is known that people often resists change. On the other hand there is also evidence that it is difficult to oppose a change, where you have contributed in the decision. Real involvement of the employees is a key factor for the introduction of performance pay:

- Conduct daily or weekly meetings with employees where the objective successes, problems, new ideas and solutions are discussed and followed up.
- Inform employees - on bulletin boards, TV screens or intranet about how far we have come towards new goals.
- Did not have the resources for training, education and other activities that can support employees to achieve new goals.

Thorough information and clear targets is a precondition for work on a payroll system succeed. Information must ensure that everyone in the company understands and accepts the payroll system. In particular, it is important that everyone knows and accepts the relationship between pay and performance. It must be quite clear to everyone what is expected of them, so that they can achieve a higher salary.

As performance-related salary to a strategy involving the employees in achieving goals in a new way, leaders must be willing to formulate and implement such a strategy. RBR does not by itself improvements in employee performance. Performance-reward improvements of new processes which engages employees in activities that improve performance.

¹ Eg. methods, technology or thinking

What are performance pay?

First of all, performance-an alternative to the traditional principles of how wages can be fixed. Especially the direct link to the company's goal means that performance pay can rest on certain principles and guidelines.

Performance pay is to support the company's business objectives and desired personnel policy. At the same time performance-helping to improve

the company's competitiveness and viability by attracting and retaining qualified employees.

Performance pay is a reward for a better effort. It is important to understand that performance pay does not replace the existing payroll system, but is a reward system, as an addition to the current wages.

When developing a performance pay system, there are three main principles that should be followed.



When we in this pamphlet talks about performance pay, we mean a system where a number of conditions must be met:

- Performance pay is an additional form of remuneration related pay for the business results and support the management-related process
- Performance pay is based on pre-set goals or measurements for operational improvements
- Performance pay is a reward for a better bet
- RBR varies with the results obtained
- Performance pay is self-financing

Main Principles

1. Clearly articulate want results.
2. Establish a basis for measurement.
3. Determine the system of payment.

Self-financed

Often think the company that there are economies to introduce performance pay. Perhaps it is wrong. Proper introduced performance pay is self-financing and improve the company's bottom line and increase employee earnings.

It also happens that the company believes that there is a measurement problem can not be solved. It may be wrong. Maybe it's because it does not have defined and operationalized what results the company wants to achieve.

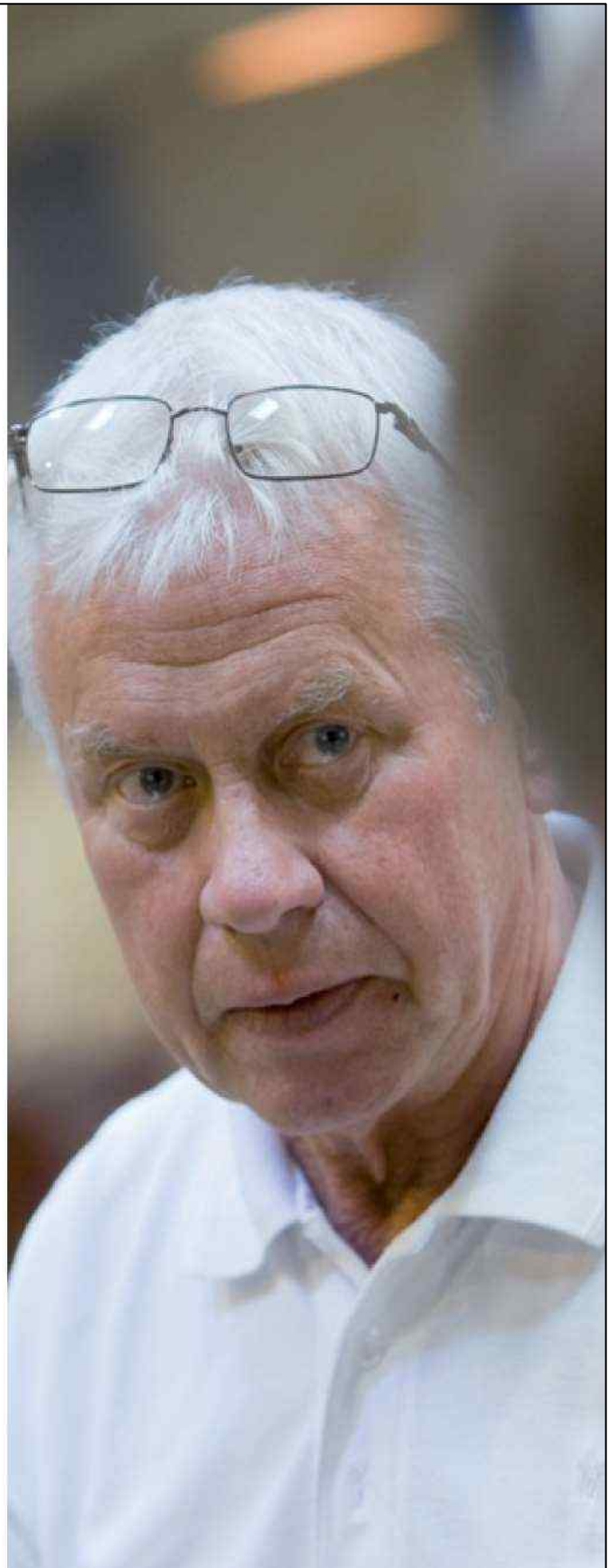
Types of performance pay

Performance pay can be divided into four categories:

- **efficiency Bonus**
The pay is wholly or partly linked to the development of the company's costs, productivity, material utilization or the like. Performance pay is calculated on the basis of the change that has taken place in relation to a norm. The norm may be an average over a preceding period.
- **quality Bonus**
The pay is wholly or partly linked to the development of the company's quality, delivery compliance, customer satisfaction or the like. Performance pay is calculated on the basis of the change that has taken place in relation to a norm. The norm may be an average over a preceding period.
- **Profit sharing**
The salary attached to the measure of the company's financial results or selected parts of it. The measurement criteria may be surplus stock yields, return on investment, or similar.
Profit sharing is done by the company distributes bonuses, employee shares or partnership.
- **Attainment**
The salary is linked to achieving specific goals. The desired target is determined based on the business plans, and when the objectives have been achieved, there is a charge. Attainment often includes the whole company and covers different employee groups.

For each of these four categories of performance pay could be attached a number of performance factors. Selecting performance factors will largely affect employees' focus and motivation. If the company agrees to go from one performance to another, move the employee focus. It may mean that the former focus falls back to the old state.

The effectiveness of performance pay depends on performance factors reflecting the business objectives and the conditions that create value in the company. By measuring and evaluating performance factors are often the company can make the necessary adjustments and obtain a fairly accurate control to secure a particular result.



The wage composition

Before we go on with RBR and the introduction of the same, we will here give a short presentation of PlusLøn, DI and CO-industry joint guidance on the introduction of new pay systems in enterprises.

Elements of PlusLøn

RBR

RBR can be either individual, group-based, or a combination of both. Performance pay is variable and depends on the results obtained.

related pay

Related pay the surcharge for jobs, subject or person relevant qualifications. Related pay is a personal allowance and follows the individual employee.

function-based

Function-is supplementary to perform a particular function or task, possibly for a temporary period.

Løntermometer

Mapping the causes of the pay success or lack thereof.

Compares pay systems in many enterprises and give it enjoyed sary knowledge to customize the payroll system in time.

Base Salary

Basic pay is pay for basic job and qualification requirements. The basic wage can be the same for all employees, or it may vary between broad groups.

PlusLøn starts with a **basic pay**, which may be the same for all employees or may vary between broad groups.

Next, may be given **related pay**, in the form of a premium for job-related, subject-related or person relevant qualifications. Qualification salary is personal and follows the individual employee.

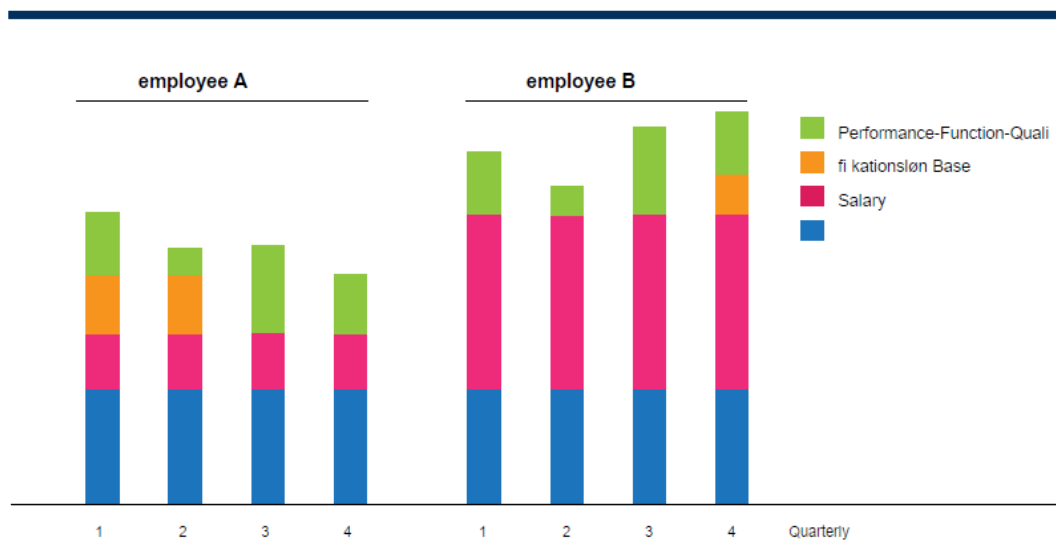
To this can be temporarily granted **function-based**, which is not personal salary component and thus not included in the basic wage. Function-is a temporary

allowances paid over a period in which a particular function or task performed. This could be participation in a project that triggers a surcharge for all hours during the project, regardless of the employee also has other tasks in the period.

In addition to these pay elements may be a system with **RBR normally group or business based**.

Performance pay is variable and depends on the results obtained.

FIG. 1 The rates of pay in PlusLøn be illustrated as shown below:



The employees A and B have the same basic pay different but related pay. Both basic pay as related pay is constant throughout all four quarters.

In the first two quarters Receiver A also has a duty allowance that falls away when A is no longer perform the job. For one

extraordinary function receives B a duty allowance in the fourth quarter.

Employee A and B are covered by the same group-based performance pay, which is calculated quarterly and paid the same amount in kroner to everyone in the group. Performance pay is the same for A and B, but varies from quarter to quarter.

1 See pamphlets for PlusLøn for workers and employees

The wage impact

Choosing forms of payment should be made based on what goals they must support. The table below shows which areas fixed and variable remuneration which most often affects most positive:

FIG. 2

Effect on	Certificates pay	Result- pay
Cooperation	•	•
productivity		•
Employees' professional development	•	
The employees' personal development	•	
The company's economy	•	•
The company's development	•	•
Customer satisfaction	•	•

As can be seen, is related pay often best to support employees' professional and personal development. Employee development is typically a process that takes time, and therefore the reward for development be adapted to this process, it means that wages periodically changes with employee development.

Performance pay is usually a good form of remuneration to affect productivity, the company's economy and development. The reason is that performance pay is directly linked to company goals.

Both forms of remuneration may be appropriate to influence collaboration and customer satisfaction positively.

measurement criteria

Set goals, and focus on results.

RBR can support both desired outcomes and behaviors. Effective performance pay has a link to the business objectives and the conditions that create value in the company.

Selecting metrics or performance factors will largely affect employees' commitment. It is important that

criteria are comprehensible to all, and that they are primarily associated with areas that employees can influence.

It is also an advantage that the performance factors to quantify or assess frequently and that they can be adjusted and adapted to changing circumstances.





Types of performance factors

One may agree RBR in all work areas. Performance Factors can be divided into three categories:

Often there will be a combination of the three categories, for example, to ensure the fulfillment of a kvantitetsmål not at the expense of quality.

Kvantitetsmål

Kvantitetsmål is often used in connection with the effectiveness or the bonus goal achievement. At an efficiency bonus fix to a standard of a workflow. If the norm is exceeded, it triggers a supplement that increases with the achieved goals. In goal achievement sets a target for the company and pay the bonus if the goal is reached.

examples: Turnover, number of units produced, number of transactions, "uptime", activity, produced tonnage used resources, raw materials used

tools and consumables, hours worked, overtime, number of employees, revenue per. employee, amount per. hours, transactions per month. hour, the cost per. unit produced.

benefits by kvantitetsmål is that they usually are easy to measure and follow up. The targets are not affected by, for example, price increases and discounts, such as revenue or earnings may be.

downside is that the company can not meet the production volumes before they are translated into earnings being sold and the cost paid.

economic goals

Economic goals are often used in connection with the efficiency bonus goal achievement or profit. They can be high or low and trigger large or small bonus, whichever best support business goals.

examples: Revenue, earnings, cost consumption, market share, gross margin, profit before tax, net profit, revenue growth, sales, development in share price, profitability, efficiency in administration, product and service development, management and employee skills.

The closer to the individual employee's own results you set goals, the easier it is to understand and feel that the employee can affect the outcome. The economic targets can also be set as a target for cost savings alone, you then assume that saved costs more revenue for the company.

benefits the economic goal is that they can easily be modified according to the company's current situation and thus contribute to quickly move employee focus and thus turning the company's profit.

The disadvantages the economic goals is that they are susceptible to many factors that the employee may not have or appear to have the ability to influence. For example: inflation, changes in competition and thus changed prices, discounts to new customers and investments.

It is important to emphasize that performance pay does not automatically go to zero if the company in a period deficit. Performance pay is a reward for improvements. If the company has poor results, the improvement trigger performance-related, whether the company has no profit. Similarly, a worse result in a profitable business well

could lead to a period when performance pay does not give anything.

Kvalitetsmål

Quality targets for production are easy to set up, the number of complaints and faults under specified regulations only can be counted. Otherwise with the "softer" areas such as customer service. Here you can instead make an agreement about how quality is understood and measured. It's a good idea to specify the Agreement in the form of a written description of what good quality is. Quality targets, for example, defined on the basis of historical data.

examples: Delivery Compliance, mistakes and cassation per. units produced, customer satisfaction, customer retention, customer complaints, response, customized solutions.

benefits by having quality with is that the pursuit of other goals will not be at the expense of quality.

downside the quality is that it can be difficult to determine who really is responsible for the quality or lack thereof. It can give interpretations in the calculation of performance pay.

Performance pay for hourly workers and salaried

The design of a performance pay system depends on the goals you want to reach. Then, on the overall goals of the company can be reached as an individual goal, or to work with group objectives, in large or small groups. Below are the hourly workers demonstrated the overall objective performance pay will also be able to support.

Overall, the objectives traditionally been to increase productivity and quality. Individual performance pay schemes

typically been designed to optimize the use of production facilities and create a greater output of each process.

The purpose of the group-based performance pay where both salaried and hourly workers involved, have increasingly been creating better results through a greater understanding of the process flow, so the focus shifted from the individual to a target for the whole and an overall process flow.

FIG. 3



salaried

Performance pay for salaried employees has generally been aimed at developing new products and services, optimize business processes, ensure high customer satisfaction mm.

It mainly separates individual performance pay from group-based performance pay is that by group-based performance pay want to see more on the unity of the product manufacturing or services.

Traditionally, companies have developed a performance pay system for workers and employees. However, there is an increased tendency for trying to introduce performance-related pay schemes that are common to the two groups, as it has a major impact on business performance when there is good cooperation between the two groups.

individual performance pay

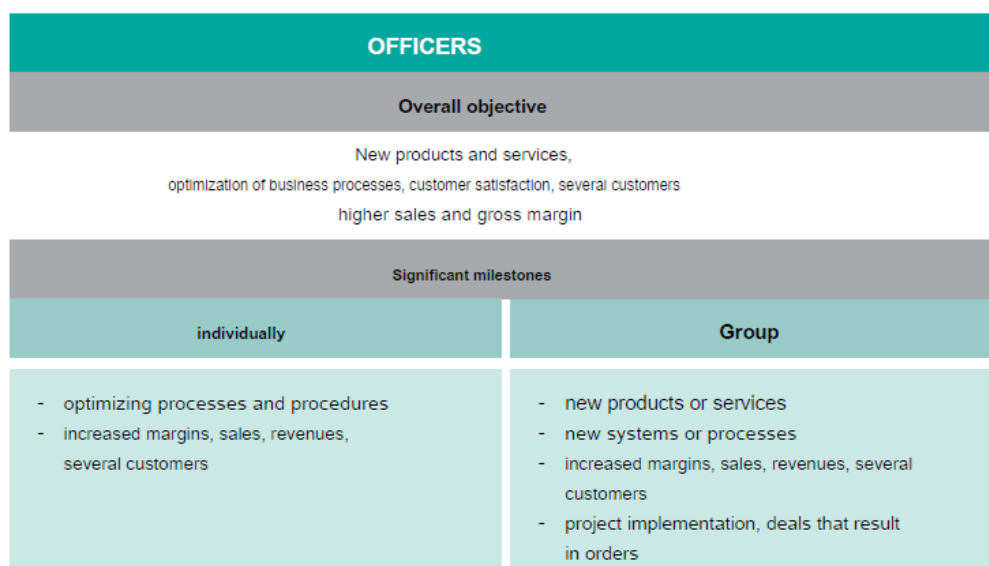
The benefits of individual performance pay is that it can create a very high motivation of the individual, the goals are often easy to understand, and at the same time, the requirements for management simple.

The main disadvantages are the risk of sub-optimization to the detriment of the company and that individual plans may result in wear and stress. In addition, the requirements for control, management and maintenance are high.

Group-based performance pay

The essential benefits of group-based performance pay is the general improvement of the company's knowledge. The goals must be pursued for the benefit of the company through close cooperation between management and employees. And that you can move the focus from the process and to the whole.

FIG. 4



The disadvantages may be that motivation element of group-based performance pay is a little less, and the system requires the establishment of a measurement system and the revision of targets and standards. Furthermore demands more leadership to get the right information out to employees.

Results Compensation

Results Wages and factors must support wage policy and the company's business objectives. What is the company's mission and vision and how we reach them?

Who should be part of a performance pay scheme?

Before the final adoption of performance pay agreement is necessary to decide which of the employee groups to take part, and how the groups should be composed:

- Should the whole company be in?
- Should it be a physical device that can have its own performance pay agreement?
- Should it be department specific?
- Should it be individual reward?

There are many factors to be taken into account.

- **Should RBR only reward productivity?**
- **Should it be the group's / department's efficiency rewarded?**

1 Productivity = Net production in terms of production induced norm x 100 / stamped working time period. Efficiency = Net production in terms of production induced norm x 100 /

1 Productivity = Net production measured in the produced standard time x 100 / the period stamped working time, total period of hours (if any, incl. the absence etc.)

Efficiency = Net production measured in the produced standard time x 100 / total period of hours (if any, incl. From- Be, etc.)

- Should it be all employees related to the job being rewarded?

- Should there be the same or different payment for the relevant group / department?

- Should it be as a percentage of salary?

- Should it be the same performance pay amounts for all?

Again, it is a good idea to look at the company's mission and vision:

- Is it the pure productivity / production efficiency measured?

- Is the energy and environmental technology initiatives that reward? (Ex.: Water, electricity, waste in general)

- Is it additionally also cooperation throughout the plant section with associated ancillary services such as: purchasing, planning, production management?

In this context it is worth taking the composition of the employees into consideration:

- temporary employees?
- Blend of workers and employees?

- Salaried?

- Should managers be involved in the distribution?

And it is also necessary to assess the nature of work, including how difficult it is to reach the target and how much effort is required to achieve the goal.

Finally, before the task is put into operation dispose of a distribution of any gain. It may be the same distribution every time, or assessed for severity of operation, the distribution changes from task to task.

Management and groups

In order for a team to succeed, it is necessary that management:

- Identifies the target group must reach in order to support the above subordinate business goals
- Ongoing focus on both the desired results and the procedure used to achieve results
- Gain understanding and acceptance of the goals that the group must reach
- Honoring both the group as individuals when the entire group is successful
- Provides the necessary information to the group and the individuals can constantly improve their performance

Possible causes of poor results may be:

- The goals that the team needs to reach is not clear enough
- The objectives of the group changed without goals changed accordingly
- The necessary common sense is not present
- Management does not support the group sufficient
- Role Clarification missing
- Inefficient management of the group

Group-based performance pay

Introduction of group-based performance pay is designed to improve performance and value creation. When a group of people work together, the result will in most cases be better.

The main reasons why companies should have group-based performance pay are:

- Improve delivery performance
- Improving the quality
- Increasing productivity
- Increased employee motivation and commitment
- Better cooperation

Only when the right knowledge, the right information and the right responsibilities are present, a group could achieve the desired customer satisfaction, quality and productivity.

But the benefits of group-based performance pay schemes are typically:

- **Reducing costs**
(Because the employees become more conscientious)
- **Improving the relationship between management and employees**
(Through better and more targeted dialogue)
- **Improving employee morale**

(Since you are a member of a team)
- **Improving cooperation among employees**
(When working together towards common goals)
- **Improving communication among employees**
(By helping each other)
- **Clarifies priorities and strategies**
(Because they have clear goals)
- **Creates successes in achieving the goal**
(Amplified by the payment of a reward)

Examples of the distribution of the performance-

By pure production tasks (process and process-like production), it is quite common for hourly workers get the same performance pay. If there are functionaries (eg support to production) with the agreement, they also have the same performance pay.

At project tasks, the composition can be hourly paid employees from different departments will RBR usually be the same. At project tasks where there is a mixture of the workers and employees, RBR can be the same or may be agreed as a percentage of the employee's salary normal.

There can also be pre-agreed fixed amount per employee when the task has been achieved.

The variation in the distribution of gains between employees and the company is great.

Here are some possibilities:

- _____
- 50/50 per cent. "Cutter" model 33⅓ per cent.
- _____
- the owner / 33⅓ per cent. the company / 33⅓ per cent. to employees 30 per cent. to the employees / 70 per cent. the company 60 per cent. to the employees / 40 per cent. the company 10 per cent. to the employees / 90 per cent. the company will be prepared one point model and the value of the points negotiated
- _____
- _____
- _____

The distribution of the prize is always negotiated before the start of the project and presents KPIs¹

or targets and deadlines to be met in order to gain paid.

¹ Key Performance Indicator:
 (Ratios of particular interest)



Principle Example of productivity and delivery performance for hourly workers

Rationale: Productivity = Number of orders received in stock (measured in standard time) / time spent on orders

Ability to deliver = Share of orders on time

Reference: orders norm, based on pre- and post

Measurable factors:

- Standard times per. item number
- Stamped (entered) time spent
- Registered number of orders received in stock

Principle Example of productivity and delivery performance for salaried

Rationale: Productivity Index = Gross margin (DB) / Gage Kroner (Gross)

Reference: budgeted productivity index

Measurable factors:

- Increased sales / increased turnover
- Better prices
- Less cost of sales
- Better purchasing prices
- Fewer defects (internal and external)
- Less payroll in production (= more bonuses for production employees)
- Less Salary consumption / less overtime



individual performance pay

Generally, there is widespread agreement that a payroll system can most effectively contribute to improvements in a company when creating link between pay and performance. Pay for performance has the great advantage that employees' current and future business value can be assessed together.

Performance pay for production workers

Individual performance-typically designed to increase individual production worker's productivity and efficiency - that operate more efficiently.

Measurement Criteria for a production worker may in principle include elements from all three aforementioned areas, operational goals, financial goals and service objectives. However, the most common targets for production workers in practice:

- Productivity / efficiency
- Quality
- Delivery Compliance
- spill

Often, in a performance scheme included several criteria, typically 2-5 paragraphs.

As shown, the goals here uniquely to increase productivity per hour, while the quality and delivery times respected.

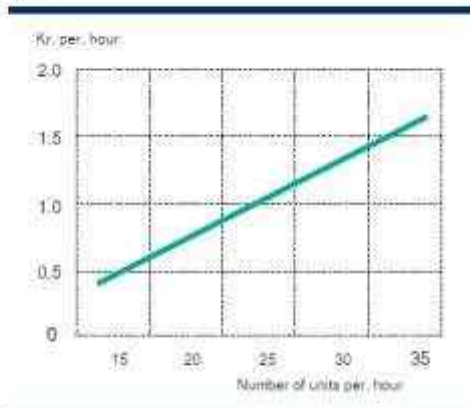
FIG. 5 illustrates the principle of individual performance pay for a production worker. The higher the productivity, the higher wages.

Performance pay for salaried

Previously it has been widely believed that the collar could be performance pay. The perception is partly due to a lack of alignment of objective measures. How is such. the result of a staff employee work?

This is often given to justify that it is not possible to set targets for salaried employees.

FIG. 5



Today it is more natural to set targets for white-collar work and reward for those in step with many companies adopt:

- Systematic employee and jobvurderingssantaler
- New forms of collaboration across the organization, which means that functionaries more directly support production

In particular, focus on remunerate for skills, optimization of workflows, consumption of materials, internal customer satisfaction and the development of new products and services.

RBR scheme based on predefined target

It is important to consider what you want to achieve with a profit pay system before embarking on constructing it. A good and thorough performance pay system for its officials can contribute to the company's resources are used in a way that supports the company's strategy.

Salaried employees are motivated largely by the fact that their work makes sense and is part of a whole. When making performance pay for employees, pay particular attention to the connection between the company's vision, strategy and goals.

Method

The company's strategy can be broken down into a number of milestones. Some targets can cover all salaried employees, while others developed separately for each department. Subobjective updated regularly to keep parity in relation to the company's strategy.

If the company's vision and strategy is formulated in such a way that relatively easily deduced some clear milestones can be as intermediate formulate some guiding principles.

For each milestones defined a level corresponding to full attainment. It also defines a minimum and a maximum. One can define 100 percent target achievement of a relatively easily attainable level, so as to ensure the meeting of the target, for example, 130 per cent. If you want to send the signal. Finally, define the expected level, so it is possible to calculate the total cost for the entire performance pay system.

Typically, the targets at the enterprise level fill a relatively large overall guidance, while the sub-targets for the departments will occupy relatively much for other managers and specialists.

FIG. 5 represents no answer book. Some companies have achieved good results by giving 10 per cent. of salary as performance pay for specialists.

Performance pay for specialists

It is important to formulate meaningful goals, as salaried employees can understand and influence. Many salaried employees perceive their work as an important part of their identity. There is a real risk of chipping in their job satisfaction and professional pride in making them a financial reward in view of something that seems pointless.

The best targets are based on data that the company already uses and follows closely. It is not intended that the company should devote substantial resources to the administration of performance pay system.

In large companies it may be necessary to make a special effort to ensure that one perceives the calculation of the milestones in a consistent manner across the entire company.

An example of the weighting of results for a specialist could be that as shown in FIG. 6 were given 30 per cent. at enterprise level, including half in the form of the result obtained for market share and half in the form of the result obtained for profit before tax.



FIG. 6

Enterprise Level:	weight 30 per cent.
- Market share	15 per cent.
- Profit before taxes	15 per cent.

The fund results are included hereinafter by 70 per cent. in total, including half in the form of it, achieved result for quality and half in the form of the result obtained for delivery on time.

Department:	weight 70 per cent.
- Quality	35 per cent.
- Delivery on time	35 per cent.

Finally adjusted the employee's personal performance, by multiplying them in the sum of goals for company and department. In the example includes completed projects in the individual results by 20 percent. and further and continuing training are included with 15 per cent.

Personal goals:	+ / - 35 per cent.
- completed projects	20 per cent.
- Forward and training	15 per cent.

Model: (corporate performance + fund's performance) x personal goals = RBR

$$0.3 + 0.7 \times 0.35 = 0.35$$

One can also choose to simply put all three levels together. The model should then be designed to goals gives 100 per cent. together. In that case, the personal goals become less important.

Example of determining the size of RBR				
	Share of wages	Weight		
		Corporation	Department	Personal goals
Manager	40 per cent.	100 per cent.	-	-
Associate Director	30 per cent.	70 per cent.	30 per cent.	+ / 15 percent.
Head of Department	20 per cent.	50 per cent.	50 per cent.	+ / 25 percent.
Mid-level	10 per cent.	40 per cent.	60 per cent.	+ / 25 percent.
Specialist	5 per cent.	30 per cent.	70 per cent.	+ / 35 percent.

Process

To ensure sufficient ownership and commitment to performance pay system can develop a project plan for who does what and when. The plan may establish deadlines for the formulation of targets when performance pay should be introduced in each department, and when to be feedback. Otherwise you risk that the work on performance pay system is forgotten, when everyday challenges are pressing.

The project plan can also define a recurring annual review process performance pay system. It is important to continuously adapt the system to the company's strategy. If the company example, aims to increase its market share within a product group in a particular geographic market, so it is natural to let the company performance pay system reflect this goal. Once the company has realized its objective or modified so that the system must be adjusted accordingly.



Performance pay for sales and customer service

Individual performance pay for employees who have direct contact with customers is typically based on criteria such as:

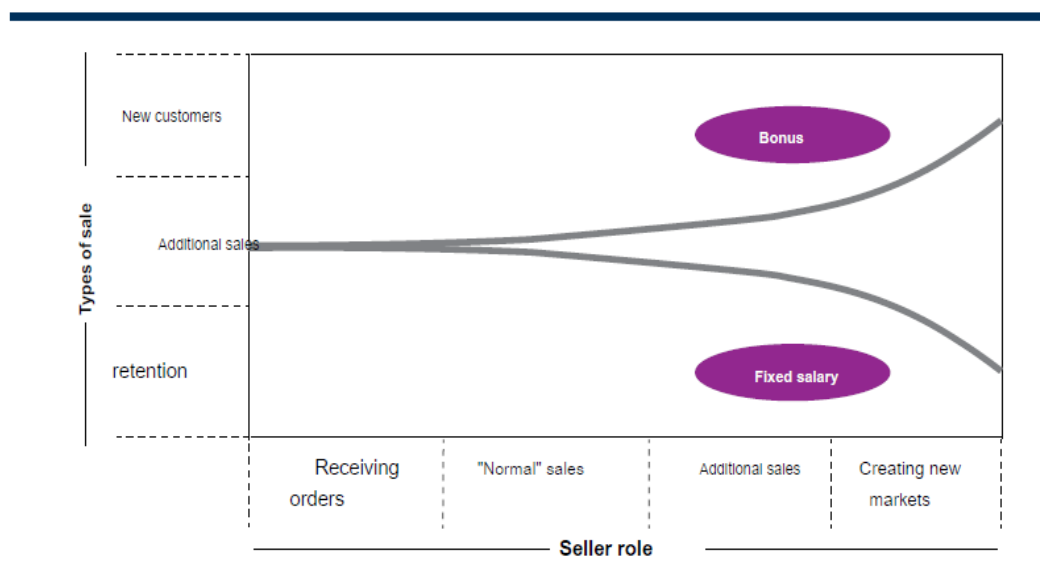
- Customer satisfaction, increased sales to existing customers, penetration, customer retention, customer complaints, direct response, customized solutions, new customers and markets

Performance pay for sellers

Performance pay schemes that encourage vendors to strive for higher sales are notoriously efficient.

Systems that have a greater focus on cost control, can not work as intended. They are not motivating for the sellers, experience. The increased cost of additional sales must of course be included in the measurement criteria, but not as it hinders to make an extra effort.

FIG. 7



Performance pay schemes for vendors to be so closely linked to achievements as possible and encourage to achieve even better results. One way to look at the potential reward options, see the illustration in FIG. 7th

As shown, earnings increasing with increasing sales.

In addition, consider what the relationship between fixed and variable pay should be performance-related pay scheme - depending on the seller's part.

FIG. 7 shows the relationship between the seller's role and types of sales. FIG. 8 expresses that the bonus increases relative to the fixed salary in line with that vendor's role becomes more difficult and more complicated.

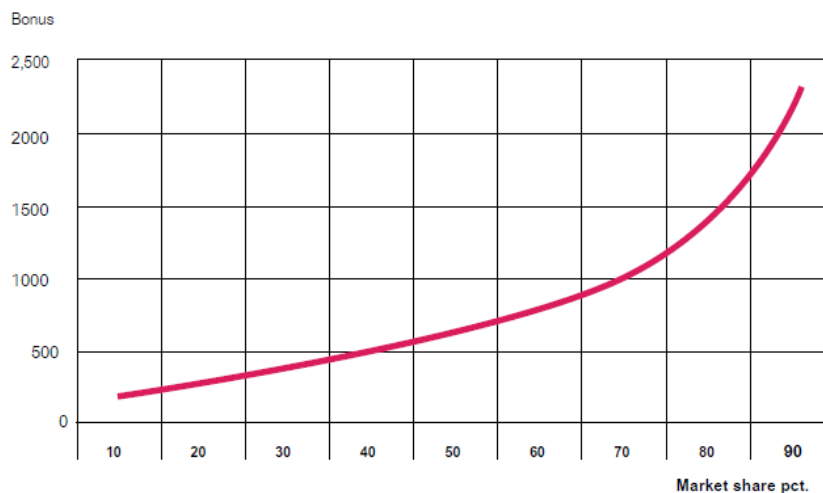
Performance pay for customer service

The intensified competition is customer service for many companies has been of central importance. Therefore, attention is also much to continually improve customer service.

Customers are frequently asked to express their satisfaction with the service they received while companies showdown telephone response times, delivery times etc.

In principle, all these goals be the subject of a reward system. If periodically taking measurements of customer satisfaction, there is a basis to establish a performance pay scheme based on current payments.

FIG. 8



Design of performance pay plans

Schematically, each step in the development of a performance-related system seen from Fig. 9th

performance

The key to designing a performance pay scheme is to have knowledge of:

- What results is critical to business development
- What behavior among employees you want to motivate

RBR can support both desired outcomes and behaviors.

Effective bonus is dependent on the measurement criteria has a context:

- To the business goals
- For the factors which affect productivity
- For what creates value in the company

To motivate for better results have to be demanded by selecting criteria. The criteria may be:

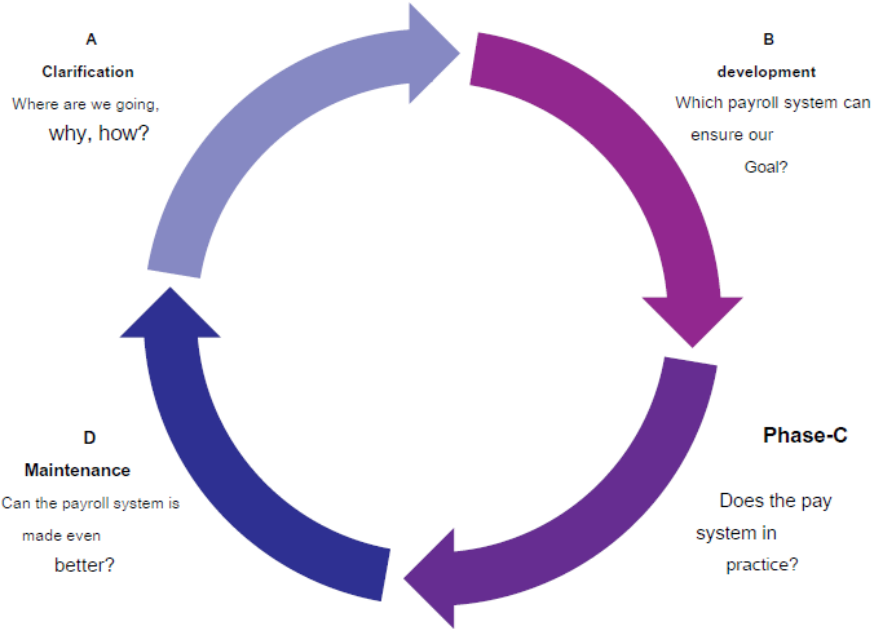
- Relevant for the company's goals
- Understandable for all
- Possible to adjust and adapt in changing environment
- Possible to measure or assess frequently
- Economically profitable for the company and employees

Local agreement

Changes in the agreed salary, most perceive as significant changes in the employment relationship, therefore it is necessary to examine the employment rules for different categories of staff when you want to introduce performance pay. See Collective Agreement.

Whether it comes to individual or group-based performance pay, this is based on an agreement - individual or collective. The agreement is necessary so that the individual or collective must accept that the pay varies with results obtained.

FIG. 9



Often it is directly a collective agreement requirements for the development of an agreement.

By drawing up contracts or local agreement, it is necessary to describe the purpose of establishing the agreement. It is natural to describe the technique of performance pay scheme, and finally it is necessary to describe how the agreement may be terminated, as well as remuneration basis exists after the possible cancellations.

Evaluation and monitoring

For that performance pay can be actively used, it must be able to adapt the company objectives.

This means that the criteria must be replaced and standard basis adjusted for example, because of:

- Investments in new technology
- New methods and new procedures

The company must continuously adjust the basis for the correction of standard time basis up or down, as new initiatives in the form of changing technology and / or methods are introduced. It is not appropriate to correct all the time, and in many situations it may make sense to consider it a bit like swings and roundabouts. Minimum once a year should be the basis for performance-critical look through and adapted to the real and important issues.

1 * Examples can be downloaded at di.dk and co-industri.dk

Advantages and disadvantages of RBR

The general advantages and disadvantages associated with the use of performance pay schemes are:

- **A properly composed performance pay system is a win-win situation for both employees and the company.** Employees have the option of improved earnings and the company improve its bottom line.
- **Both management and employees focus on the selected parameters and financial performance.** It will be a challenge for everyone to meet the targets and moving the bar toward improved target.
- **Employees want norm basis corrected because something unexpected has negative impact on earnings.**
The bar is located off of historical data also contain such influences, so it is already catered for.
- **Poorly designed performance plans and poor follow-up on results obtained disincentive and payroll system may die.** Reload performance pay system so it is timely and viable again.

Council by establishing performance pay plans

Before your company decides to introduce performance-related, you should:

- Consider the parameters that are most important to your company and customers and which can be influenced by the employees.
- Assess the expected economic effect that may be associated with the introduction of a performance pay system for companies and employees.

If you mainly answered yes to the following questions, your business is ready to performance pay:

- Does your company have the energy and effort to effect change?
- Is performance pay in accordance with your company's culture?
- Does your company have the necessary human and technical capacity to support performance pay schemes?
- Can your company clearly define what will motivate employees?
- Can you clearly define what your business will achieve using performance pay?

After the decision on the introduction of performance pay is taken, you should:

- Ensure that management and employees is set to change. Changes in the way employees are remunerated often involves a number of challenges for management. The culture of the company may be significantly affected.
- Ensure that the company can handle the intentions of a performance scheme and provide the necessary information to employees.
- Support the delegation of responsibility. A key to success is that each employee or group take responsibility and actively participate in the development.
- Thinking through the connection between the individual staff or each group's performance and productivity of the development and the company's overall performance. You risk paying the salaries, although overall the company is no basis for it.
- Review and update the RBR example. Once a year, so it is up to date.



Løntermometer

Optimum tool to keep track of your payroll system

As a tool for the introduction of performance-related offers DI and CO-industry businesses to ascertain level of satisfaction among management and employees about their current payroll system.

Løntermometeret be seen as a maintenance tool, a necessary tool if the company will have an up to date payroll system.

Here it is possible to get an analysis of managers 'and employees' responses to questions about the current pay system and want for a future payroll system.

If the company is experiencing problems in one or more of these areas will likely be able to optimize the company's payroll system. Undertakings in DI and union representatives who follow the agreement with COindu streak, can register as users of Lønsy system at: løntermometer.dk. Access requires the name and email of a manager and an employee.

The purpose of løntermometeret is to maintain the company's payroll system, so that it always works optimally. It is important to ensure that the payroll system is stranded because of errors and misunderstandings that could have been nipped in the bud. Therefore, it pays annually to make a measurement of how the pay system works.

The measurement focuses on the factors that are most important to the pay the influence of employee satisfaction and motivation. In the case of:

- Information about important decisions about daily operations.
- The employees' opportunities to develop.
- Scheduling of the daily operations.
- Cooperation between the general managers and employees.
- Acceptance of the wage distribution.
- Confidence in the daily managers' assessment of employees by related pay.
- Private and leader's support for the creation of results of performance pay.
- Confidence in payroll Committee.

It is important that the company is ready to take the consequences. When the company asking for employees' sense, expecting employees also that the company is doing something about the problems that might be. might prove to be.

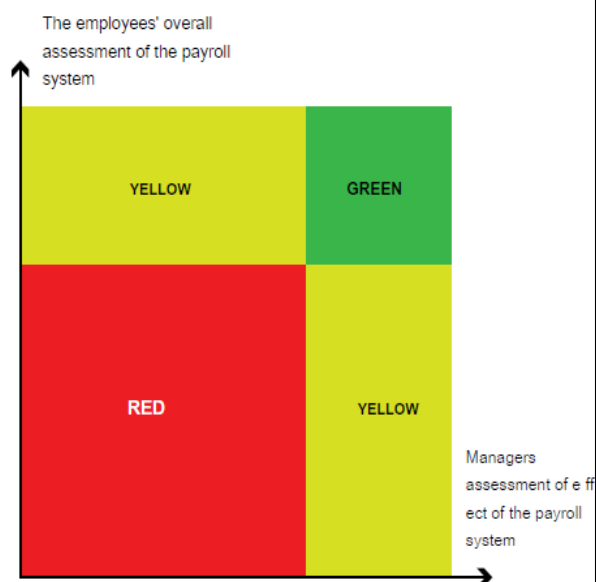
Employees and managers in the company fills each a questionnaire either on paper or electronically. See demo on www.løntermometer.dk. When everyone has the answer, you pay system, the committee analyzes and additions directly in løntermometeret. Løntermometeret allows to implement the same measurement several years in succession and monitor progress over time. In this way, the company carefully document the effects of working with payroll systems.

Do workers have a positive view of the wage system, and there is also the desired effect on productivity and retention of employees, then payroll system well. If løntermometeret shows otherwise, the reasons may be found in the answers to the questions of information, planning, cooperation etc. Be aware that results may vary

with the mood of the company. If there is a good atmosphere, it will typically also make themselves known in the form of a positive assessment of the company's payroll system.

Pay systems that are in the red zone, is at risk. They are in the yellow zone, there are no serious problems, but the pay system can be optimized. The pay systems present in the green zone, in optimum condition.

Assessment with Løntermometer



Where do we go from here?

DI and Industrial Employees are happy to provide advice outside the company. Contact DI or CO industry to learn more about opportunities or to arrange a meeting.

DI Tel. 3377 3377
 CO-industry Tel. 3363 8000

The organizations have detailed methodological guidelines for PlusLøn respectively for workers and employees. Furthermore, there is printed a number of examples of how pay systems might look like in practice. The materials can be ordered from DI or CO industry.

examples

example A

Performance-based on the extended productivity concept

In this example, the employees have been divided into five income groups. Groups is of such size that individual employees can relate to the results obtained. The allocation is also carried out in such a way that it takes into account the optimization of the performance creation. Furthermore taken of overall production and process conditions, prevailing cooperation patterns, current work organization and a possible data capture of results:

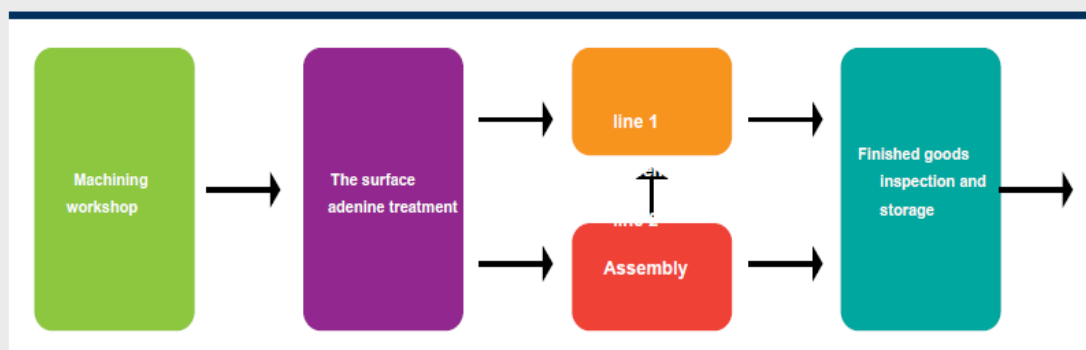
Selection and definition of performance factors

Based on the company's overall strategies and targets selected the result of factors that could contribute to achieving the objectives set.

In this example is the following result factors which will apply to all income groups: 1. Compliance with delivery 2 Quality

In addition to financial incentives, compliance with delivery and quality included to improve cooperation results between the groups. (There will be optimized on the factors that will benefit other groups to benefit further along in the process).

In order to continuously update and adapt the payroll system taken performance factors and goals to be reviewed annually. It will be possible to replace or remove worn-out performance factors. The goals also updated once a year.



mechanical workshop

In the following, the example is limited to only the mechanical workshop where the following factors are determined. Factor 1: The Productivity Factor 2: Material Spill Factor 3: Quality

For each of the four factors will include a description of the purpose and a clear definition. Also determined current level of performance and performance to be provided as a starting point (standard performance). Finally determined objectives to be achieved through an extra effort.

Factor 4: Delivery Compliance

The figure shows the possible result of factors for the respective groups result:



Factor 1 - Productivity

Purpose: To reduce labor costs. unit produced.

Definition

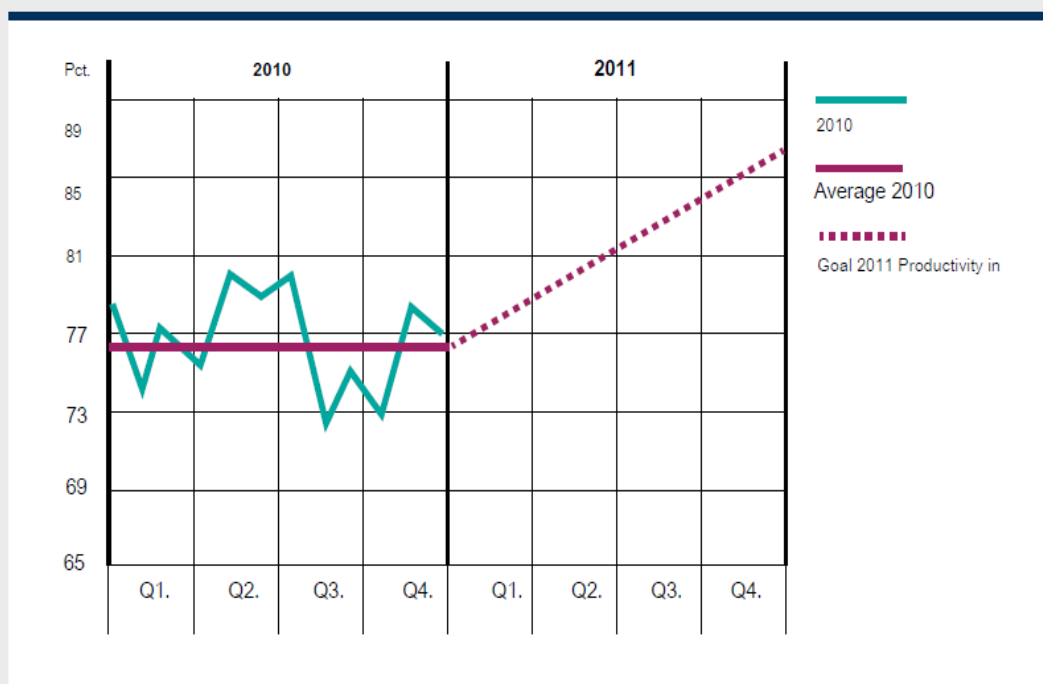
$$\text{productivity} = \frac{\text{production measured in the period} \times 100}{\text{produced standard time} \times \text{Overall time period}}$$

- the period of production is the sum of the standardized time assigned for the production
- the total period of time is the result of the group total stamped working hours come-and-go-indstemplinger

The graph below shows how the machine workshop's productivity has developed in 2010.

A negotiation has established that the starting point (standard benefit) for income creation is 76 per cent., And the department's productivity is 88 per cent. This would be reached before the end of 2011.

Dimensions and standard output is transferred to the table on page 50th



Factor 2 - Waste Material

Purpose: To ensure the best use of raw materials and production equipment and minimizing hernia, the waste form performance factor for the machine shop.

Definition

a waste period measured in $\text{kg} \times 100$

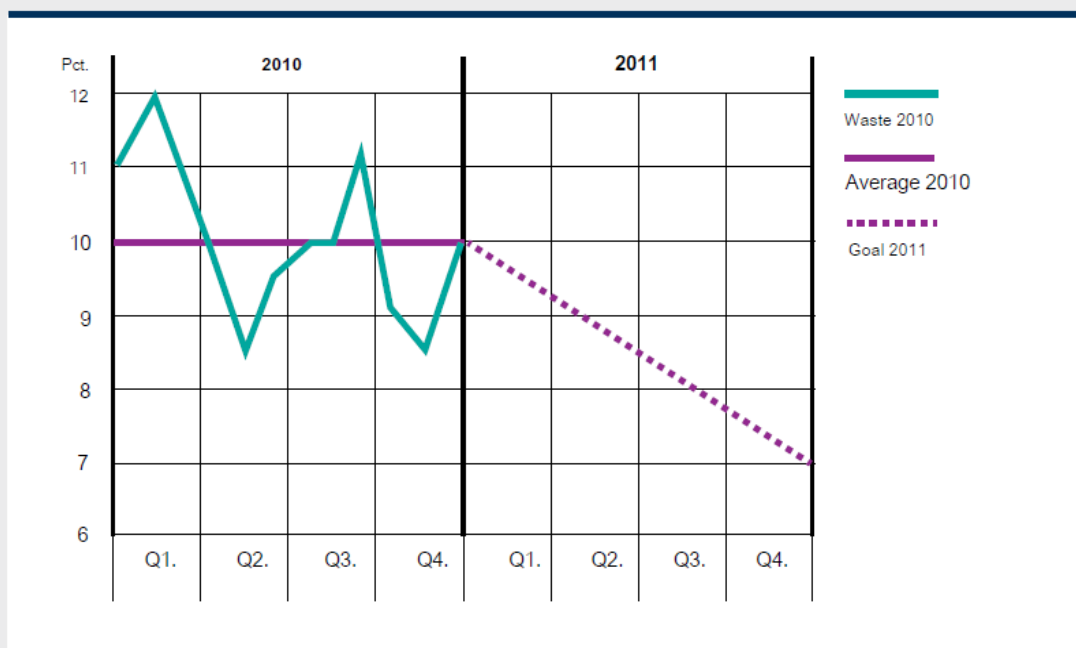
 $\text{Waste of material} = \frac{\text{the weight of the finished parts}}{\text{the weight of the finished parts}}$

- the period wastage is calculated as the number of kilos of iron waste, moving to scrap container. On the truck is fitted with load cells
- wherein the weight of the finished parts is calculated as the sum of the applied weight of the drawings

The graph below shows how the waste from the machine shop has evolved in 2010.

The starting point (standard benefit) for income creation is set at 10.0 per cent., And the department's goals for waste is 7.0 per cent. This would be reached before the end of 2011.

Dimensions and standard output is transferred to the table on page 50th



Factor 3 - Quality

Purpose: To ensure compliance with company and customer quality requirements and to work for the development of an ever higher quality.

- where complaints period is the sum of the costs incurred in a period due to remedies for quality defects

- wherein the reaction period is the sum of the invoiced

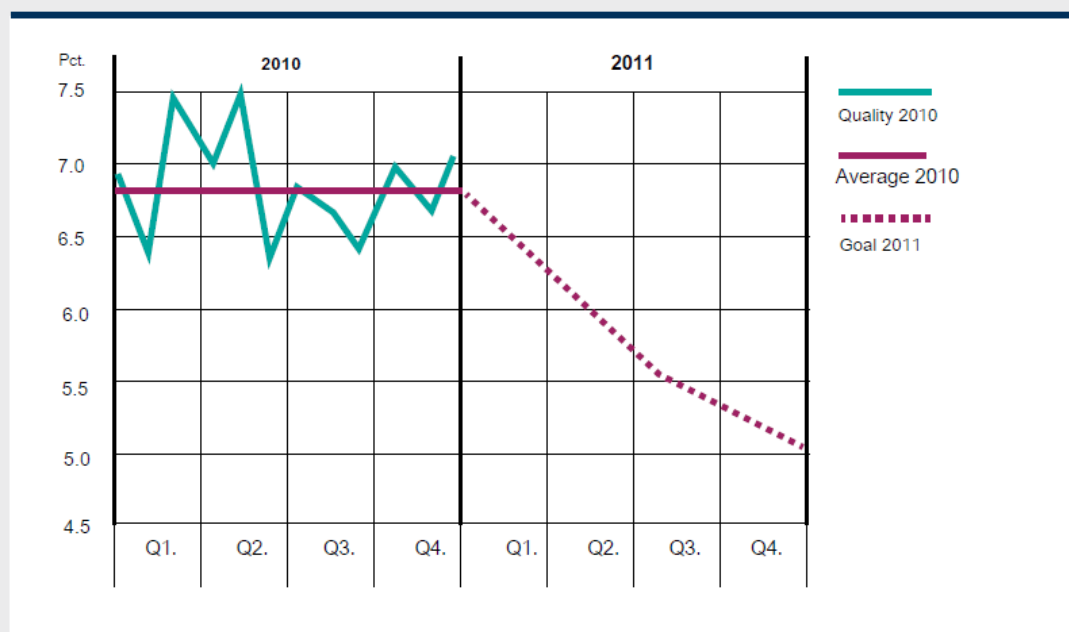
Definition

$$\text{quality} = \frac{\text{period claims} \times 100}{\text{revenue for the period}}$$

The graph below shows how the quality of the company has developed in 2010.

A negotiation has established that the starting point (standard benefit) for income creation is 6.9 per cent., And the department's goals for quality 5.0 per cent. This would be reached before the end of 2011.

Dimensions and standard output is transferred to the table on page 50th



Factor 4 - Delivery Compliance

Purpose: To ensure customer time delivery and to strengthen compliance with delivery times result between the groups.

Definition

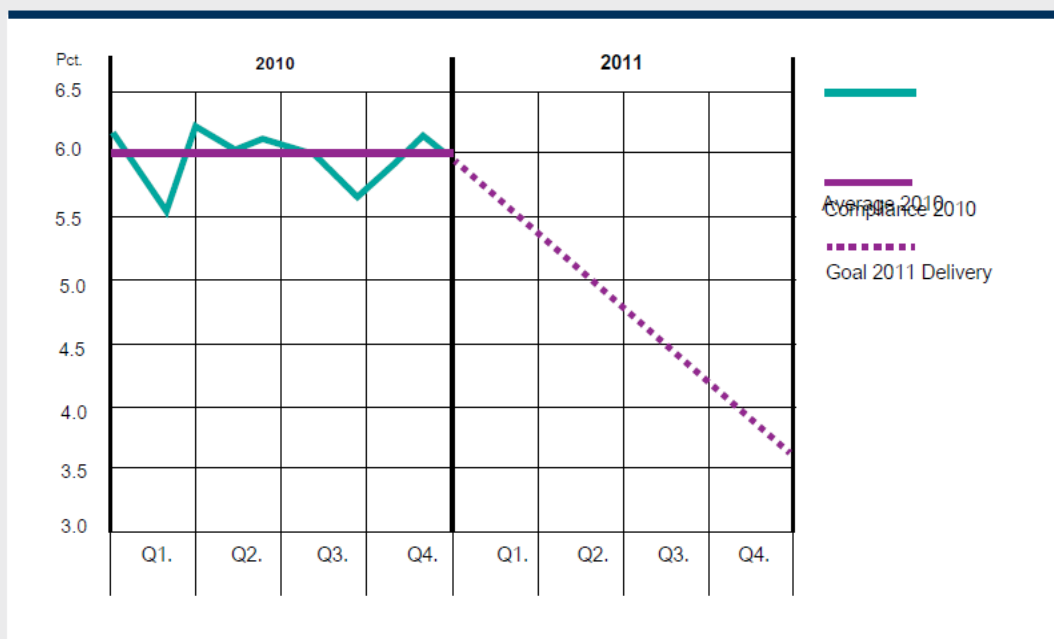
$$\text{Delivery Time compliance} = \frac{\text{number of delayed orders} \times 100}{\text{number of orders in total}}$$

- where the number of delayed orders is the sum of the orders exceed production plan delivery for group
- the number of orders is the sum of production orders delivered on time

The graph below shows how the delivery observance has evolved in the machine shop in 2010.

A negotiation has established that the starting point (standard benefit) for income creation is 6.0 per cent., And the department's goals for delivery compliance is 3.0 per cent. This would be reached before the end of 2011.

Dimensions and standard output is transferred to the table on page 50th



Payment basis and weighting

The maximum achievable performance-fixed for example to 20.00 kr./hour by 100 per cent. goal achievement, providing a factor of 2 points ear, as per the following table.

Max. score	1000 points
Kr. per. point	20,00 / 1000 = 0,02 kr.

The following table's emphasis on performance factors and payment factor is transferred to the table on page 50th

The relative importance of each factor is conferred, are listed under "weighting".

Factor no.	Text	weighting	Max. kr./t
1	Productivity	50 per cent.	10.00
2	material Waste	15 per cent.	3.00
3	Quality	15 per cent.	3.00
4	delivery Compliance	20 per cent.	4.00

Schedule for the calculation of points and performance pay

With, for example, a period of results as noted marked yellow, yields the following performance-calculation:

Productivity:

80.5 per cent. 3 corresponds to the common scale and a weight of 50 per cent. gives 150 points

Waste:

8.2 per cent. 6 corresponds to the common scale and a weight of 15 per cent. gives 90 points

Quality:

6.0 per cent. 5 corresponds to the common scale and a weight of 15 per cent. gives 75 points

Delivery time:

4.8 per cent. 4 corresponds to the common scale and a weight of 20 per cent. gives 80 points

Profit for the period for a total of 395 points à 2 pennies = kr. 7.90 per. worked.

Productivity percentage.	Waste percentage.	Quality percentage.	Delivery Time percentage.	Point
89.0	7.0	5.0	3.0	Goal 10
88.0	7.3	5.2	3.3	9
87.0	7.6	5.4	3.6	8
86.0	7.9	5.6	3.9	7
85.0	8.2	5.8	4.2	6
83.5	8.5	6.0	4.5	5
82.0	8.8	6.2	4.8	4
80.5	9.1	6.4	5.1	3
79.0	9.4	6.6	5.4	2
77.5	9.7	6.8	5.7	1
76.0	10.0	7.0	6.0	Basis 0
75.0	10.3	7.2	6.3	1
74.0	10.6	7.4	6.6	2
73.0	10.9	7.6	6.9	3
72.0	11.2	7.8	7.2	4
71.0	11.5	8.0	7.5	5
3	6	5	4	score
50	15	15	20	weighting
150	90	75	80	Point x weight
Net income (credits)				395
Payment Factor (kr. Per. Points)				0.02
Net RBR (kr.)				7.90

example C

Performance pay scheme based on productivity and profitability for the whole company

principles

Performance pay of each employee depends on:

- all departments achieved per. month

plus

- the company's economic profit per. month

Course of action

1 Each department sets goals for production
 tivitetsudviklingen which improves business
 economics 2 The individual fund share

of the results is weighted in relation to each
 other

3 are the company profit is calculated in
 relative to the desired profits 4 Performance
 pay for each employee
 calculated

Re 1. productivity ¹

For each department providing various criteria related to
 productivity:

The production department:

- units produced
- quality
- waste
- delivery time

Sales Department:

- Actual Sales / budgeted sales
- actual selling price / sales price calculated
- actual costs / budgeted costs

Economy / loss:

- delivery of monthly reports
- average credit
- actual costs / budgeted costs

Product development:

- obtained margin / budgeted margin
- new patents / expected number of patents
- actual costs / budgeted costs
- projects on time / completed projects

¹ For each department establishes a scheme for calculating
 of points - as in Example A.

1. Overall productivity performance for the entire company

Department	Weight percent.	Result	Point (w x result)
Production	40	600	240
Sales	20	650	130
Economy / loss	10	500	50
Product development	30	400	120
Total			540

2. Economic result

Surplus	1.8 mill. kr.
Required profit before payment of performance pay	1.4 mill. kr.
Basis for RBR	400,000 kr.
Maximum profit share to the employees: 35 per cent.	140,000 kr.

3. Performance-per. employee

Performance-total: 140,000 kr. X	540-300 (norm)	= 48,000
	700 (possibly profit)	

Performance-per. employee:	48,000	= 1500 kr.
	32 people	

1300 points are standard. The maximum achieved 1000 points per. department, ie that the profit potential is 700 points.

example D

Profit Sharing Scheme

Example of the local agreement

This scheme is an offer for the company's employees and is given by the Company independently of labor agreements. The scheme is in principle approved by the General Assembly, which has left it to the Board of Directors and to set guidelines for the initiation, cessation, content and interpretation.

§ 1

The purpose of the profit sharing scheme is to motivate employees to contribute to the company's continued operation through enhanced cooperation and efficiency.

§ 2

In excess, defined below, paid part of that to the employees by the given below guidelines.

§ 3

BONUS / profit-sharing scheme covers all employees, who have six months of service in the company. Full bonus is reached after 18 months of employment.

For the following employee groups, the following applies:

- Young workers under 18 regardless of function and / or employment status will be 30 per cent. the full bonus
- Employees employed part - calculated over the entire financial year receive a bonus in relation to the earned hours
- Employees employed with all or part public subsidies or engaged in any form of rehabilitation gets bonus for the company's labor costs measured throughout the year
- Employees who resign during the financial year are eligible for bonus prorated for the financial year

§ 4

Payment takes place directly after the Annual General Meeting.

§ 5

The basis for calculating the bonus is the company's audited financial statements, prepared in accordance with the Annual Accounts Act.

§ 6 Bonus appears as follows:

- Bonus amount to a total X per cent. for the year, calculated as follows:
 - Earnings before interest and tax and before financial dispostioner
 - Reduced with a return on equity
 - As well as adjusted for extraordinary items
- Return on equity stood yy per cent. and calculated on equity, beginning of year
- Adjustment for extraordinary items decided by the Board

Bonus distributed then prorated to each bonus eligible employee.

§ 7

Interpretation of the bonus scheme made by the board and management.

§ 8

The scheme is one year and can be canceled with two months notice to the end of a month prior to the start of the year.

§ 9

The Company undertakes quarterly informing employees with a view to whether earnings are expected to result in triggering the bonus.

Nyby, xx. month 201Y For the company



example E

cost reduction

These simple models can be used in all industries, both large and small companies.

Business need here is to get the cost reduced. The company and its employees share the prize equally.

example 1

Reducing costs	
Sales	240,000 kr.
estimated costs	85,000 kr.
current cost	70,000 kr.
bonus Pool	15,000 kr.
	(85,000 to 70,000)
The company's share of 50 per cent.	7,500 kr.
The employees' share of 50 per cent.	7,500 kr.

example 2

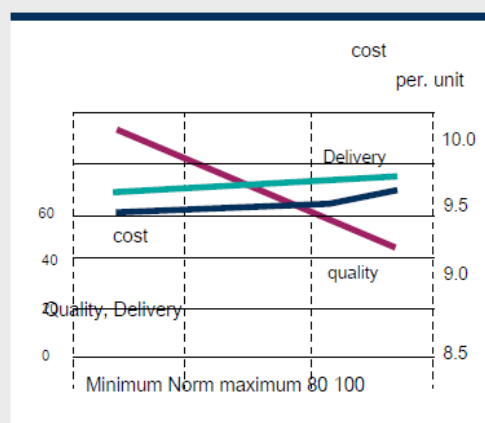
Reduction of costs for electricity, water and heating			
(Kr).	Budget	realized	savings
El	5000000	4800000	200,000
Water	1000000	950000	50,000
Heat	750000	775000	25,000
Total	6750000	6525000	225000
The company's share of 65 per cent.			146250
The employees' share of 35 per cent.			78750

example F

Improvement in productivity, quality and customer service

The company in question have difficulty coping with price competition. The company needs to improve productivity, quality and customer service (delivery). The group measured in terms of the following metrics:

- Production
- Quality
- Delivery of measurement criteria - minimum, standard and maximum - are shown in the table below.



As stated, the goal is that the cost per. unit reduced and that both quality and delivery compliance improved.

- Achieving the targets of minimum levels of all three criteria triggers a bonus of 1 per cent. of salary.
- Achieving the goals of the standard level for all three criteria triggers a bonus of 2.5 per cent. of salary.

- Achieving the goals of maximum levels for all three criteria triggers a bonus of 5 per cent. of salary.
- Achieving cost / unit of minimum quality standards and delivery compliance to the maximum, triggering a bonus of 2.84 per cent. of salary (0.34 pct. + 0.83 per cent. + 1.67 per cent.)

Performance-related scheme:

	Minimum	norm	Maximum
measurement criteria	Performance Bonus	Performance Bonus	Performance Bonus
Cost per. unit	10.25 kr. 0.34 per cent.	9.80 kr. 0.83 per cent.	9.20 kr. 1.66 per cent.
Quality	79 per cent. 0.33 per cent.	85 per cent. 0.83 per cent.	95 per cent. 1.67 per cent.
Delivery Compliance	90 per cent. 0.33 per cent.	94 per cent. 0.84 per cent.	97 per cent. 1.67 per cent.
bonus	1.00 per cent.	2.50 per cent.	5.00 per cent.

example G

Attainment

The principle of goal achievement is that: If the group meets its targets, they get paid more. All calculations are done in advance and built into the system.

Attainment allows direct integrating salaries with business plans. Targets already exist in the business plans, the target achievement through form the basis of a variable reward.

In the following table are shown, the objectives to be reached before paying performance-related, and how much is RBR.

Results salary is paid by approved accounts for the year.

Business goals	Performance-per. employee
Customer complaints under 1 per cent.	1,200 kr.
200 new customers this year	800 kr.
Market share of 65 per cent.	500 kr.
Absence of less than 2.5 per cent. per. month	500 kr.
Productivity - 50 units per. hour (only hourly workers)	5 kr. Per. hour

example H

Performance pay for sellers

COPY A / S sells forms and performs copy service for the professions (law firms, accountancy etc.). The company has multiple sellers and each has their sales area. In recent times the company's profits every year diminished. The company also maintained its reward system. The reward depends on the seller's turnover, and of course selling the vendors products that most easily can sell. These products do not have the highest profit margin. The other products, by contrast, a very high profit margin.

The management team analyze the situation and make the following proposal for a new reward system for their sales staff: 1 In the strategic sales plan establishes the

future sales size, profit and other significant sales targets. New business areas or new product also determined

2 The minimum and maximum dimensions possible for sales down

3 The fixed basic wage based individual at seller's market and seller's skills

4 Norm basis of sales determined on based on studies and its ability to reward and cost of sales. The minimum and the maximum of the reward is determined based on the total minimum and maximum profit, sales growth, new sales areas and other objects 5 company prepares a sliding

scale of targets for individual reward, from lowest estimated sales and targets for highest sales and reward 6 reward system continuously evaluated and

communicated to the vendors

Example:

- A. The expected maximum dimensions are 12 new customers and a profit of kr. 500,000 based on sales of kr. 5,000,000
- B. Minimum Sales are six new customers and a profit of kr. 200,000
- C. There are four vendors whose average fixed salary is kr. 300,000 per. per person. year
- D. At a profit of kr. 500,000 before bonus will COPY A / S pay kr. 120,000 in reward. There will not be paid a bonus if the minimum targets are not met. Achieved the minimum targets will be paid a bonus totaling kr. 30,000
- E. Sales groups' annual targets are:

Surplus	Group Bonus
100000	0
200,000	30,000
300000	60,000
400000	90,000
500000	120000

Wage policy for sellers

COPY A / S 'philosophy is to provide sellers with a total compensation package that is among the best on the market. The company believes that the desire to be the leader in this industry is best achieved through highly motivated and trained sales staff.

To achieve this will COPY A / S to pay the personal individual salary, benefits and rewards that enables sellers can increase their total compensation package significantly.

Sales Target:

- More profitable orders
- Increased revenue from existing customers
- New customers
- Increased market share
- Increased coverage

Sellers' pay package is built around:

- Real wages
- Bonus
- Employee benefits
- Special rewards

The fixed individual wages are intended to ensure a steady income and to reflect sellers' individual experiences and competencies within their sales territory.

Sellers' performance will be assessed annually based on:

- Number of orders
- Customer Service
- Problem solving
- Communication
- Cooperation

Wage increases will be determined on the basis of performance and current wage levels.

example I

Performance-service personnel

general section

This is an example of a payroll agreement between a company and its employees. Pay system is described in detail below. The company pays employees

- **Base Salary, negotiated individually**
- **RBR calculated department by department** from negotiated criteria as described in Annex 1
- **Performance-related individual, from negotiated criteria** as described in Annex 2

The purpose of this performance pay agreement is to follow the company's mission and vision. There is therefore established the following measurable factors:

1. Productivity. Goals are increased productivity and utilization of resources
2. Quality. Goals are to remain high and improved quality
3. Cooperation. Goals are good cooperation
4. Costs. Goals are more focused on cost / cost reduction
5. Customer Satisfaction. Goals are a better customer service and satisfaction as well as focus on additional sales

Employees are hired to perform a service technician work and work based from home.

- Working hours starting 30 minutes after driving from home or if arrival is earlier, at the start time of a customer.
- Working ends at the completion of the work at customer.

The employee is equipped with

- Service car equipped with appropriate tools and spare parts
- PDA and cell phone
- Relevant technical aids

Employees are hired by the Industrial Agreement.



Annex 1

Salary-service personnel - department by department

Performance-section wise calculation. Performance pay is calculated per. quarter. Performance pay is negotiated to **max. 18, -kr / hr**

For employees in Section A the following is agreed RBR scheme based on the following factors:

1. Attendance
2. The profitability in terms of the department's margin II
3. Upsell

These factors are weighted as follows: Re first

	40%	max. 7.20 kr
At a second	30%	max. 5.40 kr
At a third	30%	max. 5.40 kr

Re 1. Attendance Percentage calculated according to the following schedule:

Attendance Percentage (percent.)	96	97	98	99	100
RBR (pct.)	25	50	75	85	100

Ad 2. Performance pay is calculated according to the following schedule:

Gross margin (per cent.)	105	110	115	120	125
RBR (pct.)	25	50	75	85	100

Re 3. Performance pay for additional sales calculated according to the following schedule:

Additional sales (1,000 kr.)	200	201400	401600	601800	> 800
RBR (pct.)	25	50	75	85	100

Calculation example: Ad first

Measured to be	96.5 per cent.	=>	7.20 kr. X	= 0.25	1,80 kr.	
At a second	calculated for	111 per cent.	=>	5.40 kr. X	= 0.50	2.70 kr.
At a third	calculated for	350,000 kr	=>	5.40 kr. X	= 0.50	2.70 kr.
A total of RBR for the group (1.80 + 2.70 + 2.70) kr.				=	7.20 kr./hour	

Appendix 2

Salary-service personnel - individually

Performance pay is negotiated for max. **30, -kr / hr**

RBR individual part. Performance pay is calculated per. quarter.

The purpose of this performance pay agreement is to follow the company's mission and vision.

There is therefore established the following measurable factors:

- First increased productivity and utilization of resourceme
- 2nd continued high and improved quality
3. Good cooperation
4. costs
5. customer and service awareness

These factors are weighted as follows: Re first

	30%	max. 9, -kr
At a second	20%	max. 6, -kr
At a third	20%	max. 6, -kr
At a fourth	20%	max. 6, -kr
At a fifth	10%	max. 3, -kr

Employees are hired to perform service work and start working from home. The employee is equipped with

- Service car, equipped with appropriate tools and spare parts
- PDA and cell phone
- required education

Re 1. The productivity is measured according to the following formula:

Number of service tasks measured in standard time / elapsed time

- Where the work is the number of completed tasks in the pay period
- Where standard times for each task is known and is shown in Annex X
- Where the elapsed time is the total hours worked, paid wages for

norm	Elapsed time	Productivity
	100 per cent.	105 per cent.
	110 per cent.	115 per cent.
	120 per cent.	125 per cent.
	0 kr.	2,00 kr. 4,00 kr. 6,00 kr. 8,00 kr. 9,00 kr.

*) Productivity = ((standard time - time consumed) * 100 / standard time) in%

Ad 2. The quality is measured in the number of complaints in the period

- No complaints equals 100% bonus 6, -kr
- One and two complaints gives 50% bonus 3, -kr
- Three and more complaints give no bonus 0, -kr

Re 3. The cooperation is measured by, how many offers of assistance and / or contacts for help to colleagues that are given in the period. There must be a bulletproof method for recording assistancerne.

The goal is that the installer instead of driving home after last scheduled task, and if there is unutilized working back, offering support to a colleague or to the company's employee that manages employee scheduling, or solves a problem that the installer itself has sold . Performance pay is calculated from the following:

- 1-3 assists gives 25% of max 1.50 kr
- 4-10 assists gives 50% of max 3.00 kr
- 11-16 assists gives 75% of max 4.50 kr
- 17-> assistances provides 100% of max 6.00 kr

Ad 4. Performance pay for costs measured fuel consumption per. km, vtk.omk. by replacement investment, damage to the car, mobiltelefonomk.

Table for the calculation of cost for the employee				
fuel consumption	10-12 km / l	12-14 km / l	14-16 km / l	> 16 km / l
	25 per cent.	50 per cent.	75 per cent.	100 per cent.
utility costs	<2.000 pa DKK	2-3000 pa DKK	3-4000 pa DKK	> 4,000 pa DKK
	100 per cent.	75 per cent.	50 per cent.	25 per cent.
number of injuries	0 years	1 year	2 years	>2ars
	100 per cent.	66 per cent.	33 per cent.	0 per cent.
Mobiltf.omkostninger	0-2000 pa DKK	2-3000 pa DKK	3-4000 pa DKK	> 4,000 pa DKK
	100 per cent.	66 per cent.	33 per cent.	0 per cent.

Ad 5. Customer service and satisfaction is based on customer feedback.

Performance pay is calculated based on the following:

- 100% - 95% satisfaction gives 100% bonus 3.00 kr
- 94.99% - 90% satisfaction gives 50% bonus 1.50 kr
- 0 to 89.99% satisfaction gives 0% bonus 0, -kr

Specific example of the calculation of performance:-

Performance pay has previously written, negotiated to **max. 30, -kr / hr**

It will mean that the technician Niels Nielsen RBR will be as follows: Ad first

- Measured at 117% => 6.00 kr
- At a second no complaints => 6,00kr
- At a third 8 assistances => 3.00 kr
- At a fourth COST:

Fuel	tool Consumption	injuries	Mobiltif.
15 km / l	2500 pa DKK	1 hurt	2000 pa DKK
Profit factor	Profit factor	Profit factor	Profit factor
0.75	0.75	0.66	1

$$\text{RBR} = 6.00 \text{ kr} \times (0,75 \times 0,75 \times 0,66 \times 1) = 2.23 \text{ kr}$$

- At a fifth Satisfaction rate measured at 94% => 1.50 kr

Total RBR for fitter Niels Nielsen (6.00 + 6.00 + 3.00 + 2.23 + 1.50) kr = 18.73 kr / hour

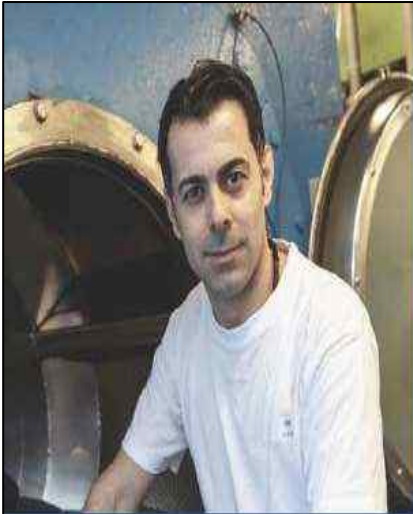
3. O caso dinamarquês: componentes da remuneração

Resumo

No caso dinamarquês a remuneração é composta por quatro partes:

- Basic wage;
- Merit pay;
- Payment by results; e
- Job based pay;

Tal como descrito no documento a seguir.



+PlusLøn

INTRODUCTION

WORK SYSTEMATICALLY WITH THE PAYROLL

– for hourly-paid and salaried employees



Foreword

This folder is a brief introduction to working with the payroll in companies in the industrial sector.

The development of the principles for remuneration is a major and important task in cooperation between employers and employees and the basis is in the industrial sector's collective agreements.

PlusLøn is the name of the framework that is developed by the Confederation of Danish Industry and the Central Organization of Industrial Employees in Denmark. The two organizations have several years of experience with the development of the principles for the determination of wage rates in a vast number of companies - large as well as small.

Draw on our experience and get good advice to work systematically with the payroll or take a look at the company's current principles for remuneration so you are sure that the wage is both fair and motivating.

The labour market is developing rapidly and it places new demands on remuneration and flexibility.

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When seen in the light of general market conditions and the desire to increase productivity, companies may have different needs to acknowledge and reward the employees' performance.

In this booklet, you will have an overview of the many options that exist to tailor the remuneration according to your needs.

Read in brief about the principles on the next couple of pages and read on in the in-depth folders (merit pay, payment by results, Wage Thermometer, etc.) or draw on our wage system consultants for a chat about how you can get started.

May 2018



Claus Jensen
Chairman
Central
Organization of
Industrial



Karsten Dybvad
CEO
Confederation of Danish
Industry

Remuneration is a strong tool to create productivity and esprit-de-corps

People would like to provide a good and thorough performance, but they would also like to be rewarded and acknowledged for it.

Remuneration is a strong tool to motivate the majority of employees. Some also weight other factors in daily life (security, well-being, challenges, etc.). But a well-functioning, fair and modern wage system can motivate all employees in a company - and can also create esprit-de-corps through shared results.

A good wage system will also develop the employees and increase productivity, improve cooperation and create dynamic in the company.

In other words: It is worth your while to have remuneration under control.

With the term "wage system" we do not mean an administrative IT system, but the frameworks and principles behind the company's determination of wage rates.





PlusLøn

PlusLøn could be the framework for the entire company's wage system in companies in the industrial sector.

PlusLøn is a flexible tool that can be adapted to the individual company and can be used for both hourly-paid and salaried employees. If employees are to be rewarded and acknowledged for having special qualifications, taking extra education or delivering special results - all this can be taken into account in the setup of the wage system, all depending on the company's needs.

You complete the framework yourself when you develop the wage system. You adjust it when it needs adjusting and you take its temperature every year so the company always has a fair, current and motivating wage system.





Become wiser about PlusLøn on the next pages where you can see how the system can be tailored to all types of companies.

There are many options to combine the remuneration and weight the various elements according to the company's needs.



The basic wage will always be a part of the wage system as a kind of foundation that can stand alone or be combined with the other wage types (either merit pay, pay by results or job-based pay)

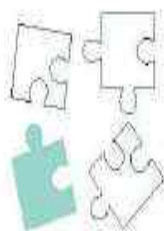
You can also easily imagine a company where all the wage elements are in play together with the basic wage.

ELEMENTS IN PLUSLØN

 <p>MERIT PAY: Merit pay is a pay supplement for qualifications relevant to a job, profession or person. Merit pay is a personal pay supplement and follows the individual employee.</p>	 <p>PAYMENT BY RESULTS: Payment by results can either be individual, group-based or a combination of both. Payment by results is variable, which depends on the results achieved.</p>	 <p>JOB-BASED PAY: Job-based pay is a pay supplement in order to perform a special function or task, possibly for a temporary period.</p>
 <p>BASIC WAGE: Basic wage is remuneration for fundamental job and qualification requirements. The basic wage can be the same for all employees, or it can vary between broad groups.</p>		

TOOLS IN PLUSLØN

 <p>WAGE THERMOMETER: Every year the company should take the temperature of its wage system in order to assess whether it functions as intended.</p>	 <p>WAGE WHEEL: In the course of the year, the company goes through a number of activities, plans and processes that keep the wage system and relevant interested parties updated.</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



Basic wage

Basic wage is the foundation in the wage system. It is remuneration for fundamental job and qualification requirements for a further defined field.

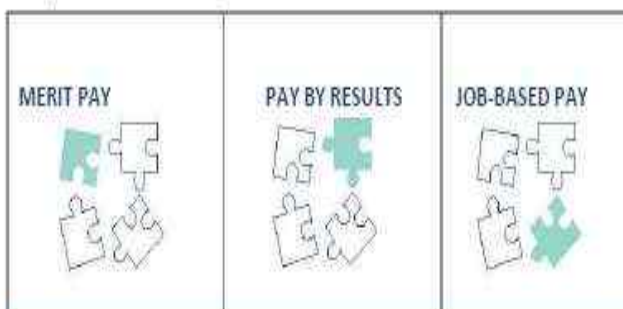
Many companies use a shared basic salary/basic wage.

Depending on the size and complexity of the company, the basic wage can be the same for everyone in an area, the same for

everyone in a specific employee group or the same for all employees throughout the company.

The same basic wage is a good beginning to ensure a superstructure with a wage distribution that matches the company's production and combination of employees.

Moreover, it is an expression of equal treatment.



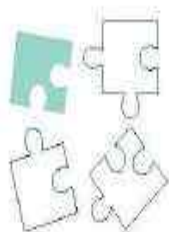
BASIC WAGE: Basic wage is remuneration for fundamental job and qualification requirements. The basic wage can be the same for all employees, or it can vary between broad groups.

All employees are treated the same without concern of gender, education or professional status. This helps to strengthen team work and flexibility.

It also becomes easier to develop clear wage structures and determine the job and profession-related factors that are added to the basic wage.

If you choose the same basic wage for everyone in the company or in a single field, a number of advantages follow - also purely in terms of administration.





Merit pay

Merit pay is a pay supplement that is added to the basic wage where the employee is assessed and rewarded for having or acquiring special qualifications.

The purpose of merit pay is to attract, retain and develop good employees. By drawing attention to the qualifications the company needs, you can encourage current and future employees to improve their qualifications and thus improve the company's conditions to reach its targets.

Each employee will be assessed based on a number of qualifications that are in demand in the company.

The qualifications are categorised into a number of factors or characteristics/attributes that are important to be able to master the job (e.g. a special education, flexibility or ability to cooperate).

The factors can be categorised into three types:

- **Relevant to the job:** Working knowledge, Complexity, Flexibility
- **Relevant to profession:** Theoretical and practical education, Relevant continuing education, Experience and Training
- **Relevant to person:** Ability to cooperate, Initiative, Self-dependence

The company then works out the various job types into a number of levels according to degree of difficulty.

It may be a good idea to gather the job-related and profession-related qualifications into one single overview schema, which hangs in a visible place in the company.

The process then begins in all earnest in the company because now the supervisors must be trained so they can conduct the individual

interviews and assess each employee's qualifications in relation to the qualifications listed in the schema.

It must be very clear to all employees which qualifications are required to achieve a higher assessment.

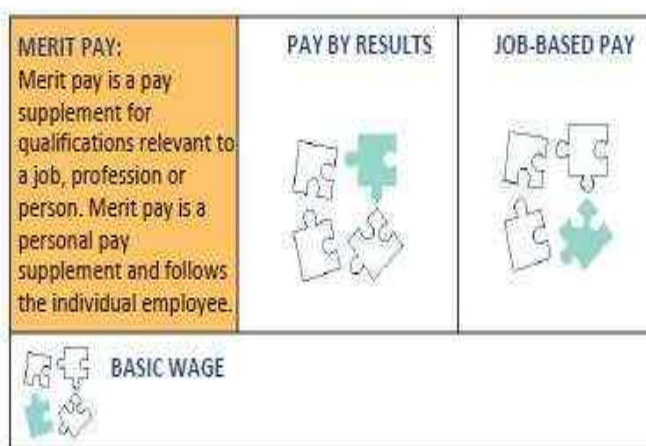
Advantages of merit pay:

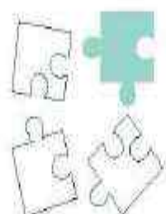
- Each employee is remunerated according to their own qualifications
- Everyone can improve their assessment
- The system is open for dialogue with every single employee
- A fair wage distribution

Disadvantages of merit pay:

- It can be time-demanding to have to set aside time for many interviews.
- In some companies, there may be resistance to change or resistance towards what has been changed wage distribution.

For further information, see the booklet: Merit pay - competencies and conduct.





Pay by results

Pay by results is a management tool for management and a strong means of communication between managers and employees. It motivates both parties to create better results and greater value for the company as it is extra profit that is paid out.

Pay by results is thus payment for a better performance and varies with the achieved, predetermined results, e.g. a business goal or results/production data from a previous/special period.

The company can calculate the pay by results based on:

- Quality goals
- Financial goals
- Quantity goals

To pay wages according to the results can create correlation between the company's

selected business goals and thus improved management and development of the company in line with the results being achieved.

For the employees, pay by results entails greater job satisfaction by way of, e.g. better cooperation to realise the specific goals. Finally, pay by results typically leads to more in remuneration.

Strengthen cooperation and performance with shared remuneration

In many companies, it makes good sense to introduce an individual or collective pay by results.

This may be in companies where new procedures, processes and products are developed or companies that quite specifically want to increase productivity and improve the bottom line. If a group of employees cooperate as opposed to each one performing an isolated task, the value increment will also be improved.

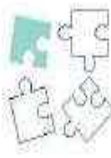
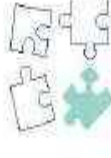

Advantages of pay by results:

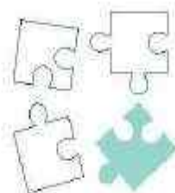
- Employees and management feel solidarity and ownership of the creation of the results
- Minimises waste
- Strengthens esprit-de-corps
- Better results
- Can be introduced quickly and is self-financing

Disadvantages of pay by results:

- Requires ongoing adjustment of the agreement
- Clear agreements on when and how you regulate

For further information, see the booklet:
Pay by results - rewarding and acknowledgement.

<p>MERIT PAY</p> 	<p>PAY BY RESULTS: Pay by results can either be individual, group-based or a combination of both. Pay by results is variable, which depends on the results achieved.</p>	<p>JOB-BASED PAY</p> 
 <p>BASIC WAGE</p>		



JOB-BASED PAY

Job-based pay is a supplement in order to perform a special function or temporary task. Job-based pay is only linked to the task and is thus not a personal pay supplement.

The labour market is constantly developing: this could be in the form of more flexible working hours and shorter periods of employment, but it could also be product development, process optimisation, new systems and more demands for documentation.

The frequent changes on the labour market place greater demands on both companies and employees and this is where job-based pay comes into play as a flexible remuneration element.

The companies must be good at utilising the existing resources and compensate for those competencies that are in demand when introducing new routines. Even though they are not of a general nature and can be rewarded in merit pay.

Some functions require a little more and, therefore, it can be a good idea to pay the employees who can, and will, take on the execution of more demanding tasks - possibly for a period.

If this is about a temporary task, it is not expedient to activate a permanent pay supplement.

Since the job-based pay follows the task and is only paid as long as the employee performs the task, it also discontinues when the task is completed or does not need to be performed anymore.

Thus, job-based pay ensures better consistency between requirements for the execution of the task and the individual employee's supplement payment.

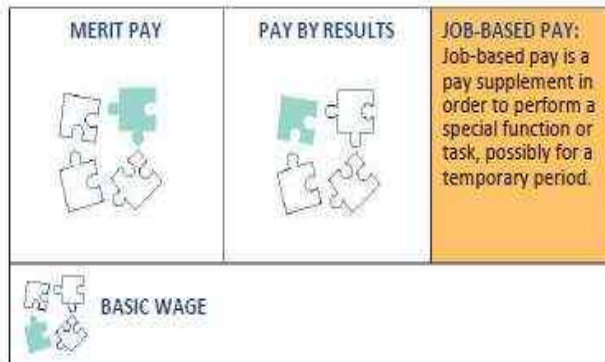
Advantages of job-based pay:

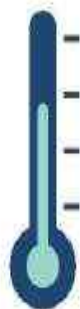
- It attracts employees for specific functions/tasks
- Creates visible evidence that management has focus on a specific field
- The company has exclusively the wage expense while the relevant task is executed
- The company pays for special personal or professional requirements to the employee
- It has an effect from the moment it is introduced.

Disadvantages of job-based pay:

- Job-based pay is more demanding in terms of administration
- There may be a lack of willingness to take on tasks without special function allowance.

For further information about job-based pay see, in particular, the chapter in the merit pay booklet.





Wage Thermometer: Take the temperature of the wage system every year

A wage system is not static by nature, but has to be maintained and adapted so it reflects the company's current situation.

A company should carry out a measuring or a survey every year so employer and employees can indicate whether the wage system functions as intended. The Wage Thermometer from the Confederation of Danish Industry and the Central Organization of Industrial Employees can assist.

The Wage Thermometer is developed in cooperation with more than 50 companies where almost 2,000 managers and employees have contributed with input and facts so other companies have something with which to compare.

To be able to compare with other companies, it is necessary to enter your own data.

The measurements indicate which areas are of the greatest importance to the employees' satisfaction and motivation, e.g.:

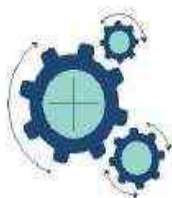
- Information concerning important decisions related to the daily operations
- Possibility to develop
- The quality of the planning of the daily operation
- Cooperation with mid-level management
- Acceptance of wage distribution
- Faith in the qualification assessment
- Faith in the Wage System Committee

Use the Wage Thermometer to become wiser about the level of satisfaction or whether you should adjust the wage system.

If this concerns minor adjustments, the company can take action immediately and thus ensure that the employees feel heard and fairly treated.

Read more in the folder: Wage Thermometer
– maintain your wage system.





Wage Wheel: Keep control of the process

In the course of the year, the company goes through a number of activities, plans and processes that keep the wage system updated. This is done via the Wage Wheel.

A lot can change in the course of a year - on the market and in the labour market and in the company itself. New products, new competitors, new colleagues, new leaders, new education programmes.

Ensuring that the wage system is kept updated is an ongoing process.

Thus, the Wage Wheel ensures that you have control of the wage system - and that you regularly adjust according to the new conditions.

Management, employees and wage system committee, which play an active role here when they are to review a number of set routines and processes.

The Wage Wheel does not automatically follow the calendar year, but may vary from company to company.

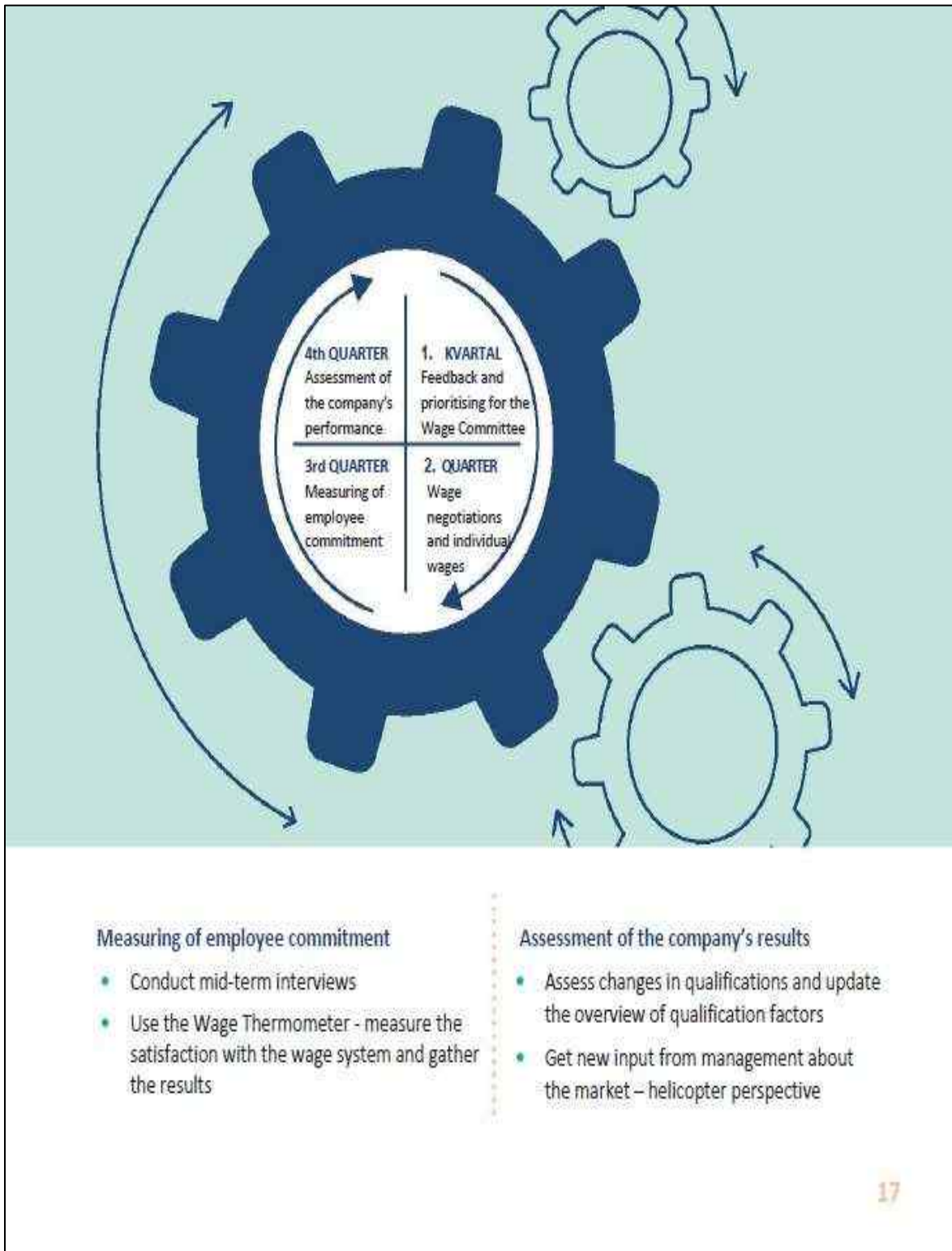
See the four phases - or partial tasks - here:

Feedback and prioritising

- The annual qualifications interview with every single employee
- Registration of results and assessment of all employees
- Training of new and experienced mid-level managers/enthusiastic employees
- Possibly add new members to the Wage System Committee

Wage negotiation and individual wages

- This is where you conduct local wage negotiations in the company and write down your agreements
- Inform employees



How to go further

Wage systems are a cooperation task, which must be developed jointly between employer and employee and shop steward and You have the key to get going with the process.

Regardless of whether you want to establish an entirely new wage system or just want to update the current one, you can perform the preliminary "diagnosis" yourself.

Ask widely in the organisation - e.g. with three to five questions to managers and employees:

Examples of questions to management:

- Does our current wage system support the right goals?
- Which weaknesses/problems does our current system have?
- What do you think our wage system lacks?

Examples of questions to employees:

- Is the wage determination easy to understand and fair?
- Is there cohesion between performance and wages? (For the individual/for groups)
- Is there good dialogue between management and employees?
- What do you think our wage system lacks?

When you have conducted the survey, you should be able to answer these three questions:

1. Why should the company have a new wage system? (purpose)
2. Which value must the wage system ensure the company? (Direction and frameworks)
3. How should it be put into practice? (elements, methods, year wheel, etc.)

The formal decision must, at the outset, be made in the company's Liaison Committee. If you then decide to initiate the process, there is a task in informing the entire organisation that the work with a new wage system is in progress (e.g. that you form a Wage System Committee, that the work will proceed over xx months and that everyone will be informed along the way).

Assistance for the process

If you get stuck or have difficulty answering the three questions, then please draw on the Confederation of Danish Industry and the Central Organization of Industrial Employees in Denmark to move on in the process.

We have comprehensive knowledge of wage systems in many types of companies and we have both advised with the establishment of entirely new wage systems and when it comes to updating an existing system.

We can also give you a sense of how much time and which resources you should set aside for the task.

How long does it take to introduce a new wage system?

Generally, it is slightly faster to introduce pay by results. It can basically be done right away provided you can agree on the criteria.

Merit pay is the long tough haul where we often see greater complexity in the tasks. There may be several levels in each job and often several employees. So it is a more time-demanding process for the company, but a useful investment as the wage system can subsequently be adjusted year after year.

WHAT DO OTHER COMPANIES DO?

It is difficult to say anything precise about which wage system would suit which type of company.

Generally, it applies that the slightly larger companies with many job functions typically choose merit pay, as the system takes into consideration the diversity in the organisation.

Small companies choose pay by results more frequently.

When the market conditions are good, many companies prefer merit pay.

4. Implementando o modelo dinamarquês

+Plusløn



related pay

Salary broken down by skills and behavior

- for workers and employees

Related pay attracts, retains and develops the skilled workers

Working with pay is a large and important task of cooperation between employers and employees, and it obviously takes based on industry agreements.

PlusLøn is a flexible tool to be adapted to each company, whether it is increased productivity, attracting new employees or increased well-being, which is the goal.

Related pay is popular

This booklet is first and foremost about related pay.

Related pay is often preferred in industrial companies because it
- as the name suggests - is able to attract, retain and develop the good and well-qualified employees. Moreover, it is possible to embrace both workers and employees within the same frame.

When a company continuously evaluate employees' skills, it becomes clear what value they add and what pay, it can trigger if you have Community terspurgte qualifications, taking extra training or providing special performance.

Related pay is often chosen by the boom in society when the demand for labor increases.

In this folder you will also find a chapter on Function-that is pay a "temporary task / function".

DI and CO-industry has years of experience developing related pay in many companies - large and small. So pull on our experiences and tips during the entire process of developing wage in the company.



Contents



Highly qualified staff is crucial to the company's competitiveness

Learn why wage setting is an important parameter when productivity and well-being are paramount page 4



The agreements form the basis for the company's wage determination

Wage work is based within the industry and the Collective Agreement. Get also input to a local agreement on business



PlusLøn - Why work systematically with pay?

Brief introduction to PlusLøn and the various elements of wage formation. Both the "new reader" and the more experienced pag



How do you work with related pay

Look, why and how to work with qualifications. We show numerous examples of qualification factors page 12



Take even hole on the important considerations

Questions, diagnosis, clarification - I can even get started on the task by conducting a survey of key stakeholders page 14



Select and combine the rates of pay in PlusLøn

See how the rates of pay can be put together



Salary structures are a signal potential of the company

See some examples of related pay, and employee types page 18



The process is important for the success of your new salary

Get a number of tangible tips to get on with the job. Involve, Inform and get good time in **the important training of middle managers to evaluate talks**

20



Assessment interviews and training of managers

What is the purpose of assessment interviews, and how do you go about it

..... page 23



Lønhjul - kept good track of salary year round

For instructions on how the pay "annual cycle" works, so you keep the payroll system up to date

..... page 26



Løntermometer - take the temperature of the payroll system each year

Satisfaction, dissatisfaction, missing problems - learn more about your challenges

..... page 29



function-based

Remuneration of a particular function or temporary assignment. How can I work with Function-

..... page 30



Forms and examples for inspiration

Read about companies that have achieved good results with their new salary system and what they learned **along the way**

..... page 33



Do you need help getting started?

Pull on the DI and CO-industry throughout the payroll process

64

Highly qualified employees are crucial for the company's competitiveness

To attract, retain and develop employees with the right qualifications and talents is a major challenge for most businesses. Related pay can help solve the problem.

Wage policy and wage determination to promote the goals and sub support the strategies the company is to survive and develop. Wage setting can be seen as one of its major competitive parameters. It can be both productivity and improve well-being.

Therefore, determining the salary one of the most important tasks, and each company must develop pay for their own needs, guidelines and principles.

When determining pay is effective and efficient, the employees' efforts often signal the desired relative to wages, and each party is thus a fair return on their "investment". Employers expect commitment from the employees and support for business goals. Conversely expects its employees adequate remuneration for the effort.

Often the employees are the main reason for the company to maintain its competitiveness. Salaries should be seen as an investment that must be nurtured and be adapted as everything else in the company. And wage policy, which in practice will be deployed in the pay system, together with the personnel policy and training, some of the main components to promote the company's goals.

With the cooperation of the wage system, the creation of an administrative IT system, but the framework and the principles behind

The agreement forms the basis for the company's wage determination

A well functioning, fair and motivating remuneration system can contribute to productivity increases. It can create a direction and motivate employees to pursue the company's goals.

The overall framework is set by collective agreements, but wage negotiations and furnishing of the payroll system occurs at the individual company as an obvious collaborative task between managers and employees.

In this booklet we cover both the Industrial Agreement and industry The function 'agreement.

As wages are a local matter between management and employees. There are three main purposes for corporate wage determination:

- To increase employee motivation and commitment and rewards
- To help improve business performance
- To create better jobs, including to attract and retain qualified employees

The agreements envisages that all company employees are paid according to the same principles - both in production and administration - both hourly workers and salaried employees.

A local agreement clarifies the guidelines of each company

Work on developing the payroll system should also result in a local agreement between the company and employees.

It may be a more accurate description of the guidelines, principles and other agreements underlying wage determination at the company, and which both parties who agree to abide by.

A local agreement should include:

- The purpose of the payroll system
- system construction
- Factors criteria ratings
- Who covers the payroll system
- The wage adjustment
- Any payroll committee's responsibilities and tasks
- Lønhtul / year plan
- Agreement enters into force and termination



PlusLøn - Why work systematically with pay?





PlusLøn can be the setting for the entire industry the company payroll.

PlusLøn is a systematic and flexible tool to be tailored to the individual business - both workers and employees.

About employees must be rewarded and recognized for having special qualifications when they take additional training or providing special performance - all this can be taken into account in the design of salary depending on business needs.

In fills even the chassis so that you achieve a transparent and well-functioning administrative system for the company's payroll. In adjusting it when it needs adjustments along the way.

COMPONENTS OF PLUSLØN

 <p>related pay: Related pay is a surcharge for jobs, professional or person relevant qualifications. Related pay is a personal allowance and follows the individual employee.</p>	 <p>PERFORMANCE-: RBR can be either individual, group-based, or a combination of both. Resultatlønen is variable and depends on the results obtained.</p>	 <p>function-: Function-is supplementary to perform a particular function or task, possibly for a temporary period.</p>
 <p>Base Salary: Basic pay is pay for basic job and qualification requirements. The basic wage can be the same for all employees, or it may vary between broad groups.</p>		

And I take the temperature of the year, so the company at all times has a justly, contemporary and motivating remuneration.

In this folder you can read how related pay can be established and tailor sewn to all companies and its employees.

Plusløn - Briefly

Base Salary makes it possible to recruit employees without special experience. Untested workers to enter and excel. Read more about little.

related pay assess and reward employees' personal skills and effort - we expand on it in this booklet.

RBR rewards for measurable results - read more in the leaflet "RBR - reward and recognition.

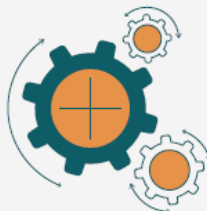
function-based - payment to carry out a special temporary task
- read chapter back of this booklet.

In the TOOLS PLUSLØN



LØNTERMOMETER:

The company should annually take the temperature of its pay system to determine whether it functions properly.



LØNHJUL:

The company undergoes during the year a number of activities, plans and processes that keep the payroll system and relevant stakeholders to date.

The foundation's Base Salary

In any payroll system there will always be a basic wage. Many companies use a common base salary.

The base salary is compensation for the basic job and skill requirements within a defined region.

The basic wage can, depending on size and complexity, be the same for everyone in an area, the same for everyone in a particular group of employees or the same for all employees throughout the company.

One's basic pay is a good start to ensure a superstructure with a lønspred- up to suit the company's production and composition of employees.

Moreover, the expression of equal treatment. All employees are treated equally without regard to gender, education or professional status. It helps to strengthen the unity and flexibility. Moreover, it is easier to build clear salary structures and fix the job and theological factors that come on top of base pay.

If you choose one's basic pay for all of the company or in a single area, medfø- teacher is also a number of benefits in administrative terms.

Base Salary is the foundation of the payroll system and makes it possible to hire employees of all kinds.

In most companies can base salary does not stand alone. Read more about superstructure related pay follows.

How do you work with related pay

Highly qualified staff is one of the reasons that the company can maintain its competitiveness.

Related pay is a salary supplement levied on top of the base salary, each employee is assessed and paid to have or acquire specific skills.

By making the skills the company needs, can encourage current and future employees to improve their skills and thus increase the company's foundation for achieving its goals.

Each employee will be assessed against a range of skills that are sought-after by the company and thereby create value.

The qualifications are divided by a number of factors that are important to master the job.

Subject-related FACTORS	job-related FACTORS
<ul style="list-style-type: none"> • Theoretical and practical training • Relevant continuing training to prepare for future demands • Experience and training • Technology / special requirements, for example, by automation 	<ul style="list-style-type: none"> • Working Knowledge • Mobility / flexibility • complexity

INDIVIDUAL RELEVANT FACTORS

- Quality
- Work Result / Performance
- Order and care
- Waste and materials
- Seniority
- Collaboration
- Creativity / A wealth of ideas
- Understanding business
- Ability to communicate / Languages
- Initiative
- Responsibility
- efficiency
- job performance
- Adaptability / Flexibility
- Planning
- Customer satisfaction / Delivery Compliance
- Commitment

Pick up skills in a table

It may be a good idea to gather the subject-related and job-related skills in a very simple summary table hangs a visible place in the company.

An overview can clarify the competences one department and not least, what is missing, so employees can bid for and develop their qualifications.

	STEP 1	STEP 2	STEP 3	STEP 4
Subject-related FACTORS				
job-related FACTORS				
INDIVIDUAL RELEVANT FACTORS				

(See more examples of this at the back of the booklet).

Then the process begins in earnest in the company, now being trained supervisors who can take individual interviews, and assess each employee's qualifications in relation to the stated qualifications in the table.

It should be perfectly clear to all employees what is expected to achieve a higher rating.

Getting started: Remove self hole on the important considerations

Pay systems is a collaborative task to be developed jointly between management, employees and union representatives, and you have even the key to a getting started with the process.

Whether you want to establish a new pay system or just want to update the current, so you can even make the initial "diagnostic" through a survey:

Examples of questions to the management:

- Supports our current pay the right targets?
- What weaknesses / problems our present salary?
- What do you miss that our payroll system can?

Examples of questions to employees:

- Is wage formation easily understandable and fair?
- Is there a link between performance and pay? (For the individual / groups)
- Are there good dialogue between management and employees?
- What do you miss that our payroll system can?

When you've made the survey, you should be able to answer these three questions:

First Why should the company have the new pay system? (purpose)

2nd What value should pay system ensure the company? (Direction and hits)

Third How is it practiced? (Components, methods, annual cycle, etc.).

Formally take The Decision of the Cooperation (you have no cooperation committees, takes the decision between managers and employees). When I saw you have decided to launch the process, there is a duty to inform all the organization that now are working on a new pay system in time (eg. To I establish a Salary Committee, the work will run over xx months and that all are informed along the way).



Help process

If you get stuck or have difficulty answering the three questions, then drag like the DI and CO-industry consultant from start to finish through the whole process.

We have extensive knowledge of pay systems in many types of businesses and have both advised by establishing new pay systems and updating of existing systems.

We can also give you an idea of the time and resources you should allocate to The task.

Select and combine elements of PlusLøn

It is an important discussion to clarify which elements of pay to be in play in the company. Learn more about how to make yourself the best possible way.

You can basically pay them on three factors:

First **The job** - each employee is paid in proportion to the value of the job for the company.

2nd **The person** - each employee paid according to performance and competence etc.

Third **results** - the employee or group of employees are paid according to results obtained.

It is rarely appropriate to pay them on a single fact.

If one chooses for instance. to pay them on the job, so anyone with the same job has the same salary, then the only real motivation to be better than their colleagues, so the chance to get a better paid job increases.

If there is little opportunity for such "promotion" so it creates no interest to be good or be better to carry out his job.

Conversely, it is almost impossible to assess and thus remunerate a person without regard to the completed job. Job severity and nature is essential for the value of the company. It takes into account related pay.

By pay them on the job and the person ie input (eg. hour) to the company, obtains hardly an accurate estimate of the value of the company.

By remunerate for output, ie for results, you get a much better offer on the employees' real value creation.

PlusLøn allows you to pay them on all three conditions simultaneously, and it's example. possible by combining related pay (job / person) and RBR (results).

Businesses should therefore assess how reward elements may affect the customers, production and collaboration, professional and personal development as well as the company's economy and development.

The company will then rank the areas, a salary system must support.



Salary structures are a signal potential of the company

Background and objectives can vary from company to company, it must pay concentrate on.

If the company wants to develop its payroll through a series of desired *qualifications* then related pay the best way to recruit new employees, retain good employees and to develop all employees personally as well as professionally.

If the company wants to influence productivity . the company's finances and development, then a variable pay element (*and function-RBR*) be suitable.

If the company has only a small spread in the severity of jobs and employees' skills, you can choose a low related pay and a higher performance-related. If there is a need for an improved result, employees can even help to influence the results.

Various conditions in a company may mean that there is a big difference in employees' qualifications, and where it is also very difficult for employees to influence the results, for example. productivity, wastage, quality.

Here it will be more beneficial for both employees and the company to let RBR constitute a small portion, while there is much emphasis on qualifications deletions.

If the company wants both a high wage in the fixed salary and a strong improvement in results . you can choose a low base salary, and also use both high related pay and high performance-and still operate within the same salary budget.

PS Performance pay should still be self-financing. This means that measurements from a given starting point, and that only the improvements that are being rewarded.

Jobs and employees

Take into account the types of jobs and the types of employees by the company and wish to have.

For example:

- A store employee working in a company where there are busy in some seasons than others. There are salary composed of a performance during the busy periods and annual related pay
- For an employee with specialized knowledge of specific processes / IT / new system working on projects that will function-for a temporary job is a good idea. This type of employee is mainly motivated by trying new things and would like to regularly challenged.
- For a salaried employee with specific skills in a language that the company needs, you can pay an annual qualification allowances that the employee makes its skills available.
- A production company wants to better profit optimize processes and introduce a *collective RBR*, which improves the bottom line and create greater cooperation and job satisfaction throughout the company.
- A company has difficulty recruiting qualified personnel and therefore introduces related pay to recruit, upskill and train the in demand labor and thereby retain employees in jobs.



The process is important for the success of your new salary in the company

Getting started and remember that it is a cooperative task, where you have to spend time to make decisions for the company and employees' best.

Use the checklist here as inspiration for the further process. But customize it for your needs.

CHECKLIST:

Survey - diagnosis

- Put the words on the contents of your system - make sure that everyone is heard
- What should pay system could and what does not work today (ask executives - employees - administration)
- Outline / Define the objective value and placement for a new system

Set team

- Define all the relevant stakeholders in the company
- Select good ambassadors throughout the organization
- Reduce a pay system committee

Composition related pay

- Define the types of jobs - skill level and background
- Define qualifications (job-related, personal)
- Establish a sampling form - try form of the relevant staff
 - puts you immediately in the selected words and expressions?
- Establish a local agreement

(Back of the pamphlet you will find forms for inspiration in this phase and concrete examples and input from companies that have been through the process)

Communication - before, during and after

- Inform the organization about work when you start - kick-off
- Prepare yourselves for all sorts of questions - put you into employees' needs
- Expectations - what does this mean for the individual and for the company and the salary?
- Timeline - give a sense of the task duration, and that it may be difficult to orient after each meeting

Ensure thorough and detailed information to the entire organization, when you are nearing the finish line.

This means that when development work is completed, and both the management and lønsyste- mudvalget can vouch for the results, one should inform all staff about:

First Why should the company have the new pay system? (purpose)

2nd What value should pay system ensure the company? (Direction and hits)

Third How is it practiced (elements, methods, annual cycle, etc.).

For a qualification payroll system is to be successful it is biting need to train managers in the system, as well as union and management in lønsyste- mudvalget,

Complete a series of test assessments to train your managers and trust people to use your conversation table to test whether it works as intended.

Assessment interviews and training of managers

**Employees may be hesitant about assessment of personal qualifications.
Addressing it with thorough training of leaders.**

To achieve success with assessment talks, one should train between the leaders along with payroll Committee and other enthusiasts, so they have a common understanding of the new system.

The goal is that the manager can make an objective, unbiased and systematic assessment of each employee's professional and personal qualifications from the agreed guidelines.

Another aim is to get the employee to participate actively and constructively in its own situation.

Related pay demands more to leadership than other pay systems. In addition, communication about the selected qualifications and assessment criteria to be known by everyone in the company.

When payroll committee has out-skill wage system, the supervisors become familiar with the content and applications. The "practicing" by filling out the form and conduct a trial assessment to determine whether one perceives the concepts alike.

In other words, the power users and ambassadors of the new pay system for the benefit of the company.

When we visit companies, we often hear that it is far easier to construct a qualification payroll system than it is to secure and implement a rewarding and confidence assessment interview. It takes practice.

It is possible that it is slightly more time consuming in the daily work, but you gain in return close contact with the individual employee and a transparent and fair remuneration system for the benefit of the entire company.

The assessment interview

The goal is to assess the individual employee in a precise, confidence-building and not least fair manner in proportion to their colleagues.

The purpose of the assessment interview is to ensure each employee one objective and systematic assessment of the professional and personal qualifications.

The whole is then used to determine the individual employee qualification allowance.

Description of qualifications issued before the interview and ensure both parties prior knowledge of the content of the conversation and the possibility of mutual preparation. Appreciation conversation requires dialogue on both professional and personal qualifications.

PROFESSIONAL QUALIFICATIONS can best be described as a "must-have" skills and it is the foreman's task and duty to evaluate each employee's performance in relation to the described qualifications in the past period, and to what extent there is a need for additional training.

PERSONAL QUALIFICATIONS is most often related to attitudes and behaviors, "nice to-have", and here is a little more room for interpretation, special situations and colleagues influence. Although it is factors related to attitudes and behavior, they should be described as carefully as possible to avoid various leaders of different assessments and attitudes.

It is important that the supervisor explains his observations while listening to the employee's views. Subsequently, the two agreed goals and opportunities for the coming period.

Appreciation conversation aim is to assess the individual employee in a precise, confidence, and not least fair manner in proportion to their colleagues. Note that the successful introduction of related pay requires, especially the first one to two years to head aside time to target the conversation to the individual employee.

Companies that prioritize and educates the foreman carefully ahead of the talks, generally experience the talks as better.

Inspiration for the good conversation

- Why do we want an annual assessment interview?
- What opportunities does the assessment interview?
- How is the result afterwards?

When the purpose and the opportunities are clear for both parties, it is easier, more confident and more constructively implement the new assessment. It is also an incentive to the individual employee becomes aware of their own qualifications of gray and want to provide a little more than before.



Lønhjul: Keep a good grip on wages - all year round

The company undergoes during the year a number of activities, plans and processes that keep your firm agreements on pay date. This is done through lønhjulet.

Much can change over the course of a year - both on the market and on the labor market and the company itself. New products, new competitors, new colleagues, new leaders, new training courses.

It is therefore an ongoing process to ensure that the payroll system is kept up to date.

Lønhjulet ensure that you have mastered the payroll system - and continually furnish you with the new elements.

It's management, employees and payroll Committee, which plays an active role here, when they have to undergo a series of routines and processes. Lønhjulet does not automatically follow the calendar year, but may vary from company to company.

See the four stages - or subtasks - here.

Interview and assessment

- The annual qualification conversation with each employee
- Registration of results and assessment of all employees
- Training of new and experienced middle managers / enthusiasts
- Supplement if necessary. Lønssystem Committee with new members

Salary negotiations and orientation on salary

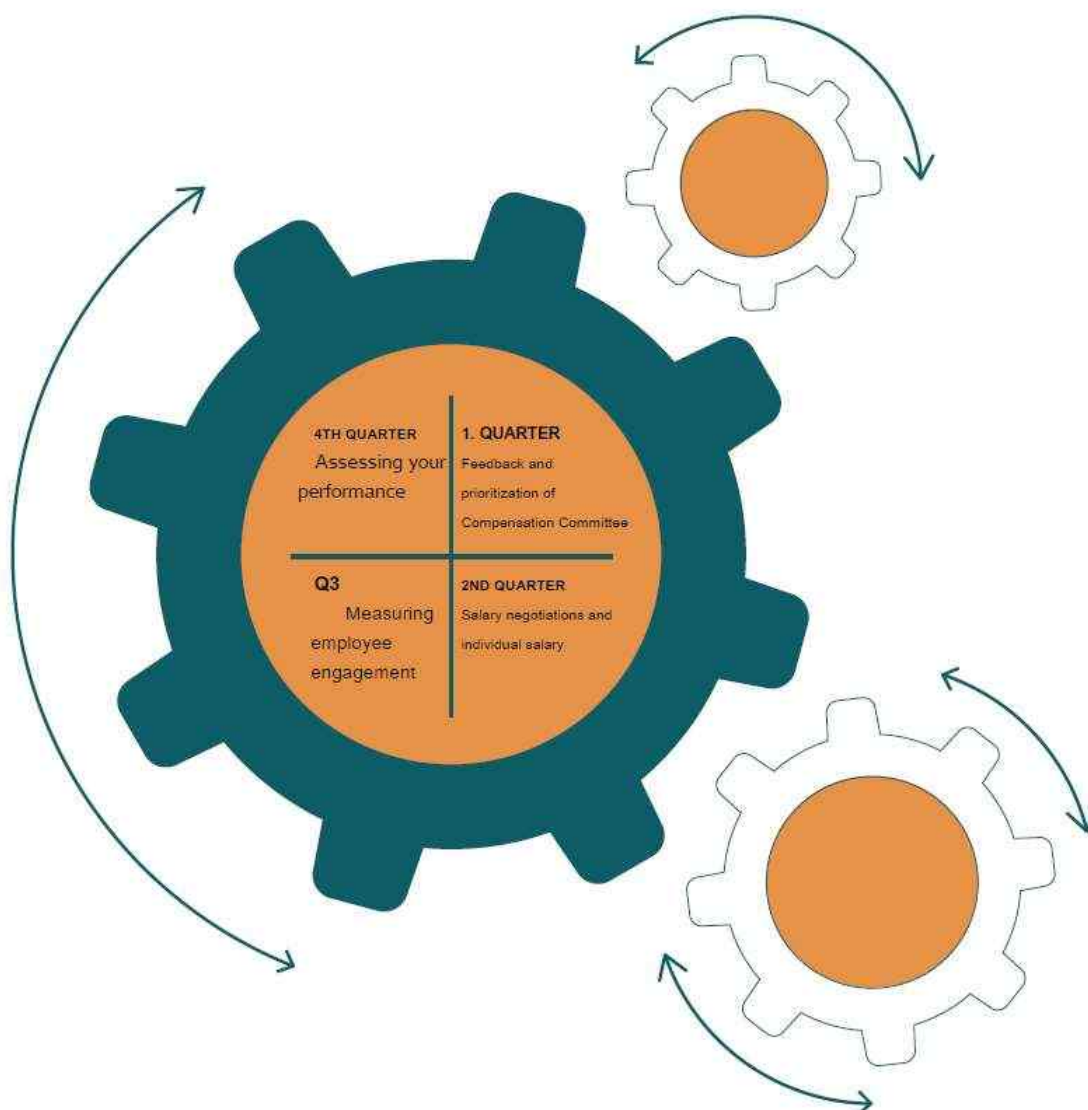
- Here making in local wage negotiations at the company and write down your appointments
- Inform employees

Measuring employee engagement

- Complete interim conversations
- Apply Løntermometer - measure satisfaction with the payroll system and collect results

Assessment of the company's performance

- Rate changes in skills - and update overview of the qualification factors
- Get new input from management on the market - helicopter view





Løntermometer: Take the temperature of the payroll system each year

A payroll system is not static, but must be maintained and adjusted to reflect the company's true.

A company should annually perform a test or a survey, so that employers and employees can indicate whether the pay system work as intended. It may DI and CO-industry Løntermometer help.

Løntermometret developed in collaboration with more than 50 companies, where nearly 2,000 managers and employees have contributed input and facts, so that other companies have something to compare with.

It is a prerequisite to compare themselves with other companies that you enter your own data.

The measurements indicate the areas of greatest importance for the employees' satisfaction and motivation, for example.

- Information about important decisions about daily operations
- Ability to evolve
- The quality of the planning of the daily operation
- Cooperation with middle managers
- Acceptance of the wage distribution
- Trust in qualification assessment
- Confidence in payroll Committee

Use Løntermometret to learn about how to stand with tilfredshe- it with the payroll system, or whether I should correct the payroll system to.

If there are minor corrections, the company can act on it immediately, thus ensuring that employees feel heard and treated fairly.

function-based

Function-is a supplement to perform a particular function or temporary work assignment.

Function-related solely to the task and is therefore not a personal allowance.

The labor is constantly evolving, it can be in the form of more flexible and shorter working positions, but it may also be the design, process optimization, several new systems or documentation requirements.

The frequent changes in the labor market making greater demands for both companies and employees, and here comes the salary into play as a flexible component of salary.

Companies must be good to use the resources and compensate for the skills that are in demand by introducing new routines, even if they have a general nature and can be rewarded in the qualifying salary.

Some features require a little more, and therefore it might be a good idea to pay the employees who can and will take on performing more demanding tasks - possibly. for a period of time.

In the case of a particular task, it is not appropriate to trigger a permanent bonus.

Since the salary follows the task and paid only as long as the employee performs the task so lapses also when the task is completed or not be performed anymore.

Function-thus ensuring a better match between the requirements to carry out these tasks and each employee additional payment.

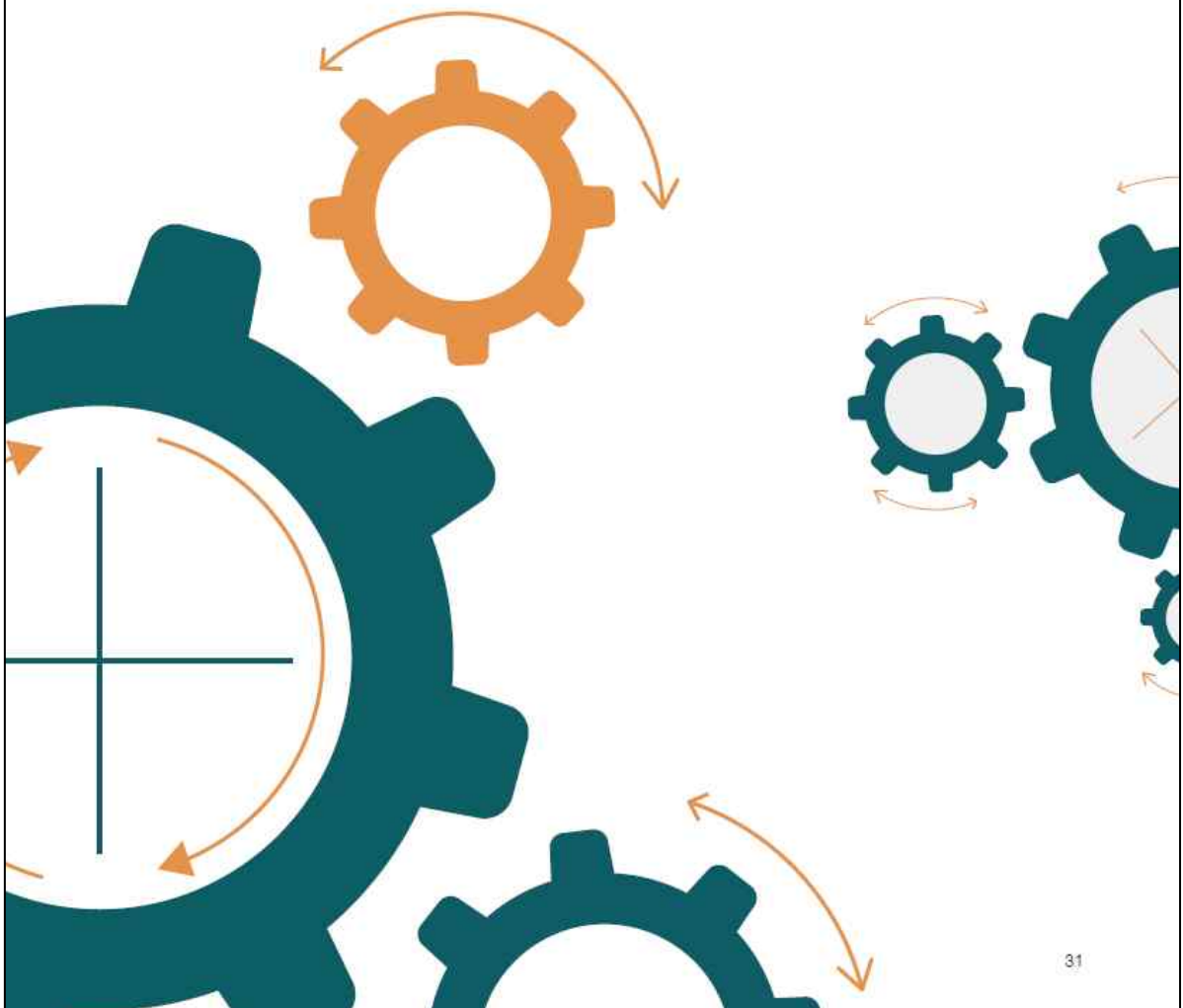
Advantages of the function-:

- It attracts employees to specific functions / tasks
- Creator visible proof that management is focused on a specific area
- The company has exclusively payroll costs, while the task is performed

- The company honors special personal or professional requirements to the employee
- It has an effect from the first day it is introduced

Disadvantages of function:-

- Function-more demanding administrative
- Pigeons not too small, short-term tasks, as it can trigger envy of colleagues
- There may be a lack of willingness to take on tasks without duty allowance



Forms and examples for inspiration

Forms

Step 1 : Description of the company's job types

step 2 : Schedule the job-related skills

step 3 : Form for the person relevant qualifications

Examples of companies

company 1 - From inflexible tool for wage system that promotes competition
ability and well-being

company 2 - From the confusing jungle of value-based salary

company 3 - From crisis and uncertainty for new fair and transparent pay

company 4 - When the payroll system needs updating

company 5 - From past piecework to contemporary related pay
(And in part RBR)

Input into local agreements

Get inspiration and an example of a local agreement

Forms


Step 1 - Describe your job types

Try to give you an overview of the company's job types. Like in a few large groups, without too many gradbøjninger.

- What is the nature of the job?
- What is your primary job function? It constituting more than 50 percent of the job. (Welder, process operator, truck driver, accountant, etc.).
- Does it require special training or background to do the job? (Education, background, professionalism)
- Is the job is important to maintain the company's competitiveness?
- Can one speak of a "market value"?

With hourly workers, it is usually a good idea to split it after the work done, for example. economy, manual machining, assembly work, CNC milling machine.

But for salaried splits typically by educational level and job responsibilities, for example. economy / budget or personnel.




	measurable criteria	STEP 1 
Job-relevant factors	flexibility Ability to hold several roles and ability to help besides his own job.	The employee needs to have solid frames.
	complexity An employee's business value increases in proportion to the severity / complexity of the jobs that he or she may hold.	The employee has simple tasks and know them well. In this business it jobs that take maximum two weeks to learn. Eg.: x care machine or washing machine fit y.
	Fill yourself ...	



Step 2 - Scheme for the job-related skills

- What is important to be able to complete the job?
- Define factors and the set of words at the various levels.


See the example below:

STEP 2 	STEP 3 	STEP 4 
In addition to the employee wants a fixed framework, the employee can also partly work outside that framework.	The employee is able to expand its work functions and adapt to new tasks.	The employee is able to think of the whole addition to his own job function. Helps naturally others.
The employee can handle a little more difficult tasks in addition to the usual. Here are the jobs that take 3-8 weeks to learn. It is, for example, be the operator of the machine zz. Switching steel machine yy etc.	The employee can accommodate and handle new and a little more difficult tasks Here are the jobs that take 9-16 weeks to learn. One must be self-propelled and can make setups and Process set up new projects.	The employee can independently take on new and very complicated functions. You should be able to assist in product development and help designers with prototypes. Or may be team specialist who running-line and adapts to the highest quality level.




Step 3 - Scheme for the person relevant qualifications

- What personal characteristics of the focus was on the company.
- Define factors and the set of words at the various levels

See the example below:

	measurable criteria	STEP 1 
Person-relevant factors	Collaboration The ability to carry out tasks in cooperation with colleagues in a smooth and efficient manner and the ability to respect others work and emerge as a team player.	Work best alone. May be unsafe in collaboration with others to be involved in conflicts.
	Initiative The ability to stay focused on their own work and put themselves in time.	The employee is often difficult to initiate on the defined tasks.
	Quality The ability to respect the original quality and possible. improve it.	The employee not always exhibit the required quality of work.
	Other possible: LösningsOrientéret Order and care Accountability Security Fill out even more ...	



STEP 2 	STEP 3 	STEP 4 
Cooperate well with others tasks.	The employee has a strong relationship with others. Can encourage and help others solve problems.	Have a unique collaboration with others. Can well as invited and unsolicited help others problem solving while maintaining rationality.
Employees rarely take more initiative, but taking responsibility for their own tasks and report on anomalies if they occur.	The employee takes the initiative and often contributes to constructive suggestions for improvement and ideas for minor changes.	The employee takes almost any initiative for problem solving - also across departments - and has the ability to support his colleagues.
Employee exhibit the expected quality of work.	The employee has a keener eye for quality and can make corrective actions.	The employee has the big picture in terms of quality and support his colleagues. Employees often come with suggestions for improvement.

Examples from the companies

We have collected a number of examples of companies that have been through the process of introducing a new qualification payroll system.

The examples will serve as inspiration regardless of where the company is in the process to update or introduce a new salary system that can attract, develop and retain employees.

Moreover, you can see a series of tables that give a good overview of qualifications and assessments.

The development of the new pay system will also be a good exercise in getting discussed and clarified the correct definitions of the factors contained in the system so everyone has the same starting point in assessing the conversation.

company 1

From inflexible tool for wage system that promotes competitiveness and well-being

A company had to realize that their pay system had been too impossible to obtain an for the majority of the employees. Too much budding meant that the payslip eventually filled three pages, because. They had an individual performance pay / chord. DER- addition had it been difficult to attract skilled workers, so a simplification, cleanup and improvement of the remuneration system was needed.

How did you get started:

- Workshop with management and union representatives
- The involvement of the unions (DI and CO-industry) in the work
- It took the temperature of Løntermometer (survey)
- Results of the survey showed the way

Formulate purpose / vision for a new system:



wage system that promotes the company's competitiveness and promote employees' earnings and job satisfaction.
We want a flexible, transparent and fair

The process continues:

- Employees are informed (project schedule, only a few details)
- A total of Løntermometer / survey presented
- New model for all unskilled
- Qualifications set, define job types, carry out sample conversations
- Finally head presented
- Time: a small year with a total of 20 meetings, because: The complexity of the original system

results:

- Improved cooperation with joint factory bonus
- Measuring efficiency rather than productivity
- fewer temps
- A higher starting salary attracts employees
- Can now explain the lower wage
- Transparent and fair (3-4 lines on a pay slip)
- Good overview of training needs

What have we learned along the way:

- Positive involving employees in the process
- No decrease in efficiency despite the consultants' warning
- Uniform qualification assessment is difficult with several supervisors, despite common preparation, education and well-documented assessments (important to keep the maintenance of lønhjulet)

Pull on the company's experience:

First, the company has defined a number of job types with different levels of difficulty - it is such. degrees of forging, painting, furnace and milling work. Then, given a number of points for each job type / severity.

Job Type 1 - 20 points

Job type 2 - 40 points

Job type 3 - 120 points

Job Type 4 - 240 points

The company has selected four qualification factors:

Competence, flexibility, commitment and behavior, which is assessed at four levels - A, B, C and D

SKILLS

level A	level B	level C	level D
Work little independently and may need guidance.	Understand tasks at a basic level and can partially work independently. May need guidance if something unexpected happens or significant changes in its instructions.	Works Independently and can educate colleagues and new employees in job functions, you yourself are trained.	Work very independently and can educate colleagues and new employees in job functions, you yourself have been trained in. Can independently implement improvement projects.

FLEXIBILITY

level A	level B	level C	level D
Employees need clear framework.	The employee can work partially outside the known tasks.	The employee is able to change his job and adapt to the tasks.	The employee is able to think of the whole addition to his own job function. Helps naturally others.

COMMITMENT

level A	level B	level C	level D
<p>The employee can get stuck and need help when something unexpected occurs.</p> <p>Showing little interest in making suggestions for improvement and streamlining of the job.</p>	<p>The employee exhibits satisfactorily responsibility for own tasks and report defects immediately they arise.</p> <p>Contributes sometimes positive and constructive suggestions for improvements.</p>	<p>The employee is engaged above average, shows great responsibility to own tasks and the tasks that are generally in the department. Contributes always very positive and constructive suggestions for improvement and implementation of minor changes.</p>	<p>The employee is extremely committed and take the initiative for improvement and participate much like in problem solving - also across departments.</p> <p>Abilities also see problems and solutions from the "company's" own perspective.</p>

BEHAVIOR

level A	level B	level C	level D
<p>There is room for improvement in terms of compliance with the company's code of conduct. Some days everything is fine, other days the tone and behavior generally strained.</p>	<p>Generally a nice observance of the company code of conduct. It rarely happens that he falls in and have unwanted behavior.</p>	<p>Meets always the company's code of conduct. Well on its way to becoming an ambassador. Missing even a little in relation to understanding and</p> <p>eg. go ahead or the daring to say no.</p>	<p>Going ahead in compliance in the described and desired behavior. Is Ambassador. Dry say no and can act as a mediator to a lesser extent.</p>

Assemble points and the types of jobs and the assessment of qualification factors for each employee in the table below.

At last count the points together and you have an overall assessment for the next interview and salary negotiation.

	Point			
	type 1	type 2	type 3	type 4
competence profile				
Job Type	20	40	120	240
competence profile	level A	level B	level C	level D
Competence	10	20	30	40
flexibility	10	20	30	40
Commitment	10	20	30	40
Behavior	10	20	30	40

company 2

From the confusing jungle of value-based salary

A major production company had experienced prosperity and growth, but lønsy- system was not followed. There were too many job types, heavy administration and the employees could experience getting different pay for comparable work.

The company therefore wanted to create a connection between desired behavior and corporate values; kundeOrientéring, creativity, willingness to change, loyalty, openness and honesty, enthusiasm and efficiency, job satisfaction and helpfulness.

The process:

- Briefings for all
- The company writes and awards a lønpeje that talks about the new principles
- Department meetings with the review of new related pay
- Time: a small year (local agreement signed)
- Interviews and assessment
- Payment of the new salary.

New system:

- 3 steps provide new salary. (Base salary, and function-related pay)
- Job profiles - from too many to get more nationwide

Job-related factors:

- Competencies: how independent can do its job
- Flexibility: one's ability to help others beyond their own job profile

Person-related factors:

- Engagement: engaged in the daily work
- Cooperation: one's ability to collaborate with colleagues
- Safe behavior: knowledge of standards and processes - active behavior
- Quality: knowledge of standardized work and process security - active behavior
- Order and standardization: exhibits a distinct order and care

Get inspiration from the company's schemes:

	Job - Competencies	Step 1 - "Know About"	Step 2 - "understand"
	Competences are defined an employee's ability to perform a job well described.	Know the competency and need guidance and support to do the job. It is during training and integration.	Understand the power at a basic level, but need guidance in certain situations.
	The grading is based on the primary job function.		
	Jobs - Flexibility and Adaptability	Step 1 - "On the Road"	Step 2 - "Intermediate"
	By flexibility / Adaptability means an employee's ability and power to hold several roles and ability to help besides his own job.	The employee can not be reassigned within the department.	Step 1, but not yet Step 3.
	Commitment	Step 1 - "On the Road"	Step 2 - "Intermediate"
job-related factors	Engagement describes how the employee is engaged in the daily work. The loan is deemed the employee's initiative and responsibility in relation to, inter alia, own job function.	Employee show responsibility for own tasks.	Step 1, but not yet Step 3.
	Cooperation	Step 1 - "To a lesser extent"	Step 2 - "Intermediate"
	Cooperation describes the employee's ability to carry out tasks in cooperation with colleagues in a smooth way.	The employee works best alone and is open to cooperation with others.	Step 1, but not yet Step 3.

Step 3 - "Uses"	Step 4 - "Commands"	Step 5 - "Mastering"
Uses competence independently within known limits.	Uses competence also in new situations and contribute to continuous improvement.	Mastering competence and are able to develop and improve the working methods of the job. The employee exhibits behavior that is out of the ordinary or normal.
Step 3 - "Flexible"	Step 4 - "Intermediate"	Step 5 - "very flexible"
The employee can be repositioned in the department. The employee can help besides his own job and is trained in other jobs in the department.	Over Step 3, but not yet step 5.	The employee can be repositioned within the department and across other functions.
Step 3 - "Committed"	Step 4 - "Intermediate"	Step 5 - "very engaged"
The employee exhibits satisfactorily responsibility for tasks and contribute constructively deal with discrepancies in daily.	Over Step 3, but not yet step 5.	The employee exhibits a responsibility beyond the expected for own territory. The employee contributes constructively with suggestions for improvement to reach the daily goal.
Step 3 - "Working well"	Step 4 - "Intermediate"	Step 5 - "Greatly"
Employee cooperate well with others tasks.	Over Step 3, but not yet step 5.	Employee cooperate very well with others on tasks

	Job - Competencies	Step 1 - "Know About"	Step 2 - "understand"
job-related factors	The ability to show respect for the work of others and the ability to appear like a team player.		
	Housekeeping	Step 1 - "Less safe"	Step 2 - "Intermediate"
	safe behavior	The employee has knowledge of standards and processes and exhibit passive behavior in relation to health and safety.	Step 1, but not yet Step 3.
		Step 1 - "On the Road"	Step 2 - "Intermediate"
	Quality	The employee has knowledge of goals, standardized work process security and require more routine.	Step 1, but not yet Step 3.
		Step 1 - "On the Road"	Step 2 - "Intermediate"
	Order and care	The employee has knowledge of the requirements and exhibit passive behavior.	Step 1, but not yet Step 3.

Step 3 - "Uses"	Step 4 - "Commands"	Step 5 - "Mastering"
Step 3 - "Safe behavior"	Step 4 - "Intermediate"	Step 5 - "very safe"
The employee has knowledge of standards and processes and show active behavior in relation to their own actions.	Over Step 3, but not yet step 5.	The employee always note dysfunctions and shows initiative to improve security also beyond their own actions.
Step 3 - "Quality-conscious"	Step 4 - "Intermediate"	Step 5 - "High quality"
The employee has thorough knowledge of the target, standardized work process security, comply with regulations, recognize and correct errors.	Over Step 3, but not yet step 5.	Contributes experience and helps to improve standards and new processes.
Step 3 - "Careful"	Step 4 - "Intermediate"	Step 5 - "very careful"
The employee is aware of the requirements to comply with requirements and regulations and exhibits a distinct order and care.	Over Step 3, but not yet step 5.	The employee contributes constructive and sustained to fund development and improvement.

company 3

From crisis and uncertainty for new fair and transparent salary.

For the 150-strong workforce flashed all alarm buttons, because wage acts capsized a number of years back. There was crisis between management and employees.

The result of a mediation meeting was a desire for a real salary system. The company had not worked systematically with pay, and the employees, it was unclear how were assessed and paid for his efforts, and how to achieve a higher rating.

Objectives / principles for the new system:

Base Salary + allowance for possible. education + length + personal qualifications.

- Assessment of professional skills and flexibility counts 40 per cent.
- Assessment of interpersonal skills and sense of order 20 per cent.
- Stability (absence) 20 per cent.
- Work helpfulness 20 per cent.

Assessment should be as objective and transparent as possible - the scale is from:

First In training

2nd basic skills

Third acceptable level

4th Medium level

5th Above average level

6th Very above average level

7th Extraordinarily high level

The process:

- Paper prepared by input from DI / CO industry and union
- Sample reviews conducted
- Review and refinement of skills in the Salary Committee
- Local agreement signed - the new principles adopted
- Presentation of the new related pay and workplace agreement for the entire company (DI and CO-industry participant)
- Time consumption: about 6 months

The result:

- The company has been a systematic approach to employee evaluation and reward now the academically gifted, samarbejdsOrientérede, stable and studious co-workers most
- The employees now know the effort it takes to share in the next wage increase
- Imbalances in the system are corrected
- There have come under control the administrative part and assurance that wage increases also realized.



company 4

When the payroll system needs updating. A company took a spade connectors deeper to introduce a combination of related pay and performance tatlø.

130 employees work in a company that is a fusion of four smaller companies. They find that their "composite" old payroll system - despite ongoing changes - have served themselves and no longer reflects reality. Work- ers and management therefore wants to wipe the slate completely clean and set a new course to enhance cooperation and fellowship in everyday life.

The process:

- Clarification phase was relatively short, there was a common desire for a new salary system
- Lønssystem Committee defined the elements that could support the company's business goals
- Then discussed the qualifications to be emphasized - they also discussed the definition of all qualifications
- Together lane to themselves gradually into how respectively. base salary, performance-related pay and could be structured and weighted
- There was held a few meetings with thorough preparation before. Commitment from all parties is paramount
- Time consumption: 6 months with concentrated effort


What have we learned along the way:

- Employees ask some along the way, our experience was that one should not orient the calculations and the process all the time, but only by market rimmed progress in the process and concrete results
- Prioritize presenting something good writing material for its employees
- It was a good exercise to put qualification factors into a schedule and bli- woe as specific as possible with the explanation. The form has since given managerial staff and, led a really good view when assessing the interview conducted

Get inspiration from the company's schedules

Qualification profile (related pay)		Step 1
Job	<p>The allocation of individual jobs in proportion to the complexity of a learning experience and insight into the company's products, as each job requires.</p> <p>The grading is based on the primary job function which corresponds to the job function, which is more than 50 per cent. of the employee's duties.</p>	Jobs characterized by a short learning curve and low complexity: Module Installation Manual machining (sawing, drilling, turning)
job-related factors	<p>Skills</p> <p>Competences are defined as an employee's ability to perform a job well described. The grading is based on the PRIMARY JOB FUNCTION</p>	The employee works a little independent and must often be guided in the job function.
	<p>flexibility</p> <p>By flexibility means an employee's ability and power to hold several jobs. The grading is based on competence assessment on other job functions.</p>	The employee can only perform their own job functions.
person-related factors	<p>Commitment</p> <p>Engagement describes how the employee is engaged in the daily work. The loan is deemed employees' initiative and responsibility in relation to, inter alia, own job function.</p>	The employee exhibits rarely accountability for own tasks and contributes rarely with suggestions for improvement.
	<p>Cooperation</p> <p>Cooperation describes the employee's ability to carry out tasks in cooperation with colleagues in a smooth way.</p> <p>The ability to show respect for the work of others and the ability to appear like a team player.</p>	The employee works best alone. The employee may seem uncertain in cooperation with others, or may be involved in conflicts.

step 2	step 3	step 4
<p>Job characterized by a medium-training time and a moderate complexity:</p> <p>Gear and minor road Stock</p> <p>welding</p> <p>Assembly</p>	<p>Jobs characterized by a longer training period and a high complexity: Machining (CNC)</p> <p>Welding and special assembly Production optimization Quality Building / maintenance</p>	<p>Jobs characterized by a long learning curve and a very high complexity and depth product knowledge: Service Installers</p>
<p>The employee working satisfactorily independently and must only be guided by new routines in the job function.</p>	<p>Employee work very independently and can continuously advise other employees in the job function so that they can independently perform the job function and new routines.</p>	<p>The employee works unusually independent and can plan, solve and complete tasks in non-routine situations. The employee can continuously advise other employees in the job function so that they can independently perform the job function and new routines.</p>
<p>The employee may well own job function perform one other job function of competence Step 2, and has held the job function within the past year.</p>	<p>The employee may well own job function perform two other job functions of competence steps 2, and has held the job functions within the past year.</p>	<p>The employee may well own job function perform three or more other job functions of competence Step 2, and has held the job functions within the past year.</p>
<p>The employee exhibits satisfactorily responsibility for tasks and contribute positively and constructively with suggestions for improvement to reach the daily goal.</p>	<p>The employee exhibits a responsibility beyond expectations for their own work. The employee contributes constructively with improvement suggestions and proposals to deal with discrepancies in daily.</p>	<p>The employee has an unusual responsibility for their own work. The employee contributes constructively with suggestions for improvement, implementation of new routines and suggestions for handling deviations in daily.</p>
<p>Employee cooperate well with others tasks. The employee contributes to the good atmosphere in the workplace.</p>	<p>Employee cooperate very well with others tasks.</p> <p>The employee will contribute to creating a good atmosphere in the workplace.</p>	<p>The employee has a unique partnership with others. The employee contributes to conflict resolution and creates a good atmosphere in the workplace.</p>

 The good employee

company 5

From past piecework to contemporary related pay (- and partly RBR)

A classic production company with about 250 employees wanted a more modern pay system that could account for significant changes in their daily work. There were better paid than on interpersonal skills and be able to think on the whole, and thus the company's continued existence.

The company had spent years moved from the assembly line and standard products for specialized job roles and niche production.

The process:

- Long inlet and various positions within the company delayed a new system
- Instructions and initial meetings with DI / CO industry meant that Lønssystemud- election was set, and it came in the process of clarification phase (facts collected, values and needs of the payroll system)
- Both the plant manager and union agreed on the objectives and stressed that it was important to establish a simple, fair and transparent wage system in which employees solve problems in the community and draw on each other

What have we learned along the way:

- "It'll just take the chance and throw yourself into it and not try to get a grip on all the details within"
- We have seen that a team employees have organized work more effectively and freed an employee to other tasks. Such a team effort can also give bonus
- Remember, RBR can always be corrected for subsequent
- Be careful to introduce new IT systems at the same time - it delays the process outer apparent

Outflow of material:

Here the five qualifying factors starring:

	Step 1	step 2
<p>Professional competence</p> <p>The ability to work flexibly in your department and across departments.</p>	Holds 1-2 jobs in their own area.	Holds 1-2 jobs in another department.
<p>Cooperation</p> <p>Mutual trust and respect for each other, for example, helpfulness, openness, trustworthiness, keep appointments and communicate.</p>	Work best alone. Can Create Problems in cooperation with others. Comes too late. Not compliant agreements. Knowing Does not.	Step 1, but not yet Step 3.
<p>Creativity and results</p> <p>Ability and willingness to solve different tasks - like on a forward-looking and positive way.</p>	Not good at problem solving. Taking advantage of not working optimally. Do not come up with ideas and solutions.	Step 1, but not yet Step 3.
<p>Responsibilities and job behavior</p> <p>Taking responsibility for the daily operation and contributes to daily production.</p>	Is very unsure of himself. Makes many mistakes and sloppy. Hits never independent decisions.	Step 1, but not yet Step 3.
<p>Housekeeping</p> <p>Safe behavior, order and diligence, collegial and forretningsOrientéret.</p>	Take too many chances. Does not always the prescribed protective equipment. Not good at keeping order and utilize materials optimally. Circumvented not always others in a positive atmosphere. Inability to recognize errors.	Step 1, but not yet Step 3.

step 3	step 4	step 5
Holds 3-4 jobs in their own area.	Holds three to four jobs in another department or five in its territory.	Holds 5 or more jobs in another department.
Cooperate well with others. Taking the initiative to help others. Rarely come too late. Meets frequently agreement, share knowledge.	Over Step 3, but not yet step 5.	Excellent for cooperation. Helps invited and uninvited. Contributing to problem solving. Is never late. Keeps all agreements. Very good to share knowledge.
Good to come up and help solve problems. Exploits working well. Good to come up with ideas and solutions.	Over Step 3, but not yet step 5.	Excellent problem solving. Exploits always working fully. Very inventive and good to come up with new solutions.
Have good overview of the routines. Is good at his job, but do not take as much responsibility for the quality of the area. Hits often independent decisions.	Over Step 3, but not yet step 5.	Always overview of routines. Laver rarely mistakes and take responsibility for the quality of work in the area. Takes many independent decisions.
Rarely take chances. Always use the prescribed protective equipment. Holder workplace reasonably tidy. Exploits often material fully. Good to deal with his colleagues. Recognizing often mistakes.	Over Step 3, but not yet step 5.	Points out the risk of accidents at work and always use the prescribed protective equipment. Always tidy in the workplace and the area around. Can bypassed all his colleagues. Always recognizes his mistakes. To optimize resources and procedures.

Input to local agreement

A local agreement describes the principles not already apparent from the group contract agreement.

Companies may enter into local agreements with their employees, for example, flexible working time, call time and pay systems.

A local agreement should include:

- The purpose of the payroll system
- system construction
- Factors criteria ratings
- Who covers the payroll system
- The wage adjustment
- Any payroll committee's responsibilities and tasks
- Lønshjul / year plan
- Agreement enters into force and termination

Inspiration for local agreements on [di.dk](#) and [co-industri.dk](#) or see an example [here](#).



Example of the local agreement with related pay

With the aim of increasing skills and productivity is between Company xx and employees covered by the Industrial Agreement has been entered into the following local agreement dd under the Industrial Agreement.

1. Introduction

The system is designed, in a systematic and objective way to determine an employee's pay in relation to each employee's skills and its willingness and ability to use his skills.

It's always business xx and thus each fund's competence needs, forming the expandability of the need for staff skills.

The payroll system is a tool for achieving an individual and differentiated pay system for employees. With competence structure wages can easily vary and be set.

2. System structure

System structure gives allowance for the employee's classification in the job profile / group. In addition ability and willingness of the job and person relevant factors.

For each job group is accompanied by a payment (describe any. In an annex) Supplements obtained by classification in the model.

Each job group are classified in the competence structure for training time, complexity and insight into business xx's products, depending on what each job requires.

Each job function is associated with a payment.

3. Assessment of qualifications

The assessment is made by the supervisor together with the employee in accordance with the competence structure (possibly. In the Annex).

At the annual interview the employee's possible wishes and agreed follow-up points and goals are discussed. As far as possible, the organization of work and education efforts in the department, take into account that each employee is offered the opportunity to achieve broad job experience and routine, as long as it is within the company's skills requirements and flexibility.

Appreciation in Hiring

New employees are placed in relevant job group recruitment, and allocated at least xxx points on recruitment. They are assessed again after three months. Employment and the final grading is conducted, and then assessed the new employee and other workers.

If a new employee is placed incorrectly on recruitment, the supplement is regulated at the next payday.

Changing the points when changing jobs

If an employee wishes to change jobs and join the new job function with lower points this triggers a change in the hourly rate at the next competence assessment.

If the company wants to relocate an employee paid a transition allowance.

If an employee's profile for competence and flexibility are changing and losing obtained extra points, this triggers a transition allowance.

4. Changing the payroll system

Audit / changes to the model of competencies, for example adding / removing elements can be ongoing - but only after the changes are approved by the remuneration committee.

By revision / amendment of the system evaluated the employees who will be affected by this. The new assessment result is introduced with the entry into force and the consequences at the annual assessment.

5. For the transition to the new pay system

If the new salary will be less than the previous hourly wage that the employee had at its entry into force, the employee will get a transition allowance, which will mean the difference between these two salaries.

This supplement will continuously decrease with the value competence / kvalifikationsløns supplement future increases with until this is neutralized.

In cases where an employee at the transition to the new system will have a higher kompetenceløn than the salary the employee had at its entry into force, it will trigger a higher hourly rate.

Employees hired after its entry into force, will be covered by the same method and model.

6. Organization

- The reduced Remuneration Committee have different structures
- During the period in which the degree pay system is built up, it has a structure, and in the subsequent operating phase, the Compensation another structure

Lønudvalgets members:

- 2 udpejet by management
- 2 staff representatives

All lønudvalgets members can demand the holding of meeting.

Committee's main tasks are:

- To discuss and agree on ground rules and ensure that the objectives and agreements are respected for the entire competence payroll system.
- To consider any. changes in the structure of the pay system.
- To hear and determine disputes about competence structure and local purpose of the agreement and interpretation. Issues in connection with a specific competence assessment addressed by each department manager and union representative.
- Remuneration Committee takes first position on individual competence assessments when the union and the department continues to disagree.
- Where, in the committee any questions on which consensus can not be reached, either party may request such questions dealt with the involvement of organizations lønkonsulenter.
- When no agreement on the committee may be brought before the organizations for possible industrial procedure.

7. Basis of contract and administration

A: Contractual basis

Logic of the Agreement competence structure (see also Annex).

B: Payment Terms

In addition to the agreed job groups, the employee is paid with xx kr. Per. competence points. In addition, the added geographical and professional allowances, which are considered a personal allowance. The value of a point is negotiated as an appendix to this agreement. The percentage sold at the annual local negotiations.

C: Settlement

Wages are paid in accordance. Employee's personal employment contract.

D: Entry into force and termination

The agreement is effective upon signature and may be terminated in accordance with the industry's Agreement rules for termination of local agreements (§ 8).

After the agreement lapse employee is paid by the then current personal salary and any supplements see. Local agreements. There is agreement that the personal salary covers jobløn + + related pay its geographic and possibly. technical supplement.

If a Ptilæg kept informed union representative about this.

A Ptilæg is a duty allowance, which can be terminated pursuant. IO §23.

8. Audit

The payroll system out once a year to review in the remuneration committee.

By xx, xx / 2019

for employees

For Business xx

Do you need help getting started?

DI and CO-industry has years of experience developing kvalifikationslønsyste- systems in many companies - large and small.

So features like on our experiences and get advice on developing a good - or even better pay system.

We are happy to share experience and provide ongoing advice to the company throughout the process.

For example. be a good idea that we meet Salary Committee and have started a good process.



Industrial Employees
co-industri.dk



Danish Industry
di.dk

To attract, retain and develop employees with the right qualifications and talents is a major challenge for most businesses. Related pay can help solve the problem.

Why should you work systematically with corporate wage determination?

- To increase employee motivation and commitment and rewards
- To help improve business productivity and results
- In order to create better jobs, including to attract and retain qualified employees

Advantages of related pay:

- Employees and management develops self system and adapt the current
- Each employee will be paid according to their skills
- The system is known and transparent to everyone in the company
- Everyone has the opportunity to improve their assessment - eg. can interest in education increased
- Via assessment interview can strengthen the dialogue between management and staff
- A fair payroll

Disadvantages of related pay:

- Time must be allotted for conversation with each employee (ie managers with many employees must keep many conversations)
- There may be some companies will be resistance to change or resistance to the change in payroll



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5. Exemplo de um sistema muito simples: SSAB

Resumo

A empresa sueca SSAB tem um sistema de incentivos muito simples: anualmente é fixado o intervalo (mínimo e máximo) de lucro acima do qual são distribuídos prémios em igual montante a todos os empregados.

SSAB, Sweden: Make work pay – make work attractive

28 October 2009

Observatory: EurWORK

SSAB is a major steel company in Sweden. For over ten years, a profit-sharing scheme has been in operation in the company, whereby profit above the goals set by the board is shared among employees. All employees receive the same amount. The shared profit can either be taken in cash or be paid into a pension fund.

Organisational background

SSAB is a leading producer of high-strength sheet steel and steel plate. The company was formed as a merger of several Swedish steel mills during a crisis in the steel industry in 1978. SSAB consists of a headquarters company and four subsidiary companies. The SSAB group has developed from a standard steel producer into a producer of more specialised steel products. The group has an income of almost 2.7 billion euro and has 8,400 employees worldwide, with 8,000 in Sweden.

SSAB is listed on the Stockholm stock exchange. Industrial relations are cooperative. SSAB is a member of the steel industry employer organisation and union density is high: 90% for blue-collar employees and 80% for white-collar employees. The economic performance of the company is highly dependent on the world market.

Description of the initiative

The profit-sharing scheme in SSAB was introduced in 1994, as an initiative by the management. The view of the management was that employees should be rewarded when the company is profitable. It was also expected that a profit-sharing scheme would contribute to company morale and loyalty.

The part of the profit that is shared among the employees is based both on a calculation and on a decision by the company board of directors. The calculation is based on the profit goals set by the board on company capital and on total capital. When these goals are met, a portion of the remaining profit is set aside for the employees. There is an upper limit, calculated on a per employee basis. The maximum profit per employee has, for some years, been 2,580 euro but in 2006 was raised to 3,225 euro.

The sum set aside for profit-sharing is paid into a fund and invested in prime shares (including SSAB shares). After three-and-a-half years, the money is paid to the eligible employees.

Eligible employees are employees who are in permanent employment and are still with the company at the time of the shareholders' annual meeting the year after the profit was made. All permanent employees receive the same amount. Part-time permanent employees get a share of the profit in relation to their working time.

The reason for the delay in paying the profit-share has to do with the Swedish tax system. By delaying the pay-out, wage tax is reduced by about 10%.

The money set aside for profit-sharing is invested in public shares including SSAB shares. This is done by a board of six persons, two nominated by management and four nominated by the local trades unions. This practice means that the actual sum paid to the employees differs from the sum originally set aside for the purpose.

The employees can receive their share of the profit in cash as an 'extra salary' or they can invest it in a personal pension fund. If the money is placed in a pension fund, the tax is postponed until they retire. It is not known how many employees take their share in cash and how many put it in a pension fund. This is a choice made by each employee every year.

There are no formal links between the wage-setting system of SSAB and the profit-sharing scheme. The trade union representative emphasises that the profit-sharing bears no relation to the wage system, and management shares this view. Wages at SSAB follow the industry agreement for the steel industry. There has never been any attempt to measure the effects of the profit-sharing scheme. There are regular attitude surveys conducted in the company but they have never been linked to the profit-sharing scheme. Personnel turnover is low, which is to be expected as the main SSAB mills are located in small communities, where SSAB is a large and dominant employer.

Dividends to the employees from the profit-sharing scheme at SSAB have varied over the years. One year there was no dividend and in other years the dividend reached the set maximum. The maximum equals at least one month's salary for the majority of employees. The majority of employees in SSAB are on monthly salaries. There are no piece-rate payment systems. In one of the mills, Oxelösund, there is a bonus scheme in operation. The scheme is based on productivity and on factors related to the environment. This scheme results in a small amount of extra pay.

Analysis

Profit-sharing schemes are not very common in Sweden, and the majority are short-lived. Schemes that have been maintained for longer periods are generally found in larger corporations. SSAB's is an example of a scheme that has been in use for over ten years and is still popular with management and employees. The method of calculating the portion for the employees gives the shareholder's representatives control over the scheme.

The scheme cannot be expected to have any noticeable effect on the daily efforts by the employees. The scheme, however, is seen by the employees as 'fair' in the sense that when the profits go up they get a share, and when the company has a loss salaries are not affected. The option to place the individual profit share into a pension fund is an additional element to strengthen the long-term relationship with the employees.

The practise of using the shared profits to buy shares, and the delay of over three years from the year the money was earned to when it is paid out can undermine the motivational aspects of the scheme. It is a common view of the management and the local trade union representative; however, that the scheme is popular among the employees and that it does contribute to company loyalty and morale.

Exemplary and contextual factors

Profit-sharing is not very common in Sweden. The discussion on employee pay is concentrated on individual pay-setting schemes. The SSAB case is an example of a scheme that exists among a handful of major corporations in Sweden. The scheme is designed to give a share of the profit during good years to the employees. This

arrangement is seen as fair, but is not designed to influence how the employees carry out their daily work. The profit-sharing scheme at SSAB has been in operation for a long time and is seen as an element in building company loyalty and morale.

Olle Hammarström, National Institute for Working Life, Stockholm

<https://www.eurofound.europa.eu/observatories/eurwork/case-studies/attractive-workplace-for-all/ssab-sweden-make-work-pay-make-work-attractive>

Fonte: Site da empresa SSAB (25/3/2020)

High-performing organization

A high-performing organization is one of the key elements in SSAB's strategy and an essential enabler for achieving the company's ambitious strategic targets. An operating model built on decentralized responsibilities and entrepreneurship are fundamental to the success of SSAB.

There are three main priorities toward achieving a high-performing organization:

- i. Improve safety with the focus to be the safest steel company in the world
- ii. Enhance productivity by continuous improvements
- iii. Strengthen the performance culture

Enhance productivity by continuous improvements

SSAB One – our shared management philosophy

SSAB One is our common management philosophy. It encompasses SSAB's vision, values and principles, which together give a direction and framework for the company. The word "management" does not mean the philosophy is exclusive to managers;

SSAB One is relevant to each and every SSAB employee. Only when all employees understand our management philosophy can we successfully involve everyone in SSAB's development efforts. SSAB One provides us with a common framework and language across different parts of our company.

SSAB One serves as a common denominator for our improvement structure at SSAB. We will succeed by ensuring we have an understanding of SSAB One and the company's vision as our common purpose, living the values as standards for our convictions and behavior, and using our principles as the rationale to achieve our fundamental goals.

SSAB One has two objectives:

1. Improve our flows based on customer demand
2. Involve and engage all employees in continuous improvement

Principles:

Normal state: We can only improve if we have defined and visualized our "normal state" in terms of safety, quality and efficiency. By recognizing our normal state, we can easily recognize deviations and act upon them

Right from me: Each of us ensures that we get things right the first time round. Errors are prevented from progressing in the production flow. We have a systematic way of dealing with deviations and errors and learning from them

Learn and improve: Development is part of everyone's daily work. Managers coach their teams and give all employees the opportunity to contribute with their knowledge and commitment

Customer demand driven: We understand our customers' needs and focus on improving all the activities that create value for customers

Strengthen the performance culture

Talent and competence sourcing

The whole industry is challenged to attract and retain skilled employees and strong leaders. SSAB works systematically to identify and meet demand for critical competencies. The following activities are just some of the things we do to attract and retain core talent:

- a) Host individual performance dialogs with every employee, as well as annual dialogs with leaders of our businesses
- b) Identify critical sources of competence, such as schools and universities
- c) Work with other industries in areas where we have overlap in our recruitment demands
- d) Provide development opportunities for employees at all levels of the organization
- e) Conduct annual succession planning

Engaging SSAB employees for performance toward goals

Aligning individual performance with SSAB's strategic direction is a central element in being a high-performing organization. Employee engagement, clearly defined objectives and performance expectations, as well as feedback, are key enablers to effectively achieve results.

SSAB strives for broad awareness of our annual business strategy from all employees. By ensuring all employees understand our strategy, we can ensure that each team and each employee is aligning their efforts toward the same unified goals. SSAB's management philosophy, SSAB One, provides the framework for continuous improvement and performance excellence. Structured performance dialogs between

employees and their manager are used to define objectives, follow up on results, provide mutual feedback, discuss the workplace safety and atmosphere, and to plan future performance and individual development.

SSAB continuously reviews and aligns reward structures to ensure performance management processes are effectively supported. Our employee and manager criteria are important elements to exemplify good performance. Matching potential candidates with development opportunities at different levels in the organization is important for developing a high-performing organization.

Diversity promotes performance

Our success depends heavily on the competence and engagement of our employees. SSAB operates globally, and has approximately 15,000 employees from diverse demographic backgrounds in more than 50 countries. Leveraging this diversity is a prerequisite to providing a superior customer experience. SSAB strives for an inclusive leadership and corporate culture, meaning that employees feel a sense of belonging and have equal opportunities to contribute and succeed.

The steel industry is traditionally male-dominated, and SSAB is no exception. SSAB believes that improving gender balance will positively contribute to the performance and safety culture and make SSAB more responsive to customer needs. SSAB has a long-term goal of increasing the presence of female employees across the company. Women in top management positions serve as important role models for others, which drives further development. In 2015, SSAB launched a diversity target aiming to have women in 30% of the top management positions in the company by the end of 2019.

- SSAB has a number of initiatives and tools to raise awareness and further promote diversity and inclusion in the company. Here are a few examples of additional efforts to support this process:
- Developing a high-level in-house mentoring program, where SSAB's Group Executive Committee members serve as mentors for female mentees. The program was successfully initiated in 2016. The mentoring program is a mutual learning experience for both mentors and mentees, through challenging each other, exchanging experiences, broadening perspectives and building networks across the organization
- Actively promote diversity when recruiting to management and specialist positions, as well as our strategic development programs, such as the Technical Development program and Business Development program
- Conduct an employee survey every second year
- Collaborate with other companies and authorities. As an example, in several locations across Sweden, SSAB partners with local municipalities to create internships for people with diverse backgrounds, including those from outside of the country. This provides participants an opportunity to gain experience in the labor market in Sweden and to build on their Swedish language skills, at the same time as giving SSAB an opportunity to find new competence needed
- Participate in external strategic initiatives such as Female Leader Engineer (Sweden), Women in Tech (Finland) and Association of Women in the Metal Industries (Americas)

Strengthen leadership capabilities and employee engagement

Leadership development

A strong leadership pipeline is not only a requirement for a high-performing organization, but also a strategic choice for SSAB. Leaders are instrumental in delivering results, establishing an inclusive culture and managing change. SSAB works to ensure that internal leadership talents are identified and systematically developed. Leadership development is aligned with SSAB One, our management philosophy.

Employee engagement

SSAB conducts employee engagement surveys to give employees an opportunity to voice their views on topics related to their working situation. The surveys help analyze the drivers of employee engagement and capture improvement opportunities which contribute to leadership, high performance and engagement. The survey results are utilized at all organizational levels, starting with the Group Executive Committee. During 2016, we utilized the survey results to improve the annual performance process. Many production teams have improved how they discuss and manage intra-team conflict based on their own results and continually challenge the way we work. Each manager is responsible for improvement planning, executing and following up with his or her team based on the results of the survey. The results are published in the GRI report.

<https://www.ssab.com/company/sustainability/responsible-partner/high-performing-organization>

6. Exemplo de aplicação numa empresa de utilities

Resumo

A empresa dinamarquesa Skanderborg serve os municípios na água de abastecimento e águas residuais.

+PlusLøn








Skanderborg utilities

gets new pay system

PlusLøn in practice



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company payroll system should reflect the efforts and results

All companies have a position on wages. Whether it's about seniority, compositions or bonus, so there will always be thought about how the company wants to remunerate its employees. With PlusLøn it is possible to motivate, retain and reward its employees - fair and manageable.

Industry's reality has changed over recent years. They produce across borders, collaborate with suppliers around the world, demand new skills, the need for increased flexibility and want to reward for good performance.

The employee's role is also changing. Many find that they can help to define the working day content they engage, take responsibility for educating themselves and making an extra effort when needed.

All these factors should be the company's payroll system also reflect:

Get inspiration for a modern pay system

DI and CO-industry consultant jointly companies how they can introduce simple, transparent and fair pay systems that also has room for flexibility and carrot.

Organizations consultants visited and guided all types of businesses - from large jobs in the process industry for the minor blacksmithing.

This booklet is an example of such advice and the process from start to finish in Skanderborg supply that should have a new payroll system.

The booklet is also part of our overall package PlusLøn. Three other pamphlets expand on pay systems respectively workers and employees and the specific method to introduce PlusLøn in the company.

So do not hesitate to contact DI and CO-industry, if we are to help your company to introduce a modern payroll system.



Utilities Skanderborg A / S

Skanderborg Utilities A / S (hereinafter referred to Skanderborg Supply) has taken over the sewing obligation from the municipality and produces 1 million. m³

drinking water annually to 6,000 households / water meters. At the same time deal with the 2.4 million. m³ waste water that is being transported, cleaned and discharged from 18,000 households. In addition, the company is also the emptying of 2,500 holding tanks from household cleaning in the open country.

when the payroll system must fit the new times and new requirements

Once there was a job at the municipality guaranteed regular income and familiar environment for years to come. But as many state and municipal corporations are separated or are in private hands, it is safe and the familiar job in the municipality wings disappeared. The upheaval also require a new payroll system.

Skanderborg Supply is an example of such an organization that has gone from being off entligt auspices to be held in a private legal corporation.

A wave of privatization

Other known examples are postal, transport, energy and telephony. Some companies have closed, others were purely private, others are partly state-owned. Market forces are unleashed.

In 2009 came the turn of the utilities. In Skanderborg had water supply and wastewater management is no longer just be a department of the municipality, they serviced. It should instead be an independent company, which would operate in market terms, ie a reliable supplier of low consumer prices and high customer satisfaction, deliver increased service and have an eye for the environment and sustainable solutions. The municipality was now just with the participants in the boardroom at the new company.

Skanderborg Supply was formed in early 2010 and should now act as a private company, but the municipal ownership. In the case of municipal mergers was Skanderborg, Ry, Galten, Horning and a minor portion of the total brædstrup municipality to Skanderborg Municipality:

In the company they have taken up the gauntlet and now has a clear vision that can and must meet the new requirements. Skanderborg Supply hopes to become one of the best-run companies in the supply industry.

But such a transformation requires otherwise of employees, and cultural difference was especially evident when forced to talk salary system in the new company. DI and CO-industry was therefore included in the company's process of building a new salary system. Read more in this booklet how the goal was reached.

What PlusLøn?

Wages in the company can and should have a motivating effect. PlusLøn are both inspiration and systematics to develop a framework for the company's payroll system so there is close correlation between the efforts, results and earnings.

In 2002 PlusLøn introduced as inspiration for new pay systems in industrial companies. The goal was to provide more opportunities for putting together the various elements of pay, so it responded better to the individual company's everyday life. Next to PlusLøn include both workers and employees.

A modern payroll system has a broad reach

Since many of the industry's companies have chosen to introduce PlusLøn. Over the past 10 years, DI and CO-industry consultants thus been in contact with a large number of companies in various industries to inspire and provide guidance on how to develop new pay system.

Plusløn made up as follows:

RBR

RBR can be either individual, group-based, or a combination of both. Performance pay is variable and depends on the results obtained.

related pay

Related pay the surcharge for the job, together person relevant qualifications. Related pay is a personal allowance and follows the individual employee.

function-based

Function-is supplementary to perform a particular function or task, possibly for a temporary period.

Løntermometer

Mapping the causes of the pay success or lack thereof. Compares lønsyste systems in many enterprises and give it enjoyed sary knowledge to customize the payroll system in time.

Base Salary

Basic pay is pay for basic job and qualification requirements. The basic wage can be the same for all employees, or it may vary between broad groups.

Whether instructions, the less wrought company or a major food producer, the frame is the same. But the content of the payroll system tailored to the individual business needs and current challenges.

Productivity on the agenda

There is at present a tendency that companies have a special focus on productivity and therefore have been more concerned with performance pay. Where qualification wage is an investment in our people and the future, then performance-fully funded from day one and can easily be estimated if the company wants to measure and reward for concrete action. Such adaptation includes PlusLøn too. The possibilities are endless with a modern wage system that can continuously adapted and targeted the wishes of management and employees priority.

Why consider a new salary system?

Many different challenges may lead to the decision to introduce a new salary system. DI and CO-industry consultants perceive eg. The companies mentioned reasons:

- Changed forms
- Outdated pay system, for example. piecework, unequal wages or salary alone seniority
- Complex and time-consuming payroll system
- No correlation between skills, efforts and achievements
- The ceiling has been reached in the pay system
 - no room for development

- Crisis, cutbacks, restructuring
- A desire or requirement of both employees and management
- Need for increased employee flexibility and competence
- Larger justice - too many subjective points.

Noticeable and visible change

The goal is that when the new pay system is introduced, there will be a number of tangible and visible benefits to both management and employees. Here mention businesses eg.:

- simple structure
- easy administration
- Wide support
- Clear link between pay and performance
- Supports corporate goals
- objective metrics
- High ceilings in the payroll system.

Take your temperature once a year

When the new pay system is a reality, says the time is not quiet. Many factors can and will impact the system.

Here is a tool - Løntermometeret

- annually measure satisfaction with the payroll system. The conditions which are most important for employee satisfaction and motivation, is mapped to measure, the system may have problems. Both employees and management fills each a questionnaire to clarify whether



system works as intended. By measuring once a year, you can monitor progress and adapt the system as needed. In this way, the company carefully document the effects of working with payroll systems.

A common interest in achieving a good result

The company's payroll system should be based on business objectives and opportunities - that is, the actual business basis. A prerequisite is that the payroll process sets the stage for a positive cooperation between management and employees for the success of the new pay system. It is always a common interest to achieve a good result.

How long will it take?

Most companies want to get a sense of how long it takes to introduce a new salary system.

Unfortunately no clear answer. A payroll system process is a process to be run in parallel with the daily operations. It is therefore devoted extra effort and working. Just as unpredictable factors can come into play at work. Switches, for example, a new IT system along the way, there is change in ownership structure, you have the right data about the company or is suddenly changed order intake.

A rough estimate is that the qualification should typically salary could be constructed of 4-6 months and wages result in 2-4 months.

Read more about the different phases in the payroll process and look at page 20, how Skanderborg Supply went to the task.



Synergy and increased security of supply

Denmark has a so-called good water availability. This makes it easy to set up his own small waterworks. Those are 2,500 of the country - it is the 50 in Skanderborg.

Several water companies merge these years to achieve synergies and increase security of supply. At Skanderborg Supply will also be happy to know the cooperation with small water works.

”

We want to be a professional and modern utilities in contact with citizens rather than just a number to be went straight asses once a year, 'says CEO Jens Bastrup, Skanderborg Supply.

Why new pay system in Skanderborg Supply?

At Skanderborg Supply started it afresh when the company took leave of the municipal payroll and went over to PlusLøn. Read here how the director and confidence and employee representatives went to the task.

- We had to go through a major cultural exercise, says the director of Skanderborg Supply Jens Bastrup. The municipal payroll system was safe for the individual employee, but it did not necessarily reflect a modern utilities in all its facets.

- When we went from being a local company to a private-like utilities, it was also beginning to do away with the municipal bonds in a number of areas. One of them was pay. Since we are not a big organization, it was an impossible task to hold on to and manage eight different arrangements that they had 32 employees. The communal agreements was not up to date.

- We terminated the existing local agreements and found that membership of Danish Industry was the best for our business. We met DI and CO-industry, and it was agreed to create a new pay system based on DI's agreements and PlusLøn system.

- The payroll system to ensure that we can **retain, develop and attract qualified and motivated employees** the development of the organization, and that we live up to our long-term objectives of payroll and HR area to make the company ready for the new future as a private actor in the supply area, says Jens Bastrup.

In the midst of a time of change

- We are in the midst of an exciting development, which we have increased customer focus, think of new tasks and in general make the company an effective player on the market conditions. It is an exciting and important cultural exercise in which we can and must be innovative in many areas - including wage, says Jens Bastrup.

- Skanderborg municipality in the supply traditionally been good at delegating tasks, it may be that we can manage to pull some of the tasks back to us. Perhaps we will need to hire new people. And then our wage system be fair, flexible and transparent.

We ourselves with to have a definition of the content of our new pay system

Several employees were challenged as Skanderborg Supply should have Plusløn.

- We will know from the municipal system where seniority and step is defined in many years to equal employment. It was easy to relate to - and what would happen now ?, says operations assistant Niels Mikkelsen, who has been with the Salary Committee throughout the process.

- Suddenly our reality become another, and we should just get used to. Our company was a private limited company and the like had to work on other terms - even purely in terms of pay. Then we were immediately skeptical.

- Conversely, we could also see that we had a payroll system that was neither fair nor logical, and where some performed the same tasks, but fi c different pay, says Niels Mikkelsen.

Areas of responsibility:

Skanderborg Supply 12 employees in drif ten work in teams around the clock every day of the year, where they monitor and service the 200 km of water mains 1000 km sewage pipes 8 purifiers 5 waterworks

150 pump stations

The working time of the employee operating ranges of dependent on whether one is on duty. It has about every fifth week.

Should reflect qualifications

All employees of a utility performs an important job. They help to ensure the infrastructure of an entire area. It requires both a good overview and flexibility. Some employees have day guards every five weeks, where they monitor the entire supply system and must be able to act if something goes wrong. Others must provide good customer service over the phone, while others need to make sure that there is track of receipts and payments.

- So there was a need for a pay system that reflected the diversity of qualifications. We took up the gauntlet and went seriously to the task - even though it was a little difficult process at first.
- As a specialist in our field, it makes sense that we are helping to develop the business under new auspices, says Niels Mikkelsen.
- And now we are also in the process of considering what new tasks we can deliver to local citizens, for example. could dredging for private be a new service.



In future, the skills and flexibility rather than seniority, defining salary in Skanderborg Supply', says Niels Mikkelsen.

How introduces PlusLøn

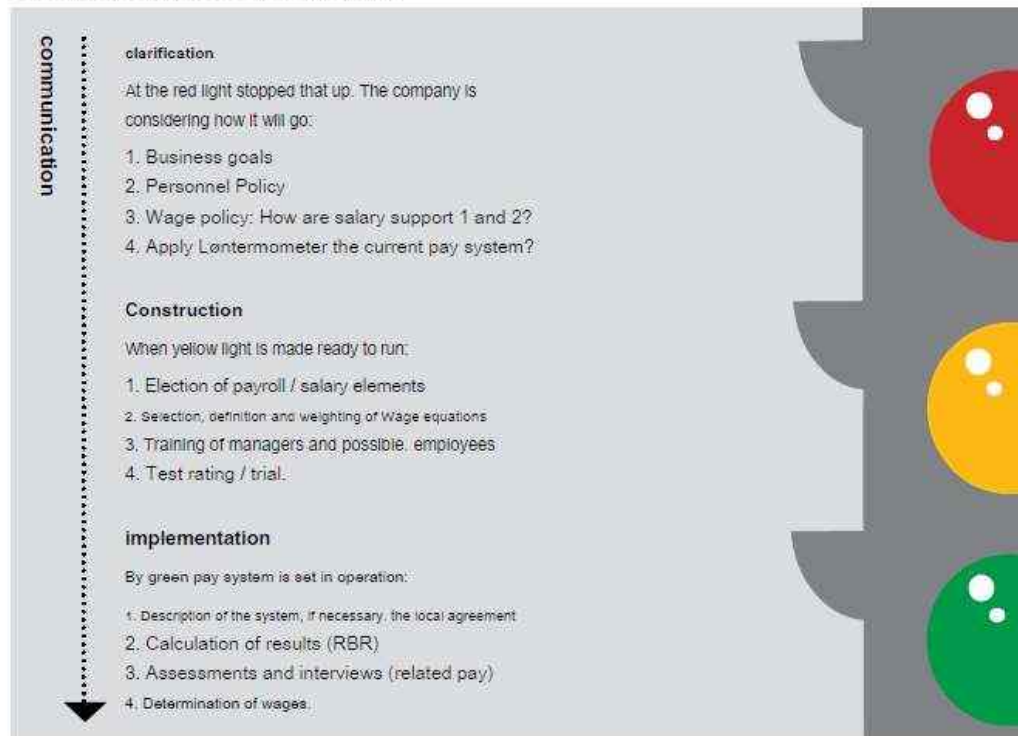
To build and establish a new salary system requires strong commitment by both management and employees. It is a process that can last from six months to a year, where values, work practices, myths and challenges are mapped ...

From thought to action

A new salary system is not a commodity that can be pulled off the shelf. However, it is a thorough process consisting of three phases

- clarification, design and implementation - which helps to provide clarity and consistency. During the process must be well informed

Development of a pay system with PlusLøn



to ensure support for the project. In several places we have seen that missing or unlucky communication can create resentment against an otherwise good payroll system. And then the forces of good wasted.

Like the employees who are to lead the system into practice must be prepared for the job as ambassadors.



Engaged in the process

To introduce a new salary system is therefore greatly to ensuring a 'good process' underway. We suggest that you select a number of enthusiasts / employees and

leaders who both actively participate in all meetings of the payroll system, but also has an obligation to inform and if necessary. In draw other employees and in general support the project.



How did they do in Skanderborg Supply

Eight agreements and four different payroll systems with local adaptations. The administration was fierce as four smaller supply units were merged in Skanderborg. It was obvious that a fresh start for a simple and modern payroll system.

The overall objective of the payroll system was that it had to fit its new realities and challenges and could

retain, develop and attract qualified and motivated staff e development of the organization.

This should implemented through three main tasks:

By providing better opportunities for rewarding effort, for example.

- ensure fair and balanced remuneration customized inserted and surroundings.
- focus on skills and performance rather than seniority.
- opportunity to develop performance-related pay system.

By creating a professional payroll and personnel management, for example:

- draw on staff legal help from the employers' organization.
- employer determines salary from the company's current situation, not from tradition or historic rules.

By having a common, simple and coherent solution in the business

- customized system to our company, taking into account all conditions.
- a simple and practical system, we can handle and develop.
- relationship with other business systems that benefit goals and skills.
- tool that can ensure good dialogue on the tasks, development, goals and rewards.



Remember to orient at the right time

Both management and staff have helped to define and establish the framework for the new payroll system. Lønssystem Committee consisted of representatives from management, employees and union representatives from the four departments, so the payroll system was tailored to the company's everyday life and work:

A few of employees say about work:

- Taking part in the payroll committee is a good opportunity to influence and put a mark on the new pay system. But it has also been a time-consuming process, where we sometimes have felt that we spent many hours discussing us to quite small, but important parts of the payroll system.

- It can be a little hard to inform its colleagues in the process. Few people know that when we have arrived at a chart that looks fairly simple out so it's been long discussions ahead on every word included in the table', says operations assistant Torben Rasmussen, as seen to the left in the picture.

- I would definitely recommend that you inform collected about work when reached some important milestones. For it is difficult to explain the many hours of work on a random two minute talk in the canteen, said operating assistant Niels Mikkelsen.

The new pay system

Skanderborg Supply new salary system contains all four elements of PlusLøn (Base Salary, related pay, and Function-RBR). All elements are flexible and can be continuously developed as needed.

Base Salary

On appointment places the company a new employee at a relevant base salary which the employee will be graded on the assumptions and the background required for the job. There are two basic step - 'no training' and 'training'. The basic wage makes it possible to recruit employees without relevant experience to a fair wage, which rises when the professional skills and experience is obtained.

function-based

At Skanderborg Supply, an employee also honored with Function-if you perform a particular function. Function wage is introduced to the relevant staff. Eg. get an electrician now function-because of his education.



related pay

Qualification salary ensures that all employees assessed from a number of job-related and personal factors. At Skanderborg Supply has defined factors as follows:

job-related FACTORS

- The severity of the employee's job.
- Knowledge / experience in performing each job.
- The employee's competence to make independent decisions in the job.

INDIVIDUAL RELEVANT FACTORS

- **accountability**
The employee conveys important information inside job function. The ability to make a planning of their own work - stay organized
- taking into account the most economically advantageous solution for the company.
- The employee can prioritize tasks?
- including distinguish between significant and insignificant.
- **flexibility**
Is the employee willing to adapt to the ongoing changes of the entity? Is the employee willing to solve important / urgent tasks when scheduled break / day off?

The ability to change the behavior / attitude in order to achieve a common goal.

- **Collaboration**

If the employee is helpful to other colleagues and show respect for other people's work?

Helps the employee to a positive and motivating atmosphere? Is the employee receptive to others' ideas?

- **Initiative**

Is the employee motivated and involved in their work? Creates employee new solutions? Seeks employee influence their own job content and development department?

- **Service**

Exhibiting employee care, tidiness when he / she is acting on behalf of the company - also in relation to the company's values? Shouldering the employee to follow customer inquiries to the door and pass them on to the appropriate responsible departments / employees? Meets employee agreements with the customer, so the customer has a good experience of the company?

Point	1	3	6	10	15
Assessment	Not satisfied-tory	Satisfied-tory	Well	Much well	super well

There are prepared a thorough guide in how the manager gives points to a number of described and defined tasks. At the annual performance is

each employee evaluated with points from 1-15 in the different areas, and the results are included in salary negotiations.



!!

Mette Hansen, left, working with area Business and Customers say about RBR: 'We have even helped to define our goals and thought that they were realistic. But we live in a dynamic world where that can happen something unexpected. We have for example, experienced prolonged illness in the department and had to draw on external consultants, the kind is not to foresee. We regard this as a 'test year' and need to edit and review our goals again in a year's time. '

RBR

Performance pay is a whole new part of remuneration in the company.

Here, employees have even discussed what goals they want as a basis for performance pay, and in the next process, the employees - who now works as autonomous teams - even define how they will follow up on the chosen target.

In the process, it is not a task for management to determine or define how employees want to meet their goals. Management's job is only to give some overall goals of the company.

Performance pay is based on two main business goals

- Following the rationalization plan.
- To achieve customer satisfaction.

And four specific department goals:

Department goals of Plan and Project:

- Effective compliance with the investment budget.
- Number of projects implemented without external adviser.

Departmental for Sewage:

- Water quality - and to ensure such a small sewage tax as possible.
- Implemented major services at pumping stations.

Departmental for Drinking

- Reduction of the water loss (optimally a water loss of 6 per cent.).
- GPS indmåling wiring harness.

Departmental of Business and Customers

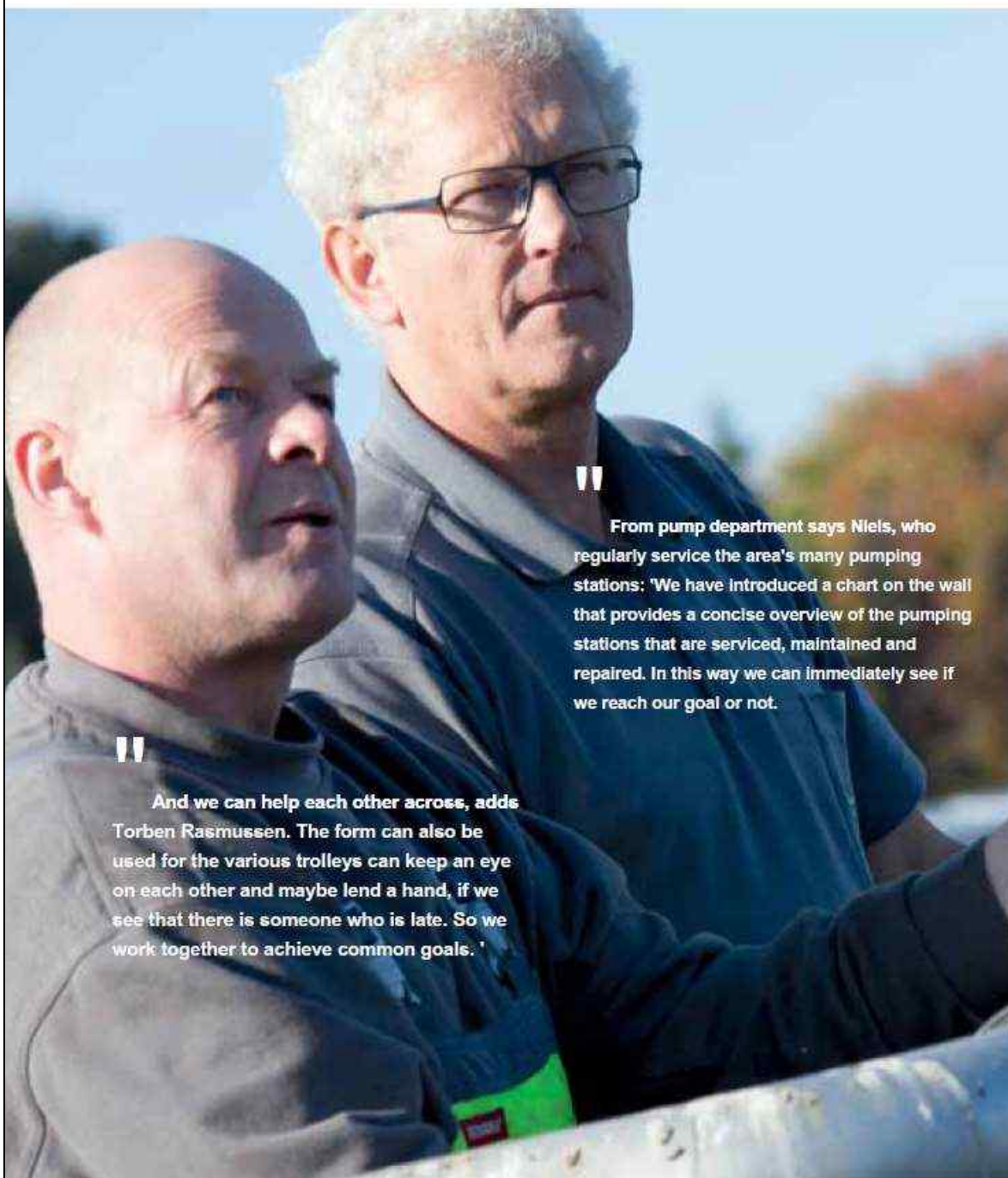
- Must solve several tasks yourself and spend less money on external consultants such as auditors.
- Treatment of invoices on time and thus avoid penalties.

With RBR employees can annually receive up to 8,000 kr. As an extra bonus.

Earnings Wages need to be developed

Performance pay is currently running in the first version. When the statement is done after the turn will Skanderborg Supply foreta-

ge an evaluation of goals and results in even better reflect everyday tasks.



”

From pump department says Niels, who regularly service the area's many pumping stations: 'We have introduced a chart on the wall that provides a concise overview of the pumping stations that are serviced, maintained and repaired. In this way we can immediately see if we reach our goal or not.'

”

And we can help each other across, adds Torben Rasmussen. The form can also be used for the various trolleys can keep an eye on each other and maybe lend a hand, if we see that there is someone who is late. So we work together to achieve common goals.'

Getting started with the new salary system

Salary motivates. Salary maintain. Salary is a powerful tool. Developing an efficient payroll system should be a common task for management and employees.

Many companies take far inlet before they decide that now they have a new salary system. But the decision itself is just the very first step. Be prepared that it is a demanding and sometimes lengthy collaborative process that lies ahead. Both the director and employees to get to work when they need to discuss, define, negotiate and communicate a new salary system. But watch out - the thorough process is ultimately helps to ensure a good result.

Remember in the process:

- Have the necessary staff back-up. There may be changes in staff during the process.
 - Get support for the process from those involved - management and employees.
 - Create understanding that it is important for the company to get a new salary system.
 - Engage and retain key personnel in the process.
 - Inform employees regularly about the new opportunities.
 - Keep the change - possibly - with Løntermometer.
 - Pull on organizations lønkonsulenter in the process if you need coaching or counseling.
- To ensure that the company has updated and reliable data on the company's production (time, bonuses, job roles, attendance rates, standard times, etc.).
 - To devote the time needed to process and prioritization of the work.
 - If during the process introduces a new IT system (eg. ERP MRPsystemer), please note that it often takes longer than estimated.

Lessons from Skanderborg Supply

Other utilities, public-private companies and others face in these years to a similar process as Skanderborg Supply. To those Skanderborg Supply also a number of practical advice for inspiration and consideration.

Jens Bastrup:

- We had to start all over again to set targets and make clear what it is we value our employees. It took a little longer than expected. But the task we got inspiration from other utilities, for example. Horsens water. Similarly, I also hope that our experience will inspire others, standing in front of the same culture exercise.
- The entire project has been time consuming, but necessary. However, it has been difficult to keep schedules at a busy time, and it has at times led both talk, rumors and insecurity with him.
- The result is that our new payroll system pays fair for skills and tasks and rewards for good performance. I am proud that the employees have been so committed to develop the company to the new times. This bodes well for our company, says Jens Bastrup.

Customer Advisor Mette Hansen:

- Our payroll process has definitely cost us some blood, sweat and tears. It is probably necessary to get out on the other side with a good result. But it has to adjust to. There are no quick fixes in such a process.

Operating Assistant Niels Mikkelsen:

- It's been a tough but necessary process for all of us. Among the employees there were some who thought that they had a reduction in pay.
- Today all accepted the new wage system and many are really happy, some are not so enthusiastic. It is not enough to avoid. But we will never be able to go back to the old system, it is excluded.
- Nowadays, assessments of individual employees more simple and fair. Previously, it was assessed by three different leaders and it could be a mixed experience. Now we have a single assessment conversation from some fixed factors and we have more dialog, where you can say from time to time.
- On a more general level, we have learned to know one another in this process. Previously, management well listen to us, but now we see that both are listened and acted. It is positive, says operations assistant Niels Mikkelsen.

7. Produtividade: como medir

Medida	Objectiva
	Simple (KISS: Keep It Short and Simple)

Factor 1 - Productivity

Purpose: To reduce labor costs. unit produced.

Definition

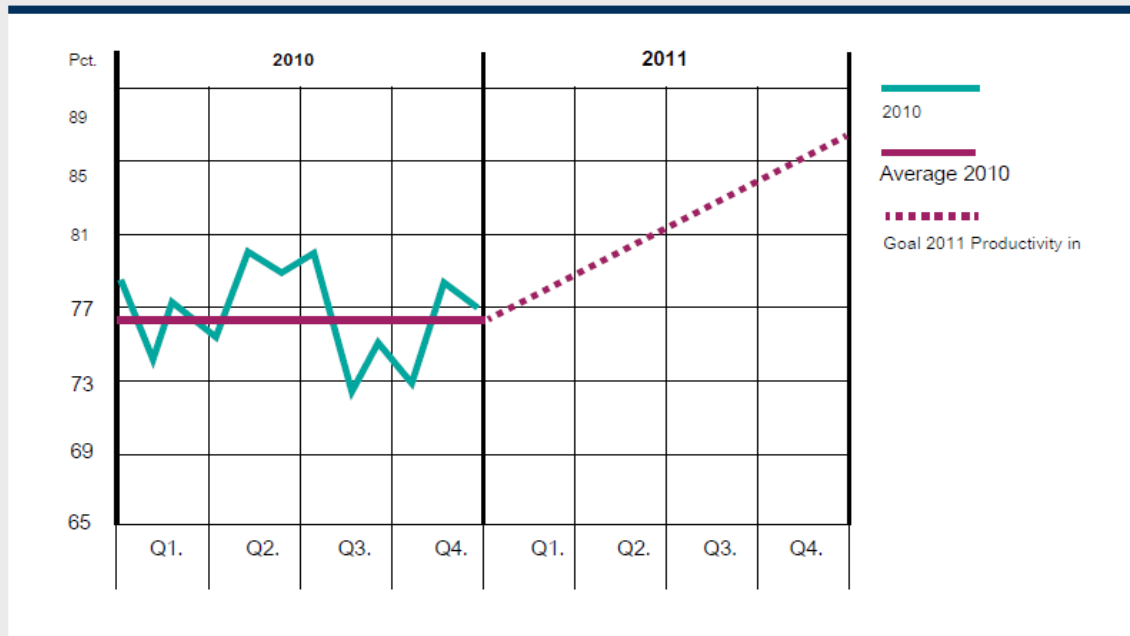
$$\text{productivity} = \frac{\text{production measured in the period} \times 100}{\text{produced standard time} \times \text{Overall time period}}$$

- the period of production is the sum of the standardized time assigned for the production
- the total period of time is the result of the group total stamped working hours come-and-go-indstemplinger

The graph below shows how the machine workshop's productivity has developed in 2010.

A negotiation has established that the starting point (standard benefit) for income creation is 76 per cent., And the department's productivity is 88 per cent. This would be reached before the end of 2011.

Dimensions and standard output is transferred to the table on page 50th



example B

RBR contract manufacturer

Results Factor = Productivity / result

For the calculation of result the following factors are calculated:

- Net hours spent
(Measured via the piston as well as short daysheet)
- Net packed ports
(Measured via the filed / finished reported production order forms / route maps)
- Subsequently, the calculated theoretical packed porttal by taking period consumed hours and dividing by the agreed standard figures

(Hours per day, Port from the "Norms, rates and points system")

- The theoretically calculated packed porttal deducted actually packed porttal. Difference number then converted to a score by multiplying the difference figure with the calculated point value per. gate. ("Norms, rates and points system")
- The calculated score value then is multiplied with pay-per factor. point. ("Norms, rates and points system")

The resulting value is the profit of kr. Per. hour.



example C

Performance pay scheme based on productivity and profitability for the whole company

principles

Performance pay of each employee depends on:

- all departments achieved per. month

plus

- the company's economic profit per. month

Course of action

1 Each department sets goals for production
 2 The individual fund share

of the results is weighted in relation to each
 other

3 are the company profit is calculated in
 relative to the desired profits 4 Performance

pay for each employee
 calculated

Re 1. productivity ¹

For each department providing various criteria related to
 productivity:

The production department:

- units produced
- quality
- waste
- delivery time

Sales Department:

- Actual Sales / budgeted sales
- actual selling price / sales price calculated
- actual costs / budgeted costs

Economy / loss:

- delivery of monthly reports
- average credit
- actual costs / budgeted costs

Product development:

- obtained margin / budgeted margin
- new patents / expected number of patents
- actual costs / budgeted costs
- projects on time / completed projects

¹ For each department establishes a scheme for calculating
 of points - as in Example A.

1. Overall productivity performance for the entire company

Department	Weight percent.	Result ₁	Point (w x result)
Production	40	600	240
Sales	20	650	130
Economy / loss	10	500	50
Product development	30	400	120
Total			540

2. Economic result

Surplus	1.8 mill. kr.
Required profit before payment of performance pay	1.4 mill. kr.
Basis for RBR	400,000 kr.
Maximum profit share to the employees: 35 per cent.	140,000 kr.

3. Performance-per. employee

Performance-total: 140,000 kr. X	$\frac{540-300 \text{ (norm)}}{700 \text{ (possibly profit)}}$	= 48,000
----------------------------------	----------------------------------------------------------------	----------

Performance-per. employee:	$\frac{48,000}{32 \text{ people}}$	= 1500 kr.
----------------------------	------------------------------------	------------

1300 points are standard. The maximum achieved 1000 points per. department, ie that the profit potential is 700 points.

8. Tempo de entrega: medição

Factor 4 - Delivery Compliance

Purpose: To ensure customer time delivery and to strengthen compliance with delivery times result between the groups.

Definition

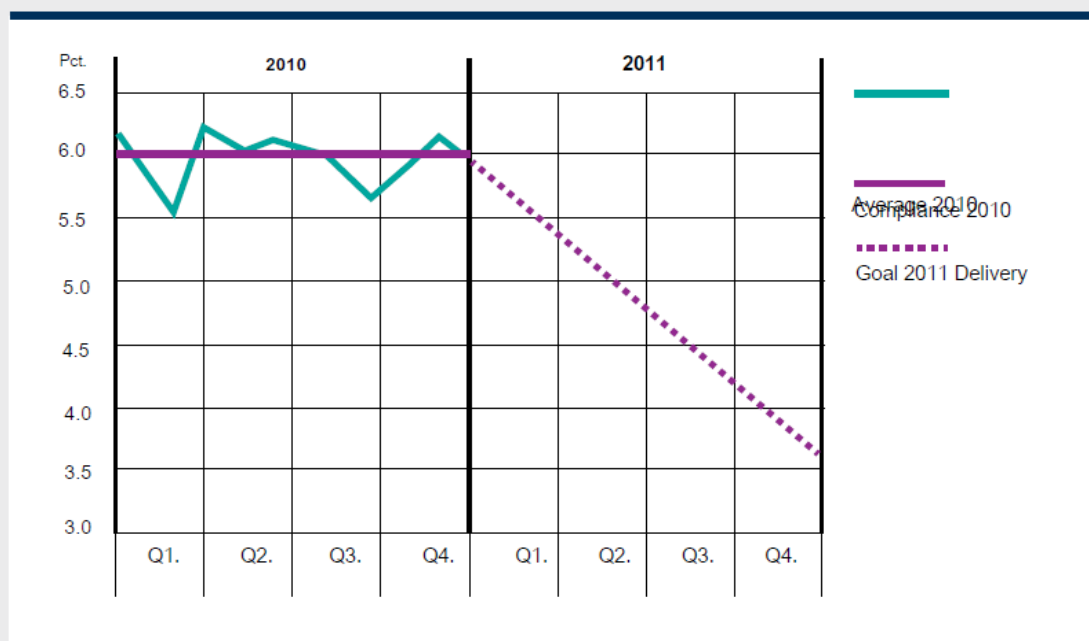
$$\text{Delivery Time compliance} = \frac{\text{number of delayed orders} \times 100}{\text{number of orders in total}}$$

- where the number of delayed orders is the sum of the orders exceed production plan delivery for group
- the number of orders is the sum of production orders delivered on time

The graph below shows how the delivery observance has evolved in the machine shop in 2010.

A negotiation has established that the starting point (standard benefit) for income creation is 6.0 per cent., And the department's goals for delivery compliance is 3.0 per cent. This would be reached before the end of 2011.

Dimensions and standard output is transferred to the table on page 50th





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9. Qualidade: quantificação

Factor 3 - Quality

Purpose: To ensure compliance with company and customer quality requirements and to work for the development of an ever higher quality.

- where complaints period is the sum of the costs incurred in a period due to remedies for quality defects

- wherein the reaction period is the sum of the invoiced

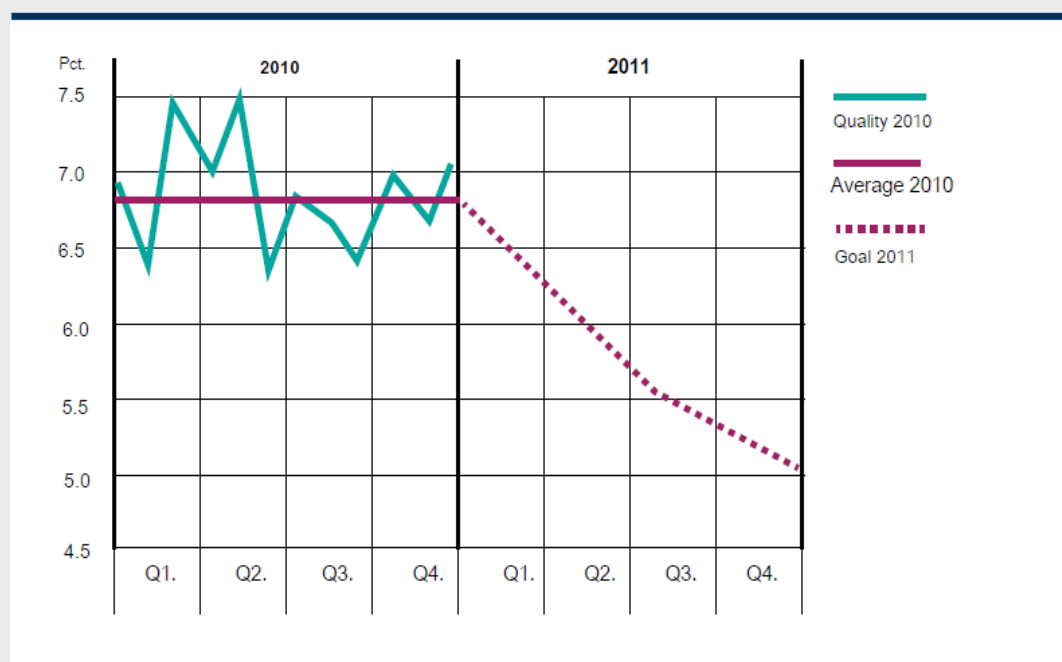
Definition

$$\text{quality} = \frac{\text{period claims} \times 100}{\text{revenue for the period}}$$

The graph below shows how the quality of the company has developed in 2010.

A negotiation has established that the starting point (standard benefit) for income creation is 6.9 per cent., And the department's goals for quality 5.0 per cent. This would be reached before the end of 2011.

Dimensions and standard output is transferred to the table on page 50th



Result = Quality Factor (Q)

- Q Supplement is a supplement to be granted per. hour.
- Parameters for evaluation: 1: Dents, 2: Scratches, 3: Assembly, 4: Finish - general surface assessment.
(Dirt, swarf etc.) 5: 6:
- The sample of 2 (or more) parameters that are used in a given period of time - can be subsequently replaced with others.
- Is performed periodically (14 days) controls a plurality of door types, weighted according to units of%
- allow 0, 3 or 5 points per. port Maximum achievable 50 points per. control period. Is one error per. port that requires discarding of component / component, there can be triggered points for the product.
- Checks carried out by the quality department.
Checks are carried out immediately before packing, but will also perform quality control of packaged products. When checking relating to the quality supplement, there will always be attended by a production worker.

Norms, rates and points system

1. Negotiated "Zero Point" (Standard figures):

x, xx per hour. gate.

2. Negotiated payment factor:

x.xx kr. per. point.

The rates in 1 & 2 sold via the local wage negotiations.

3. Scoring:

The percentage distribution of the three categories is drawn from the historical material.

Average points per. gate: 1510

4. Q-system:

Negotiated payment per. point:

x.xx kr. per. Q points.

Maximum Q Supplement can be: xx, xx kr. Per. hour.

Payment rate negotiated via the local wage negotiations.

10. Lucro: sistema baseado no desempenho de toda a empresa

example D

Profit Sharing Scheme

Example of the local agreement

This scheme is an offer for the company's employees and is given by the Company independently of labor agreements. The scheme is in principle approved by the General Assembly, which has left it to the Board of Directors and to set guidelines for the initiation, cessation, content and interpretation.

§ 1

The purpose of the profit sharing scheme is to motivate employees to contribute to the company's continued operation through enhanced cooperation and efficiency.

§ 2

In excess, defined below, paid part of that to the employees by the given below guidelines.

§ 3

BONUS / profit-sharing scheme covers all employees, who have six months of service in the company. Full bonus is reached after 18 months of employment.

For the following employee groups, the following applies:

- Young workers under 18 regardless of function and / or employment status will be 30 per cent. the full bonus
- Employees employed part - calculated over the entire financial year receive a bonus in relation to the earned hours
- Employees employed with all or part public subsidies or engaged in any form of rehabilitation gets bonus for the company's labor costs measured throughout the year
- Employees who resign during the financial year are eligible for bonus prorated for the financial year

§ 4

Payment takes place directly after the Annual General Meeting.

§ 5

The basis for calculating the bonus is the company's audited financial statements, prepared in accordance with the Annual Accounts Act.

§ 6 Bonus appears as follows:

- Bonus amount to a total X per cent. for the year, calculated as follows:
 - Earnings before interest and tax and before financial dispothoner
 - Reduced with a return on equity
 - As well as adjusted for extraordinary items
 - Return on equity stood yy per cent. and calculated on equity, beginning of year
 - Adjustment for extraordinary items decided by the Board

Bonus distributed then prorated to each bonus eligible employee.

§ 7

Interpretation of the bonus scheme made by the board and management.

§ 8

The scheme is one year and can be canceled with two months notice to the end of a month prior to the start of the year.

§ 9

The Company undertakes quarterly informing employees with a view to whether earnings are expected to result in triggering the bonus.

Nyby, xx. month 201Y For the company



11. Redução de custos: exemplo

example E

cost reduction

These simple models can be used in all industries, both large and small companies.

Business need here is to get the cost reduced. The company and its employees share the prize equally.

example 1

Reducing costs	
Sales	240,000 kr.
estimated costs	85,000 kr.
current cost	70,000 kr.
bonus Pool	15,000 kr.
	(85.000 to 70,000)
The company's share of 50 per cent.	7,500 kr.
The employees' share of 50 per cent.	7,500 kr.

example 2

Reduction of costs for electricity, water and heating			
(Kr).	Budget	realized	savings
El	5000000	4800000	200,000
Water	1000000	950000	50,000
Heat	750000	775000	25,000
Total	6750000	6525000	225000
			The company's share of 65 per cent. 146250
			The employees' share of 35 per cent. 78750

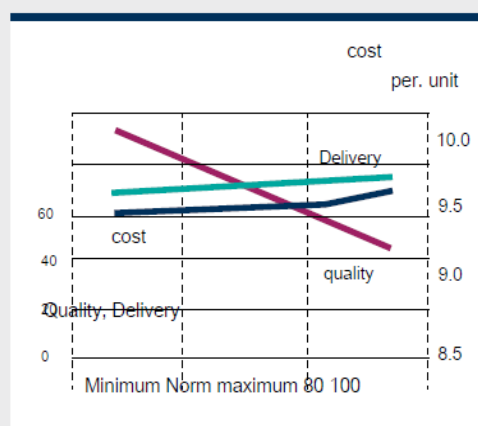
12. Multiobjectivos: produtividade, qualidade e serviço

example F

Improvement in productivity, quality and customer service

The company in question have difficulty coping with price competition. The company needs to improve productivity, quality and customer service (delivery). The group measured in terms of the following metrics:

- Production
- Quality
- Delivery of measurement criteria - minimum, standard and maximum - are shown in the table below.



As stated, the goal is that the cost per. unit reduced and that both quality and delivery compliance improved.

- Achieving the targets of minimum levels of all three criteria triggers a bonus of 1 per cent. of salary.
- Achieving the goals of the standard level for all three criteria triggers a bonus of 2.5 per cent. of salary.

- Achieving the goals of maximum levels for all three criteria triggers a bonus of 5 per cent. of salary.

- Achieving cost / unit of minimum quality standards and delivery compliance to the maximum, triggering a bonus of 2.84 per cent. of salary (0.34 pct. +

0.83 per cent. + 1.67 per cent.)

Performance-related scheme:

measurement criteria	Minimum	norm	Maximum
	Performance Bonus	Performance Bonus	Performance Bonus
Cost per. unit	10.25 kr. 0.34 per cent.	9.80 kr. 0.83 per cent.	9.20 kr. 1.66 per cent.
Quality	79 per cent. 0.33 per cent.	85 per cent. 0.83 per cent.	95 per cent. 1.67 per cent.
Delivery Compliance	90 per cent. 0.33 per cent.	94 per cent. 0.84 per cent.	97 per cent. 1.67 per cent.
bonus	1.00 per cent.	2.50 per cent.	5.00 per cent.

Payment basis and weighting

The maximum achievable performance-fixed for example to 20.00 kr./hour by 100 per cent. goal achievement, providing a factor of 2 points ear, as per the following table.

Max. score	1000 points
Kr. per. point	20,00 / 1000 = 0,02 kr.

The following table's emphasis on performance factors and payment factor is transferred to the table on page 50th

The relative importance of each factor is conferred, are listed under "weighting".

Factor no.	Text	weighting	Max. kr./t
1	Productivity	50 per cent.	10.00
2	material Waste	15 per cent.	3.00
3	Quality	15 per cent.	3.00
4	delivery Compliance	20 per cent.	4.00

13. Vendedores: sistema de incentivos

example H

Performance pay for sellers

COPY A / S sells forms and performs copy service for the professions (law firms, accountancy etc.). The company has multiple sellers and each has their sales area. In recent times the company's profits every year diminished. The company also maintained its reward system. The reward depends on the seller's turnover, and of course selling the vendors products that most easily can sell. These products do not have the highest profit margin. The other products, by contrast, a very high profit margin.

The management team analyze the situation and make the following proposal for a new reward system for their sales staff: 1 In the strategic sales plan establishes the

future sales size, profit and other significant sales targets. New business areas or new product also determined

2 The minimum and maximum dimensions possible for sales down

3 The fixed basic wage based on the seller's market and seller's skills

4 Norm basis of sales determined on the basis of studies and its ability to reward and cost of sales. The minimum and the maximum of the reward is determined based on the total minimum and maximum profit, sales growth, new sales areas and other objects 5 company prepares a sliding

scale of targets for individual reward, from lowest estimated sales and targets for highest sales and reward 6 reward system continuously evaluated and

communicated to the vendors

Example:

A. The expected maximum dimensions are 12 new customers and a profit of kr. 500,000 based on sales of kr. 5,000,000

B. Minimum Sales are six new customers and a profit of kr. 200,000

C. There are four vendors whose average fixed salary is kr. 300,000 per. per person. year

D. At a profit of kr. 500,000 before bonus will COPY A / S pay kr. 120,000 in reward. There will not be paid a bonus if the minimum targets are not met. Achieved the minimum targets will be paid a bonus totaling kr. 30,000 E Sales groups' annual targets are:

Surplus	Group Bonus
100000	0
200,000	30,000
300000	60,000
400000	90,000
500000	120000

Wage policy for sellers

COPY A / S 'philosophy is to provide sellers with a total compensation package that is among the best on the market. The company believes that the desire to be the leader in this industry is best achieved through highly motivated and trained sales staff.

To achieve this will COPY A / S to pay the personal individual salary, benefits and rewards that enables sellers can increase their total compensation package significantly.

Sales Target:

- More profitable orders
- Increased revenue from existing customers
- New customers
- Increased market share
- Increased coverage

Sellers' pay package is built around:

- Real wages
- Bonus
- Employee benefits
- Special rewards

The fixed individual wages are intended to ensure a steady income and to reflect sellers' individual experiences and competencies within their sales territory.

Sellers' performance will be assessed annually based on:

- Number of orders
- Customer Service
- Problem solving
- Communication
- Cooperation

Wage increases will be determined on the basis of performance and current wage levels.



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14. Serviço: como incentivar

example I

Performance-service personnel

general section

This is an example of a payroll agreement between a company and its employees. Pay system is described in detail below. The company pays employees

- **Base Salary, negotiated individually**
- **RBR calculated department by department** from negotiated criteria as described in Annex 1
- **Performance-related individual, from negotiated criteria** as described in Annex 2

The purpose of this performance pay agreement is to follow the company's mission and vision. There is therefore established the following measurable factors:

1. Productivity. Goals are increased productivity and utilization of resources
2. Quality. Goals are to remain high and improved quality
3. Cooperation. Goals are good cooperation
4. Costs. Goals are more focused on cost / cost-reduction
5. Customer Satisfaction. Goals are a better customer service and satisfaction as well as focus on additional sales

Employees are hired to perform a service technician work and work based from home.

- Working hours starting 30 minutes after driving from home or if arrival is earlier, at the start time of a customer.
- Working ends at the completion of the work at customer.

The employee is equipped with

- Service car equipped with appropriate tools and spare parts
- PDA and cell phone
- Relevant technical aids

Employees are hired by the Industrial Agreement.



Annex 1

Salary-service personnel - department by department

Performance-section wise calculation. Performance pay is calculated per. quarter. Performance pay is negotiated to **max. 18,-kr / hr**

For employees in Section A the following is agreed RBR scheme based on the following factors:

1. Attendance
2. The profitability in terms of the department's margin II
3. Upsell

These factors are weighted as follows: Re first

	40%	max. 7.20 kr
At a second	30%	max. 5.40 kr
At a third	30%	max. 5.40 kr

Re 1. Attendance Percentage calculated according to the following schedule:

Attendance Percentage (percent.)	96	97	98	99	100
RBR (pct.)	25	50	75	85	100

Ad 2. Performance pay is calculated according to the following schedule:

Gross margin (per cent.)	105	110	115	120	125
RBR (pct.)	25	50	75	85	100

Re 3. Performance pay for additional sales calculated according to the following schedule:

Additional sales (1,000 kr.)	200	201400	401600	601800	> 800
RBR (pct.)	25	50	75	85	100

Calculation example: Ad first

	Measured to be	96.5 per cent.	=>	7.20 kr. X	= 0.25	1,80 kr.
At a second	calculated for	111 per cent.	=>	5.40 kr. X	= 0.50	2.70 kr.
At a third	calculated for	350,000 kr	=>	5.40 kr. X	= 0.50	2.70 kr.
A total of RBR for the group (1.80 + 2.70 + 2.70) kr.					=	7.20 kr./hour

Appendix 2

Salary-service personnel - individually

Performance pay is negotiated for max. **30, -kr / hr**

RBR individual part. Performance pay is calculated per. quarter.

The purpose of this performance pay agreement is to follow the company's mission and vision.

There is therefore established the following measurable factors:

First increased productivity and utilization of resource

2nd continued high and improved quality

3. Good cooperation

4. costs

5. customer and service awareness

These factors are weighted as follows: Re first

	30%	max. 9, -kr
At a second	20%	max. 6, -kr
At a third	20%	max. 6, -kr
At a fourth	20%	max. 6, -kr
At a fifth	10%	max. 3, -kr

Employees are hired to perform service work and start working from home. The employee is equipped with

- Service car, equipped with appropriate tools and spare parts
- PDA and cell phone
- required education

Re 1. The productivity is measured according to the following formula:

Number of service tasks measured in standard time / elapsed time

- Where the work is the number of completed tasks in the pay period
- Where standard times for each task is known and is shown in Annex X
- Where the elapsed time is the total hours worked, paid wages for

norm	Elapsed time Productivity	100 per cent.	105 per cent.	110 per cent.	115 per cent.	120 per cent.	125 per cent.
		0 kr.	2.00 kr.	4.00 kr.	6,00 kr.	8,00 kr.	9,00 kr.

*) Productivity = ((standard time - time consumed) * 100 / standard time) in%

Ad 2. The quality is measured in the number of complaints in the period

- No complaints equals 100% bonus 6, -kr
- One and two complaints gives 50% bonus 3, -kr
- Three and more complaints give no bonus 0, -kr

Re 3. The cooperation is measured by, how many offers of assistance and / or contacts for help to colleagues that are given in the period. There must be a bulletproof method for recording assistancerne.

The goal is that the installer instead of driving home after last scheduled task, and if there is unutilized working back, offering support to a colleague or to the company's employee that manages employee scheduling, or solves a problem that the installer itself has sold . Performance pay is calculated from the following:

- 1-3 assists gives 25% of max 1.50 kr
- 4-10 assists gives 50% of max 3.00 kr
- 11-16 assists gives 75% of max 4.50 kr
- 17-> assistances provides 100% of max 6.00 kr

Ad 4. Performance pay for costs measured fuel consumption per. km, vtk.omk. by replacement investment, damage to the car, mobiltelefonomk.

Table for the calculation of cost for the employee				
fuel consumption	10-12 km / l	12-14 km / l	14-16 km / l	> 16 km / l
	25 per cent.	50 per cent.	75 per cent.	100 per cent.
utility costs	<2.000 pa DKK	2-3000 pa DKK	3-4000 pa DKK	> 4,000 pa DKK
	100 per cent.	75 per cent.	50 per cent.	25 per cent.
number of injuries	0 years	1 year	2 years	>2ars
	100 per cent.	66 per cent.	33 per cent.	0 per cent.
Mobiltif.omkostninger	0-2000 pa DKK	2-3000 pa DKK	3-4000 pa DKK	> 4,000 pa DKK
	100 per cent.	66 per cent.	33 per cent.	0 per cent.

Ad 5. Customer service and satisfaction is based on customer feedback.

Performance pay is calculated based on the following:

- 100% - 95% satisfaction gives 100% bonus 3.00 kr
- 94.99% - 90% satisfaction gives 50% bonus 1.50 kr
- 0 to 89.99% satisfaction gives 0% bonus 0, -kr

Specific example of the calculation of performance:-

Performance pay has previously written, negotiated to **max. 30, -kr / hr**

It will mean that the technician Niels Nielsen RBR will be as follows: Ad first

- Measured at 117% => **6.00 kr**
- At a second no complaints => **6,00kr**
- At a third 8 assistances => **3.00 kr**
- At a fourth COST:

Fuel	tool Consumption	injuries	Mobiltlf.
15 km / l	2500 pa DKK	1 hurt	2000 pa DKK
Profit factor	Profit factor	Profit factor	Profit factor
0.75	0.75	0.66	1

RBR = 6.00 kr x (0,75x0,75x0,66x1) = **2.23 kr**

At a fifth Satisfaction rate measured at 94% => **1.50 kr**

Total RBR for fitter Niels Nielsen (6.00 + 6.00 + 3.00 + 2.23 + 1.50) kr = 18.73 kr / hour

15. Sazonalidade: programas para estas empresas

Resumo

Samson Agro, dedicando-se a maquinaria agrícola e semelhantes, tem vendas sazonais sendo uma parte significativa dedicada à exportação.

+PlusLøn

SAMSON AGRO gets new pay system

PlusLøn in practice



Contents



The company's payroll system to reflect the efforts and results

Salary is not just salary. A modern salary system must both take account of the employees' qualifications and experience - and have the opportunity to reward and recognize the very good results.

page 5



When the payroll system needs updating

Reportage from SAMSON AGRO describing the challenges and effects company's everyday life. What are the wishes and background to change the existing payroll system?

page 7



What PlusLøn?

See which challenges can lead to decision on new pay system. Graphical representation of PlusLøn.

page 9



Why new salary system with SAMSON AGRO?

SAMSON AGRO introduced in 2003 a new salary system where the elements and performance-related pay was included. Eventually it turned out that the share of the payroll system did not work appropriate, therefore Samsom AGRO now updating the payroll system.

Interview with director Jens Lauridsen:

"There may well be something to strive for."

Interviews with union representatives and process manager:

"Our old payroll system had reached the ceiling."

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How introduces PlusLøn

The three phases of PlusLøn - clarification, design and implementation.

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How did they at SAMSON AGRO

Read about the three phases, the course at SAMSON AGRO.

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Getting started with a new salary system

Checklist for companies that are considering new pay system. How to get started. SAMSON AGRO provide specific advice to other businesses who also want to update their payroll system.

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company payroll system should reflect the efforts and results

All companies have a position on wages. Whether it's about seniority, compositions or bonus, so there will always be thought about how the company wants to remunerate its employees. With PlusLøn it is possible to motivate, retain and reward its employees - fair and manageable.

Industry's reality has changed in recent years. They produce across borders, collaborate with suppliers around the world, demand new skills, the need for increased flexibility and want to reward for good performance. The employee's role is also changing. Many find that they can help to define the working day content they engage, take responsibility and training and provides the extra mile when needed.

All these factors should be the company's payroll system also reflect.

Get inspiration for a modern pay system

DI and CO-industry consultant jointly companies how they can introduce simple, transparent and fair pay systems that also has room for flexibility and carrot.

The consultants visited and guided all types of businesses - from large jobs in the process industry for the minor blacksmithing.

This booklet is an example of such advice and the process from start to finish at SAMSON AGRO.

The booklet is also part of our overall package PlusLøn. Three other pamphlets expand on pay systems respectively, workers and employees as well as the specific method to introduce PlusLøn in the company.

So do not hesitate to contact DI and COindustri, if we are to help your company to introduce a modern payroll system.



SAMSON AGRO A / S

SAMSON AGRO is a modern manufacturer of agricultural machinery - fertilizer, manure spreaders and tools for the treatment of manure.

The company is based in a newly built headquarters in Viborg and consists of four merged companies with a total of about 130 employees - both hourly workers and salaried employees.

SAMSON AGRO sells its products at home and abroad. In 2010 they had a turnover of approximately 200 million kr.

When the payroll system needs updating

SAMSON AGRO characteristic green slurry and manure spreaders catches the eye at every turn in the countryside. Over 65 years the company has developed and supplied environment-friendly products for agriculture at home and abroad. Inside the walls is the time to further develop the systems for the 80 hourly-paid production workers.

The financial crisis was hard on many. This also applied to farmers worldwide who suddenly held back on buying new farm machinery. The labeled SAMSON AGRO who might take the dismissal of a large number of employees in

2009. The company's reality changed dramatically. Fortunately, there are budding belief in renewed growth in export markets.

"Growing together" has SAMSON AGRO slogan sounded since 2010. The term describes the products that ensure growth of farmers' crops - with respect for nature. And the term frame also the medarbejderånd prevailing in SAMSON AGRO. That one only

develop, produce, sell and deliver the ton fertilizer and manure spreaders by joint efforts and team spirit.

Precisely the joint effort and team spirit will henceforth be reflected in the company's payroll system. It does not work today, where good enough is a possibility of reward and recognition, but the pay system has outlived its more motivating role.

Both management and employees will therefore seek a new salary system that better reflect the everyday management and employees find themselves.

What PlusLøn?

Wages in the company can and should have a motivating effect. PlusLøn are both inspiration and systematics to develop a framework for the company's payroll system so there is close correlation between the efforts, results and earnings.

In 2002 PlusLøn introduced as inspiration for new pay systems in industrial companies. The goal was to provide more opportunities for putting together the various elements of pay, so it responded better to the individual company's everyday life. Next to PlusLøn include both workers and employees.

A modern payroll system has a broad reach

Since many of the industry's companies have chosen to introduce PlusLøn. Over the past 10 years, DI and CO-industry consultants thus been in contact with a large number of companies in various industries to inspire and provide guidance on how to develop a new lønsy-

Elements of PlusLøn

RBR

RBR can be either individual, group-based, or a combination of both. Performance pay is variable and depends on the results obtained.

related pay

Related pay the surcharge for jobs, subject or person relevant qualifications. Related pay is a personal allowance and follows the individual employee.

function-based

Function-is supplementary to perform a particular function or task, possibly for a temporary period.

Løntermometer

Mapping the causes of the pay success or lack thereof. Compares lønsyste systems in many enterprises and give it enjoyed sary knowledge to customize the payroll system in time.

Base Salary

Basic pay is pay for basic job and qualification requirements. The basic wage can be the same for all employees, or it may vary between broad groups.

system. Whether instructions, the less wrought company or a major food producer, the frame is the same. But the content of the payroll system tailored to the individual business needs and current challenges.

Productivity on the agenda

There is at present a tendency that companies have a special focus on productivity and therefore have been more concerned with performance pay. Performance pay is fully funded from day one and can easily be estimated if the company wants to measure and reward for concrete action.

If you choose instead to focus on qualifying wages, then it is a long term investment in our people and the future, which not only look at the results, but the whole range of competencies. Such adaptation includes PlusLøn too. The possibilities are endless with a modern wage system that can continuously adapted and targeted the wishes of management and employees priority.

Why consider a new salary system?

Many different challenges may lead to the decision to introduce a new salary system. DI and CO-industry consultants perceive eg. The companies mentioned reasons:

- Changed forms
- Outdated pay system, for example. piecework, unequal wages or salary alone seniority
- Complex and time-consuming payroll system

- No correlation between skills, efforts and achievements
- The ceiling has been reached in the pay system, no room for development
- Crisis, cutbacks, restructuring
- A desire or requirement of both employees and management
- Need for increased employee flexibility and competence
- Larger justice - too many subjective points.

Noticeable and visible change

The goal is that when the new pay system is introduced, there will be a number of tangible and visible benefits to both management and employees. Here mention companies such as .:

- simple structure
- easy administration
- Wide support
- Clear link between pay and performance
- Supports corporate goals
- objective metrics
- High ceilings in the payroll system.

Take your temperature once a year

When the new pay system is a reality, says the time is not quiet. Many factors can and will impact the system.

- Here is a tool - Løntermometeret
- annually measuring satisfaction

payroll system. The conditions which are most important for employee satisfaction and motivation are mapped to measure, the system may have problems.

Both employees and management fills each a questionnaire to determine whether the system is working as intended. By measuring once a year, you can monitor progress and adapt the system as needed. In this way, the company carefully document the effects of working with payroll systems.

A common interest in achieving a good result

The company's payroll system should be based on business objectives and opportunities - that is, the actual business basis. A prerequisite is that the payroll process sets the stage for a positive cooperation between management and employees in order to succeed with the new

payroll system. It is always a common interest to achieve a good result.

How long will it take?

Most companies want to get a sense of how long it takes to introduce a new salary system.

Unfortunately no clear answer. A payroll process is just a process

- a parallel activity in which forces to be deposited and working hours. Like many different - sometimes unpredictable - factors come into play at work. Change to the new IT system along the way, there is change in ownership structure, you have the right data on the company, there is suddenly changed order books or something completely different.

A rough estimate is that the qualification should typically salary could be constructed of 4-6 months and wages result in 2-4 months.





”

No company can change a pay system from one day to the other. Such a decision must mature before it can get serious about it. But then it has to be done properly, says President, Director Jens Lauridsen, SAMSON AGRO.

When the bell rings ...

In SAMSON AGRO 18,500 m² big black, modern factory building with sound between rooms a very loud sound.

It comes from the massive ship's bell, as sellers put vibrates when they will tell you that a new order to the factory have come in house.



Why new salary system with SAMSON AGRO?

SAMSON AGRO introduced in 2003 a new salary system where the elements and performance-related pay was included. Eventually it turned out that the share of the payroll system did not function appropriately, therefore Samson AGRO now updating the payroll system so that both employees and management are satisfied.

The payroll system should support the company's goals and fit strategy. The exercise was SAMSON AGRO front.

- A new salary system is an opportunity to start fresh - and wash the slate clean, says President. Director Jens Lauridsen, SAMSON AGRO,

- Actually, we have long been signs of a common new pay system, even tried with some changes himself. Our existing payroll system undoubtedly had worn itself, and the company has changed a lot since the original salary system was established.

- Salary affects us all - and there is great interest from all sides. It will probably always be a "process" in which some would like to change a lot, other any stick with what they have. The dialogue on this is very important.

"I think it is good that DI and CO-industry comes with a common system / work tool, so we stand strong against employees - and it benefits the process when we can say that the outcome is the result of a collaboration between the trade unions and employers. "

About survival

- We will also have a business in 5 years, so we have a common interest in retaining jobs and ensuring the company's survival. The payroll system must be flexible and adaptable and it must motivate employees to be at work.

Our old payroll system had reached the ceiling

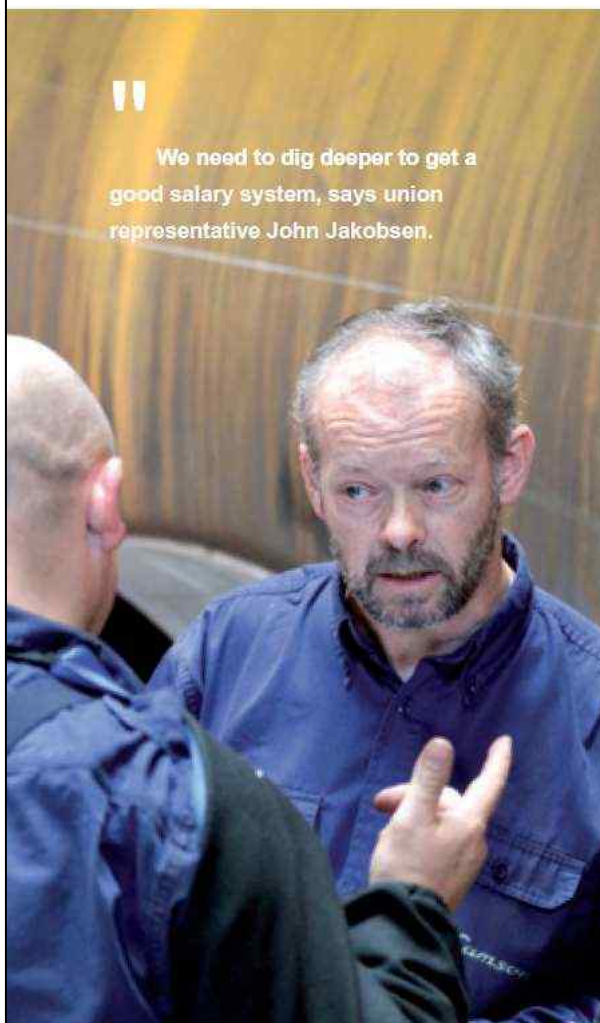
For employees were working on the new pay system a welcome opportunity to rectify everything that is not functioning properly.

- SAMSON AGRO is the result of a merger of four very different companies. And these original companies also had very different wage levels and titles. The modified looked at in 2003 by creating a unified pay system for the company, but the solution was unfortunately not optimal

or appropriate, it turned out, when we started using it, says union representative John Jakobsen, who works in the welding department.

- In the payroll system triggered "more points" automatically "more money". And soon reached the ceiling. So both management and employees were dissatisfied with the system where assessments were not always a realistic reflection of reality.

- So we had to dig deeper to establish a new salary system.



"

 We need to dig deeper to get a

 good salary system, says union

 representative John Jakobsen.

Working hours and tasks:

Slurry and manure spreaders are typically supplied in the spring. Therefore works SAM SON AGRO 80 employees in pro production typically 42 hours per week in the winter and 32 hours a week in the summer, which is low season.

The tasks are:

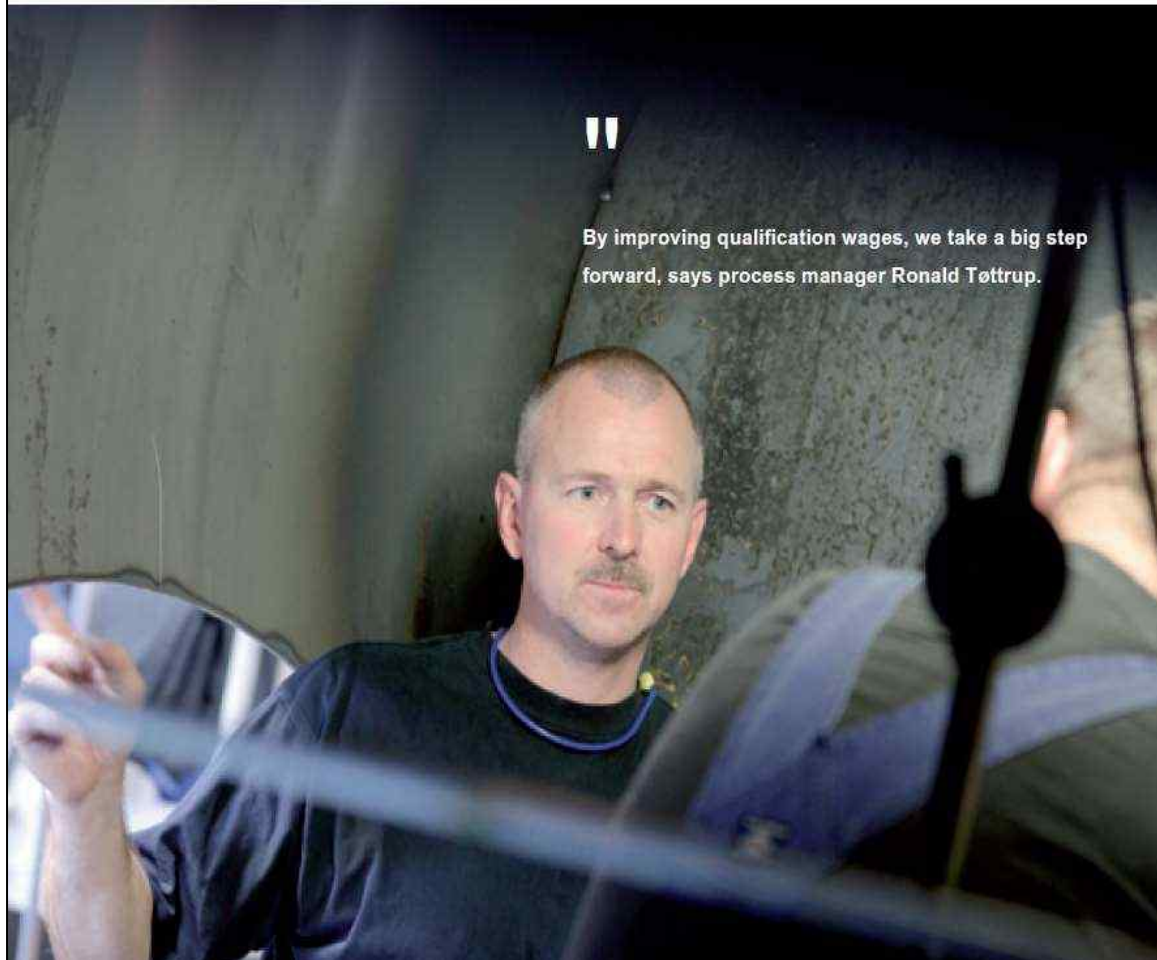
Welding, assembly, development, data quality control, storage and delivery of services.

Everyone should know how they are assessed

For process manager Ronald Tøttrup is a new related pay high on the agenda. "The old system hung on the individual process managers' subjective assessment, and then it was quietly watered down, because there was a common understanding of how to assessed employees," says process manager Ronald Tøttrup.

count in the assessment, will make it visible to anyone what the company needs and watchman. It should be open to all who can do what. So we can better help each other in everyday life, when it is known and clear who can be approached for which tasks. It improves collaboration and community in everyday life.

- So alone in raising the skill wage will be a major step forward. Making visible the skills and qualifications and what factors



How introduces PlusLøn

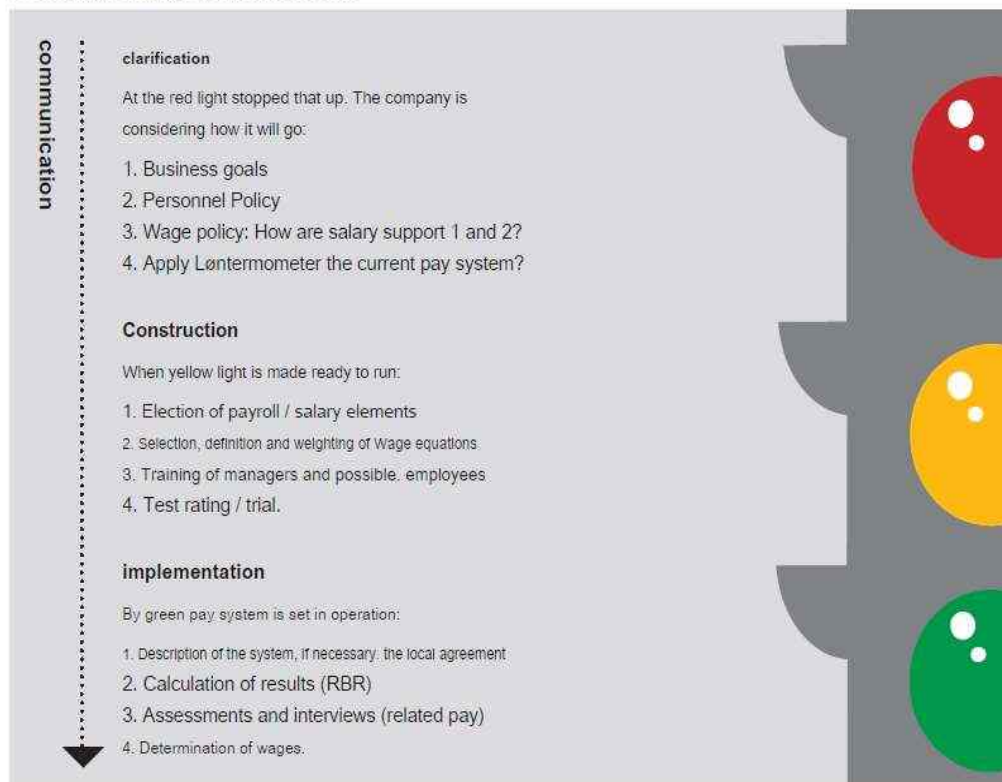
To build and establish a new salary system requires strong commitment by both management and employees. It is a process that can last from six months to a year, where values, work practices, myths and challenges will be identified

A new salary system is not a commodity that can be pulled off the shelf. However, it is a thorough process consisting of three phases

- clarification, design and implement

ORIENTATION - which helps to provide clarity and consistency. During the process should be informed thoroughly to ensure support for the project. More

Development of a pay system with PlusLøn



places we have seen that missing or unlucky communication can create resentment against an otherwise good payroll system, And then the forces of good wasted,

Like the employees who are to lead the system into practice must be prepared for the job as ambassadors,



Engaged in the process

To introduce a new salary system is therefore greatly to ensuring a "good process" underway. We suggest that you select a number of enthusiasts / staff

and managers who both actively participate in all meetings of the payroll system, but also has an obligation to inform and if necessary, involve other employees and in general will support the project.



How did they at SAMSON AGRO

Related pay and salary system had for years been a recurring point of discussion at SAMSON AGRO. The results of the many discussions was that both management and employees wanted inspiration and help to develop a new salary system.

DI and CO-industry were summoned to support the process, which in total has lasted half a year.

clarification phase was relatively short. It was obvious that there was a common desire to establish a new salary system, and it had would be based on the elements of PlusLøn

- The Industrial Agreement. A Remuneration Committee with production director, HR manager and two stewards were reduced. There was also a process manager and HR assistant with the remuneration committee.

At SAMSON AGRO began to define what elements they wanted to be included in future pay system to support the company's business objectives.

Here pointed mainly on:

- reliability
- Quality
- cost Optimization
- flexibility
- Result.

Construction phase was the next step, where lønudvalgets participants in Community spores in on how the system should be composed of base salary, performance-related pay and.

In the process, there were several meetings between DI, CO-industry and company. But between these meetings, the company worked actively on to discuss the factors such. Qualifying wages were built for. It brought together management and employee representatives several times and the required preparation every time. Design phase is therefore where there really should be commitment from all parties and also like one coordinator in the company who can ensure progress.

At SAMSON AGRO found also to qualifications to be weighed, and how defined the individual qualifications. Initially

discussed the following skills as important:

- Working Knowledge
- flexibility
- accountability
- Commitment
- Initiative
- overview
- Cooperation
- Education
- Reliability.

Several elements could overlap, and in the further process came to the following:

The job-related factors

- Job Function
- Skills
- Flexibility.

The person relevant factors

- Commitment
- Cooperation.

learning exercise

For SAMSON AGRO assignment was now working to identify the relevant qualification factors and describe them in words. The work was performed using a schema (a matrix-type), wherein the pay system committee formulated contents of the qualification factors. Eg., To contributing constructively expertise and innovation in daily production.

About workflow says HR manager Anne Eliasson:

"The table we got a good step forward. It was a good exercise to put the various factors into a schedule and deepen them with as precise words

possible. It also changed our priorities, so more of the factors changed its name. We therefore used a lot of time to clarify what factors we would choose and later to try evaluate employees from.

In addition, we decided that the form - in its final form - should be on a single page. It will give a good overview of both employees and the immediate supervisor when assessing the interview conducted".

The competence profile in the table on pages 22-23

The competence profile is assessed annually in connection with staff development interview (MUS).


Employees who are placed on stage 1, the process manager, at the annual assessment, receive instructions on what the employee must develop in order to reach the next step.




Compared to the jobrelevant factor "SKILLS" then a job function, employee NOT has held within the past year must be equal to 0 in step - ie do not count.

Classification in relation to "Flexibility" is based on competence assessment on other job functions. It's only competence ratings of at least two steps involved in the evaluation of flexibility.

The green marked in the table indicate where most employees will be located.

Samson Agro

competence profile (Related pay)		STEP 1 
job-related factors	<p>JOB</p> <p>The allocation of individual jobs in proportion to the complexity of a learning experience and insight into the company's products, as each job requires.</p> <p>The grading is based on the PRIMARY JOB FUNCTION, which corresponds to the job function, which is more than 50 per cent. of the employee's duties.</p>	<p>Job characterized by a short training time and a low complexity:</p> <ul style="list-style-type: none"> -- Module Assembly -- manual processing (Sawing, drilling, turning).
	<p>SKILLS</p> <p>Competences are defined an employee's ability to perform a job well described. The grading is based on the PRIMARY JOB FUNCTION</p>	<p>The employee works a little independent and must often guided in the job function.</p>
	<p>FLEXIBILITY</p> <p>By flexibility means an employee's ability and power to hold several jobs. The grading is based on competence assessment on other job functions.</p>	<p>The employee can only perform their own job functions.</p>
Person-related factors	<p>COMMITMENT</p> <p>Engagement describes how the employee is engaged in the daily work. The loan is deemed employees' initiative and responsibility in relation to, inter alia, own job function.</p>	<p>The employee exhibits rarely accountability for own tasks and contributes rarely with suggestions for improvement.</p>
	<p>COOPERATION</p> <p>Cooperation describes the employee's ability to carry out tasks in cooperation with colleagues in a smooth way.</p> <p>The ability to show respect for the work of others and the ability to appear like a team player.</p>	<p>The employee works best alone. The employee may seem uncertain in cooperation with others, or may be involved in conflicts.</p>

 <p>STEP 2</p>	 <p>STEP 3</p>	 <p>STEP 4</p>
<p>Job characterized by a medium-training time and a moderate complexity:</p> <ul style="list-style-type: none"> -- Gear and minor road -- Memory (read / Transport) -- Warehouse (receiving / shipping) -- Stock (pick and accounting) -- Barrel Way / Milling -- spreader way -- boom mount -- Equipment Installation -- Module Assembly (gearboxes) -- Spreader Assembly. 	<p>Job characterized by a long training time and a high complexity:</p> <ul style="list-style-type: none"> -- Machining (CNC) -- Gyllevognssvejs -- Slurry tanker Montage / special assembly -- production Optimization -- Quality -- Building / maintenance. 	<p>Jobs characterized by a long learning curve and a very high complexity and depth product knowledge:</p> <ul style="list-style-type: none"> -- Service Installers.
<p>The employee working satisfactorily independently and must only be guided by new routines in the job function.</p>	<p>Employee work very independently and can continuously advise other employees in the job function so that they can independently perform the job function and new routines.</p>	<p>The employee works unusually independent and can plan, solve and complete tasks in non-routine situations. The employee can continuously advise other employees in the job function so that they can independently perform the job function and new routines.</p>
<p>The employee may well own job function perform one other job function of competence Step 2, and has held the job function within the past year.</p>	<p>The employee may well own job function perform two other job functions of competence Step 2, and has held the job functions within the past year.</p>	<p>The employee may well own job function perform three or more other job functions of competence Step 2, and has held the job functions within the past year.</p>
<p>The employee exhibits satisfactorily responsibility for tasks and contribute positively and constructively with suggestions for improvement to reach the daily goal.</p>	<p>The employee exhibits a responsibility beyond expectations for their own work. The employee contributes constructively with improvement suggestions and proposals to deal with discrepancies in daily.</p>	<p>The employee has an unusual responsibility for their own work. The employee contributes constructively with suggestions for improvement, implementation of new routines and suggestions for handling deviations in daily.</p>
<p>Employee cooperate well with others tasks.</p> <p>The employee contributes to the good atmosphere in the workplace.</p>	<p>Employee cooperate very well with others tasks. The employee will contribute to creating a good atmosphere in the workplace.</p>	<p>The employee has a unique partnership with others. The employee contributes to conflict resolution and creates a good atmosphere in the workplace.</p>

Applicable Rate: September 16, 2011

The first sample assessment

The next step in the design process was a sample assessment of all employees. Here tells the process manager Ronald Tøttrup:

"The table was fairly easy to work with, but the process leaders asked many initial questions - most just looked at the headline, for example. commitment, and assessed so exclusively on it. "

- But in reality it was important to read all the explanatory text under the heading "engagement" as it clarifies what we mean by commitment of SAMSON AGRO. Here it was good to be able to draw on some education, so we believe in the same way all around.

- Overall, all managers with hourly paid employees was form through 4-5 times before employees have received the final assessment. And the leaders have received training in the assessment and had an overall assessment of employees to ensure a uniform assessment. It is an exercise we will do once a year in the future, says Ronald Tøttrup.

Education ensures consistent assessments

At SAMSON AGRO chose to carry a day's training in the new assessment system, so you could test whether the new ratings also up to the task.

How much transparency?

The employees' skills levels (the assessment criteria for flexibility in the competence profile) was evaluated in respect to the job functions of the competence profile. This competency matrix forms the basis of assessment of

The employees' reaction

"We feel that the employees are very curious about the new Lønsy system - they often ask us how's it coming ?, how is it ?, says union representative Finn Otkjær.

And it takes a man to have presented the work in half an hour at a meeting in the canteen. We have been through all sorts of considerations and decisions during the payroll process. All the balances can and I shall of course do not have to, but they are just helping to achieve the result.

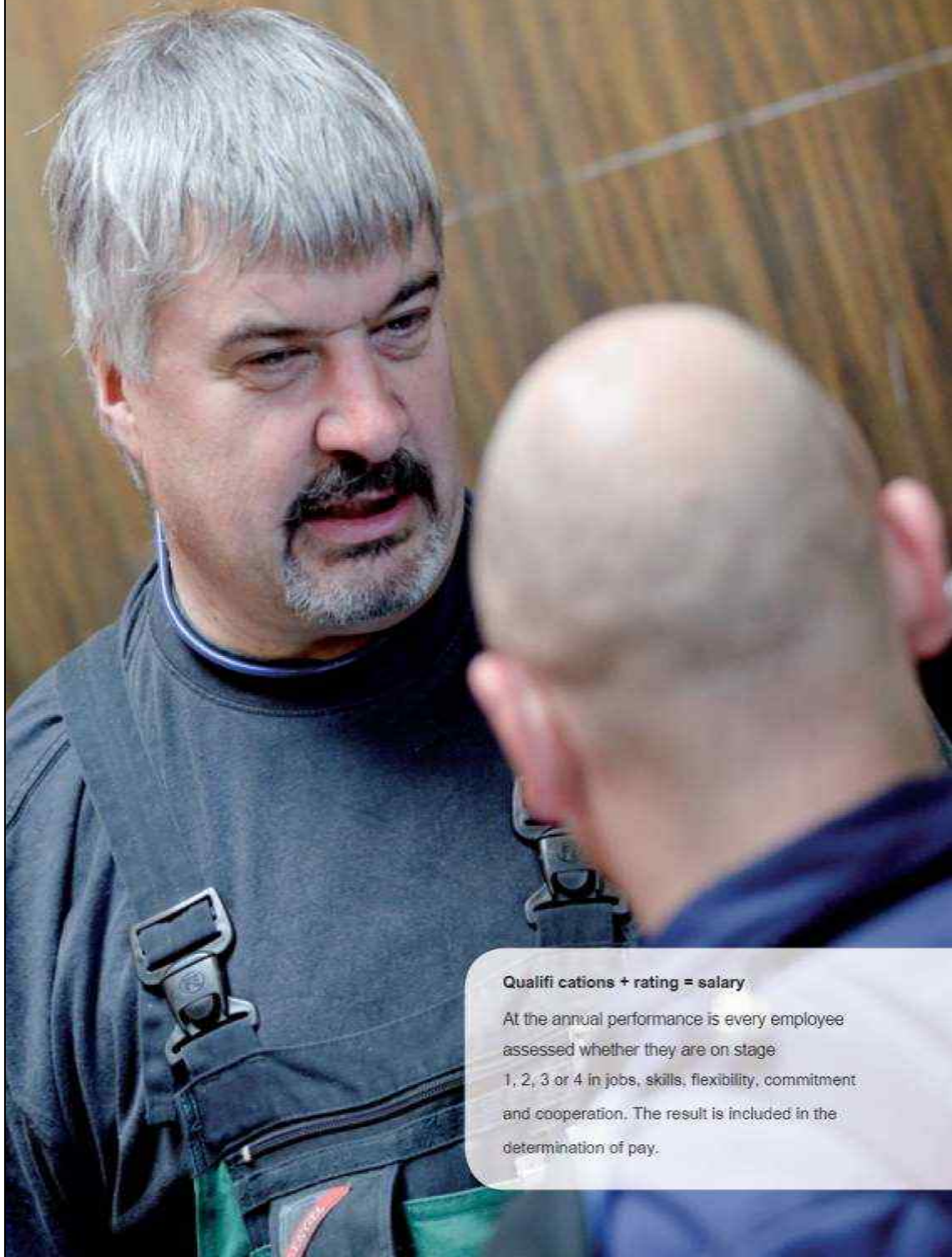
It has been a good thing for the process late, that our director at the initial meeting said: "No one was more to pay cuts." It has given some peace at all.

Here in the design phase, we will show the employees qualification form, so they can see a few examples of the assessment to be carried forward. They may, for example. start by evaluating themselves. It will be a good exercise.

I think PlusLøn is a good system for us and are excited employee nes reaction.

11

Employees are well aware that we are doing a lot of work to construct a new payroll system, and they want to hear about the results. But it is a challenge to have to produce a half years of work in just half an hour, says union representative Finn Otkjær.



Qualifications + rating = salary

At the annual performance is every employee assessed whether they are on stage 1, 2, 3 or 4 in jobs, skills, flexibility, commitment and cooperation. The result is included in the determination of pay.

flexibility and competence in the skills profile. The company was considering publishing this competency matrix. It spawned a discussion of whether it would be wise to publish them.

Officers from DI and Industrial Employees often see all qualifications will be published on businesses. It gives a good overview of the entire company's expertise.

But even they have not seen the same transparency of the ratings. It will always be up to the individual company.

implementation phase is the month when the company decides to put the payroll system time.

First there SAMSON AGRO local agreements boiled down to a few. As wages are negotiated between the union and management. The result of the negotiations included immediately in the new pay system.

There have been kept grading conversation with all employees.

Performance pay has chosen to wait until we have better data on production. Then you will add RBR as another element from PlusLøn.



SAMSON AGRO's new pay system

Management and staff were included in the September 2011 an agreement for the company's new pay system - SAMSON PLUSLØN.

The goal is:

- to improve business performance, competitiveness and efficiency
- to develop and maintain a flexible and competent staff. The payroll system is built on a personal salary consists of basic salary, related pay and variable components of remuneration in the form of performance-related and function-based.

personal wages

- Base Salary
- Quali fi kationsløn



variable salary

- RBR
- function-based

The starting point is the modules in PlusLøn.

job-related factors

- Jobs
- Skills
- flexibility

Person-related factors related pay

- Commitment
- Cooperation

Rates in the competence profile (PR. Step per. Hour)

competence profile	Step 1	step 2	step 3	step 4
Job	kr. x	kr. x	kr. x	kr. x
Competence	kr. x	kr. x	kr. x	kr. x
flexibility	kr. x	kr. x	kr. x	kr. x
Commitment	kr. x	kr. x	kr. x	kr. x
Cooperation	kr. x	kr. x	kr. x	kr. x

personal wages

- Base Salary
- Quali fi kationsløn

1. Base Salary

2. Qualification salary is based on a new assessment for the new competency profile. In the qualification profile, is subject to varying rates per. hours for each step of the five

SAMSON PLUSLØN are:

job-related factors

- Jobs
- Skills
- Flexibility

can be defined time and tasks. The novelty of

+

Person-related factors

- Engagement
- Cooperation

3. Performance pay is not included in the payroll are not covered by the competence profile which system yet. There have lacked relevant data due.

Transition to a new ERP system (a common IT system for scheduling orders, production and resources). It is agreed that the RBR to be introduced by wage negotiations in 2012.

4. Function wage applies to special features that

Getting started with the new salary system

Salary motivates. Salary maintain. Salary is a powerful tool. Developing an efficient payroll system should be a common task for management and employees.

Many companies take far in let before they decide that now they all also have a new salary system. But the decision itself is just the very first step. Be prepared that it is a demanding and sometimes lengthy collaborative process ahead. Both the director and the shop steward must get to work when they need to discuss, define, negotiate and communicate a new salary system for employees. But watch out - the thorough process is ultimately helps to ensure a good result.

Remember in the process:

- Have the necessary personaleback-up. There may be staff changes during the process.
- Support for the process from the involved, management and employees.
- Create understanding that it is important for the company to get a new salary system.
- Engage and anchor key persons in the process.
- Inform employees regularly on new opportunities.
- Keep the change - possibly, with Løntermometer.
- Pull on organizations lønkon-consultants in the process if you need coaching or counseling.
- To ensure that the company has updated and credible data on its production (time, bonuses, job roles, attendance rates, standard times mm.).
- Set aside the necessary time to process late and prioritization of the work.
- If during the process introduces a new IT system (eg, ERP MRP systems), please note that it often takes longer than originally estimated.

Lessons from SAMSON AGRO

SAMSON AGRO also has a few specific advice to other companies who want to update their payroll system

Interview HR manager

Anne Eliasson

- One of my experience is that you have to be realistic about the time consumption. It is a demanding task over several months. So it's important to keep each other firmly on the deadlines that are underway. Similarly, it is also good to see an agreed goal ahead, so there is a deadline that is pushing a constructive way.
- I also think that it could have been a good idea to establish some ground rules for how the process should be. Below could also define the role of external consultants from DI and CO-industry must have in order to make the most of the meetings. We could also have considered to involve some more employees as ambassadors in the change process, when the pay system would be disseminated. It could have eased the pressure on union representatives in the final phase.
- The challenge for us where we have had the new salary system for a month, employees of course compare with what they already know. And it raises a number of questions. For the two systems can not be compared. Now we are no specific where it was previously

a subjective evaluation, which determined the salary of the individual.

- I am sure that when we ask the employees about a year, so they've got the system into the skin and can see the common thread between the appraisal interview, competency profile, the individual assessment - and therefore wages, says Anne Eliasson.



Interview steward Finn Otkjær

- In retrospect, it could probably have been good with a little more written material that could present pay system for employees.

- When we Remuneration Committee has worked with the process in half a year, so it can be difficult to boil down the essence of a brief meeting in the canteen, which also will be asked a lot of questions. Some of the employees have also been some doubts about the pay real content.
- Our employees have the not read a whole lot about the new pay system. But we might have illustrated the payroll system with graphs or curves and a bit of pressure, so they knew exactly what a new salary system would mean for them.
- I also feel that we had a somewhat contrived course here at last. A number of local agreements had been terminated and had to be renegotiated before a certain date, then suddenly we had to work very quickly. Amid process had our director stepping in as dealer as production director changed jobs. It is clear that such staff changes provide little turmoil.
- All in all it was a fine salary system that solves the challenges we had, so it'll keep going forward. There's also the opportunity to hone and right to and the flexibility we get enough also to make use of in the years ahead, says Finn Otkjær.

Education in the payroll system

Chief consultant Allan K. Larsen, DI, has over the last 10 years been responsible for more than 40 courses in the new pay systems. "My experience is that it helps to ensure that individual managers better understand the system and better use of the fairly uniform. At the same time undress that the leaders better, so they feel a greater security by conducting interviews.

The right time for such a cure sus is just before you are completely finished with the development of the new payroll system. One doctor courses has shown that there may need to adjust something before it is put one and considerably in work.

In the course of a single day can I get tree network managers to use a new system and the eligibility, on how they conduct assessment interviews with employees, so the day is good gi vet out,"says Allan K. Larsen.

16. Empresas que trabalham em regime de encomendas: métodos

example B

RBR contract manufacturer

Results Factor = Productivity / result

For the calculation of result the following factors are calculated:

- Net hours spent
(Measured via the piston as well as short daysheet)
- Net packed ports
(Measured via the filed / finished reported production order forms / route maps)
- Subsequently, the calculated theoretical packed porttal by taking period consumed hours and dividing by the agreed standard figures

(Hours per day. Port from the "Norms, rates and points system")

- The theoretically calculated packed porttal deducted actually packed porttal. Difference number then converted to a score by multiplying the difference figure with the calculated point value per. gate. ("Norms, rates and points system")
- The calculated score value then is multiplied with pay-per factor. point. ("Norms, rates and points system")

The resulting value is the profit of kr. Per. hour.



Result = Quality Factor (Q)

- Q Supplement is a supplement to be granted per. hour.
- Parameters for evaluation: 1: Dents, 2: Scratches, 3: Assembly, 4: Finish - general surface assessment.
(Dirt, swarf etc.) 5: 6:
- The sample of 2 (or more) parameters that are used in a given period of time - can be subsequently replaced with others.
- Is performed periodically (14 days) controls a plurality of door types, weighted according to units off%.
- allow 0, 3 or 5 points per. port Maximum achievable 50 points per. control period. Is one error per. port that requires discarding of component / component, there can be triggered points for the product.
- Checks carried out by the quality department. Checks are carried out immediately before packing, but will also perform quality control of packaged products. When checking relating to the quality supplement, there will always be attended by a production worker.

Norms, rates and points system

1. Negotiated "Zero Point" (Standard figures):

x, xx per hour, gate.

2. Negotiated payment factor:

x.xx kr. per. point.

The rates in 1 & 2 sold via the local wage negotiations.

3. Scoring:

The percentage distribution of the three categories is drawn from the historical material.

Average points per. gate: 1510

4. Q-system:

Negotiated payment per. point:

x.xx kr. per. Q points.

Maximum Q Supplement can be: xx, xx kr. Per. hour.

Payment rate negotiated via the local wage negotiations.

17. Tipologia de objectivos em função do tipo de tecnologia e necessidade

Resumo

O quadro em baixo resume os objectivos mais frequentes em função do tipo de tecnologia (unitária significa só uma encomenda) e as necessidades impostas pelo trabalho e passado: rapidez; custo; qualidade; globais.

Objectivos Tipos (3+1)	Tecnologia (3)	Séries		Unitária								
		Grandes (massa para stock)	Pequenas									
Rapidez +		Δ Quantidade/ produtividade	Horas de execução / Tempo de entrega									
Custo +		<table border="1"> <tr> <td rowspan="3">∇</td> <td rowspan="3">Gastos</td> <td>Matérias primas</td> </tr> <tr> <td>Equipamentos</td> </tr> <tr> <td>Consumíveis</td> </tr> <tr> <td colspan="3">Desperdícios</td> </tr> </table>	∇	Gastos	Matérias primas	Equipamentos	Consumíveis	Desperdícios				
∇	Gastos	Matérias primas										
		Equipamentos										
		Consumíveis										
Desperdícios												
		Custo unitário										
Qualidade ou		∇ Quebras										
			Avaliação cliente/satisfação									
		∇ Queixas										
Global		Margem secções										
		ROA da fábrica										
		Lucro (resultados operacionais)										
Requer sempre		Melhoria norma do passado	Dados Avaliação ou									
			Acordo gestão-empregados									

18. As três fases de implementação

Payment basis and weighting

The maximum achievable performance-fixed for example to 20.00 kr./hour by 100 per cent. goal achievement, providing a factor of 2 points ear, as per the following table.

Max. score	1000 points
Kr. per. point	20,00 / 1000 = 0,02 kr.

The following table's emphasis on performance factors and payment factor is transferred to the table on page 50th

The relative importance of each factor is conferred, are listed under "weighting".

Factor no.	Text	weighting	Max. kr./t
1	Productivity	50 per cent.	10.00
2	material Waste	15 per cent.	3.00
3	Quality	15 per cent.	3.00
4	delivery Compliance	20 per cent.	4.00

How introduces PlusLøn

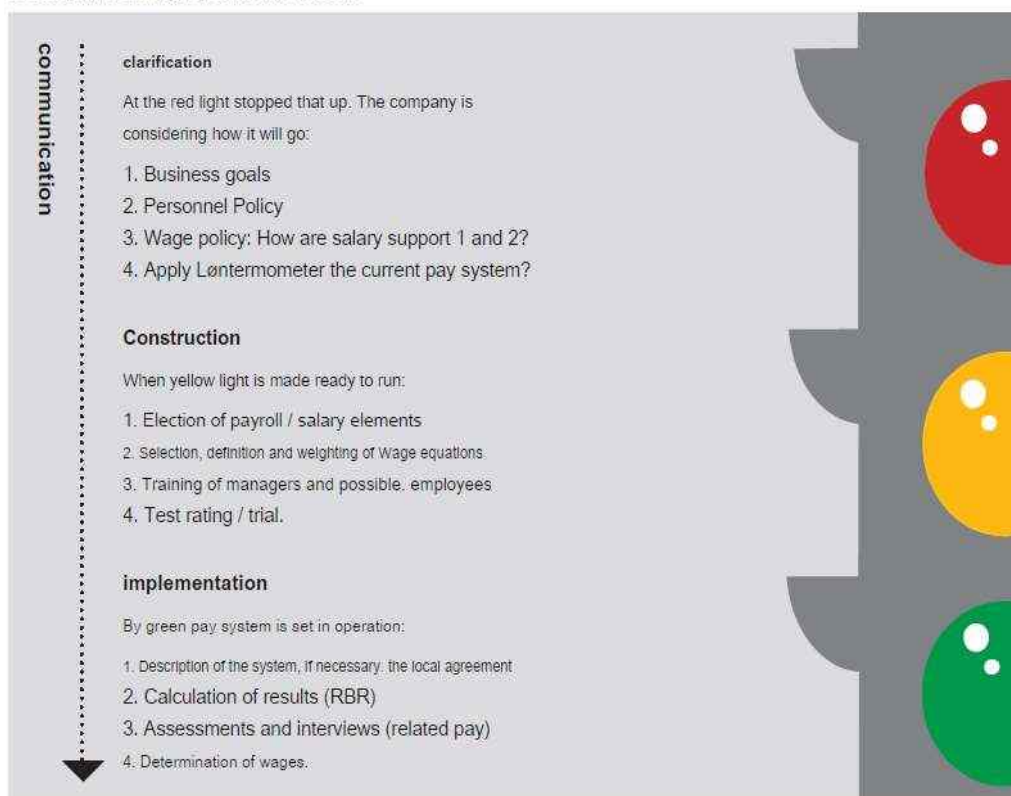
To build and establish a new salary system requires strong commitment by both management and employees. It is a process that can last from six months to a year, where values, work practices, myths and challenges will be identified

A new salary system is not a commodity that can be pulled off the shelf. However, it is a thorough process consisting of three phases

- clarification, design and implement

ORIENTATION - which helps to provide clarity and consistency. During the process should be informed thoroughly to ensure support for the project. More

Development of a pay system with PlusLøn



19. Ultrapassando objecções dos sindicatos

Resumo

Os capítulos sobre incentivos, contratação colectiva e a conclusão do documento contêm algumas práticas estrangeiras para ultrapassar eventuais objecções dos sindicatos.

Elas são listadas seguidamente e baseiam-se nos seguintes factos:

Primeiro: o sindicato italiano tem uma forte influência marxista e o sindicato austríaco tem uma forte influência trabalhista;

Segundo: os sindicatos nórdicos (suecos e dinamarqueses) possuem também uma substancial tradição trabalhista;

Terceiro: não obstante o de cima, todos participam de um modo generalizado em programas conjuntos com a gestão: de incentivos, organização e métodos, task forces para aumento de produtividade, inovações a nível da contratação colectiva, etc.

Quarto: sendo a razão que a gestão os persuadiu de que a cooperação é no seu (deles) interesse dado que “antes de comer o bolo, há que cozinhá-lo” (citação de um entrevistado).

Eis algumas práticas indicadas pelos entrevistados que facilitam ultrapassar as objecções dos sindicatos.

Práticas

1. Realização de **workshops periódicos** com a presença de representantes sindicais;

2. **Simulação dos ganhos de produtividade** a repartir (vide exemplos no documento);

3. Iniciar um **sistema de incentivos** preferencialmente:

- i. Através de prémios de **grupo**; ou
- ii. Com algo muito mais **simples e específico**: por exemplo, objectivos de diminuição de quebras, diminuição de desperdícios, de consumíveis, etc. – vide quadro da questão 17 anterior.

iii. Em toda a fase de definição de objectivos e implementação, cooptar o **shop steward/delegado sindical** para uma task force composta por:


- 1 – Representante da associação empresarial;
- 2 – Representante do sindicato;
- 3 – Gestor; e
- 4 – Delegado sindical

4. **Acordos** não apenas a nível empresarial, mas também enquadrados no âmbito do contrato colectivo (naturalmente sempre com carácter opcional para cada empresa) com as cláusulas da matriz em baixo para atingir os objectivos de 1) confiança, 2) estabilidade, 3) simplicidade e 4) impacto.

CONTRATAÇÃO COLECTIVA		Vantagens		Confiança	Estabilidade	Simplicidade	Qualidade (impacto)
Cláusulas							
1	Conjunto das nove cláusulas optativas			✓			
2	Distinção clara entre aumentos	Transversais – baseados em variáveis como inflação		✓	✓		
		e	Individuais				
3	Implementação conjunta pela gestão e delegado sindical (formal)			✓			
4	Escrito			✓			
5	Só pode ser mudado 1x ano				✓		
6	Foco: ganhos de produtividade para além do orgânico e equipamento			✓			
7	Sistema pesca					✓ (1/3–1/3–1/3)	
8	Adaptação aos impostos sobre o trabalho			✓		✓ (se taxa = 41% → 141-159)	
9	Exemplos de programas (individuais e de grupo)	Benchmarks					✓
		+	Transversais				✓

5. No estrangeiro existe a preocupação de **evitar que se crie o receio** de que ano após ano ocorram uma ou ambas de duas coisas:

- i. A diminuição dos prémios unitários;
- ii. O aumento injustificado do mínimo, do patamar acima do qual é premiada a produtividade. Isto requer excluir da base de incidência dos prémios, os aumentos de produtividade devidos à inovação na maquinaria e curva de aprendizagem, tal como é analisado no ponto seguinte.

FACTORES CRÍTICOS DE SUCESSO																						
<p>1</p> <p>Fundamental apoio dos sindicatos:</p> <p>Evitar receio que com o tempo</p>	<p>▽ Prémios unitários</p>	<p>Solução: Transparência margem</p>																				
	<p>△ Chão (mínimo)</p>	<table border="1"> <tr> <td>Solução: Diferenciar Δ anual produtividade</td> <td>Orgânico (curva de aprendizagem)</td> <td>Equipamento</td> <td>Outros</td> </tr> <tr> <td>Dinamarca</td> <td>1,5%</td> <td>Departamento organização e métodos</td> <td>Pagar</td> </tr> <tr> <td colspan="2" style="text-align: center;">Chão</td> <td></td> <td></td> </tr> </table>	Solução: Diferenciar Δ anual produtividade	Orgânico (curva de aprendizagem)	Equipamento	Outros	Dinamarca	1,5%	Departamento organização e métodos	Pagar	Chão											
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Dinamarca	1,5%	Departamento organização e métodos	Pagar																			
Chão																						
<p>2</p> <p>Características Dos Incentivos</p>	<p>Frequência</p>	<p>Fim de encomendas</p> <p>2 x 2 meses ou</p>																				
	<p>% significativa do salário fixo</p> 	<table border="1"> <thead> <tr> <th rowspan="2">Professional Categories</th> <th colspan="2">Average total compensation</th> <th rowspan="2"></th> </tr> <tr> <th>1 Fixed salary per year</th> <th>2 Variable per year</th> </tr> </thead> <tbody> <tr> <td>Several categories of factory workers</td> <td>€ 49.970,00</td> <td>€ 5.030,00</td> <td>10%</td> </tr> <tr> <td>Other departments</td> <td>€ 71.370,00</td> <td>€ 7.170,00</td> <td>10%</td> </tr> <tr> <td>Management</td> <td>€ 117.700,00</td> <td>€ 14.340,00</td> <td>12%</td> </tr> </tbody> </table>	Professional Categories	Average total compensation			1 Fixed salary per year	2 Variable per year	Several categories of factory workers	€ 49.970,00	€ 5.030,00	10%	Other departments	€ 71.370,00	€ 7.170,00	10%	Management	€ 117.700,00	€ 14.340,00	12%	<table border="1"> <tr> <td>Companies</td> <td>Return on investment: Up to 20% / 30%</td> </tr> </table>	Companies
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Companies	Return on investment: Up to 20% / 30%																					
<p>Note: 1 euro = 7,5 DKK Source: Confederation of Danish Industry</p>																						

20. Como calcular a base de incidência dos ganhos de produtividade (e da curva de aprendizagem)

20.1. O objectivo é remunerar os ganhos de produtividade apenas da quarta coluna da matriz em baixo:

Solução: Diferenciar aumento anual produtividade	Orgânico (curva de aprendizagem)	Equipamento	Outros
	1,5%	Departamento organização e métodos	Remunerar parte aos empregados
	Chão a excluir		

20.2. Tal requer em primeiro lugar que sejam **excluídos** os ganhos de produtividade devidos exclusivamente à nova **maquinaria** introduzida. Por acordo entre:

20.2.1. A gestão e o delegado sindical apenas, se o plano de incentivos estiver em vigor há muito tempo; ou

20.2.2. A task force inicial que inclui também um representante da associação e do sindicato, se se estiver na fase inicial.

Em qualquer caso a documentação e o apoio do fornecedor de equipamento facilita a tarefa.

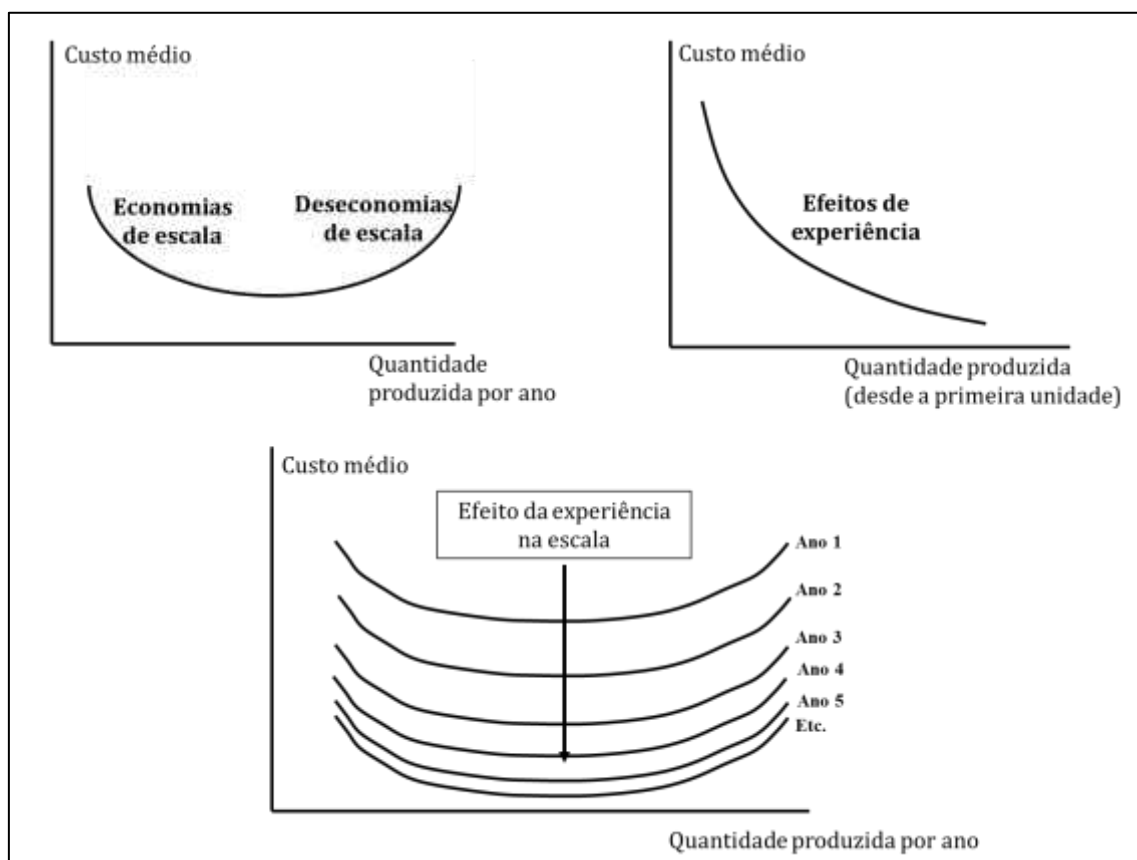
20.3. Resta **extirpar** os ganhos devido à **learning curve** (curva de aprendizagem):

20.3.1. De notar que a curva de aprendizagem não é igual a economias de escala. Ambos dizem respeito à diminuição do custo médio de produção. Mas as economias de escala derivam da dimensão fabril, isto é, do montante/quantidade produzida em cada ano, que quando maior facilita mecanizar tarefas antes manuais, adquirir maiores máquinas (cujo preço

aumenta menos que a capacidade de produção), obter descontos dos fornecedores, etc.¹

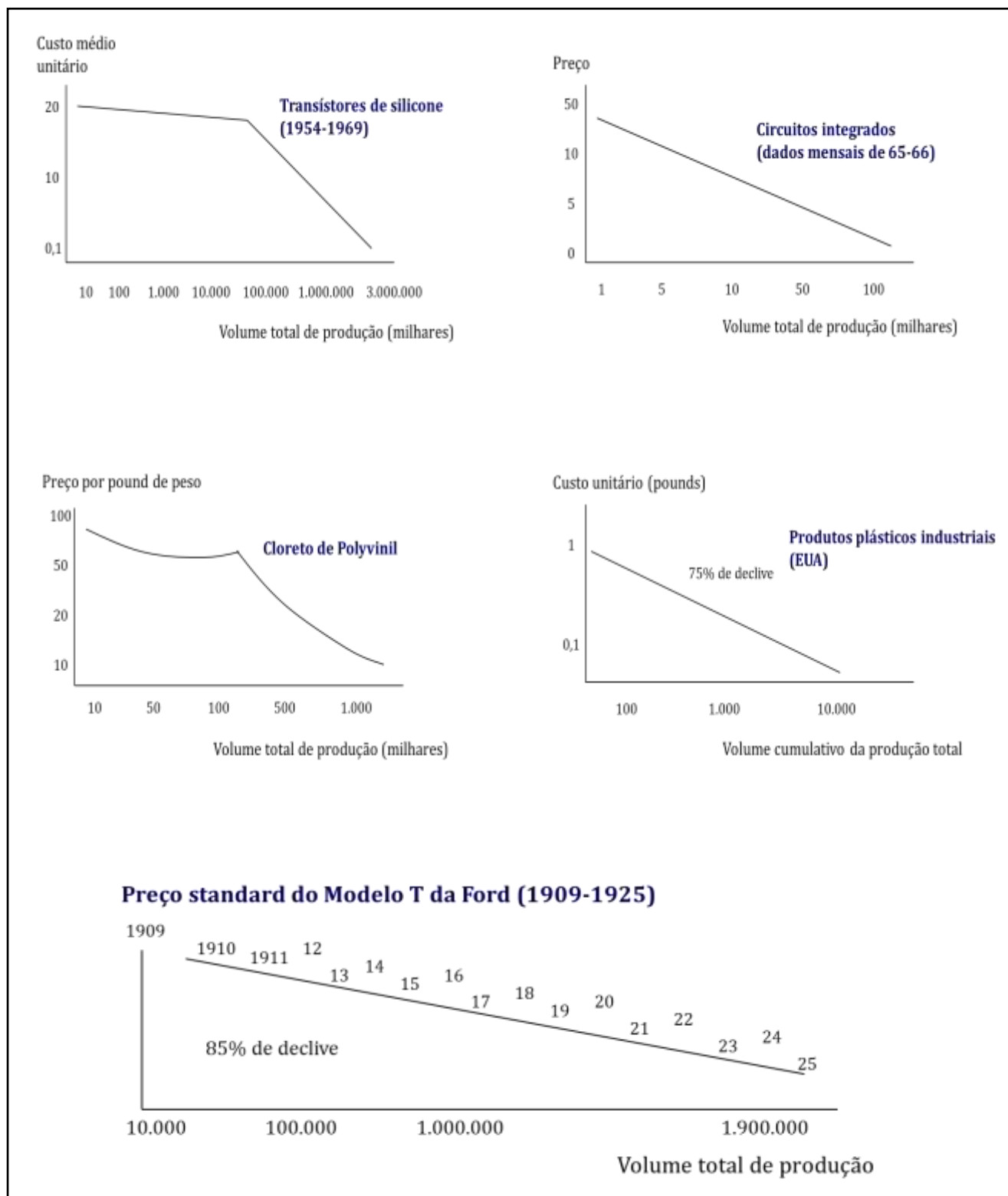
20.4. O efeito de experiência diz respeito não à quantidade produzida por ano mas sim desde o início (o primeiro ano) de produção. De qualquer produto: a simples repetição com o passar do tempo leva os empregados a desempenharem as mesmas tarefas mais eficientemente. A habituação leva à aprendizagem e esta à eficiência. Esta é a essência do Taylorismo e da especialização nos operários fabris.

20.5. O efeito de experiência faz com que a curva das economias de escala com o tempo se vá “afundando”.



¹ A partir de determinada escala o custo médio aumenta e entra-se na fase ascendente da curva (deseconomias de escala) devido à necessidade de remunerar horas extraordinárias (na nossa empresa e nos nossos fornecedores habituais), recorrer a fornecedores menos eficientes, etc.

20.6. Os gráficos em baixo ilustram o efeito da experiência em **várias indústrias**: transístores de silicone, circuitos integrados, produtos químicos, plásticos e no conhecido modelo T da Ford.



20.7. Na **estimativa dos ganhos de eficiência** devido à pura inércia do passar do tempo (**curva de aprendizagem**), há que distinguir **três aspectos**: 1) o **período**, 2) a **entidade** e 3) o **tipo de produção**:

20.7.1. O **período** deve ser desde que foi introduzida maquinaria nova para cada secção (ou a fábrica como um todo), isto é, o período começa no momento zero, a data da última vez em que houve inovação;

20.7.2. Quanto à **entidade** é sempre preferível que diga respeito à própria empresa: da secção, e se não houver dados, da fábrica.

Em alternativa pode-se utilizar a taxa de crescimento da produtividade da indústria (CAE 23, 24, 25, etc.), ou do sector metalúrgico como um todo, ou ainda da economia portuguesa;

20.7.3. Finalmente há que diferenciar quando o **produto** é o mesmo; e quando o produto ou encomenda são substancialmente diferentes.

Quando a empresa trabalha em grandes séries, basta utilizar a taxa de crescimento passado da produtividade.

Quando se trabalha em pequenas séries ou encomendas, utiliza-se como base (o valor absoluto da) produtividade da série ou encomenda anterior igual ou mais semelhante.

Quando a empresa inicia a laboração não há obviamente efeitos de experiência e a base é a produtividade da indústria, do sector metalúrgico ou da economia, o que for mais baixo.

O quadro a seguir resume o modo de cálculo da curva de experiência.

Cálculo da curva de experiência		
Período	Sempre a partir da última alteração de maquinaria	
Entidade	Melhor: secção	
	2º melhor: fábrica	
	3º melhor: indústria	
	4º melhor: sector metalúrgico	
	5º melhor: economia portuguesa	
Tipo de produção	Grandes séries: taxa de crescimento	
	Pequenas séries: valor absoluto da série ou encomenda mais semelhante do passado	
	Início de laboração: valor mais baixo de três	Indústria
		Sector metalúrgico
Economia		

21. Organização e métodos: melhores entidades estrangeiras para coaching às empresas portuguesas

Nome	Função	Entidade	Contacto
Jesper Madsen	Director	Departamento de serviço da indústria de metal e maquinaria, da confederação da indústria dinamarquesa	jem@di.dk
Klas Wåhlberg	Director-geral	Associação sueca das empresas de engenharia	klas.wahlberg@teknikforetag en.se

22. O papel das associações no desenvolvimento e investigação aplicada na metalurgia

Sugere-se duas entidades para **benchmark**:

Primeira: a associação metalúrgica sueca (distinto da associação de engenharia) – documento em baixo;

Segunda: O instituto americano do ferro e aço (distinto da associação dos produtores de aço) – documento em baixo.

ASSOCIAÇÃO METALURGICA DA SUÉCIA

(Jernkontoret - Swedish Steel Producers' Association)

1 - Research and Education Council

2 - Standardisation Council

Fonte: Site da associação Jernkontoret

1 - Research and Education Council

The Research and Education Council's area of responsibility consists of joint industry research, EU research and university programmes as well as their relevant research areas.

This council includes heads of research from the steel companies as well as from Jernkontoret. The Managing Director of Jernkontoret, the Technical Director, and the Research Managers of Jernkontoret's Technical Areas are also included in the council. And so are persons from Jernkontoret and Industriarbetsgivarna, who are responsible of the industry's recruitment issues.

The Council

- monitors the main lines of the joint industry research in Sweden (within Jernkontoret, Swerim AB as well as university institutions concerned) and of EU research (within the Research Fund for Coal and Steel, RFCS and Horizon 2020).
- keeps itself informed about funding possibilities for this joint research and acts to ensure that these funding sources can be utilised in the best possible way for the industry's needs.
- assists Jernkontoret in the case of enquiries from research authorities etc.

- safeguards and promotes education and research at technical universities in Sweden and activates initiatives that help to meet the requirements of the industry.
- supports university education and recruitment for universities.

Members of the Research and Education Council

Martin Pei, SSAB AB, Chairperson

Petter Damm, Uddeholms AB

Erik Enghag, Suzuki Garphyttan AB

Phetra Ericsson, Ovako AB

Tom Eriksson, AB Sandvik Materials Technology

Marie Louise Falkland, Outokumpu Stainless AB

Pasi Kangas, AB Sandvik Materials Technology

Cecilia Lille, Outokumpu Stainless AB

Gert Nilson, Jernkontoret

Göran Nyström, Ovako AB

Bo-Erik Pers, Jernkontoret, vd

Eva Petursson, SSAB AB

Stefan Sundin, Erasteel Kloster AB

Rose-Marie Yttergren, Höganäs Sweden AB

Robert Eriksson, Jernkontoret, Secretary

Joint steel research

Jernkontoret is responsible for far-reaching collaboration on behalf of research and development. Steel companies, suppliers to the industry and the steel industry's own customers all participate in an extensive and effective research network.

An effective network

Sweden's steel industry is a world leader within a number of specialised niches. The foundation of the steel industry's export success has been a consistent and long-term investment in a product range incorporating high knowledge content.

In Sweden, more than one billion kronor (about 105 million Euros) is invested each year in steel research. The major part of this research is carried out within the different steel companies. The joint research conducted within Jernkontoret's technical areas accounts for roughly 10–15 per cent of this total.

Jernkontoret's industry-wide research comprises an extensive network. Indeed, practically all the steel plants in Sweden, Finland and Norway are involved. But there is involvement too from important suppliers and customers of the steel industry. In fact, the network comprises some 600 active participants and it is an effective instrument for channelling the research results into practical applications within the companies concerned.

Technical areas

The research is carried out within 15 technical areas (TO). These cover material and process technology research, spanning the whole cycle from the raw materials to the finished steels and by-products. The research is primarily needs-driven in character and is geared to enabling the results to be applied in the companies. In parallel, some basic research is also carried out. This research is undertaken at the participating companies, at different research institutes and at higher education centres such as universities of technology.

Research and innovation programmes

Jernkontoret also co-ordinates far-reaching research programmes on behalf of government agencies. At present, two programmes are ongoing:

- Energy use in the iron and steel industry – research and development, JoSEn
- Strategic innovation programme Metallic Materials

The Steel Eco-Cycle is an environmental research programme that was carried out in two phases during the years 2004-2012. The results now available show that steel has a vital role to play in the development of a sustainable society. To disseminate the findings to a wider audience, the compiled results from the Steel Eco-Cycle programme are published under "Publications", where it is possible to download the documents, or order printed copies.

Financing of the research

Those companies that participate in the research contribute financially with direct investments and inputs in kind, in the form of company-specific trials and working time. The industrial trials are a key component of the research collaboration between companies, research institutes and centres of higher education. This is because they offer scope for full-scale operational trials and the application of boundary conditions from real life to the analyses.

Public funding occurs through long-term research programme agreements, primarily with Swedish government agencies.

Background

The joint Nordic steel research is unique of its kind in a number of ways and, what is more, it has very deep roots. As far back as 1751, technical co-operation in organised form was initiated within the Swedish iron and steel industry. The present operational form, whereby the research is divided into different areas, was established in 1926. Since 1969, the industry's research activities have a Nordic dimension.

Technical areas

Joint research is carried out within 15 technical areas (TO). The research covers materials and process engineering, from raw material to finished steel products as well as process stages such as rolling, extrusion and drawing.

There are also technical areas that relate to material properties, heat-treatment processes, analytical chemistry, non-destructive testing, digitalisation, powder metallurgy as well as the by-products of steel production. Jernkontoret's Department of Research and Education administers and co-ordinates the research in these technical areas.

More or less all steel plants in Sweden, Finland and Norway, as well as important suppliers and customers of the steel industry, participate in the joint research work.

Goals and focus: The object of the research is to strengthen the steel industry's competitiveness within the respective technical area. The research is mainly needs-driven and focused on enabling its application in the companies. Basic research is carried on in parallel. Technology watch also takes place within the different technical areas.

Financing: The technical areas most often seek project finance by way of the major research programmes run by Jernkontoret but other funding sources also play a role.

Companies that participate in research projects make both financial contributions and contributions in kind; that is, in terms of working time and full-scale industrial trials.

The research providers:

Jernkontoret's Department of Research and Education administers and co-ordinates the work within the technical areas. The research is carried out, as a rule, through collaboration between companies and the research providers in the form of higher education centres and industrial research institutes. Frequent partners are the Royal Institute of Technology (KTH), Luleå University of Technology (LTU) and Dalarna University on the academic side. Where the research institutes are concerned, frequent partners are the Swerea Group's research institutes Swerea MEFOS and Swerea KIMAB. All in all, a total of some twenty research providers are involved in different research projects.

What, in Swedish, is called 'bruksforskning' is also carried out. This means that the research is performed at the participating companies, with their own resources being used.

Jernkontoret's technical areas	Research Manager
TO 21 <u>Iron ore-based metallurgy</u>	Robert Vikman
TO 23 <u>Electric arc furnace technology,</u> <u>ladle metallurgy</u>	Robert Vikman
TO 24 <u>Casting and solidification</u>	Robert Vikman
TO 31 <u>Strip and plate</u>	Rachel Pettersson
TO 32 <u>Bar and profile</u>	Rachel Pettersson
TO 33 <u>Wire</u>	Rachel Pettersson

TO 34 <u>Tube</u>	Rachel Pettersson
TO 41 <u>Steel development and applications</u>	Rachel Pettersson
TO 43 <u>Stainless steel</u>	Rachel Pettersson
TO 44 <u>NDT and measuring techniques</u>	Robert Eriksson
TO 45 <u>Analytical chemistry</u>	Robert Eriksson
TO 51 <u>Energy and furnace technology</u>	Helena Malmqvist
TO 55 <u>Steel production residues</u>	Robert Eriksson
TO 60 <u>Digitalisation</u>	Helena Malmqvist
TO 80 <u>Powder metallurgy</u>	Robert Vikman

TO 21 Iron ore-based metallurgy

Jernkontoret's technical area 21, Iron ore-based metallurgy, is where collaboration takes place between companies and organisations interested in research into coking, sintering, different reduction processes (e.g. blast furnace for pig iron production) and oxygen gas process for crude steel production.

The technical committee meets 2-3 times a year, either at Jernkontoret or at member companies.

Purpose and general orientation:

To monitor developments in the area, from the sintering process and other preparatory operations up to and including tapping of steel into the ladle.

- Coke production
- Sintering, raw materials to blast furnace, lime production

- Reduction processes
- Blast furnace process, desulphurisation of pig iron
- Oxygen processes
- Alloy additions during tapping
- Process control, energy savings

TO 23 Electric arc furnace, ladle metallurgy

Jernkontoret's technical area 23, Electric arc furnaces, ladle metallurgy, is where collaboration takes place between companies and institutions interested in research and technical development within the areas of: electric arc furnaces, ladle metallurgy processes, AOD/CLU converter processes and refractory materials.

The technical area is divided into four research blocks, all of which report to a technical committee comprising the chairman, the chairmen of the research blocks and Jernkontoret's research managers. The highest decision-making body is the technical area's general meeting, where all participating companies in the research blocks are represented. The technical committee meets 3-4 times a year at Jernkontoret or at member companies. The general meeting, on the other hand, is held every spring.

Purpose and general orientation: Technical area 23 is divided into four research blocks, with different working areas. The research blocks plan, implement and report research activities within the respective fields. The blocks prepare items for consideration, such as new research activities for decision in the technical area. The blocks present the research activities carried out to the technical committee. Membership of the research blocks determines participation in the technical area.

TO 24 Casting and solidification

Jernkontoret's technical area 24, Casting and solidification, is where collaboration takes place between companies and institutes interested in research and technical development in the field of metal casting and solidification.

The technical committee meets 3-4 times per year at Jernkontoret or at member companies.

Purpose and general orientation: Activities within technical area 24 aim to improve the Nordic steel industry's competitive position, through working together within the fields of casting and solidification. This involves, for example, the creation of networks for the exchange of experience and know-how, seminars and conferences as well as research. Such activities may either be co-funded with state research funding or carried out using member companies' own resources, so-called "bruksforskning".

The research is performed in collaboration with industrial research institutes and universities. Through this work, the technical area here contributes to knowledge development within its member companies, the maintenance of effective research environments at research institutes and, not least, to the education and training of researchers.

TO 31 Strip and plate

Jernkontoret's technical area 31, Strip and plate, is where collaboration takes place between companies, research institutes, higher education institutions interested in research into the rolling of flat products.

The rolling process for production of strip or plate – often called flat products – normally starts with the reheating of steel slabs in furnaces. The steel slabs are then

hot rolled into strip or plates, via repeated thickness reductions, both reversible and continuous, using a number of roll pairs.

The products are then water-cooled in a cooling area or undergo hardening. The interaction between the heating, rolling and cooling creates the product's final external and internal properties. For some of the products, cold rolling and annealing is carried out while otherwise finishing takes place e.g. cutting into sheet.

There are a large number of different rolling mills for hot and cold rolling. Examples include the wide strip mill, plate mill, reversible finishing mill, tandem mill, sizing mill, cluster rolling mill, etc.

The products, both of carbon steel and stainless steel, are found in a large number of applications. These typically include cars, commercial vehicles, heavy transport vehicles, ships, cranes, buildings, white goods, kitchen utensils etc.

Committee meetings are arranged 2-3 times per year, at Jernkontoret and at member companies alternately.

Purpose and general orientation:

- To seek financing for, to plan and initiate own projects, as well as externally co-funded projects or major research programmes, via co-ordinated contacts between companies, researchers and donors
- To run this process-focused research, with an input of joint research efforts from companies, institutes and higher education institutions
- To foster contacts within the industry, facilitate the sharing of experiences, to make the best use of specialist knowledge and monitor the latest technology and processes
- To strengthen the Nordic steel industry's competitive position within this area through applying the research results obtained

TO 32 Bar and profile

Jernkontoret's technical area 32, Bar and profile, is where collaboration takes place between companies, research institutes and higher education institutions interested in research into the rolling of bars and sections, often called long products.

The rolling process to make bars (billets) and profile products starts conventionally with the reheating of steel slabs in furnaces. It continues with hot rolling of these steel slabs, via repeated area reductions, first reversibly and then continuously through passes between grooved rolls in a number of roughing stands into bars or profiles.

The products are subsequently air cooled on a cooling bed; there then takes place finishing, such as straightening and turning. The interaction between the heating, rolling and cooling creates the product's final external and internal properties. Rolling mills are long and are divided up into the roughing stand, intermediate stand and finishing train.

Rolling mills are often designated according to the products they make; rod and bar mill, section rolling mill, small section mill, wire rod mill etc. The products are often used as structural elements in buildings (universal beams, structural columns), for bridges, ships and for use in different vehicles.

Committee meetings are arranged 2-3 times per year, frequently on the premises of member companies.

Purpose and general orientation:

- To seek financing for, to plan and initiate own projects, as well as externally co-funded projects or major research programmes, via co-ordinated contacts between companies, researchers and donors
- To run this process-focused research, with an input of joint research efforts from companies, institutes and higher education institutions

- To foster contacts within the industry, facilitate the sharing of experiences, to make the best use of specialist knowledge and monitor the latest technology and processes
- To strengthen the Nordic steel industry's competitive position within this area through applying the research results obtained

TO 33 Wire

Jernkontoret's technical area 33, Wire, is where collaboration takes place between companies, research institutes and higher education institutions interested in wire production.

The process of wire drawing into finished wire products normally begins with descaling of the oxide layer on wire rods delivered from the wire rod mill. The process continues with cold drawing of wires to the final, predetermined dimension. This takes place via repeated area reductions and continuously by way of passes with wire drawing dies, which are arranged in a drawing block or capstan. In the drawing of thinner wire, the wire rods are annealed and pickled before renewed cold drawing takes place.

Wire products include wire racing bearings, spring wire, welding wire, staple wire, high resistance electrical wire, wire for drills, surgical suture wire, etc.

Committee meetings are arranged 2-3 times per year, often on the premises of member companies.

Purpose and general orientation:

- To seek financing for, to plan and initiate own projects, as well as externally co-funded projects or major research programmes, via co-ordinated contacts between companies, researchers and donors
- To run this process-focused research, with an input of joint research efforts from companies, institutes and higher education institutions

- To foster contacts within the industry, facilitate the sharing of experiences, to make the best use of specialist knowledge and monitor the latest technology and processes
- To strengthen the Nordic steel industry's competitive position within this area through applying the research results obtained

TO 34 Tube

Jernkontoret's technical area 34, Tube, is where collaboration takes place between companies, research institutes and higher education institutions interested in research within tube and pipe production.

There are two main types of tube products, namely welded tube and seamless tube. In the case of welded tube, these are manufactured through steel strip being formed into a tube and the joints or seams being welded together. Seamless tubes can be produced by rolling from bar stock or be extruded via a die opening. Thin wall tubing can be further processed through drawing or pilgering (to reduce the dimensions).

Tubes may be of both stainless and carbon steel. Applications include tubes for different types of process industry, for high temperature use, in corrosive environments, for many types of transport, for oil pipelines etc.

Committee meetings are arranged 2-3 times per year, often on the premises of member companies.

Purpose and general orientation:

- To seek financing for, to plan and initiate own projects, as well as externally co-funded projects or major research programmes, via co-ordinated contacts between companies, researchers and donors
- To run this process-focused research, with an input of joint research efforts from companies, institutes and higher education institutions

- To foster contacts within the industry, facilitate the sharing of experiences, to make the best use of specialist knowledge and monitor the latest technology and processes
- To strengthen the Nordic steel industry's competitive position within this area through applying the research results obtained

TO 41 Steel development and applications

The purpose of Jernkontoret's technical area 41, Steel development and applications, is to collaborate within those fields where there is scope to jointly enhance the material's properties. The starting point is primarily the perspective of the steel customer.

The technical area functions as a contact group, both for initiating projects and for collaboration between companies. Meetings are arranged 2-3 times a year, alternately at Jernkontoret and at member companies.

Identified collaboration and research areas are:

- Microstructures and impact of defects on product characteristics
- Phase equilibria and kinetics of phase transformations
- Sharing of experiences concerning materials and materials testing
- Fabrication processes such as machining, welding, cold and hot forming
- Material performance at end user stage

Purpose and general orientation:

- To seek financing for, to plan and initiate own projects, as well as externally co-funded projects or major research programmes, via co-ordinated contacts between companies, researchers and donors
- To run this process-focused research, with an input of joint research efforts from companies, institutes and higher education institutions

- To foster contacts within the industry, facilitate the sharing of experiences, to make the best use of specialist knowledge and monitor the latest technology and processes
- To strengthen the Nordic steel industry's competitive position within this area through applying the research results obtained

TO 43 Stainless steel

Jernkontoret's technical area 43, Stainless steel, is where collaboration takes place between companies, research institutes and higher education institutions interested in material research into stainless steel.

Stainless steel was introduced around the turn of the 20th century, initially as a stain-resistant product for household applications. Low maintenance cutlery of stainless steel was a great convenience. Since then, the number of stainless steel grades has dramatically increased.

Stainless steel strip is produced in rolling mills, by means of hot and then cold rolling. The interaction between the heating of steel slabs, final rolling and cooling creates the product's final external and internal properties. The properties are determined in the first place by the microstructure, which determine the strength, ductility, hardening, etc. Characteristic of stainless steels is, for example, the resistance to wet corrosion and high-temperature oxidation.

Stainless steel is normally classified according to the steel's resulting microstructure: Ferritic, Martensitic, Austenitic, Duplex Ferritic-Austenitic.

Stainless steel occurs often in household appliances, in various types of steel cladding for buildings and structures, in motor vehicles and trains, within healthcare and the food industry, in tubes and pipes for different types of process industry, for handling high temperatures, in corrosive environments, for different transport conveyances, etc.

Committee meetings are arranged 2-3 times per year, alternately at Jernkontoret and at member companies.

Purpose and general orientation:

- To seek funding for, to plan and to initiate own projects and external co-funded projects or major research programmes via co-ordinated contacts between companies, researchers and grant providers
- To run this process-oriented research, where joint research inputs are included from companies, institutes and universities
- To promote industrial contacts, to enable the sharing of experiences, to make use of specialist knowledge and to monitor the latest technical developments
- To strengthen the competitiveness of the Nordic steel industry within the area through using the research results achieved

TO 44 Non-destructive testing and measuring techniques

Jernkontoret's technical area 44, Non-destructive testing and measuring techniques, is where collaboration takes place between companies and institutes interested in research into non-destructive testing (NDT).

Committee meetings are arranged 2-3 times per year, at Jernkontoret or at member companies.

Purpose and general orientation:

- To develop non-destructive measuring techniques from being an aid in final testing to playing a determining and informational role in production processes. Substantial economic advantages can be achieved in this context.
- To utilise the possibilities of handling and interpreting signals to open the way to more reliable assessment methods.
- To apply non-destructive testing to
 - hot and cold materials
 - different dimensions and forms
- To support activities relating to the "examination and certification of personnel who carry out non-destructive testing". This takes place through Jernkontoret being a part-owner of CSM NDT Certification AB and the Research Manager for this technical area being a member of the company's board of directors.

TO 45 Analytical chemistry

Jernkontoret's technical area 45, Analytical chemistry, is intended for companies and institutes interested in analytical chemistry research in relation to steel production and steel applications, as well as non-ferrous metals. In practice, however, the collaboration takes place wholly within the framework of the Management group for analytical chemistry. LG 45

To rationalise activities and to avoid duplication of work, joint research collaboration within analytical chemistry has taken place, since the early 1990's, wholly within the framework of the "Management group for analytical chemistry within the Nordic iron, steel and metal industries". This collaboration involves the participation of the following governing and advisory bodies:

- Jernkontoret, Technical area 45, Analytical Chemistry
- Swerim AB, MRC Process analytical monitoring
- SIS, Swedish Institute for Standards, SIS TK 122

The formal, legal independence of the parent organisations above is retained and they function, as before, on the basis of their own rules and preconditions. At the same time, the practical work is planned and discussed at joint meetings.

The management group consists of representatives of those companies who are members of these organisations. The management group holds an annual meeting, but extra meetings may be arranged as and when required. For the handling of day-to-day matters, however, the management group has appointed a committee.

The technical area is divided into four committees of experts. Research activities are carried out within the framework of four committees of experts (EK):

- EK 1, General analytical techniques (JK 45051)
- EK 2, Chemical analysis during metallurgical processes (JK 45052)
- EK 3, Standardisation of chemical analysis methods (JK 45053)
- EK 4, Process analytical chemistry (JK 45054)

The general discussions in the different bodies are open to all members. However, project prioritisation and selection as well as information about – and access to – results are normally reserved to the participants in the parent organisation that funds the particular project.

Purpose and general orientation:

- Covers problems and tasks that relate to knowledge, experience and standardisation within analytical chemistry or with analytical relevance, including sampling and sample preparation for the benefit of the Nordic steel and metal industries.
- Collaboration takes place in respect of production, process and product development with the goal of keeping one step ahead of existing requirements where analytical questions are concerned.
- Experience-sharing with national and international organisations and institutions is stimulated.

TO 51 Energy and furnace technology

Jernkontoret's technical area 51, Energy and furnace technology, is where companies, institutes and universities, interested in research into energy and furnace processes, collaborate.

Steelmaking furnaces are divided into different zones where different atmospheres and oxygen concentrations act as means of control. The requirement for steel slabs to have a specific temperature during a certain period plays a determining role also.

There are conventional, continuous and batch-type furnaces. With furnaces of the continuous type, the steel slab is transported through the furnace via e.g. pushers or walking beams. Batch-type furnaces include soaking pit furnaces. The heat in the furnaces is most often generated through combustion of oil or gas via a flame.

Smaller heat treatment furnaces are frequently heated by electrical resistance wire. Other heat treatments, at later process stages, include bright annealing in different forms, whether of the continuous or batch type.

Committee meetings are arranged 2-3 times a year, taking place at Jernkontoret and member companies alternately.

Purpose and general orientation:

- To strengthen the Nordic steel industry's competitiveness within the furnace technology area.
- To carry out process-oriented research with joint research inputs from companies, institutes and universities.
- To initiate, plan and fund projects via co-ordinated contacts between companies, researchers and funding providers.
- To promote industrial contacts, facilitate the interchange of experiences, utilise specialist knowledge and monitor technical developments.
- To diffuse information about research results and new technology and to work for the introduction of these in practice.

TO 55 Steel production residues

Jernkontoret's technical area 55, Steel production residues is where companies and institutes interested in research into residual products collaborate.

Parallel with iron and steel products, other materials also are produced which originate in the steel production processes. Each year, this takes the form of just over two million tonnes of material (e.g. slag and oxide scale), whereof about:

- 40 % is used externally, e.g. sold as various products
- 40 % recirculated internally
- 20 % becomes landfill waste

Residual products is the collective term for by-products, material for internal circulation, recycling and waste. This term has no legal signification but is one way of summarising everything that arises in addition to the production of steel.

Committee meetings are arranged 2–3 times per year at Jernkontoret or at member companies.

Purpose and general orientation:

- To promote the development of new products deriving from metallic and mineral residues.
- To seek solutions in order to increase the use of residual products.
- To increase knowledge about the properties of the different materials, and effects in connection with their use.
- To optimise the quantities and properties of the production residues for the purpose of increased use.
- To prioritise, initiate and run R&D projects within the field.
- To monitor technological developments and influence the preparation of relevant legislation.
- To promote networking inside and outside the sector and to act as a forum for the sharing of information and experiences for members' specialists within the field.

TO 60 Digitalisation

Companies and institutes in research with and within digitalisation collaborate within Jernkontoret's technical area 60, Digitalisation.

Digitalisation provides new opportunities for improving efficiency, and consequently productivity, in both manufacturing and management processes. It additionally opens up the possibility of increasing customer value. Digitalisation is thus decisive for industrial development to improve competitiveness, sustainability and meet increased competition.

Although the basis of digitalisation is progress in computer technology and telecommunications, the ability of companies to capitalize on this potential depends on how both leadership and the organization develop and adapt.

Work in the technical area is carried out in thematic groups. These address specific subjects in digitalisation and consist of experts from the member companies. The thematic groups reports to the committee, which is the highest decision-making body. Committee meetings are arranged 3-4 times per year at Jernkontoret or at member companies.

Purpose and general orientation:

To gather and share knowledge on the benefits of digitalisation and its methods in

- Process control /automation, e.g. data collection, data mining, "industrial dark data", "big data", sensors, system integration, mobility, positioning, visualization, administrative systems, maintenance and robotics.
- Customer interaction, e.g. customer portals, order management, web shops and e-commerce.
- Simulation and modelling, e.g. product and process development, virtual factories and optimised design.
- New business models and customer values, e.g. design support, function guarantees and "smart products".
- Organisation and leadership, e.g. access to information, role of managers, competence needs and recruit.

TO 80 Powder metallurgy

Companies with an interest in powder metallurgy materials collaborate within Jernkontoret's technical area 80, Powder metallurgy.

Committee meetings are arranged 2-3 times per year at Jernkontoret or at member companies. To properly prepare the meetings of the Technical Area, the committee has appointed an advisory panel (TOB 80), which meets about four times a year.

Purpose and general orientation:

Companies interested in powder metallurgy materials collaborate within this technical area. There are member companies that cover the whole chain i.e. from powder

production via pressing (compaction) to the users of components manufactured through powder metallurgy.

Technical area 80 lays great emphasis on active collaboration between the material manufacturers and material users; this is to facilitate product development and product design and construction.

Research and innovation programmes

- Energy use in the iron and steel industry – research and development, JoSEn

The JoSEn program is a collaboration between Jernkontoret and the Swedish Energy Agency that runs during the period 2013–2018.

Program's vision and objectives:

The long-term vision is as follows: the Swedish iron and steel industry in 2050 is competitive and a trailblazer in terms of scientific knowledge in the international market, supplying energy-efficient, climate-sensitive products that reflect a caring approach to the environment.

Goals for the program period:

- to support projects that aim to increase the energy efficiency of the iron and steel industry.
- to maintain the excellent research groups that operate at Swedish higher education institutions and research institutes at present.
- to disseminate the program's results to the steel industry.

The program is intended to support well-embedded projects which, on completion, will lead to good dissemination of the results and implementation in the long and short term. In order to achieve maximum resource efficiency in the entire iron and

steel industry process chain, the thermal process stages of the mining process are also included in the program.

- Strategic innovation programme Metallic Materials

The strategic innovation program, Metallic Materials brings together Sweden's metal producing industries encompassing steel, aluminium, hard metal, steel castings, cast iron and non-ferrous metal castings.

Metallic Materials was one of the first Swedish innovation areas to become a Strategic Innovation Program – an initiative run by Vinnova, the Swedish Energy Agency and the Research Council Formas. The idea behind the initiative is to increase innovation within industries important to Sweden. These sectors must also have the potential to become even more significant through stimulating collaboration between industry, the public sector and the academic world.

The metal industry's long tradition of developing and producing advanced materials means that nowadays operations are carried out across the whole chain: from mining and smelting to the processing, forming and finishing of metals.

The Metallic Materials Program office includes representatives of Jernkontoret, Svenskt Aluminium, the Swedish Foundry Association and the Faculty of Engineering at Lund University.

1.2. Education

The success of the Swedish steel industry rests on its capability to offer value-added solutions based on advanced steels. To ensure the success be continued, specialist knowledge within as well as across several disciplines is required.

Jernkontoret strives to increase interest in those degree programmes and courses that meet the special needs of the steel industry.

What Jernkontoret offers, among other things, are university bursaries for technologists on two especially important Master of Science in Engineering programmes: Materials Design and Engineering at KTH Royal Institute of Technology and Sustainable Process Engineering at Luleå University of Technology (LTU).

We also arrange different types of activity for young people and we participate in steel companies collaboration with schools.

2 - Standardisation Council

The Standardisation Council's area of responsibility covers issues concerning standardisation of materials and products.

The Council:

- prioritises Jernkontoret's input to Swedish steel standardisation and decides how Jernkontoret's funding for steel standardisation should be allocated.
- works to diffuse knowledge on the importance of standardised technical regulations and concepts for rationalised marketing and manufacturing.
- represents the steel industry's interests on standardisation issues in relation to public authorities and other materials/products/competitors.
- handles issues relating to the need for new steel standards, sampling methods and process concepts.

Members of the Standardisation Council:

Hans Kjellstorp, Chairperson, AB Sandvik Materials Technology

Anneli Anhelm, Ovako Bar AB

Per Hofslagare, SSAB Special Steels

Mats Larsson, Höganäs Sweden AB

Maria Norberg, Uddeholms AB

Patrik Sundell, Outokumpu Stainless AB

Robert Eriksson, Secretary, Jernkontoret

AMERICAN IRON AND STEEL INSTITUTE (AISI)

Fonte: Site do American Iron and Steel Institute

AISI serves as the voice of the North American steel industry in the public policy arena and advances the case for steel in the marketplace as the preferred material of choice. AISI also plays a lead role in the development and application of new steels and steelmaking technology.

AISI is comprised of 18 member companies, including integrated and electric furnace steelmakers, and approximately 120 associate members who are suppliers to or customers of the steel industry.

Collaborative Research & Development

The Technology department of American Iron and Steel Institute (AISI) is responsible for Collaborative Research and Development (R&D). The Collaborative Research and Development Program receives direction from the Committee on Manufacturing Technology (COMT).

AISI acts on behalf of Industry Participants by:

Soliciting research proposals from academia, industry, government, and private laboratories.

Facilitating analysis of the proposals received.

Seeking Federal or other co-funding.

Providing project management for all projects within the program.

Current Topics

Advanced Measurement Technology

The Steel industry has a need for sensors which can measure various parameters throughout the steelmaking process. To date, these measurements have not been possible due to the extreme temperatures and conditions experienced. The industry has a need for these sensors to provide for more accurate modeling, real-time sensing, and overall quality improvements. Some of the measurement devices needed would provide the ability to measure oxygen in liquid metal, slag depth, liquid metal temperature, rolling mill temperatures, pickle bath chemistry, acidity, and copper levels, cold rolling stand load and separating force. In addition to the sensors, there is also a need for big data analysis. A system is necessary to analyze and compile the data from the sensors in order to make it readable and useable to predict issues.

The deadline for this solicitation has passed. COMT members are currently deciding which proposals to pursue. Any additional proposals received will be presented to the committee at the next meeting.

Active Projects

Novel Flash Ironmaking

An innovative ironmaking technology based on the direct gaseous reduction of fine iron oxide concentrates in a flash reduction process is under development between Berry Metal Company and the University of Utah. The Novel Flash Ironmaking Process takes advantage of shale gas discoveries in the United States and the productive use of the available large quantities of fine iron oxide concentrates.

Once fully implemented, the projected benefits of this novel technology include a reduction in energy consumption by using concentrates that do not require pelletization or sintering—potentially eliminating the use of coke. Significant

environmental emission reductions—especially CO₂ emissions in comparison to the conventional blast furnace ironmaking route—come from using natural gas or hydrogen instead of coke as the reducing agent.

The Novel Flash Ironmaking Process technology is to be applied to the production of iron as a feed to the steelmaking process initially, but could also be a part of a continuous direct steelmaking process eventually replacing the blast furnace and other alternative ironmaking processes.

Project Participants: ArcelorMittal, Berry Metal, TimkenSteel, U. S. Steel

Future Solicitation

Recycling of Steel Plant Co-products

The Steel industry is seeking to reduce the amount of co-products of the steel making process that go into landfills. Some co-products have an established process, for example, slag handling results in slag products being used in construction, asphalt, and agricultural markets. There are other co-products that do not currently have a path towards reuse. Research is needed to increase the recycling and reuse of steelmaking co-products that end up in landfills.

CO₂ Reduction from Steelmaking Processes

CO₂ reduction has been, and will remain a priority for manufacturing companies. The Steel industry has made significant improvements in reducing CO₂ emissions, but seeks to further this effort and reduce CO₂ emissions even more. The Steel industry is seeking new technologies to reduce, capture and/or sequester the CO₂ from steelmaking processes.

Additive Manufacturing Impacts on Steel and Competing Materials

3D printing has revolutionized the way that prototyping is performed. To date, the Steel industry has not experienced any significant gain with additive manufacturing technology. Research is needed to identify potential opportunities, determine the technology barriers to implementing 3D printing with steel, and decide how best to overcome those barriers. A market analysis is also necessary to gain an understanding of achievements other materials have experienced/may experience with additive manufacturing.

COMT

AISI's Committee on Manufacturing Technology (COMT) gives direction to the Collaborative Research and Development Program. The COMT meets twice per year and holds conference calls as needed.

Mission

To provide AISI members technological awareness, anticipation, evaluation and leadership addressing opportunities and competitive threats to ensure steel continues as the material of choice.

Goals

Increase the competitiveness of the North American steel industry by:

Lowering energy use and CO2 emissions

Lowering emissions to our environment

Enhancing product performance

Leveraging steel industry resources and risk

The Economic Impact of the American Iron and Steel Industry

According to a recently released analysis, the American iron and steel industry is a dynamic part of the U.S. economy, accounting for more than \$520 billion in economic output and nearly two million jobs in 2017 when considering the direct, indirect (supplier) and induced impacts. These workers earned over \$130 billion in wages and benefits. All told, the industry generated \$56 billion in federal, state and local taxes.

AISI Public Policy Priorities

Pro-Manufacturing

The North American steel industry strongly supports the implementation of a national pro-manufacturing agenda to ensure U.S. manufacturers are able to compete in today's global economy.

Trade

Foreign government subsidies and other market-distorting policies have resulted in massive global steel overcapacity and significant levels of steel imports, resulting in thousands of U.S. job losses and numerous plant closures. The United States must take broad action under Section 232 to protect our national security; press China and other nations to eliminate their steel overcapacity and to end all subsidies and other market-distorting policies that promote steel overcapacity; enforce aggressively U.S. trade laws against dumping and subsidies by using all available tools; modernize and strengthen the NAFTA; respond to foreign government currency manipulation; and defend aggressively our ability to apply non-market economy methodology to remedy injurious dumping by China.

Tax Policy

AISI supports tax policy that encourages manufacturing activity in the United States and increases the global competitiveness of domestic steel producers. Congress should maintain provisions in the tax code that ensure a competitive corporate tax rate, accelerated cost recovery to promote domestic capital investment, and the elimination of the corporate alternative minimum tax, while providing for the necessary and appropriate transition rules that allow companies to carry into the new tax system net operating losses and other tax assets they have accumulated under prior law.

Energy and Climate Change

The production of steel is inherently energy intensive and the availability and reliability of affordable energy is essential to the industry's competitiveness. The Administration should ensure that regulations of energy providers do not undermine the competitiveness of U.S. manufacturers, including continuing EPA efforts to replace the Clean Power Plan. In addition, Congress and the Interior Department should continue to reverse ongoing federal regulatory efforts that limit production of domestic energy sources. Congress and the Administration should enact policy measures to facilitate investment in our national energy infrastructure, including production, distribution, transmission, and storage projects.

Environment

American steel producers have carefully sought to reduce our environmental footprint even while producing the advanced and highly recyclable steel that our economy needs. We have been encouraged by the current Administration's recognition of the need for a partnership with industry to preserve and protect our shared environment while promoting economic growth. AISI urges the Administration and Congress to continue to reconsider EPA regulatory actions in order to address the impact of these

regulations on industrial competitiveness and to ensure adequate cost/benefit analysis.

Transportation and Infrastructure

Transportation infrastructure facilitates broad economic growth and directly impacts the competitiveness of the domestic steel industry. Congress should provide for increased, long-term funding for improvements to the nation's transportation, water, energy and other critical infrastructure. Federal funding should be accompanied by reforms that streamline permitting to speed approval of large projects and should ensure that iron and steel used for the nation's infrastructure is produced in the United States.

Workforce Policy

The steel industry shares the federal government's goal of ensuring safety and health at industrial workplaces. However, some regulations may misdirect priorities and create unnecessary costs for employers that prevent optimum workplace safety and health benefits from being realized. The Administration and Congress should reconsider and reform these regulations. Congress also should enact the Voluntary Protection Program Act to authorize and improve the VPP, a key employer employee-OSHA collaborative workplace safety program, and the Administration should commit to a cooperative enforcement approach where federal agencies and employers work in partnership to advance workplace safety and health.

23. RISE (Research Institutes of Sweden): Investigação & Desenvolvimento transversal à indústria

RISE RESEARCH INSTITUTES OF SWEDEN

RISE is Sweden's research institute and innovation partner. Through our international collaboration programmes with industry, academia and the public sector, we ensure the competitiveness of the Swedish business community on an international level and contribute to a sustainable society. Our 2,800 employees engage in and support all types of innovation processes. RISE is an independent, State-owned research institute, which offers unique expertise and over 100 testbeds and demonstration environments for future-proof technologies, products and services.

Our purpose

RISE's mission is to work for sustainable growth in Sweden by strengthening the competitiveness and capacity for renewal of Swedish industry, as well as promoting the innovative development of society as a whole.

RISE's mission is formulated in Swedish Government research and innovation bills as well as any owner instructions issued by the Government.

The Government's research and innovation bill states that the overarching goal for the research institutes gathered under the RISE AB umbrella is to be internationally competitive and facilitate sustainable growth in Sweden by strengthening competitiveness and innovation in the business Community.

We do this by:

- i. Increasing our own and our customer's international presence and competitiveness.
- ii. Strengthening regional business communities and industrial clusters.
- iii. Creating a robust infrastructure for innovation for the benefit of industry and society.

- iv. Contributing to innovative, sustainable solutions to social challenges.
- v. Supporting small and medium-sized businesses nationwide.

Our objectives

RISE Research Institutes of Sweden's mission is to work for sustainable growth in Sweden by strengthening the competitiveness and capacity for renewal of Swedish industry.

Operational objectives:

RISE Research Institutes of Sweden AB and its subsidiaries (RISE) shall be internationally competitive and facilitate sustainable growth in Sweden by strengthening competitiveness and innovation in the business community.

RISE shall strategically develop expertise and collaborative networks that contribute to strengthening competitiveness and innovation in the business community, as well as the institute sector's position in the innovation system.

RISE shall have an appropriate structure for effectively contributing to strengthening competitiveness and innovation in the business community.

The combined industry research institute sector's brand, RISE, shall be reputed and well-known among stakeholders.

Sustainability objectives:

- i. Responsibility objective – by 2020, 100% of our customer assignments will come with a Sustainability Declaration and be linked to one of the UN Sustainable Development Goals.
- ii. Business objective – by 2020, 10% of turnover shall be generated as a direct result of sustainability work.
- iii. Attraction objective – by 2020, we shall be one of the 10 most attractive employers in our category nationally.

Financial objectives:

- i. Operating margin – at least 3% from 2020 onwards.
- ii. Net debt/equity ratio – 0-30% from 2019 onwards.
- iii. Dividend – 0%.

Our offer

RISE works on some of the most pressing and exciting challenges of the age, often on assignment from or in close collaboration with the industry, academia and the public sector.

1 - Vision and strategy

Increased competitiveness and sustainable development are built on the ability of companies and organisations to renew and innovate, on their knowledge of global trends and on how well they are able to identify the needs of relevant target groups.

There is an increasing need for business intelligence and trend spotting in order to navigate an increasingly complex and dynamic market. This must be combined with structured and systematic innovation work.

We offer:

Innovation partnerships: We offer businesses, public authorities and organisations structured, strategic innovation partnerships in the form of framework agreements.

These innovation partnerships are designed based on the customer's needs but are always founded on trust and confidentiality. A confidentiality agreement is prepared for access to the customer's project portfolio and future challenges, so that we are able to proactively support the customer in identifying the correct expertise, test beds and any other applicable RISE services.

Another central component of any innovation partnership is that the customer always has access to one person within RISE who works exclusively for the client on either a full-time or part-time basis and who functions as their point of contact. It may even be possible that one of the customer's employees will be provided with a workplace at RISE, or indeed that all relevant RISE employees will be stationed at the Customer's premises.

Future scenarios and roadmaps: Using systematic business intelligence based on challenges and needs, we are able to provide an overview of which trends and conditions can be expected to affect the organisation in the short and long terms.

These methods have been developed over a long period of time and are combined with the research and in-depth technical expertise available at RISE.

Our Technical Innovation System (TIS) is a methodological framework through which we analyse the emergence of new technological sectors. This is used to identify opportunities and obstacles to growth in various technological fields. The method can be used in a number of areas, although it does require good knowledge of the technology in question.

Among other things, we can deliver:

Trend spotting and action plans to meet future challenges: Systematic data collection allows the analysis of business intelligence to draw strategic conclusions and model future scenarios.

Forecasting of new, fast-moving or disruptive solutions: Can include technologies, business models, organisations, etc.

Innovation support services: RISE Innovation Offices allow us to offer a range of innovation support services that facilitate an efficient and successful development and innovation process irrespective of whether the aim is a technological shift, business development or organisational evolution.

Translucent Innovation: Translucent Innovation is a digital platform and app for open innovation, in which the company's needs for research or business development are matched with RISE expertise and 5,500 startups and small businesses in the Swedish Incubators and Science Parks (SISP) network.

CoCreation: A two-day workshop based on design methodology in the field of product and business development, aimed at providing an informed decision prior to commencing an innovation project. A concrete customer requirement is formulated and submitted via Translucent Innovation. Responding companies are invited to attend the workshop for creative concept generation and structured assessment of profitability and implementability. Deliverables from the workshop are a number of completed concepts.

Need Portfolio Management (NPM): How does one determine which needs will provide the best return and can realistically be delivered at a given cost and within a given timespan? RISE offers support in Need Portfolio Management (NPM), a service very much akin to PPM (Project Portfolio Management) but with the focus on need and business opportunities prior to the commencement of a project. During a two-day workshop, current needs from the sales organisation are analysed and a need portfolio

is prepared. In combination with a training course, the company can then drive their own NPM process.

TRIZ: Needs analysis carried out within NPM can be supplemented with a root-conflict analysis of the most business-critical needs. TRIZ is a method for quickly identifying general problem-solving principles to deal with technical issues. RISE offers both training and workshops on TRIZ methodology. TRIZ is a Russian acronym for the 'Theory of Inventive Problem Solving'.

Innovation Landscaping: This service is aimed at companies that require solutions to technical or business-related problems and need support in evaluating possibilities such as joint venture, patent procurement or company acquisition to obtain the correct technology. Based on the challenge facing the customer, RISE will compile a report on relevant partners and technical solutions, interview candidates and arrange workshops with the customer.

Innovation Due Diligence (IDD): This service is offered in collaboration with Luleå University of Technology's business development company LTU Business and is focused on early-stage innovation and business ideas. We undertake a detailed evaluation of business potential in three stages, allowing an informed decision on how the innovation/business idea should be developed.

Beyond: Beyond, a collaboration with Ideon Open in Lund, is an incubator and accelerator for product and business development in large, established businesses. Beyond offers the company an innovation environment for the development of creative ideas and new technologies, with working teams placed in the incubator for up to a year.

The Pink – Design Enabled Ecosystem for Prototyping Sustainable Futures: The Pink is both a physical and a virtual innovation hub and a design-driven ecosystem; a platform for cutting-edge innovation and sustainable social transformation. The Pink is a project for prototyping sustainable futures in which dynamism, creativity and exploration are the key.

Innovation competition: On behalf of Vinnova, RISE also runs a national innovation competition office aimed at supporting public authorities, organisations and businesses in effectively utilising and implementing innovation competitions in their organisational development. Among other things, we provide support for the procurement and evaluation of innovation competitions, as well as strategies for implementing the results obtained.

2 – Research and Development

The complex challenges facing society and trade and industry demand increasing levels of skills development and interdisciplinary solutions.

Needs-driven, applied research is RISE's core activity and is always conducted in collaboration with customers and partners, either in publicly funded consortiums or through direct assignments on behalf of the private sector. We also offer competence development and specific support for small and large businesses.

We offer:

Applied research for innovation:

Publicly funded consortiums: As an independent innovation partner, RISE conducts and participates in a number of challenge-driven national and international R&D projects that are in part publicly funded. Thanks to our large network in the private and public sectors, we are able to quickly assemble teams and stakeholders with the relevant skills in all links of the value chain; whether from the public sector, trade and industry, large and small businesses or academia. Publicly funded projects are characterised by: Experimental results; Intellectual property shared with other consortium members; Work partly financed by public funds; Noncompeting parties throughout the value chain participate

Direct assignments on behalf of the private sector: RISE is able to call on a uniquely broad range of technical expertise, as well as a robust innovation infrastructure, for the benefit of our customers. Our expert consultants are all researchers with a global network and good insight into commercial conditions. We conduct our work together with customers in complete confidentiality to identify development needs and develop market-adapted and sustainable applications. Direct assignments on behalf of the private sector are characterised by: Confidentiality; Projects can be large or small in scope.

Service innovation and design processes: Knowledge about how service logic and methods for co-creation and design can be utilised in R&D work is increasingly important for both the public and private sectors in being able to develop new services and functionality.

We use design methodology to analyse and visualise the users' conditions, behaviour and motivations, and to develop customised solutions in close collaboration with our customers and partners. It is often necessary to implement processes across industries and sectors, in the borderlands between innovation, research and business development. Unique structures are thereby created for innovation, adapted to every requirement and challenge facing the individual enterprise and at a system level, whereby we also create new conditions for policy making based on relevant data.

RISE Service Lab is one example of an innovation environment in which we conduct research and development into innovative services.

Professional Education: In addition to the knowledge transfer that takes place in daily collaborations between us and our partners, RISE offers a competence development for a professional, sustainable, competitive and lifelong learning. Our educational activities are aimed at both the business sector and the public sector.

Supply of competence development: RISE educational activities are aimed at both the business sector and the public sector. Our range includes everything from subject-specific courses and lectures to conferences, web-based education and facilitation of complex change processes in the form of workshops and seminars. The subject areas reflect the entire breadth of the RISE business areas. Many of our courses also result in certifications and validations.

Tailored activities: RISE also provides tailored activities designed for the customer's specific needs according to wishes. It can involve smaller training efforts, such as individual lectures, workshops or conferences, but also be more comprehensive education programs, mobile education solutions, online education or distance learning.

Research on digitization and learning: RISE offers a context in which organizations in the education sector and active people in lifelong learning can participate in applied research projects, gain new knowledge, test products and systems and also gain access to both research and external analysis of digitization.

Innovation support for small and medium-sized businesses: One of RISE's most important tasks is to strengthen the competitiveness of small and medium-sized Swedish businesses (SMEs). Our focus is always on the needs of the individual company and we offer customised support and expertise irrespective of where on the development curve the company finds itself.

We are able to offer SMEs everything from technical solutions, skills development and commissioned research to evaluations of products or processes. We also have methods and services to support the innovative ability of the company.

Our offer for SME companies:

Access to RISE's 2800 experts and hundreds of test and demonstration environments

Guidance regarding SME-specific projects and offers

Tips and advice regarding funding opportunities

Quality-assured market access

Business networks

Customised training

Examples of SME-specific projects and networks include the Food Accelerator, Scale-up, the Enterprise Europe Network (EEN), EU SME support initiatives and advice on CE labelling.

Expert support: RISE has the expertise required to implement a successful innovation process, with specialists in a large number of technical disciplines and other important fields of knowledge. This expertise can be combined in interdisciplinary teams or offered individually, depending on the customers needs and the complexity of the assignment in question.

3 – Industrialization and quality assurance:

Testing, measuring, verification and quality assurance are important elements in any successful and efficient technical development and innovation activity.

We offer test beds and specialist competence in advanced measurement techniques, certification, calibration, standards and quality control.

We offer:

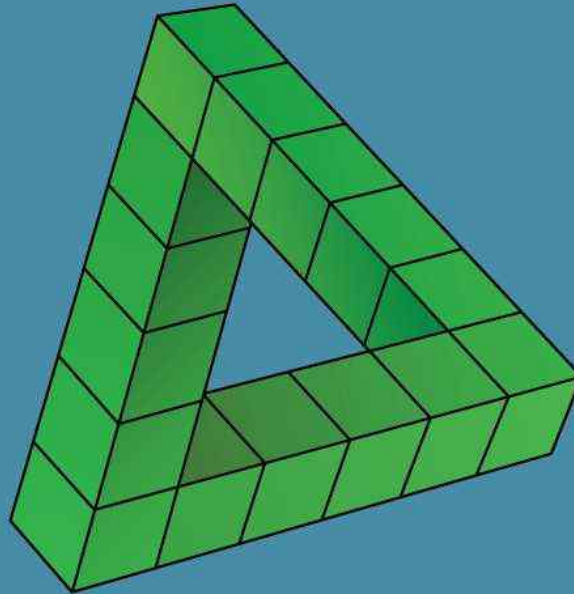
Industrialization and verification: Test beds and demonstration environments, technical evaluation and verification as well as prototypes and pilot production are some of RISE's offerings in industrialization and verification.

Technical evaluation and verification

Quality assurance: Legislation often places demands on products, equipment, machinery, management systems and/or skills. As a customer, you may also want to feel comfortable with what you buy. Confidence in products and services increases with quality assurance in the form of certification, calibration and inspection. RISE is the national leader in several of these competence areas.

24. Negociação colectiva: exemplos de cláusulas do acordo dinamarquês referente a incentivos

2017 – 2020



INDUSTRIAL
AGREEMENT



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Clause 23 Supplementary pay systems

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Subclause (1)

Individual or collective agreements may be made concerning pay systems supplementing pay fixed according to clause 22. Supplementary pay systems may include pay by results, bonuses, production premiums, performance-related pay, function pay, job bonuses, inconvenience allowances or a system based on team qualifications.

Subclause (2)

Payment under supplementary pay systems cannot be changed more than once in any one year covered by this Agreement.

Subclause (3)

Agreements on supplementary pay systems should be in writing.

Subclause (4)

Unless otherwise agreed, collective agreements on supplementary pay systems may be terminated in accordance with clause 8.

Unless otherwise agreed, individual agreements may be terminated at the notice of termination applying to the individual employee concerned.

Subclause (5)

On discontinuation of the supplementary pay system the employee shall receive a pay fixed according to clause 22 and any other continuing supplementary allowances.



Notes

Clause 24 Piecework

Subclause (1)

- (a) Piecework may be agreed by free negotiation and/or local agreement.
- (b) The payment for piecework cannot be changed more than once in any one year covered by this Agreement.
- (c) Any existing local agreements which apply to specific work and which cannot be terminated or expire before completion of the work shall not be covered by item (b).

Subclause (2)

- (a) Where piecework rates are fixed by free negotiation, this shall take place by negotiation between the employer and the employee(s) to whom the piecework is offered.
- (b) Where agreement cannot be reached, either party shall be entitled to call in the shop steward to participate in the further negotiations.
- (c) Where agreement is not reached, the work shall be performed for a payment which is 11 per cent less than the average piecework earnings in the quarter preceding the negotiations for the group of employees in the enterprise to which the employee concerned belongs.

However, the payment cannot be less than the minimum pay according to this Agreement.

Application of the above provision as a basis for payment of a substantial part of the

	Notes
employees engaged on piecework is regarded as abuse.	
Subclause (3) Price lists, piece rates and other fixed piecework rates and locally agreed piecework rates may be terminated in accordance with clause 8.	
Subclause (4) A piecework book or file shall be kept in which all piecework jobs shall be entered, stating clearly the extent, limitation, price, etc. of the work. The employees shall have access thereto. Piecework which has previously been entered need not be entered again.	
Subclause (5) Unless otherwise agreed, the individual employee shall receive the usual time rate as advance payment for piecework.	
Subclause (6) For participation in internal information and instruction meetings during working hours, employees who are interrupted while doing piecework shall be paid the average earnings from piecework and time-rate work in the preceding quarter for the group of employees to which the employee concerned belongs.	
Subclause (7) In cases where an employee performs a part of a job which has been assigned as piecework to one or several other employees whose production is dependent on the former employee's effort, a special piecework arrangement should be agreed	

Notes

_____ with such employee prior to the commencement
 _____ of that part of the job.

_____ Where this is not possible, a suitable addition to
 _____ the time rate shall be agreed with the employee in
 _____ question.

Subclause (8)

_____ On completion of the piecework the employee
 _____ shall hand in his/her piecework ticket for
 _____ approval of the work.

_____ When the work has been approved, the
 _____ difference, if any, shall, as far as possible, be
 _____ computed on the next pay day, however, not later
 _____ than four weeks after approval of the work.

Subclause (9)

_____ Unless otherwise agreed, any surplus on
 _____ piecework on a group basis shall be distributed
 _____ on the basis of the individual employee's time
 _____ rate and the hours worked.

25. Negociação colectiva: detalhe do caso italiano

PERFORMANCE-RELATED PAY AND FIRM PRODUCTIVITY: EVIDENCE FROM A REFORM IN THE STRUCTURE OF COLLECTIVE BARGAINING

CLAUDIO LUCIFORA AND FEDERICA ORIGO*

The authors investigate the causal effect on firm productivity of a switch from fixed wages to collective performance-related pay, exploiting a reform in the structure of collective bargaining triggered by a social pact. They find that an increase in the adoption of collective performance-related pay leads to a 3 to 5% productivity gain but that such effect declines over time. They show that the effect on productivity varies substantially by firm size, industry affiliation, and union density. Both the size of the bonus and the design of the scheme—in terms of number and types of parameters used—are also important features for a firm's productivity.

The compensation packages of a growing proportion of firms, particularly in the private sector, include pay schemes linking pay to employee or company performance (Bloom and Van Reenen 2011). The economic effects of these pay incentives have been extensively investigated, and a large theoretical literature seeks to explain how firms should design compensation schemes to motivate workers in their jobs and maximize firms' profits (for a review, see Prendergast 1999).

While several studies document large productivity gains associated with the adoption of individual performance-related pay (PRP) schemes and in particular piece rates (Lazear 2000; Bandiera, Barankay, and Rasul 2005; Freeman and Kleiner 2005), robust evidence on the impact of collective PRP on firms' productivity is still scarce. Some empirical studies show that collective PRP is able to generate productivity gains for firms, although they are not as large as those found for individual PRP (Cahuc and Dormont 1997; Origo 2009; Gielen, Kerkhofs, and van Ours 2010). Furthermore,

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KEYWORDS: performance-related pay, productivity, unions

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studies based on firm-level panel data show that these gains, albeit relatively small, also benefit the employees through higher earnings (Andrews, Bellmann, Schank, and Upward 2010; Long and Fang 2012), and the returns to performance pay are larger for ethnic minorities, particularly in the case of minority women (Fang and Heywood 2006, 2010).

One problem in comparing the above findings, however, lies in the different identification strategies generally used in the literature: while the studies on collective PRP mentioned above usually exploit the panel structure of the data to estimate fixed-effects models, those on individual PRP exploit quasi-natural experiments occurring in the compensation scheme at a given firm.

Both strands of literature have limitations. On the one side, the approach based on panel data provides consistent estimates of the causal effect as long as the changes in the pay structure are strictly exogenous, or alternatively if all the differences between treated and control firms can be attributed to firm-specific fixed effects. The strict exogeneity assumption is violated if firms choose to change their pay structure on the basis of past productivity levels, which is often the case. On the other side, the approach that exploits quasi-natural experiments, being based mostly on specific case studies, often lacks external validity for the results.

This article improves on the previous literature by combining the two approaches above. First, we use a very rich firm-level panel data set for the Italian metal engineering industry and implement a fixed-effects model to account for firms' unobserved heterogeneity. Second, we exploit an exogenous change in the institutional setting, which—in the frame of a social pact—changed the structure of bargaining, shifting firm-level collective bargaining from fixed wages to PRP schemes. The focus on the Italian experience provides an interesting case, as little empirical evidence is available on the effects on firms' productivity of a move to decentralized bargaining, with a variable pay scheme defined as a cash-based bonus linked to specific indicators of productivity, profitability, or other measures of firm performance. While social pacts traditionally involve a policy contract between the government and social partners over income policies and other macroeconomic targets, issues concerning the structure of collective bargaining or firms' payment systems are relatively uncommon (Baccaro and Lim 2007; Hassel 2009; Avdagic, Rhodes, and Visser 2011). Finally, we investigate the existence of heterogeneous productivity effects by firm characteristics (i.e., firm size, industry, and unionization level), paying specific attention to the role of the design of the premium and the actual amount of the bonus paid.

Theory and Empirical Evidence

Economic theory predicts that collective PRP schemes should be used when it is difficult to measure individual performance. Their use should reduce monitoring costs (Fitzroy and Kraft 1995) and increase the workers' effort, with subsequent positive effects on aggregate productivity: When individual pay depends on aggregate performance, everyone has an incentive to monitor his or her coworkers to avoid opportunistic behaviors that may reduce

the aggregate output and lead to lower pay. Furthermore, by transferring some of the risk from firm profits to individual pay, the firm increases the cost of shirking, inducing greater effort (Perotin and Robinson 1998). Finally, the introduction of collective incentives may increase productivity by reducing workers' turnover and thereby increasing the incentives to invest in firm-specific human capital (Kruse 1992). Collective PRP schemes may reduce turnover if they increase workers' identification with the firm values and culture or if workers consider the new scheme a sort of "gift," involving reciprocity and commitment from both parties involved.

However, whereas with individual incentives each worker's remuneration is directly related to his or her own output, with collective incentives each worker receives only a small fraction of the total profits generated by his or her marginal effort, equal to $1/N$, where N is the number of workers participating in the collective PRP scheme. The so-called $1/N$ problem creates an incentive to free ride, which is higher the larger N is, with subsequent negative effects on aggregate productivity. Furthermore, productivity may decline if the worker does not accept bearing the risk of the business implied by the adoption of a pay scheme linking wages to firm performance. This is particularly true when such increasing risk is not associated with greater participation in the firm's decision making or when the firm performance is poor. Hence, from a theoretical point of view, collective PRP schemes may have both positive and negative effects on productivity, and the actual impact of these effects is an empirical question (Ben-Ner and Jones 1995).

The vast number of empirical studies on the relationship between collective PRP and productivity usually find positive effects or, at worst, no effect of such schemes on productivity (for a review, see Bryson et al. 2013). Furthermore, the most "optimistic" results are found in earlier studies based on cross-sectional data, which do not adequately control for a potential omitted variable bias and other sources of endogeneity. This happens when collective PRP is adopted only by firms with certain characteristics (in terms of firm culture, industrial relations, past productivity levels, and so on) or simultaneously with other policies or technology that may affect productivity per se. In all these cases, the lack of controls for these factors leads to an overestimation of the effect of collective PRP on productivity (Kruse 1993; Blasi, Freeman, Mackin, and Kruse 2010).

A few studies have taken these issues into account by using firm-level panel data and estimating fixed-effects models. Despite referring to countries whose economic conditions and institutions are quite different (among others, Cahuc and Dormont 1997 for France; Piekkola 2005 for Finland; Robinson and Wilson 2006 for the United Kingdom; Origo 2009 for Italy; Gielen et al. 2010 for the Netherlands; Kato, Lee, and Ryu 2010 for Korea), most of them still find a positive effect of collective PRP on productivity, ranging from 2 to 10%, depending on the study considered.¹

¹In this section, given the type of collective PRP schemes triggered by the reform in Italy, we focus mainly on cash-based collective schemes (including profit and gain sharing) while disregarding studies that consider deferred schemes or other forms of financial participation. In this case, particular care should be used in interpreting the results as the effects of financial participation are not directly comparable with those of collective PRP.

Some of these studies, however, find that the actual effect of collective PRP on productivity—which may be on average negligible—may depend on firm-specific factors or other organizational variables, such as technological level and the broader organizational environment (Robinson and Wilson 2006). For example, the positive effects in terms of decentralized monitoring deriving from the introduction of collective PRP should be more relevant when the monitoring costs are higher, which is more likely in large firms with complex technology. Conversely, the productivity effects following the introduction of collective PRP should be smaller in firms with predominantly routine tasks.

Productivity effects of collective PRP are also mediated by the presence of unions. In unionized workplaces the effects are likely to be smaller as a result of the monitoring role that unions already have on workers' free-riding behavior and because unions increase workers' morale or improve communication with management (Brown and Medoff 1978). Moreover, since in unionized workplaces wages are higher under any form of pay compensation (including fixed wages), workers are more productive even in the absence of incentive schemes. In general, the empirical evidence on the role of unions, mainly for the United Kingdom and the United States, is quite controversial. Black and Lynch (2001) found that the effect of profit sharing on productivity is positive and statistically significant only in unionized firms. They concluded that more cooperative unionized labor management relations, in which employees have a greater role in decision making through their union representatives, are associated with higher labor productivity. However, an update of the same study shows that the effect of PRP on productivity in unionized firms is usually not statistically significant (Black and Lynch 2004). Robinson and Wilson (2006) found that the effect of profit sharing on productivity in unionized workplaces in the United Kingdom is also not statistically significant. Using a panel of workers rather than firm-level data, Booth and Frank (1999) showed a positive effect of PRP schemes on earnings, with a larger effect in the nonunion sector. A similar analysis for the United States showed that the returns of flexible pay systems are roughly the same in unionized and nonunionized firms (Brown 1992). Evidence for Italy based on firm-level panel data showed that the effects of collective PRP on productivity are stronger in low-unionized firms, while the wage effects are larger in highly unionized ones (Origo 2009). Differences in the structure of collective bargaining—that is, a centralized structure at the national industry-wide level in Italy and a decentralized one at the firm level in the United Kingdom and the United States—may explain some of the cross-country differences.

Economic theory also predicts that productivity gains may vary quite substantially with the design of the scheme (i.e., in terms of the number and types of parameters). Agency theory posits that when agents are risk-averse, incentives should be weaker the greater (and more unexpected) the risk, and performance measurement is more likely to be distorted. Furthermore, firms may prefer incentives based on multiple indicators in order to mitigate the relevance of any distortion associated with the adoption of a single

performance measure (Gibbs, Merchant, Van Der Stede, and Vargus 2009). A typical example is the quantity-quality trade-off facing firms with PRP schemes designed only on productivity measures and disregarding product quality. In order to avoid achieving higher productivity at the expense of lower quality, firms may adopt a composite indicator (i.e., weighting quantity and quality) in the design of the PRP scheme.

Another important aspect of the adoption of collective PRP concerns the productivity effects induced by the actual amount paid out as a PRP bonus. While economic theory unambiguously predicts that the incentive effect is likely to increase with the size of the bonus, the empirical evidence on the relationship between the size of the pay premium and performance is rather mixed. Several experimental studies have shown that small performance-related pay bonuses, compared with no bonus at all, may actually have a larger negative effect on performance. However, when the pay premium is large enough, it has a larger positive effect on performance in comparison with the no-incentive case (Gneezy and Rustichini 2000). Other experimental studies have found a bell-shaped relationship between the effort levels and the intensity of incentives (Pokorny 2008). One way to reconcile these mixed findings is to consider that firms and workers (or union representatives) may be more interested in relative than in absolute levels of pay premiums. They are concerned not only about the level but also about whether the premium is larger (or smaller) than that paid by similar firms in the same industry (Jones and Kato 1995).

The Institutional Setting

One common feature of the several industrial relation reforms that occurred in Italy during the 1990s is that they were framed as “social pacts”—tripartite agreements involving the government, national trade unions, and employers’ associations, with the main focus on one policy issue at a time (Hassel 2009; Avdagic et al. 2011). In July 1992, an important tripartite agreement was reached to abolish the wage indexation clause (the so-called *Scala mobile*) in order to curb the inflation rate and comply with the EU Maastricht targets that the candidate EU countries had to meet to join the European Monetary Union. Another tripartite agreement, in July 1993, concerned a major reform of the structure of collective bargaining, introducing a two-tiered structure consisting of (national) industry-level and firm-level bargaining. The Pact for Work, signed in 1996 with the usual formula of a tripartite agreement, introduced new forms of fixed-term contracts in order to increase employment flexibility. Finally, in 1998, a tripartite agreement confirmed the two-tiered structure of collective bargaining and introduced the practice of government consultations with social partners over labor and social policy issues (Baccaro and Lim 2007). Though all these reforms originated from the need to increase labor market flexibility and to allow (negative) macroeconomic shocks to be partially absorbed by wage and (fixed-term) employment adjustments, the 1993 reform thoroughly changed the wage-setting system, moving the focus of collective bargaining from the central (industry) level to the decentralized (firm) level.

The first level of bargaining linked industry wage increases to the government's macroeconomic targets to adjust for changes in inflation. The second level concerned employers and local unions and was meant to ease the introduction of collective PRP schemes, which were defined as cash-based schemes linking wage increases to specific indicators of productivity, profitability, or other measures of firm performance.² Whereas before 1993 wage increases determined at the firm level usually took the form of fixed bonuses, after 1993 PRP schemes became the "norm" among bargaining firms. Note that this occurred even without the introduction of formal sanctions for firms deviating from these recommendations and without strong fiscal incentives.³ The new institutional framework provided by the 1993 reform facilitated the rapid and wide diffusion of collective PRP schemes, as well as making their design and implementation less costly—firms could replicate or adapt to their needs the algorithm already implemented in other firms.⁴ Furthermore, firms' management found collective PRP schemes appealing as they introduced some additional cyclical variability into pay levels. Even if variable pay components could add up only to the industry wage levels bargained at the national level (or they could be zero when the performance targets were not met), in the medium run they could effectively absorb part of the wage increases bargained at the firm level.

Another salient feature of the reform was related to the implementation phase of firm-level contracts within each industry-level agreement. The adoption of collective PRP schemes was actually influenced by both the timing of the renewal of the industry-level agreement and the elapsed length of the existing firm-level contracts. The combination of these two features produced a quasi-random sequence in the ability of firms to introduce the new PRP schemes. Firms operating in the metal engineering industry, for example, could implement PRP schemes after 1994⁵ and only when the ongoing firm-level contract was about to expire (most firm-level contracts lasted two to three years). An ad hoc survey carried out in 1995–96 by the national statistical office on a representative sample of approximately 8,000 firms with at least 10 employees in both manufacturing and services confirmed that the introduction of PRP schemes mainly replaced the traditional fixed-pay component bargained at the firm level on top of pay levels set by the industry-level

²It could be argued that wage flexibility can also be achieved with the adoption of individual PRP. However, unions are more favorable toward the adoption of collective PRP because it usually requires collective bargaining at the local (firm) level, while individual PRP schemes are often bargained individually, particularly in the case of highly skilled workers. This explains the focus on collective PRP in the 1993 social pact.

³A possible explanation is that the incentives to comply were shaped not only by legal but also by social sanctions. Also, evidence shows that compliance can often be achieved with "mild laws" even when the legal sanctions are non-deterrent (Kube and Traxler 2011).

⁴Firm-level contracts are official documents and are publicly available.

⁵Metal engineering firms waited for their new industry-level agreement in 1994 in order to see how their national unions and employers' associations interpreted the changes in collective bargaining recommended by the 1993 reform. Subsequent industry-wide agreements, particularly the one signed in 2004, recalled the principles of the 1993 reform and emphasized the role of collective PRP schemes in firm-level contracts.

bargaining (ISTAT 1999).⁶ The amount of the PRP component is usually the same for all workers; alternatively, when it differs, it is proportional either to the average pay for each occupational level or to an indicator of individual absenteeism. On average, the actual incidence of collective PRP is close to 5 to 6% of the total gross wage (Casadio 2003; Brandolini et al. 2007).

Data and Descriptive Evidence

The empirical analysis uses a representative sample of Italian metal engineering firms drawn from the annual survey carried out by the National Employers' Association of the metal engineering industry (Federmeccanica). We focus on the metal engineering industry because it is the only field that offers such a rich panel data set for the years relevant to our analysis. Note that the metal engineering industry accounts for almost 40% of the firms and employment in manufacturing in Italy and is a leading industry for issues related to industrial relations and decentralized bargaining. Moreover, while we acknowledge that the external validity of our results may be limited and that it would also be interesting to gain insights into other industries (for example, services), in terms of our analysis, focusing on a single industry also has positive features, since the lower (within) industry heterogeneity reduces the confounding factors that may affect our econometric analysis.

The survey is available from 1989 to 2007, but since questions on firms' productivity were asked only until 1999, our estimates focus on the period between 1989 and 1999. On average, approximately 3,000 establishments employing almost 450,000 employees are surveyed each year, corresponding to around 10% of establishments and 25% of the workers in this industry. The survey provides information on firms' attributes, such as industry, employment, sales, outsourcing, exports, union activity, firm-level collective bargaining, wage levels, and composition. Information is also available for each establishment, within each firm, on employment composition, turnover, and working time arrangements. Since decentralized bargaining takes place mainly at the firm level, the latter will be considered as our unit of analysis.

Our variable of interest is whether the firm in a given year has introduced a collective PRP scheme, defined as a cash-based bonus linked to different measures of firm performance (productivity, profitability, or other). The definition of collective PRP and the corresponding questions changed slightly after 1995. The surveys administered from 1989 to 1994 asked bargaining firms whether their pay levels were among the issues bargained in the year of the survey and whether a variable pay scheme had been introduced either at the department or at the firm level. In this respect, we consider as firms adopting collective PRP those that declared they had signed a new firm-level

⁶The ISTAT survey shows that failure to fulfill the performance targets usually implies a proportional reduction in the total payment (44.6% of the total workers). The premium can actually be zero for 42.6% of the workers involved. A minimum fixed payment is, however, guaranteed for the remaining 12.8%.

contract in the year of the survey and answered positively at least one of the questions related to the introduction of collective variable pay schemes (department level or firm level). Starting with the 1995 survey, in accordance with the 1993 reform and the provisions of the 1994 industry-level agreement, the questions relative to variable pay schemes were reformulated using the same terminology as in the industry-level agreement—*premio di risultato*, that is, collective PRP—and no longer differentiated between department level and firm level. Hence, we consider as firms adopting collective PRP those firms that declared they had introduced some type of PRP scheme within the framework provided by the industry-level agreement.⁷

Figure 1 reports the evolution of firm-level bargaining and the adoption of collective PRP before and after the reform of the structure of collective bargaining. The first panel (a) depicts the evolution of the share of firms with a PRP scheme in the total sample (bolder line, left-hand scale) and the share of firms with a firm-level contract (right-hand scale). These trends show that while the share of firms with a firm-level contract declined from around 55% at the beginning of the 1990s to 45% in 1999, the share of firms with collective PRP grew from 10% in 1989 to around 25% in 1999, with a sharp increase in diffusion in 1995 to 1996. The observed change in the bargaining setting is even more clear-cut when we restrict our attention to firms bargaining a new firm-level contract each year (see panel b).

We do not have direct information on the number of workers covered by collective PRP or when the bonus is actually paid; however, the national agreement of the metal engineering industry states that all workers employed when the collective PRP is paid are eligible for the premium, which should be paid within seven months after the end of the year for which the results are used to compute the bonus. Given this feature and the information in our data set, the best we can do is to proxy the number of workers covered by collective PRP with the number of those employed in firms with collective PRP at the end of the year for which the results are used to compute the bonus. Figure 2 reports the share of workers covered by collective PRP under this definition; it highlights a discontinuity similar to that found in terms of the number of firms: the share of workers covered by collective PRP rises from around 40% in 1990 to 1994 to 46% in 1995 and it climbs to 60% in 1996, remaining stable at this level in the following years (Figure 2). Hence the data clearly highlight the existence of a discontinuity between 1994 and 1995 to 1996, as confirmed by a simple test for the existence of a structural break around 1995.⁸

⁷Regardless of the wave (and the definition) considered, information on the introduction of collective PRP is available only for the year in which the new contract is signed. We then assume that firms also adopt a collective PRP scheme in the following years unless a new firm-level contract without collective PRP is signed.

⁸*F*-tests show that the share of firms with PRP schemes has been significantly higher since 1995 with respect to the period from 1989 to 1994 ($F = 41.84$ [p -value = 0.0001] for all firms; $F = 284.4$ [p -value = 0.0000] for bargaining firms). A similar test on the share of workers covered by PRP schemes yields an *F*-test of 35.2 (p -value = 0.0002).

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Figure 1. Incidence of Firm-Level Contracts and Collective PRP, 1989–1999

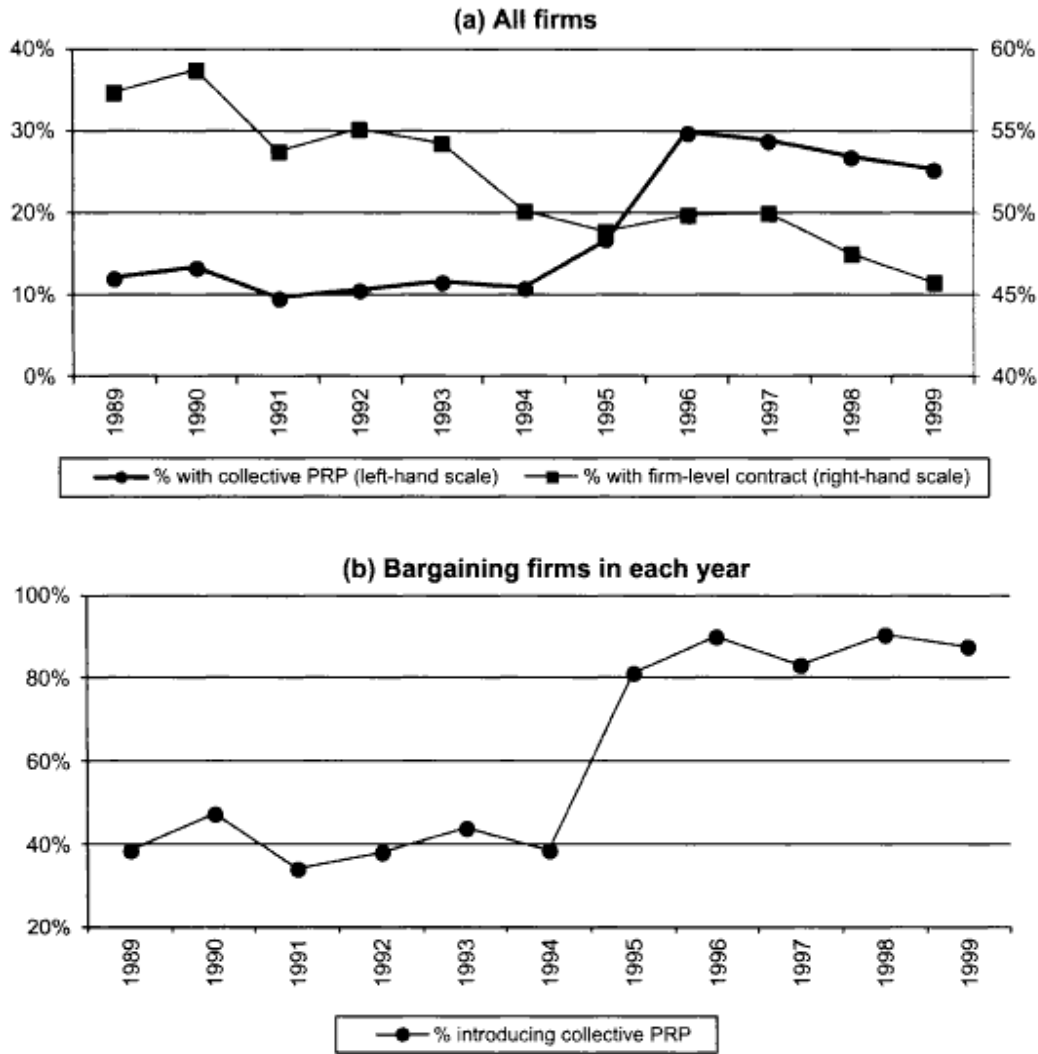


Figure 2. Share of Workers Covered by Collective PRP, 1989–1999

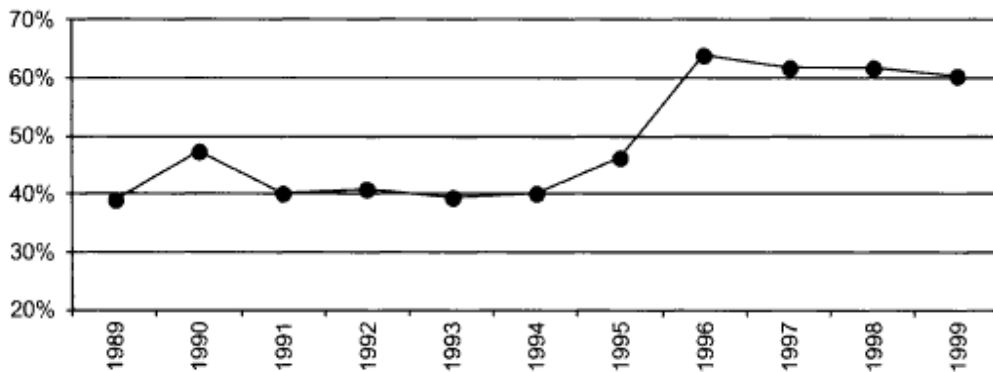


Table 1 reports the mean values of productivity and other firm characteristics according to different firm types. Since the data set does not contain information on the gross output or value added per worker (or the data to compute them), we use the logarithm of the value of the real sales per worker as a proxy for labor productivity.⁹ While this is not optimal, research has shown that as long as the firm-specific ratio of sales to value added is constant, the value of sales per worker can be considered a good proxy for labor productivity (Nickell, Wadhvani, and Wall 1992). Furthermore, since collective PRP can be adopted only through firm-level bargaining, we consider three main groups of firms: those without a firm-level contract (and hence without collective PRP), those with a firm-level contract but without collective PRP, and those with a firm-level contract and with a collective PRP scheme. The evidence reported in Table 1 shows that the firms introducing collective PRP schemes differ from the other firms not only in terms of productivity but also along many other dimensions, such as size, workforce composition, working-time schedules, and industrial relations settings. Most of these differences, even though small, remain statistically significant when we use as a comparison group only firms with a firm-level contract and without collective PRP. Nevertheless, the difference in productivity is always larger when we compare firms with collective PRP with those without collective PRP than when we compare them with those without a firm-level contract (the estimated differences are 0.33 and 0.28, respectively). This evidence, on the one hand, may indicate the presence of a “genuine” effect of collective PRP on productivity independent from that of other factors (such as working time, flexibility, and working conditions) bargained at the firm level, but on the other hand, it may also indicate the existence of (self-) selection in the adoption of collective PRP among bargaining firms. We shall take due care of these issues in our empirical strategy.

Table 2 provides some statistics on the actual amount of the bonus paid at the three-digit industry level. The mean yearly value of the bonus is rather small (around 500 euros, corresponding to 2.7% of the annual real wage), but it hides a high degree of heterogeneity across firms and subsectors. The mean bonus actually ranges from 0 to almost 7,500 euros (corresponding to almost one-third of the total real wage), with the largest variation registered in the machinery and transportation subsectors. The differences in the means by subsector are less pronounced, but the mean bonus ranges from around 430 euros in firms producing cutlery, tools, and general hardware to more than 800 euros in technical offices.

Among the firms with collective PRP, considerable heterogeneity also emerges in the nature of the PRP schemes themselves. Figure 3 shows the share of firms with collective PRP by the type of parameter used to compute

⁹The real sales values were obtained using the output deflator for the manufacturing sector at 2000 constant prices. We could not use hourly productivity (such as real sales per worker-hour) because of the lack of accurate information on annual hours worked.

Table 1. Differences by Firm Type, Pooled Data, 1989–1999

	No PRP and no contract	No PRP and contract	PRP (and contract)	Differences	
	a	b	c	c-a	c-b
logprod	11.37	11.31	11.64	0.28***	0.33***
Other characteristics					
<i>Firm characteristics</i>					
Number of employees					
1-19	0.48	0.13	0.04	-0.44***	-0.09***
20-99	0.46	0.51	0.41	-0.05***	-0.11***
100 and over	0.05	0.35	0.55	0.49***	0.19***
Multiplant	0.21	0.18	0.41	0.20***	0.23***
Outsourcing	0.52	0.63	0.68	0.16***	0.05***
Export	0.50	0.71	0.78	0.28***	0.07***
Investment	0.29	0.47	0.60	0.31***	0.13***
<i>Workforce composition</i>					
% women	0.22	0.19	0.20	-0.02***	0.00
% white collars	0.34	0.32	0.33	-0.01**	0.01***
% training contracts	0.06	0.04	0.04	-0.02***	0.00
% temporary workers	0.02	0.01	0.02	0.00	0.01***
% part time workers	0.03	0.02	0.02	-0.01***	0.00
Immigrants	0.43	0.32	0.63	0.20***	0.31***
<i>Working time schedules</i>					
Flex time	0.04	0.08	0.11	0.07***	0.03***
Shifts	0.13	0.37	0.56	0.43***	0.19***
Overtime	66.1	74.7	68.4	2.29	-6.35***
Temporary layoffs	0.11	0.23	0.17	0.06***	-0.05***
<i>Industrial relations</i>					
Firm-level contract	0.00	1.00	1.00	-	-
Union density	0.14	0.41	0.40	0.26***	-0.01***
Strike	0.15	0.60	0.62	0.47***	0.02***
N observations	16087	10792	4658		

Note: See the Appendix for variable definitions.

Statistically significant at 5%; * at 1%.

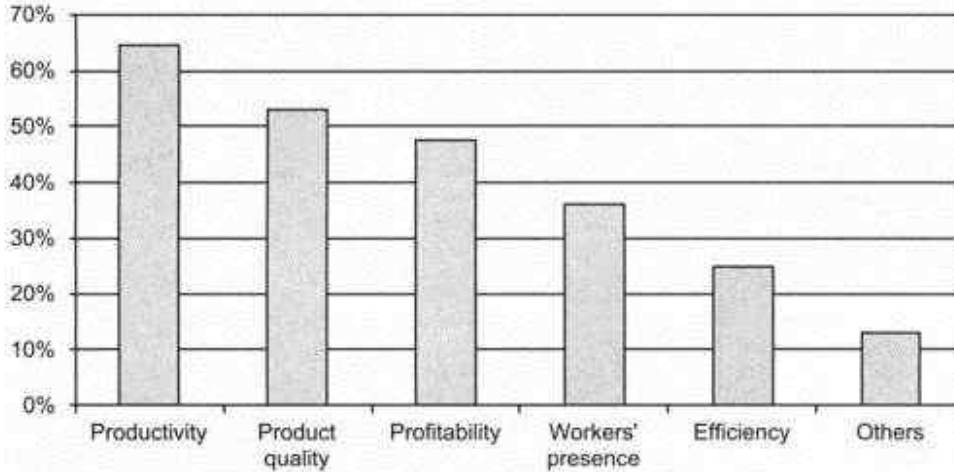
the amount of the collective PRP premium for the period 1995 to 1999.¹⁰ The most-used indicators are productivity (almost two-thirds of the firms), profitability (around 53% of the firms), and product quality (almost 48% of the firms). Collective PRP schemes are much less parameterized on indicators of workers' presence (i.e., absenteeism) and efficiency, which are used in approximately 36 and 25% of the firms, respectively. Firms use more than one parameter, but they usually avoid algorithms that are too complex (the median number of parameters is two). Among the firms using only one parameter (around 25% of the total), almost 40% adopt a "pure" productivity premium (i.e., depending on only one indicator of productivity), while a

¹⁰Detailed information on the structure and payment of collective PRP is available only since 1995. Unfortunately, we do not have direct information on whether the performance parameters used to compute the bonus are more objective or subjective. As stated in the national industry-level agreement of 1994, however, objectivity and third-party verifiability (such as in the case of indicators reported in firms' balance sheets), should characterize the parameters used in the algorithm of the PRP scheme.

Table 2. Amount of PRP Bonus by Industry, Pooled Data, 1989–1999

<i>Industry</i>	<i>Euros (2000 prices)</i>				<i>Share of total real wage (%)</i>			
	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>
Basic metals	509.89	431.98	33.08	2198.73	2.79	2.36	0.37	11.39
Foundries	653.30	476.52	72.78	3506.18	3.71	2.82	0.47	16.41
Metallic tools	468.95	387.34	83.39	1864.72	2.70	2.30	0.46	10.79
Machinery	448.15	384.28	48.00	7438.37	2.39	2.06	0.42	30.60
Cutlery, tools, and general hardware	433.18	346.46	75.12	1838.44	2.40	1.89	0.46	9.10
Precision tools	619.52	495.10	90.78	2421.26	3.18	2.60	0.43	11.41
Electronic equipment	519.43	413.17	0.00	1988.28	2.92	2.50	0.00	11.72
Transportation	496.69	441.85	83.55	3939.37	2.81	2.53	0.49	20.15
Machinery installation	509.19	415.04	0.00	1923.67	2.26	2.06	0.00	7.51
Repair of metal products, machinery, and equipment	496.99	450.42	73.29	1472.24	2.69	2.66	0.47	8.67
Technical offices	832.58	763.94	0.00	2423.89	3.10	3.06	0.00	9.04
Total	502.90	415.36	0.00	7438.37	2.70	2.33	0.00	30.60

Figure 3. Parameters Used to Design the Collective PRP, 1995–1999
Share of PRP firms adopting each performance parameter



“pure” profit-sharing scheme (i.e., depending on only one indicator of profitability) is used by 26% of these firms. The role of profits may actually be more crucial, since in the majority of the firms the actual payment is conditional upon the existence of (positive) profits.¹¹ Finally, firms seldom use quality indicators by themselves but use them often in combination with other parameters, particularly with productivity ones, so that higher productivity will not come at the expense of product quality. Overall, this evidence suggests that firms adopt quite different collective variable pay schemes, the actual design of which is probably driven by firm-specific factors, such as the availability of data to measure the relevant parameters, management quality, and the industrial relations climate.

The Empirical Strategy

The empirical strategy builds on the availability of firm-level panel data, which allows us to estimate a model with firm fixed effects. We specify our baseline model as follows:

$$(1) \quad Y_{it} = \alpha PRP_{it} + \beta X_{it} + \theta_i + \tau_t + \varepsilon_{it}$$

where Y_{it} is a measure of productivity of firm i at time t , PRP is a dummy equal to 1 if collective PRP is adopted by firm i in year t , X_{it} is a vector of time-varying control variables, θ_i are firm-specific fixed effects, τ_t are the common time fixed effects, and ε_{it} is the usual error term. α and β are parameters to be estimated.

¹¹The “conditional clause” is applied to the total payment in one-fourth of the firms with collective PRP, while it conditions part of the total payment in another one-third of firms.

We start with the traditional approach by estimating Model 1 with a fixed-effects estimator.

In the framework of the treatment evaluation literature,¹² the estimation of Equation (1) by fixed effects—or first differencing—provides consistent estimates of the causal treatment effect (i.e., the parameter α) as long as the treatment is strictly exogenous or under the assumption that the only difference between the treated and the control group is captured by the fixed effects θ_i (Ichniowski and Shaw 2009).

In our case, in order to account for any residual endogeneity in the adoption of collective PRP that is not captured by firm-specific fixed effects (such as measurement error or reverse causality), in the empirical analysis we exploit the previously discussed quasi-natural experiment provided by the institutional reform of the structure of collective bargaining. Specifically, we consider the reform as an exogenous shock to the probability of adoption of a collective PRP scheme that, from the actual implementation of the reform (i.e., from 1995 onward), increased the probability of PRP scheme adoption in a quasi-random way—depending on the elapsed time since the last firm-level contract was signed (see Figure 1b).

As previously discussed, the social pacts that in the 1990s made it possible to reform several features of the Italian labor market and of the system of social protection were not exogenous events to the industrial relations system at the national level. Indeed, since the social pact focused on PRP as a way to boost productivity (and induce firms to share productivity gains with their workers without creating inflation pressure), both previous national productivity levels as well as past inflation could have been relevant in the decision process. We contend, however, that the 1993 reform was an exogenous shock with respect to the wage-setting mechanism and the costs and benefits of PRP for each single firm. While some firms may choose to adopt a collective PRP scheme to boost productivity (which may be a problem of reverse causality), the change in the structure of collective bargaining triggered by the 1993 reform constitutes an exogenous shock to the probability of adopting a PRP scheme for each firm. This change can be considered independent from the potential productivity gains.

We then exploit this exogenous variation in two ways. First, we consider as “treated” only those firms that introduced a collective PRP scheme from 1995 onward (i.e., the first to be able to do so after the 1994 industry-wide metal engineering agreement).¹³ Since we use a within estimator, with this identification strategy the control group includes the same firms before the adoption of the collective PRP scheme and all the firms that never adopted collective PRP schemes over the period considered.

¹²In our case, we can consider the introduction of collective PRP as the treatment; hence the firms that introduce such schemes can be considered “treated,” while the others may be part of the “control group.”

¹³As a consequence of our identification strategy, we drop firms with collective PRP before 1995, for which the introduction of such schemes is more likely to be endogenous and dependent on past productivity levels. This should not be the case after the 1993 reform because, as shown in Figure 1, most of the bargaining firms of the metal engineering industry have introduced some form of collective PRP since 1995.

Second, using the whole sample, we estimate a two-stage model in which we exploit the time elapsed since the last firm-level contract and its interaction with the 1993 reform as instruments in the first stage to estimate the probability of adopting a collective PRP scheme. In practice, we assume that these factors should influence firm productivity only through their effects on the probability of adoption of collective PRP. We then implement a two-stage (IV) strategy, in the first stage of which we estimate the probability of adoption of collective PRP and then use its predicted values in the second stage (our equation of interest) in place of the actual PRP dummy:

$$(2a) \quad PRP_{it} = \alpha_1 C_{it} + \alpha_2 C_{it} * R + \beta_1 X_{it} + \theta_i + \tau_t + v_{it}$$

$$(2b) \quad Y_{it} = \alpha PR\hat{P}_{it} + \beta X_{it} + \theta_i + \tau_t + u_{it}$$

where PRP , as in Equation (1), is a dummy capturing the adoption of collective PRP in firm i in year t ; C is the elapsed time (in years) since the last firm-level contract for firm i in year t ; R is a dummy equal to 1 for the years following the reform of the collective bargaining system (hence, since 1995); X_{it} is the vector of time-varying control variables; θ_i and τ_t are vectors of firm and time fixed effects, respectively; and v_{it} is the error term. In the second stage, $PR\hat{P}$ is the estimated probability of the adoption of collective PRP from the first stage, and all the other variables have the same meaning as above. Note that the use of a fixed-effects estimator in the first stage is complicated by the binary nature of the dependent variable. To control for unobserved individual heterogeneity in the first stage, we use a two-stage fixed-effects estimator, of which the linear predictions from the first stage are then subsequently recoded into a binary variable.¹⁴

Main Results

Table 3 presents the main results on the effect of collective PRP on labor productivity: in columns (1) to (5) we show the estimates of our baseline estimation strategy; in columns (6) and (7) we report the estimates based on the identification strategy exploiting the reform of collective bargaining discussed above. In all the estimations, we implement a linear fixed-effects estimator with clustered standard errors. When we use the whole sample, we consider as treated all the firms that introduced collective PRP schemes in any year over the period from 1989 to 1999. In column (1), we control for time and firm fixed effects, and then we progressively add controls: for firm characteristics (column 2), workforce composition (column 3), working-time schedules

¹⁴The predicted probability is equal to 1 if the linear prediction is greater than 0.5, and 0 otherwise. We also estimated the first stage using a random-effects (RE) probit model and an RE probit model with Mundlak correction—that is, an RE probit model augmented with the means of all the time-varying variables by firm as additional regressors, which should proxy for the individual fixed effects (Mundlak 1978). The estimates remain qualitatively unchanged and are available on request.

(column 4), and industrial relations (column 5).¹⁵ Subsequently, using the full specification (as in column 5), we implement the identification strategy that exploits the 1993 reform of collective bargaining and consider as treated only the firms that have introduced collective PRP schemes since 1995 (see column 6). Finally, in the last column (column 7), we report the instrumental variable (IV) estimates obtained for the whole sample with the two-stage fixed-effects estimator (from now on, fixed-effects IV estimator).

In the most parsimonious specification, the estimated productivity gain is around 6% (column 1). Once all the controls are included, our estimates suggest that collective PRP increases productivity by 4.6%, and this effect is statistically significant (column 5). The estimated productivity gain proves to be robust to different model specifications. Similar estimates are obtained when we use as treated firms only those that introduced collective PRP from 1995 onward (column 6). Finally, when the full model with the fixed-effects IV estimator is estimated, the productivity gain, albeit smaller, remains positive (above 3%) and statistically significant. The first-stage estimates show that our instruments are jointly statistically significant, correlated with the potential endogenous variable (i.e., the dummy for the adoption of collective PRP), and genuinely exogenous (i.e., uncorrelated with the error term of the productivity equation).¹⁶

Regarding the effect of the other control variables, we find that productivity is lower in firms with multiple plants, while productivity is higher when firms operate in international markets, when they outsource part of the production, or if they have made new investments in the year of the survey. The number of employees, proxying for firm size, does not show any statistically significant association with productivity once we control for firm fixed effects. When we control for workforce composition, we find that both the share of women and the share of white-collar workers have a positive and statistically significant effect on productivity. However, conditional on the share of women, an increase in the share of part-time workers seems to reduce productivity. Among the controls for working-time arrangements, we find that the use of both shift work and overtime increases productivity; conversely, the use of temporary layoffs, as expected, is negatively associated with productivity. Finally, the evidence from the industrial relations variables shows that the presence of a firm-level contract is positively associated with productivity, while the occurrence of strikes, during the year of the survey, is negatively associated with productivity. The effect of union density is negative but not statistically significant. Similar results are also found using alternative functional forms (such as a logarithmic or a quadratic form).

On the whole, our results point out that the estimated productivity effect of collective PRP is not negligible and is in line with previous estimates on

¹⁵The lack of information on capital prevented the estimation of more traditional production functions.

¹⁶The value of the *F*-test on the joint significance of the two instruments is 483.43 (*p*-value = 0.000); the value of the Sargan test on the exogeneity of the instruments is 0.331 (*p*-value = 0.565). The first-stage estimates are available on request.

Table 3. Effect of PRP on Labor Productivity

	<i>OLS (fixed-effects estimates)</i>						
	<i>All firms</i>					<i>Treated after 1995</i>	<i>Fixed-effects IV^b</i>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	<i>(7)</i>
PRP	0.059*** [0.010]	0.059*** [0.010]	0.061*** [0.010]	0.053*** [0.009]	0.046*** [0.010]	0.044*** [0.010]	0.031*** [0.011]
Size_20-99		-0.032* [0.018]	-0.018 [0.018]	-0.019 [0.018]	-0.016 [0.018]	-0.011 [0.018]	-0.015 [0.018]
Size_100 and over		-0.043 [0.028]	-0.017 [0.027]	-0.019 [0.027]	-0.015 [0.026]	-0.011 [0.027]	-0.014 [0.026]
Multiplant		-0.022 [0.015]	-0.035** [0.014]	-0.034** [0.014]	-0.035** [0.014]	-0.030** [0.015]	-0.035** [0.014]
Outsourcing		0.034*** [0.008]	0.030*** [0.008]	0.028*** [0.008]	0.029*** [0.008]	0.028*** [0.008]	0.029*** [0.008]
Export		0.049*** [0.010]	0.043*** [0.010]	0.042*** [0.010]	0.040*** [0.010]	0.042*** [0.010]	0.040*** [0.010]
Investment		0.027*** [0.005]	0.033*** [0.006]	0.026*** [0.005]	0.026*** [0.005]	0.025*** [0.006]	0.026*** [0.005]
% women			0.245*** [0.071]	0.263*** [0.070]	0.269*** [0.070]	0.285*** [0.072]	0.268*** [0.070]
% white collars			0.373*** [0.056]	0.374*** [0.056]	0.368*** [0.055]	0.386*** [0.055]	0.364*** [0.055]
Immigrants			0.003 [0.006]	0.000 [0.006]	0.000 [0.006]	0.000 [0.006]	0.000 [0.006]
% training contracts			0.072** [0.034]	0.025 [0.034]	0.020 [0.033]	0.009 [0.034]	0.021 [0.034]
% temp workers			-0.017 [0.037]	-0.057 [0.039]	-0.057 [0.039]	-0.057 [0.039]	-0.055 [0.039]

(continued)

Table 3. Continued

	<i>OLS (fixed-effects estimates)</i>						
	<i>All firms</i>				<i>Treated after 1995</i>		<i>Fixed-effects IV^b</i>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	<i>(7)</i>
% part-timers			-0.098*	-0.099*	-0.099*	-0.107*	-0.099*
			[0.058]	[0.057]	[0.057]	[0.059]	[0.057]
Flex time				-0.016	-0.016	-0.018	-0.015
				[0.013]	[0.013]	[0.014]	[0.013]
Shifts				0.025**	0.024**	0.022*	0.025**
				[0.012]	[0.012]	[0.013]	[0.012]
Overtime				0.000**	0.000**	0.000**	0.000**
				[0.000]	[0.000]	[0.000]	[0.000]
Temporary layoffs				-0.122***	-0.120***	-0.120***	-0.121***
				[0.008]	[0.008]	[0.008]	[0.008]
Firm-level contract					0.021**	0.018*	0.025**
					[0.011]	[0.011]	[0.011]
Union density					-0.021	-0.011	-0.022
					[0.027]	[0.028]	[0.027]
Strike					-0.015**	-0.013**	-0.015**
					[0.006]	[0.006]	[0.006]
Constant	4.659***	4.626***	4.460***	4.450***	4.450***	4.442***	4.448***
	[0.007]	[0.017]	[0.026]	[0.028]	[0.030]	[0.031]	[0.030]
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rsquared (overall)	0.214	0.254	0.295	0.312	0.312	0.317	0.311
Observations	29,131	29,131	27,597	27,596	27,555	26,144	27,521
Number of firms	8,598	8,598	8,207	8,207	8,203	8,057	8,197

Notes: Robust standard errors in brackets. Dependent variable: Log of Real Sales per Worker (Linear Fixed-Effects Estimates)

^aInstruments in the first stage: length of the firm-level contract and its interaction with the reform dummy. Estimates of the first stage are available upon request.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

the effect of collective PRP found for a number of countries. For example, if we consider the most conservative estimates reported in column (7), the productivity gains generated by the introduction of a collective PRP scheme account for up to 6% of the overall increase in average productivity over the period considered. Such a contribution is larger (around 10%) if we restrict our analysis to the four years around the reform.

To test the robustness of our main set of results, in Table 4 we investigate whether the effect of PRP schemes on productivity varies with the timing of adoption or when we consider a restricted sample of firms. While we maintain that productivity gains should not depend on the timing of firms' adoption of collective PRP, we pay attention to the existence of heterogeneous effects by the date of adoption of PRP schemes, as they may signal that our identification strategy is not able to account fully for the endogenous selection of firms. Thus, we introduce a dummy variable to identify "late adopters," defined as those firms that have introduced a collective PRP scheme since 1997. The main estimates are reported in columns (1) and (2) of Table 4, in which the estimated coefficient for the dummy variable named PRP 97–99 should be interpreted as the differential productivity effect between late and early adopters. We find that the differential effect on productivity for the late adopters is positively signed but small in size and not statistically significant, suggesting that the productivity gains are not affected by the timing of the introduction of the collective PRP.

Furthermore, since collective PRP schemes are bargained with local unions, in the remaining columns of Table 4 we restrict our sample to firms with a firm-level contract (columns 3 and 4) and to bargaining firms in the period between 1989 and 1999 (columns 5 and 6). Our main estimates show that the productivity gains deriving from the introduction of collective PRP remain positive and statistically significant, and the size of the estimated effect (between 2.2 and 2.3%) is only slightly smaller than that found in our preferred specification, when non-bargaining firms are also included in the sample (see the last column of Table 3).

In light of the potential role played by firm-specific factors in influencing the effect of collective PRP schemes on productivity, in Table 5 we further investigate the existence of heterogeneous effects by different firm attributes, specifically by firm size, subsector (to proxy for technological differences), and union density. The estimates by firm size show that only firms with more than 20 employees enjoy productivity gains after the introduction of collective PRP schemes. Furthermore, the estimates by subsector show no statistically significant productivity effects for firms providing technical assistance (see the estimates for services in Table 5). A statistically significant effect is found in the remaining industries, but the productivity gains are larger for firms in high-tech industries than for firms in low-tech industries (3.7% and 2.6%, respectively). The results by union density show that positive productivity effects are larger in firms with a lower share of unionized workers than in firms with a higher unionization rate.

Table 4. Effect of PRP on Labor Productivity by Time of Adoption and for Selected Subgroups

	<i>All</i>		<i>Firms with a firm-level contract</i>		<i>Bargaining firms between 1989 and 1999</i>	
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
PRP	0.041*** [0.012]	0.030** [0.012]	0.034*** [0.012]	0.023** [0.012]	0.035*** [0.013]	0.022* [0.012]
PRP 97–99	0.009 [0.012]	0.002 [0.012]				
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes
<i>R</i> -squared (overall)	0.239	0.311	0.282	0.351	0.295	0.351
Observations	27,521	27,521	14,080	14,080	10,339	10,339
Number of firms	8,197	8,197	4,301	4,301	2,347	2,347

Notes: Full model specification as in column 7 of Table 3. Robust standard errors in brackets. Dependent variable: Log of Real Sales per Worker (Linear Fixed-Effects IV Estimates)

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Overall, these estimates confirm that the adoption of collective PRP schemes is more effective in firms in which the monitoring costs are likely to be higher, such as large, high-tech, and low-unionized firms. Furthermore, the results by firm size seem to suggest the existence of economies of scale both in monitoring and in potential productivity effects, as in large firms more workers are covered by the collective incentive scheme. At the same time, they suggest that free riding is not a major issue in large firms, which seem to have developed effective mechanisms (examples are peer pressure, guilt, and shame, as well as social norms) to reduce free riding to levels that allow collective PRP to be productivity-enhancing (Bryson et al. 2013). An alternative explanation relies on the fact that teamwork is more likely in large firms, in which such a work practice may mitigate the free-riding problem through mutual monitoring and a cooperative culture (Long and Fang 2013). More generally, our results indicate that the effect of the adoption of collective PRP on firm performance is significantly mediated by firm-specific factors.

We also test the existence of heterogeneous productivity effects along other dimensions discussed in the literature review: the design of the PRP scheme and the actual size of the bonus. First, we estimate whether the effect of collective PRP on productivity depends on the number and type of parameters actually used to compute the variable component of pay. Table 6 reports the main estimates of the effect of PRP schemes by the number of parameters used in the algorithm (column 2), by the type of parameter (column 3), and by the existence of a “conditional clause” for payment (i.e., the existence of non-negative profits, column 4). Since this information is available only from 1995 onward, the reported estimates refer to the period between 1995 and 1999. Note that the productivity effect estimated for this shorter period is around 2.7% (column 1 in Table 6), two percentage points smaller than the corresponding estimate for the whole sample period (see

Table 5. Effect of PRP on Labor Productivity by Firms' Attributes

	Firm size (n. employees)		Subindustry ^a			Union density ^b	
	< 20	≥ 20	Low-tech	High-tech	Services	Low	High
PRP	0.021 [0.065]	0.025** [0.011]	0.026* [0.014]	0.037** [0.018]	-0.004 [0.036]	0.058** [0.026]	0.025** [0.012]
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared (overall)	0.258	0.339	0.333	0.323	0.249	0.262	0.362
Observations	7,322	20,199	11,928	10,210	5,383	13,313	14,208
Number of firms	2,884	5,952	3,704	3,486	2,213	4,967	4,435

Notes: Full model specification as in column 7 of Table 3. Robust standard errors in brackets. Dependent variable: Log of Real Sales per Worker (Linear Fixed-Effects IV Estimates).

^aLow-tech sectors: foundries, metals, metallic tools, and cutlery and other tools; high-tech sectors: precision tools, electronic equipment, and transportation; services: repair and technical offices.

^bBased on the median unionization rate (24%).

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

column 5 in Table 3). The estimates reported in columns (2) and (3) suggest that the productivity effects are smaller—though the estimated coefficients are not statistically significant—in firms in which the design of the collective PRP scheme is rather complex or linked to profitability indicators. As in previous studies, we find that firms often use schemes based on multiple parameters, but their effect on productivity is no larger than that of simpler schemes. This may be due to the fact that complex schemes (and profitability indicators) depend on too many factors, which are often difficult for the workers to influence or verify. A statistically significant negative effect is found for collective PRP schemes in which the actual payment is conditional upon the existence of (non-negative) profits; moreover, its magnitude completely offsets the productivity gains generated by the PRP scheme.¹⁷ If we interpret this “conditional clause” as a way for firms to share the risks with workers, then we may conclude that collective PRP schemes are less effective for firm productivity when they are not targeted to extract workers’ effort. This result is in line with the hypothesis that the incentive effects of collective PRP schemes may be undone by workers’ perception of (excessive) risk sharing in pay determination.

Second, we estimate the productivity effect of the actual size of the PRP bonus. As in Jones and Kato (1995), we compute relative bonuses as the difference between the (logarithm of) the bonus paid by the firm and the (logarithm of) the average bonus paid in the industry to which the firm belongs. This relative measure of the bonus is a proxy for the firm’s distance relative to the industry average. Since all the variables are in logarithms, the estimated coefficient can be interpreted as an elasticity, measuring the

¹⁷The *F*-test on the sum of these two coefficients does not allow us to reject the null hypothesis that this sum is equal to zero ($F(1, 5029) = 0.21$ and corresponding p -value = 0.65).

Table 6. Effect of PRP on Labor Productivity by Type of Scheme, 1995–1999

	(1)	(2)	(3)	(4)
PRP	0.027** [0.014]	0.041** [0.019]	0.029** [0.014]	0.042*** [0.015]
Complex PRP (3 or more indicators)		-0.029 [0.023]		
Pure productivity premium			0.007 [0.037]	
Pure profit sharing			-0.019 [0.043]	
PRP payments conditional on positive profits				-0.053** [0.027]
Firm fixed effects	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes
Firm controls	Yes	Yes	Yes	Yes
<i>Rsquared</i> (overall)	0.073	0.073	0.074	0.074
Observations	11,854	11,854	11,854	11,854
Number of firms	5,021	5,021	5,021	5,021

Notes: Full model specification as in column 5 of Table 3. Robust standard errors in brackets. Dependent variable: Log of Real Sales per Worker (Linear Fixed-Effects Estimates)

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

percentage change in productivity caused by either a 1% increase in the firm bonus, holding the industry average constant, or a 1% decrease in the industry average, holding the firm bonus constant. Table 7 reports the main results based on two different specifications—firm and time fixed effects in columns (1) and (3) and the full specification also with time-varying controls in columns (2) and (4)—and using only the subsample of firms with a PRP scheme. In the first two columns, we report the productivity effect of the logarithm of the absolute value of the firm-level bonus, while in the last two columns we report the productivity effect of the relative bonus. We find that both the absolute and the relative amount of the bonus have a positive and statistically significant effect on productivity, albeit with a rather small estimated size: the estimates in column (2) suggest that a 10% increase in the bonus paid by the firm causes an increase of around 0.4% in the real sales per worker.¹⁸ A similar effect is found for the relative bonus.

Finally, we investigate whether the effect on productivity is temporary, testing whether it declines after a number of years by using different lags of the PRP variable. We find that the productivity effect is not very long-lasting: it progressively declines over time and is no longer observable within three years after the introduction of the collective PRP scheme.¹⁹ These results are consistent with the previous evidence on the United States (Kruse 1992),

¹⁸This effect is small but not negligible: if we apply the estimated elasticity to the mean values, we obtain the result that a 50 euro increase in the PRP bonus per worker causes an increase of 415 euros in the real sales per worker.

¹⁹The estimates are available on request.

Table 7. Effect of the Amount of the PRP Bonus on Firm Productivity

	<i>All firms with PRP</i>			
	(1)	(2)	(3)	(4)
Log (PRP bonus)	0.033*** [0.011]	0.038*** [0.011]	—	—
[Log (PRP bonus) – log (PRP bonus_ industry avg)]	—	—	0.028*** [0.010]	0.033*** [0.010]
Firm fixed effects	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes
Firm controls	No	Yes	No	Yes
R-squared (overall)	0.498	0.506	0.497	0.506
Observations	2,539	2,519	2,539	2,519
Number of firms	1,103	1,097	1,103	1,097

Notes: Full model specification as in column 5 of Table 3. Robust standard errors in brackets. Dependent variable: Log of Real Sales per Worker (Linear Fixed-Effects Estimates)

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

while much larger productivity effects (around 10%) and greater persistence over time (at least for the first three years after the introduction) are found in the case of Korea (Kato et al. 2010).

Concluding Remarks

This study provides an estimate of the causal effect on firm productivity of a switch from fixed wages to collective PRP, triggered by a reform of the structure of collective bargaining that occurred in Italy in the mid-1990s. This reform represents an exogenous shock that shifts the probability of adopting collective PRP at the firm level, which we used to identify the productivity effect. Using a unique and very rich firm-level panel data set for the Italian metal engineering industry, we implemented a fixed-effects model combined with a quasi-natural experiment and showed that the introduction of collective PRP led to productivity gains of up to 3–5%, which progressively declined over time. Our results are in line with previous findings for other countries and confirm that a modest (positive) effect is to be expected when the average size of the premium paid out is rather small (in our case, around 500 euros yearly). In other words, we find empirical support for the hypothesis that the intensity of incentives does matter for workers' effort and firm performance.

We also found that the productivity effects are heterogeneous across different firm types. Our results indicate that the productivity gains are larger in medium to large firms, high-tech industries and firms with a low level of unionization. We showed that the design of the PRP scheme (in terms of the number and types of parameters) also matters for firm performance. We found the productivity gains to be smaller in the case of PRP schemes based on a large number of performance indicators, while we found no effects

when a “conditional clause” was used (i.e., when the premium is paid only if the firm makes non-negative profits, regardless of the other targets). This result suggests that collective PRP schemes generate productivity gains when they are targeted to workers’ effort, while they are not effective when introduced to share risks with workers.

In terms of policy implications, our results suggest that reforms of the institutional setting regulating wage determination and the structure of collective bargaining may be effective in promoting the diffusion of incentive schemes and ultimately firms’ productivity. In terms of our estimates, the 1993 reform has proved effective in fostering firms’ productivity through the introduction of collective PRP schemes. Any public incentive (subsidies or fiscal deductions) to promote the adoption of such schemes should, however, be carefully evaluated as large deadweight losses may arise as a result of the heterogeneous nature of the pay arrangements within firms.

In more general terms, we can argue that the different social pacts that were implemented in Italy over the 1990s proved to be the only feasible way—given the combination of a weak political setting and widespread social consensus—to reform the labor market and social protection. Moreover, social pacts framed as tripartite agreements may provide a favorable environment in which to make the reforms work by promoting compliance even in the absence of formal incentives or sanctions.

Appendix

Table A.1. Definitions and Descriptive Statistics, Pooled Data, 1989–1999

	<i>Definition</i>	<i>Mean</i>	<i>Standard deviation</i>
Logprod	Log of real sales per worker (2000 prices, euros)	11.601	0.626
PRP	1 if firm adopts collective PRP, 0 otherwise	0.148	0.355
Log (PRP bonus)	Log of amount of PRP bonus (2000 prices, euros)	5.992	0.686
Log (PRP bonus) – log (PRP bonus_industry avg)	Relative distance from industry average	1.069	0.844
Contract length	Length of firm-level contract (years)	1.066	1.668
Length*reform	Contract length*dummy equal to 1 for years since 1995	0.462	1.478
<i>Firm characteristics</i>			
Number of employees (reference group: 1–19 employees)			
Size_20–99	1 if 20–99 employees, 0 otherwise	0.476	0.499
Size_100 and over	1 if 100 or more employees, 0 otherwise	0.230	0.421
Multipiant	1 if multipiant firm, 0 otherwise	0.227	0.419
Outsourcing	1 if firm outsources part of the production, 0 otherwise	0.579	0.494
Export	1 if exporting firm, 0 otherwise	0.614	0.487
Investment	1 if new investments during the year, 0 otherwise	0.396	0.486
<i>Workforce composition</i>			
% women	Women/employees	0.207	0.175
% white collars	White collars/employees	0.333	0.222
% training contracts	Workers on training contract/employees	0.050	0.103
% temporary workers	Temporary workers/employees	0.020	0.078
% part-time workers	Part-time workers/employees	0.024	0.065
Immigrants	1 if any immigrant workers in the firm, 0 otherwise	0.425	0.673
<i>Working-time schedules</i>			
Flex time	1 if firm adopts flexible working hours, 0 otherwise	0.064	0.246
Shifts	1 if firm adopts shifts, 0 otherwise	0.276	0.443
Overtime	Annual overtime hours per worker	69.380	91.800
Temporary layoffs	1 if firms uses temporary layoffs, 0 otherwise	0.160	0.363
<i>Industrial relations</i>			
Firm-level contract	1 if firm has a firm-level contract, 0 otherwise	0.490	0.500
Union density	Unionized workers/employees	0.274	0.266
Strike	1 if any strike during the year, 0 otherwise	0.376	0.484

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26. Negociação colectiva: task forces suecas para produtividade

Vasconcellos e Sá Associates

From: Wåhlberg , Klas [mailto:klas.wahlberg@teknikforetagen.se]
Sent: quarta-feira, 1 de Abril de 2020 15:59
To: associates@vasconcellosesa.com
Cc: Lindqvist, Bengt
Subject: VB: Industriavtalet - bifogat

Dear Prof Sa,

Many thanks for the interesting discussion we just had. As promised I enclose a copy of the Framework agreement for the Industry parties in Sweden, Industrirådet, comprising of both employers as well as unions working in the industry business.

- 1) This agreement governs the detailed salary/wage collective bargaining agreements that is signed individually among the different individual unions and the corresponding employers organization. The enclosed document is regrettably in Swedish only, but I would like to draw your attention to the following pages and clauses, which was what I referred to:

Pg 5 Industrirådet 1st paragraph – that describes how the parties generally should work together. Industrirådet means – Industry council, and comprise of the unions and employers in the industry sector. You find all signatories on page 34, including me for tTeknikföretagen.

Pg 8 Avtalets syfte 1st paragraph, "avtalets syfte" = Purpose of the agreement where all parties has signed that "The purpose of the agreement is to unite the parties of the industry in a strive to improve industry competitiveness and create good working conditions for the employees. The parties have a long tradition of working together successfully and closely in matters related to industrial development".

There is more in the two first clauses on page 8, but this summarizes the strive for industrial competitiveness – where productivity increase is one factor.

- 2) Union contacts in Sweden:

I would suggest IF Metall chairman Marie Nilsson. Mail: marie.nilsson@ifmetall.se She will be able to assign someone to your mail further in her organization.

Best regards
Klas Wåhlberg / Director General

Industry cooperation and negotiation agreements

Industry Council

- Industry partners have signed cooperation and negotiation agreements. In order to monitor and promote the implementation of these agreements, and otherwise deal with questions aimed at creating favorable conditions for the industry and its employees, organizes parties an industrial council ("Industry Council") consisting of senior representatives of all parties. Senior representatives referred primarily party chairman, deputy chairman, executive director and chief negotiator or negotiating secretary.
- Within the Industry Council appointed one (1) Bureau of six (6) members, three (3) representatives of the employees and three (3) representatives of the employers' side. The term of the work of the Bureau shall be two (2) years. Furthermore appointed within a-Industrial Council (1) projections Industry Committee, with one (1) representative of each contractor.
- Industrial Council meets at least one (1) time per year and in addition when the Bureau so decides. Industry Committee meets two (2) times per year as well at the invitation of the Bureau. The Bureau is responsible for it at the meetings, minutes after adjustment of the chairman are provided to all members.
- The Bureau prepares Industry Council meetings and is otherwise managing the activities contemplated by this Agreement or as Industry Council decides. For operations that Industry Committee is responsible for belonging to appoint the impartial chairmen (OPO), in accordance with § 3 of the negotiated agreement, and the industry's financial advice. The Bureau shall convene the Industry Committee on these decisions and shall otherwise convene Industry Committee when there is reason to. Insofar Industry Committee decided to create working groups / projects responsible Bureau for Planning and Coordination of these working groups. Otherwise responsible Bureau and the Industry Committee on the development of operations in accordance with this Agreement, the content and spirit.

Council

Bureau and
Industry
Committee

Meetings

Teaching

industry cooperation

part I

Introduction - Purpose of the agreement and alignment

Purpose of the
agreement

- Purpose of the agreement is to combine the industry's parties (the "Parties") in an effort to strengthen the competitiveness of the industry and create good conditions for corporate employees. The parties have a long tradition of successful and close cooperation in matters relating to the conditions for industrial development. The cooperation is based on a common understanding of the industry's role and importance for the national economy. With this agreement, the partners want to strengthen and broaden cooperation and thereby promote continued good relations between the parties. The agreement is also a basis for further collaboration with other stakeholders who want to work for a strong Swedish industry.

industry role

- The industry plays a crucial role in the development of Swedish society and prosperity. The extent of Swedish exports have more than doubled in recent decades and the industry's export revenue represents about half of Sweden's GDP. Exports are dominated by manufactured goods and services in varying degrees connected with them. Taking into account the direct and indirect employment, the industrial sector accounts for well over a quarter of total employment.

Duration of industry cooperation and negotiation agreements

Below and signing parties in the industry have specifically within each agreement area, adopted the Agreement. The parties agree that the agreement shall enter into force on 13 June 2016 and valid until further notice, with six months' notice of termination.

Stockholm June 13, 2016

Arne Sehlström, president, Building Thread Association Ravindra Parasnis,

president, Graphic Companies' Federation Per Hide Stone, Managing

Director, Industrial Employers

Jonas Hageqvist, CEO, IKEM - Innovation and chemistry employers Magnus Huss, Director,

IKEM - Innovation and chemical industries Bo-Erik Pers, CEO, Jernkontoret Marie Söderqvist,

CEO, Food Federation Carina Håkansson, CEO, Forest Industries

Lena Lisa Tengblad, President, Forestry and Agricultural Employers Per Ahl, Managing

Director, Sverin

Klas Wahlberg, CEO, Engineering Industries

Geolita Tall, Secretary General, TEKO, Swedish Textile and Fashion Corporate interest organization Anders Weihe, MD, TEKO,

Swedish Textile and Fashion Companies David Johnson, President, Wood and Furniture Industry

Per-Olof Sjöck, General Secretary, GS Union for the forestry, wood and graphical industry, Anders Ferbe,

General Secretary, IF Metall

Hans-Olof Nilsson, General Secretary, Food Workers' Union Ulf Bengtsson, the

Federation, the Swedish Engineers Martin Linder, General Secretary, Union

27. Contratação colectiva na Dinamarca no sector metalúrgico: formação no posto de trabalho

FINANCIAL POSSIBILITIES

MEMBERS OF AGREEMENT

For Dansk Metal's employed members, continuing education and training are basically regulated in the agreements.

The agreements generally have two options:

- ▶ **Company paid training:**
 - The company chooses education and is responsible for all costs

- ▶ **Competence fund paid training:**
 - The individual selects within the limits set by the OK
 - Typically, expenses are paid for attendance fees, course materials, transportation, diet and lodgings
 - Typically, partial pay compensation is paid
 - The time of training during working hours is agreed with the company
 - The individual is responsible for the application, registration, etc.
 - See, for example, the fact sheet on IKUF

You have to be aware of that

The agreement to which the member is covered determines which competence fund to seek support from.

Typically, applications and commitments must be given prior to enrollment in education.

If the member is seeking a grant from a competence fund, you should often also apply for SVU or WEU.

MEMBERS WITHOUT AGREEMENT

For Dansk Metal's employed members who are not employed by agreement, he or she can arrange freedom with the company and apply for government grants (see back).

If the company pays labor costs and course expenses, the company will be able to apply for WEU or SVU if the conditions are met.

If the workplace has an accession agreement, the member may in some cases also seek competency funds.

FINANCIAL POSSIBILITIES

GRANTS FROM THE PUBLIC

Adult continuing education allowance (WEU): 80 per cent. of unemployment benefit level and can be searched for the rules on support for AMU courses.

State Adult Education Support (SVU): Between 60 and 80 per cent. of unemployment benefit level and can be searched for the rules:

- ▶ For general education (primary and secondary school): 80 per cent. of unemployment benefit equivalent to DKK 3,344, - per week.
- ▶ For higher education (courses that cannot be applied for SU): 60 per cent. of unemployment benefit equivalent to DKK 2,508, - per week.

Adult apprenticeship scheme: Companies may in special cases receive grants to employ apprentices over the age of 25 if this receives the agreement minimum payment.

Find more information at jobnet.dk.

HERE YOU CAN APPLY FOR GRANTS

- ▶ DI - CO-I agreement: ikuf.dk
 - ▶ Employers - Metal and others: aleu.dk
 - ▶ Municipalities: the municipal competence fund.dk
 - ▶ Regional: denregionalekompetencefond.dk
 - ▶ Governmental: competence.development.com
 - ▶ State adult education: svu.dk
- WEU allowance: Read about it at veug.dk. Apply at etteruddannelse.dk

28. Programa transversal à economia dinamarquesa: novas ferramentas para educação contínua dos adultos

New skills throughout life

Future adult, continuing
and continuing education

June 2017

Expert group for adult, continuing and further education

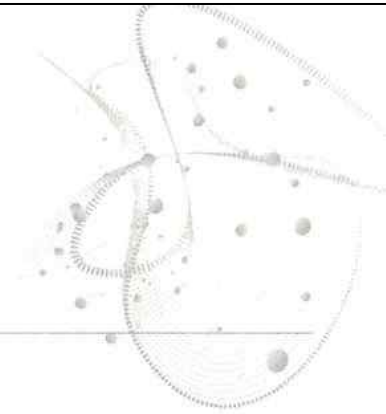


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Description of public adult, continuing and further education efforts

The participation of Danes in adult, continuing and further education is among the highest in OECD²², and there is a well-developed adult, continuing and continuing education system. The public adult, continuing and further education system plays a central role in this and consists of a number of different offers at different levels that relate to the ordinary education system. The key public adult, continuing and further education programs are described below.

The public offering of adult, continuing and further education encompasses education at all levels and in a number of different disciplines. A general distinction is made between three types of adult, continuing and further education:

General adult, continuing and further education, which includes preparatory adult education (FVU), general adult education (AVU), HF-single subject, dyslexic education (OBU) and Danish education for adult foreigners.

Vocational adult, continuing and further education, which relates to labor market education (AMU), vocational education for adults (EUV) and open education / individual subjects at vocational education level.

Higher adult, continuing and further education, which is academic, diploma, master's, other open higher education and part-time education at the universities as well as a certain range of subject-specific courses in various fields.

Effect evaluation of adult, continuing and further education efforts

The data material in KORA's impact evaluation of the Danish WEU system is based on register data of persons who in the third quarter of 2011 started a WEU course, either at the general, business or advanced level. For general and higher VEU courses, the duration is generally significantly longer than the AMU courses, and for these courses, therefore, as an supplement, additional analyzes have been carried out with the start date set to Q3 2008.

The following effect measures are used in the analysis:

- **Salary and employment:** Monthly salary and employment rate per month from the start of the course in the third quarter of 2011 up to and including the first quarter of 2015.
- **mobility:** Job mobility in the form of a new employer within the same industry or industry change, and professional mobility, both horizontal (new job function at the same professional level) and vertical (new job function at a higher level).

²²OECD (2016b)

(Continued)

- **Education:** Further continuing education and / or increased education in the ordinary education system.
- **Sick leave:** Sickness absence beyond the first 14 days, the so-called employer period.

The impact analyzes are divided into employed and unemployed students.

Source: Impact assessment of adult and continuing education efforts (KORA 2017)

General adult, continuing and further education

General adult, continuing and further education corresponds to education at primary or secondary level, as well as Danish for adult foreigners and dyslexia (OBU). The purpose of general adult, continuing and further education is to improve the basic competences of the participants so that the participants are able to participate in the community, further their education and enter the labor market. The aim is thus not only to strengthen the direct labor market-oriented skills, but also to strengthen also to ensure that all adults are able to read and calculate. The target group for general adult, continuing and further education are adults who have not achieved the basic skills needed in the education system, in the labor market and in society, including adult foreigners. General adult and continuing education is used to provide the basic skills in reading,

Effects of general adult and continuing education among employees

- On the general level, KORA finds that general adult education (AVU) and HF subjects lead to increased participation in the ordinary education system as well as in the continuing education system, and that this effect goes hand-in-hand with a reduction in employment and wages.
- KORA for preparatory adult education (FVU) finds a similar effect.
- Especially young and skilled workers experience a reduction in wages and employment and an increase in the use of education.
- Dyslexia education has no effect on participation in ordinary education, but there is, however, an increased use of continuing education.
- The higher the level of continuing education in the general field, the more marked and long-lasting the educational effects. That is, those who start in hf-single subjects start more education in the ordinary education system and / or in the continuing education system than those who start at avu who then again start more education than those who start at FVU and dementia courses.
- Participation in the general WEU reduces the number of sick days. The effect is very large for unskilled people. For skilled workers, there is no effect on sick days.

Source: Impact assessment of adult and continuing education efforts (KORA 2017)

Vocational adult and continuing education

Vocational adult education, continuing education corresponds to the level up to and including vocational education in the ordinary education system. The courses directly target the skills that are in demand in the labor market. The goal is to strengthen the participants' employment opportunities. Vocational, adult and continuing education encompasses a wide range of disciplines, and the offer ranges from short courses of one day duration to longer courses. As a starting point, the target group is adults who have educational qualifications minimum at the basic education level and most often also relevant employment experience.

Labor market programs (AMU) are short, vocational courses on average approx. 4 days targeted at unskilled and skilled workers. Through AMU, unskilled and skilled workers can obtain the skills that are in demand in the labor market. On the shorter AMU courses, approx. half of the participants already have a vocational education.

The purpose of AMU is to give the individual the opportunity to continuously acquire competence that is in demand in the labor market. AMU contributes to creating a flexible labor market where the labor force has the required skills or can quickly acquire them, and where the individual is best equipped to meet the challenges in the labor market in the short and long term. The target group is skilled and unskilled people who are resident in Denmark or are employed in Denmark.

There are approx. 3,200 AMU courses and there are courses in most industries.

The courses are organized in a system of common competency descriptions, each describing a job field in the labor market of the skilled and unskilled.

In addition to labor market programs, about 170 selected individual subjects from the vocational programs (area and specialist subjects) are connected to the common competence descriptions.

In addition, there is the integration basic education (IGU), introduced with the tripartite agreement on labor market integration in spring 2016, which contains 20 weeks of schooling composed of both general and vocational adult, continuing and further education.

In addition, a large number of AMU courses are part of educational structures that give credit and shortening in the vocational training programs, with which AMU also plays an important role in the vertical competence lift from unskilled to skilled. In addition, there are a number of contract training programs in particular in the construction area, where a package of AMU courses together provides recognized competence corresponding to skilled level. Finally, a number of AMU courses are used as optional specialist subjects in the main courses of business education.

Vocational adult education and continuing education is primarily AMU, but vocational education for adults (EUV) and individual vocational education at vocational education level is also included in this category, but is not the subject of the expert group's recommendations.

Effects of AMU among employees

- KORA finds that AMU generally has positive effects on wages and employment.
- Overall, participation in AMU means that the employment rate increases by 2 percentage points. The starting point is an employment rate of approx. 85 per cent, which rises to 87 per cent.
- AMU courses have a greater effect on the employment rate of unskilled workers than of skilled workers. As a result, the employment rate for unskilled persons increases from 75 to 78 per cent. and for professionals from 88 to 90 per cent. That is a significant percentage difference between the groups. The difference is also reflected in the wage effects.

(Continued)

- However, the overall result covers large variations between the four main types of AMU courses:
 - *Certificate Courses*. All courses that are a condition for the performance of a job and that carry a certificate issued by an authority or certified industry organization.
 - *industry Courses*. All other industry-oriented courses, which do not give certificates but only general. AMU-proof.
 - *Interdisciplinary courses*. Cross-disciplinary courses across industries on, for example, management, collaboration, IT, service, etc.
 - *Basic courses*. Cross-sectoral courses across industries on basic general skills in a business-oriented context.

- The effect is driven by the industry-specific and cross-cutting courses. The industry rates lead to an increase in the employment rate of two to three percentage points and an increase in the monthly salary of DKK 500-1,000. The effect is relatively rapid after the start of the course and is slightly declining but stable over the 3½ years, data covers. Virtually similar results are achieved at cross-curricular courses
- *Certificate Courses* on the other hand, does not affect wages and employment rates. One possible explanation may be that certificates are often required and that they must be renewed regularly.
- Unlike the other three types of AMU courses, basic courses initially result in a smaller (and short-term) decline in employment, which indicates that this type of AMU leads to increased education (WEU or regular). That is also the case. However, the result is driven solely by the so-called individual competence assessments (IKV)²³, which constitute a very large part of the activity on basic AMU courses.
 - In general, KORA finds that AMU has no significance for changing employer or job / function level. However, two opposing effects can be imagined. The opportunity for a job change is increased, but at the same time, the skills to retain the existing job are increased.
 - However, KORA finds statistically significant results for industry change and job function change at unchanged level (horizontal mobility) when calculated on AMU course types²⁴
 - *industry Specific courses*, transversal organizational courses and general basic courses result in reduced professional mobility horizontally
 - *Certificate Courses* on the other hand, increases horizontal mobility, and so does IKV (almost significantly)
 - *industry Specific courses* cross organizational courses as well as general basic courses reduce professional mobility, ie the worker retains the same job function.
 - *Certificate Courses* on the other hand, increases horizontal mobility.

Source: Impact assessment of adult and continuing education efforts (KORA 2017)

²³ The purpose of IKV is precisely to assess basic skills for the purpose of transfer of credit, because the worker intends to start more (post-) education, and that explains the result here.

Higher adult, continuing and further education

Higher adult, continuing and further education corresponds to higher education in the regular education system and includes the following programs:

- Academy programs (For example, Academy programs in automation and operations, Academy programs in energy technology, Academy programs in taxes and fees)
- Diploma programs (eg Diploma in Management, Healthcare Diploma, Diploma in Business Education)
- Masters Degree (eg Master of Business Administration, Master of Public Administration, Master of IT)

The programs are at 60 ECTS (European Credit Transfer System), which corresponds to one year of full-time study. The courses are modular and one or more modules can be taken without having to complete a full education. However, if you complete a full education, it will provide access to the level above.

Higher adult, after- and further education can include are organized as subject-specific courses. They are based on elements that form part of the higher-qualifying full-time or part-time programs. They are usually offered as part-time and have a duration of 1 to 4 weeks converted into full-time. In addition, there are a number of other flexible forms of organization in higher education adult, after- and further education, including part-time, full-time and part-time courses.

The higher education programs in the higher education system target different target groups according to the relevant level of admission that the individual has completed. Common to all is that the applicant must have at least 2 years relevant work experience after completing the qualifying education.

Effects of higher adult and continuing education among employees

- The results for wage effects in the higher education sector vary widely
- Diploma courses result in the largest salary gains, while academic courses have small gains.
- On average, wages increase by an average of approx. DKK 1,000 per month two years after the start of the course for higher VEU as a whole
- The employment rate generally rises more than wages. Academic-level courses increase the employment rate by 4-5 percentage points. It only partially impacts on wages, where the estimated average effect ranges from approx. 400 to 1,100 DKK a month, but generally just on the border with statistical significance.
- Courses at the diploma level result in quite a large pay effect. A fully completed diploma program corresponds to a full-time equivalent, which is usually completed over a minimum of four years for people in employment. It is therefore not surprising that it takes over two years before a positive average effect of approx. DKK 1,500 a month is worth noting. In a supplementary analysis with a start time in the third quarter of 2008, KORA finds that the effect seems to stabilize at approx. DKK 2,000 a month after four to five years.

(Continued)

- Participation in the WEU at the master's level shows positive and significant employment effects after five years and corresponding pay effects after approx. six years (marginally significant, with an effect of about DKK 2,000 a month in 2015 prices). It is not surprising that courses at the master's level only fail several years after they have begun. The courses last for several years and many students drop out before completing a comprehensive master's degree program.
- Continuing education at the upper secondary level has a large and statistically significant effect on mobility between job levels. Participation in higher education at the academic and diploma level has quite powerful and statistically significant effects on vertical job mobility, i.e. mobility to a higher skill level. For diploma courses, there are three leaps in skill levels, while for academic courses, the leaps to the highest (management) level apply.
- *Master level* does not show any effect on vertical mobility. This is not surprising as the date window here is 3½ years.
- Participation in higher VEU overall reduces the number of sick days. The reduction is only significant for diploma and master. If you divide the participants on an educational background, KO- RA finds that this result is primarily from skilled professionals participating in higher education, and the estimate is statistically very significant and economically very high.

Source: Effect evaluation of adult and continuing education efforts (Balvig, Kristensen and Skipper 2017)

Managing supply and content

The basic principle of managing the provision of adult, continuing and further education is that the education must have an educational and / or employment relevance. In addition, the supply of most programs is also governed by geographical proximity.

Objectives for, as well as the content of, the programs are set for general and higher adult, continuing and further education, as well as certain vocational education programs, in executive orders either by the Minister of Education or the Ministry of Education and Research, just as in the ordinary education system.

In the field of vocational law (AMU), a large part of the responsibility for setting educational goals and the provision of education is outsourced to the 11 industry-organized continuing education committees, with representatives from employers and employee organizations²⁵. The model should ensure that the supply is continuously adapted to the needs of the individual industries.

The providers of public adult, continuing and further education will usually be self-supporting educational institutions. However, there are a number of approved private providers at AMU that can offer AMU on par with public institutions. In addition, the Adult Education Centers (VUCs) have an operating agreement with other public schools, language centers and public educational associations.

²⁵ There are basically 11 continuing education committees in the AMU system. In addition, there is a superstructure on the Industry Joint Committee and the Metal Industry Education Committee, which is responsible for development of AMU courses in welding, firing technology and foundry.

All education in the higher adult, continuing and further education system must be accredited.

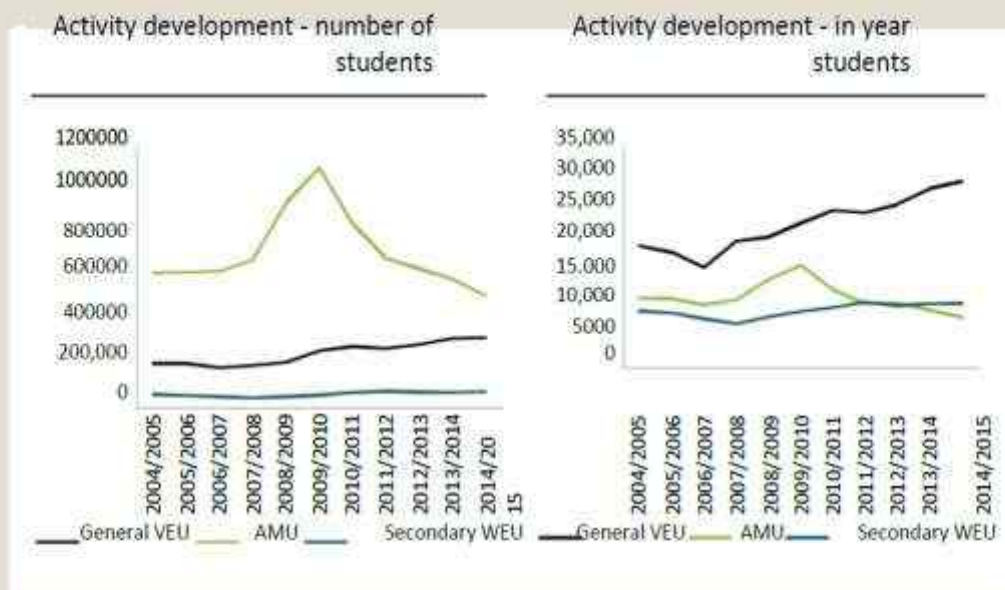
- Within the framework of the Executive Order, the individual business academies, professional colleges and universities lay down detailed rules on the programs in a curriculum.
- The institutions that offer each academic or diploma program jointly prepare a curriculum for the program. The Board of Research and Education approves new modules and training directions.

Activity and expenses

There has been increasing activity in general adult, continuing and further education over a number of years, while the activity at AMU has decreased significantly since 2010. Activity in higher adult, continuing and further education has been relatively stable since 2007.

The number of Danes taking a master's, diploma or academic degree stagnates. In 2014, the activity in publicly funded tertiary adult, continuing and further education was at the same level as in 2004, when measuring the number of year pupils. It shows a new analysis from the Danish Evaluation Institute (EVA) May 2017²⁶.

Figure 3.7: Activity development in public adult education, continuing education and further education (students / students)



Note: an annual student is basically a full-time student for 40 weeks. There is a big difference between the ratio of pupils and students between the areas, as the duration is very different. At AMU, for example, an annual student in 2016 corresponded to an average of 65 students. If the same person participates in several courses, the person is counted several times in the number of students.

Source: UVM and UFM.

²⁶ EVA (2017a)

In general adult, continuing and further education there were government operating grants of approx. 2.5 billion DKK in 2015 and expenses for SU and SVU²⁷ of approx. 1.7 billion kr. (2014 figures). There is a participation fee of DKK 120 per person. courses for core subjects, and DKK 1,200 for the other subjects.

At AMU, there were government operating grants of DKK 735 million. DKK 2015 in 2015 and expenses for reimbursement for participation in vocational adult and continuing education (WEU allowance), etc., financed by employers, of DKK 552 million. As a general rule, there is a participant payment of between DKK 500-1,000 per person. week at AMU. There is no state grant and thus full participation payment for people with a higher education.

In upper adult, continuing and further education, there were government operating grants of approx. 320 million DKK in 2015 and expenses for SVU of approx. 83 million There is free participation payment for upper secondary, continuing education and further education, which corresponds to an average of 70 per cent. of expenditure.

General WEU users

- Activity at the general VEU (avu, FVU, hf-single subject and dyslexic education (OBU)) increased by 59 per cent. since 2004/2005, which corresponds to approx. 120,000 more students in 2014/2015. For persons up to 29 years, the increase has been up to 141 per cent. The increase in activity takes place at the same time as the educational order introduced in 2009.
- In the general WEU, the proportion of women is greater than men, except for dyslexic education, where the proportion of men is slightly higher than women.
- The largest proportion of students have primary education as the highest completed education. For avu, this applies to 86 per cent. of the students, and for FVU the proportion is 73 per cent. In hf individual subjects, 65 per cent. of primary school students as the highest completed education.
- In general adult education, a relatively high number of students are outside the workforce (61 per cent) and among all types of courses, persons outside the workforce make up the largest proportion of students.

Users of AMU

- From 2004/2005 to 2009/2010, activity on AMU courses increased for all age groups, after which activity has decreased from 2010/11/11/2014 2015. However, the decrease must be seen in the context of the proportion of skilled and unskilled people in the population, and taking into account the demographic development in the educational level of the population, the proportion of skilled and unskilled persons attending AMU courses is approx. the same level as ten years ago.
- The AMU courses are primarily taken by persons with vocational education or primary education as the highest completed education. In 2014/2015, approx. half (55 per cent) of the students have a vocational education, and 28 per cent. had elementary school as the highest completed education.
- Men take AMU courses to a greater extent than women and in 2014/2015, 62 per cent. by the AMU students.

²⁷ SVU is the abbreviation for "State adult education support", which is an education grant that allows for further or further education during working hours. The individual can receive SVU as compensation for wages, or the employer can receive SVU as compensation for labor.

(Continued)

- The activity in AMU courses increases with the age of the students, and the activity is highest in the age group 45-49 years, after which it falls.

Higher VEU users

- In the HD / ED programs, activity fell by 37 per cent. since 2004/2005. The decrease corresponds to approx. 12,300 fewer students in 2014/2015 and the decrease is seen for all age groups, except for the age of 45-49, when the activity has increased.
- The academic programs (VVU) are the course activity since 2004/2005 decreased by 7 per cent. (The answer running for 2,485 fewer students). Course activity has increased for people aged 45-59, whereas it has decreased for persons under 45 years.
- In the master's programs, activity has increased by 49 per cent. from 2004/2005 to 2014/2015 (corresponding to approximately 3,400 more students). In particular, activity has increased for people over 35 years of age, while it has fallen for people under 35.
- The diploma programs are overweight (72 per cent), while the HD / ED degree programs are overweight (62 per cent). In the master's programs, the gender distribution is fairly even.

Source: UVM

Corporate use of public and private adult, continuing and continuing education

In addition to the public adult, continuing and continuing education programs, privately offered adult, continuing and further education is also part of the total adult, continuing and further education activities. The private growth, continuing education and training programs are handled by private providers, ie. privately tendered and financed activities without public support. For example, it may be private courier companies or supplier companies that also offer courses related to, for example, fixtures and fittings.

Private adult, continuing and continuing education is generally not formally qualifying for further education, and there are no common rules for quality assurance and documentation of the content of the programs.

As there is no central registration of the private adult, continuing education program, there is limited knowledge about the total supply of the private adult education, continuing education program and further education program:

According to a survey of companies and individuals' use of adult and continuing education in 2016, conducted by Epinion²⁸, companies make extensive use of both public and private adult, continuing and further education programs, 43 per cent. thus, the companies in the survey used private growth, continuing education and further training courses in 2016. By comparison, 25 per cent indicate of companies that have used AMU, 15 per cent. has applied upper secondary education, continuing education and further education, and 6 per cent. has applied general adult, continuing and further education in 2016.

²⁸ Epinion (2017)

In addition to the courses offered by private training companies and suppliers, competence development, etc. can also take place internally in the companies. According to Epinion's study, 45 per cent used of the companies take internal courses, while 68 per cent. took advantage of pageant training in 2016²⁹.

Effects for unemployed persons participating in adult, continuing and further education

- The effect of participation in adult and continuing education (WEU) for unemployed persons on cash assistance and daily money depends on whether they participate in general, vocational or higher education WEU programs.
- Where WEU at the general level appears to be a long-term investment that initially leads to ordinary education at the expense of employment, participation in WEU at the vocational and higher education levels already provides positive employment effects for the vacant years after participation.
- Participation in the general WEU leads to lower unemployment for cash benefit recipients, but not for day-money recipients.
- The analysis of the business-oriented WEU courses shows that the greatest effect is seen when course participation takes place in connection with a company-specific activation program. However, it cannot be ruled out that this positive effect is to some extent driven by the fact that participation in business-oriented WEU for some unemployed in business internships / salary subsidies is conditional on the company wishing to hire the person after the internship / salary supplement period.

Source: Effect-evaluation of adult and continuing education efforts (Bolvig, Kristensen and Skipper 2017)

²⁹ The companies in the study have been able to indicate that they use both public and private adult and continuing education as well as internal courses / assistant-training, so the percentages do not sum to 100 per cent.

29. Contratação colectiva na Suécia: formação no posto de trabalho

What can associations and unions do for companies to increase the productivity and the wages of the workers?

Introduction

You can improve growth in two ways. More employment and/or increased productivity. Sometimes these two options are look upon as if it were a contradiction between them. That's not true. It is possible to do both; increase employment rate and raise productivity. Portugal should have the potential to increase productivity and employment. In other words, to catch up, at least some of the gap to other countries.

How? First my starting point would be that "How" is a question for the Portuguese. I don't know the conditions and experiences from Portugal. What I can do is to share some of my Swedish experience and our ideas about how to improve the result for the workers and the wellbeing in the whole society.

1. Overall national policy approach

Swedish trade union are, generally speaking, positive to new technology, innovations, competition on the product market (there are exception - markets failure and so on but generally). We defend free trade and openness to foreign investment. This approach increases the pressure on the economy and bring more of structural change. Structural change tends to benefit some and hurt others. This policy approach must therefore be combined with a policy which protect workers from income losses and facilitate job change. Labor market policy is crucial if you want to reach a result where all benefit.

2. Institutionalized cooperation – Industrial agreement

In Sweden we have, since 1997, an agreement between employers and employee in the mining and manufacturing sector. The aim of the agreement is to strengthen and develop Swedish manufacturing industry, to increase investment in education and skills

and to regulate wage formation between the labor market parties in a way that ensure that that the internationally competitive sector should maintain a wage-setting role.

The creation of strong institution between the social partners in mining and manufacturing industries with the purpose to strengthen Industrial development, collective bargaining and vocational training has been successful.

3. Education and on the job training

One of the hot issues for the trade unions in Sweden (forget Corona) is to strengthen the workers right to education. I believe it is also important in Portugal. More and better education is an important tool to get higher productivity and higher employment rate.

Education directed to low skilled groups are very important to create more equal living condition as well as to rise the production in the company and in the whole society. More of on the job training, well design vocational training programs and special effort in case of redundancy and when workers need complementary education for to get a new job. Forms and target groups differs, adult education, school to work program etc.. High activity and commitment from the social partners are crucial.

Göran Nilsson

Senior Economist

IF Metall

30. Fiscalidade: exemplos macro

30.1. **Espanha:** O governo de Aznar diminuiu as taxas de IRS mínima e máxima (de 17 para 9,06% e de 47,6 para 29,16% respectivamente) e o saldo orçamental melhorou de -3,9 para equilíbrio e o total de receitas em % do PIB também ligeiramente.

ESPAÑA - GOVERNO AZNAR (1996-2004)					
Anos	Taxas			Saldo orçamental em % do PIB	Total receitas % do PIB
	IRS (mínima)	IRS (máxima)	IRC		
1996	20	56	35	-5,4	37,6
→ 1997	17	47,6	35	-3,9	37,7
1998	17	47,6	35	-2,9	38,1
→ 1999	15	39,6	35	-1,3	38,6
2000	15	39,6	35	-1,1	38,1
2001	15	39,6	35	-0,5	37,9
2002	15	39,6	35	-0,4	38,2
→ 2003	9,06	29,16	35	-0,4	37,9
→ 2004	9,06	29,16	35	0	38,7

Fontes: Statistical Annex of European Economy, Autumn 2017, Comissão Europeia
OCDE, Taxation Database 2016

30.2. **EUA:** O presidente Bush reduziu a taxa de IRS (de 38,6% para 35%) e o total de receitas em % do PIB subiu de 31,3% para 32,4%.

EUA - PRESIDÊNCIA DE BUSH (2001-2008)

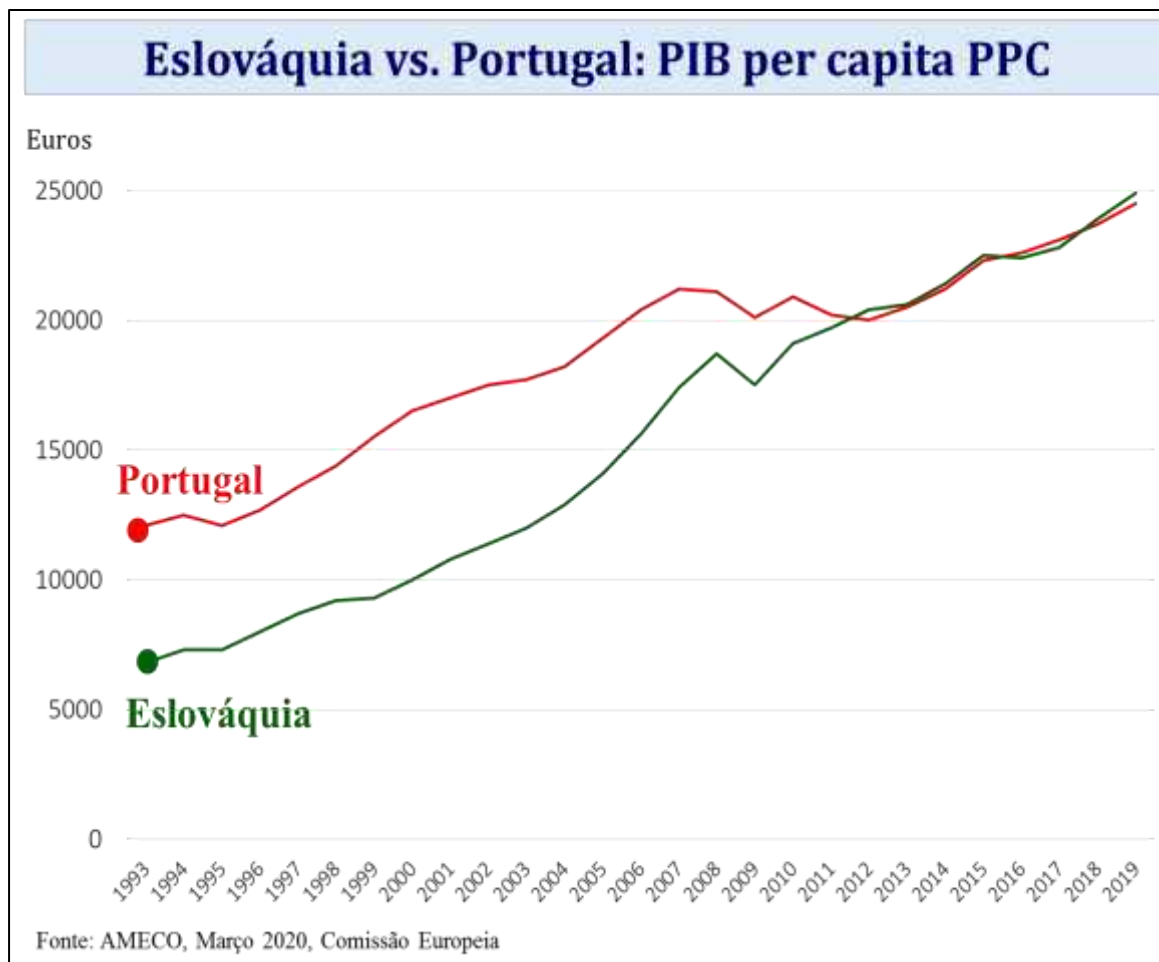
Anos	Taxa máxima		Total de receitas (federais) % PIB
	IRS	IRC	
2001	39,6	35	33,6
2002	38,6	35	31,3
2003	35	35	30,7
2004	35	35	30,9
2005	35	35	32,3
2006	35	35	33,2
2007	35	35	33,4
2008	35	35	32,4

Fontes:

Taxa máxima de IRS e IRC: OCDE Database, 2016

Total de receitas (federal) em % do PIB: Statistical Annex of European Economy, Autumn 2017, Comissão Europeia

30.3. **Eslováquia:** Em 2002 diminuiu a taxa de IRC, IRS e IVA para o valor único de 19% e a Eslováquia atravessou incólume a crise do subprime e ultrapassou Portugal em PIB per capita.



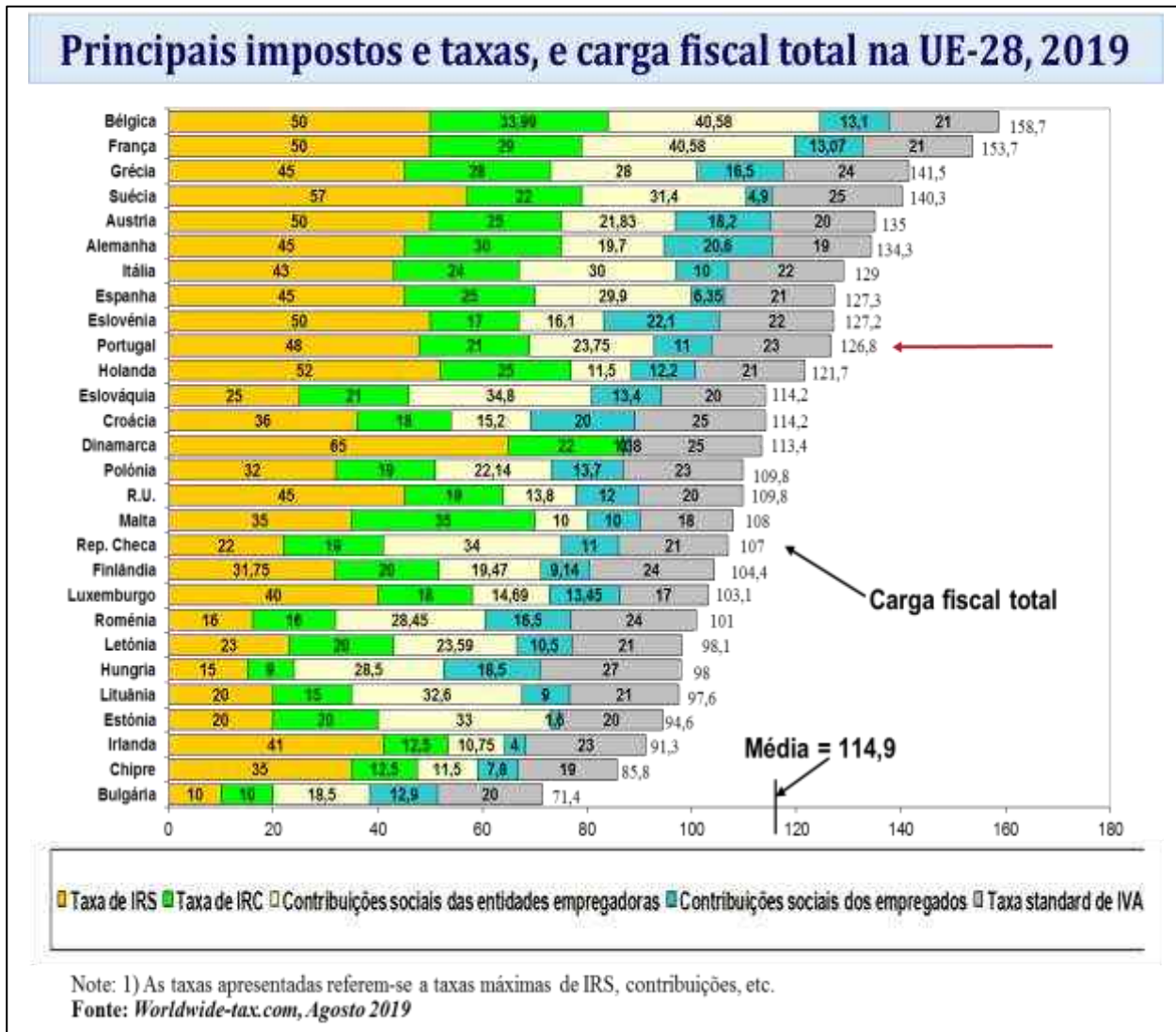
30.4. **EUA: Na presidência de Reagan** as taxas de IRS e IRC foram reduzidas e a percentagem de receitas no PIB e o crescimento económico acelerou (da recessão de -1,9% em 1982 para 4,2% em 1988).

EUA - PRESIDÊNCIA DE REAGAN (1981-1989)				
Anos	Taxa máxima		Total de receitas % PIB	Taxa de crescimento real do PIB
	IRS	IRC		
1981	70	46	31,9	2,6
→ 1982	50	46	31,6	-1,9
1983	50	46	30,9	4,6
1984	50	46	30,9	7,3
1985	50	46	31,3	4,2
1986	50	46	31,5	3,5
→ 1987	38,5	40	32,3	3,5
→ 1988	28	35	32,1	4,2
1989	28	35	32,3	3,7

Fontes:
Taxa máxima de IRS e IRC: OCDE Database, 2016
Total de receitas (federal) em % do PIB e Taxa de crescimento real do PIB: Statistical Annex of European Economy, Autumn 2017, Comissão Europeia

31. Carga fiscal portuguesa comparativamente com outros países europeus

A carga fiscal portuguesa é 126,8 acima da média da EU-28 de 114,9.





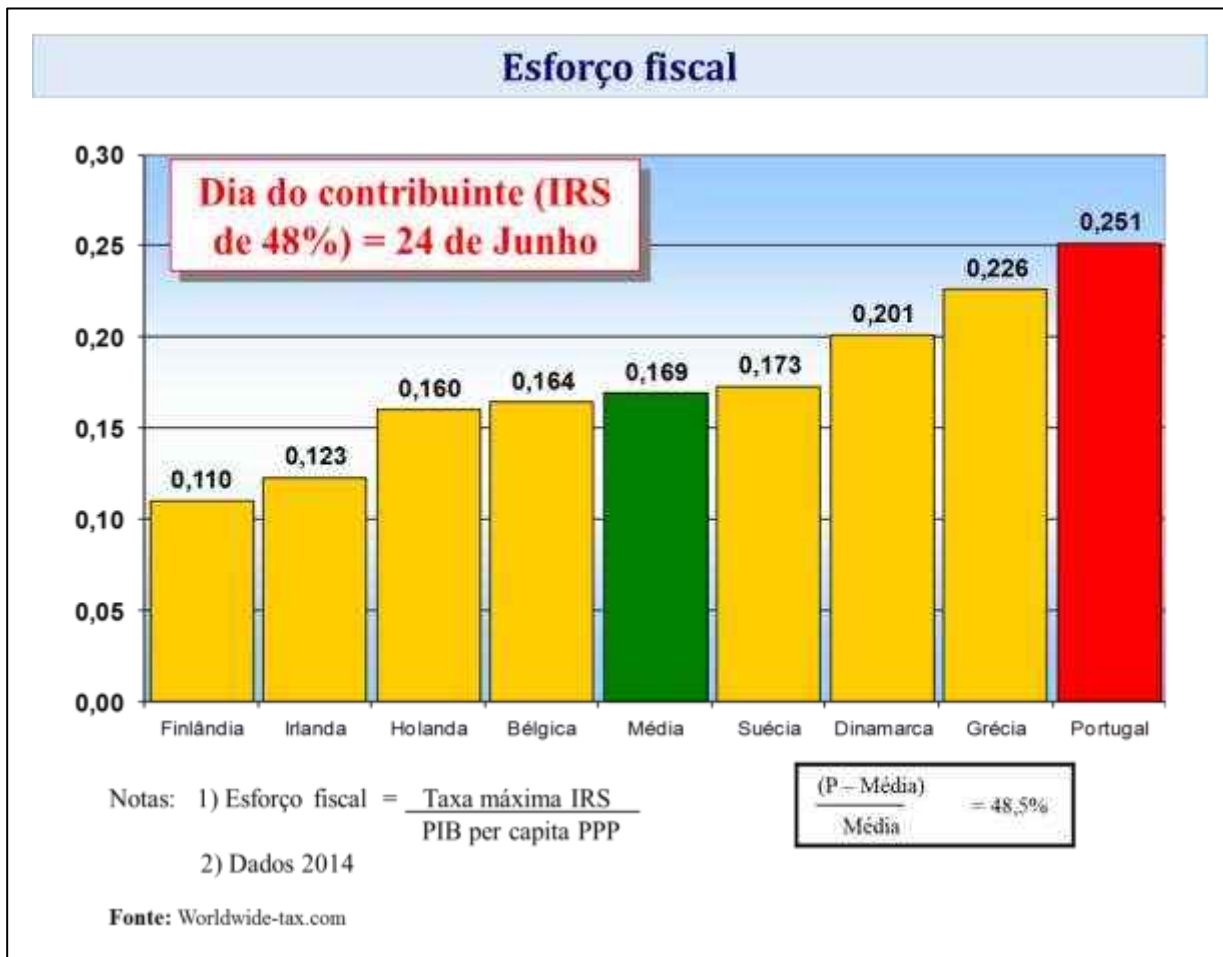
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32. Esforço fiscal português

Se se tomar em consideração o PIB, o esforço fiscal português é o **maior**.



33. Factores críticos de sucesso na implementação

- 1º. **Co-optar** o(s) sindicato(s);
- 2º. Propôr a **redução** para 75% ou 50% da taxa de imposto e apenas sobre a remuneração variável;
- 3º. Desde que (**garantia** dada ao estado) a receita fiscal (face ao último ano) não diminua;
- 4º. Fazer várias **simulações** dos benefícios para todos os parceiros sociais, para além do quadro da figura 30 do texto.

Figura trinta

Benefícios com taxa de incentivo de 50% em milhões de euros (%)		Para	Estado	Economia	Setor metalúrgico
		Relativo a			
PIB/VAB				340,6 (0,2%)	170,3 (2%)
Receita Fiscal ¹			101,1 (0,15%)		
Em termos líquidos ² (assumindo uma repartição de 50%-50% do acréscimo de produtividade)	Empregados (50%)				77,1
	Empregadores (50%)				77,1

Soma = 154,2

Notas:

¹ A receita fiscal (de impostos diretos e indiretos) em 2017 foi de 67 mil milhões de euros.

² VAB adicional em termos líquidos = 170,3 (VAB adicional) x (100% - 0,5 x 18,9%) = 154,2

Fonte: Eurostat, Março 2020. OECD - Revenue Statistics, Março 2020

34. Melhores contactos no estrangeiro para apoio na implementação

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