LEAN PRODUCTION AND THE FUTURE OF “THE GOOD WORK”

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The good work is a concept established in the mid 1980s. It is a normative theory formulated by the Swedish Metal Workers’ Union, now called IF Metall. Rather than being very innovative, the concept served more to summarise the values and visions that characterised the trade union movement of those days. In this essay, we will attempt to reconstruct the historic roots of the theory and discuss their relevance in relation to today’s industrial context where Lean Production and similar trends are important elements.

Keywords: The good work, work environment, work organization, competence, management concepts, Lean Production.

1. THE HISTORIC ROOTS

The purpose of this essay is to attempt to re-establish the stature of “the good work”. Our starting point is that “the good work” is something that is not a given for all times, but rather something that must continually be updated in relation to the new technology and changes in the social contexts.

1.1 From consensus to conflict

The trade union movement has a long tradition of demanding active involvement in the technical and organisational development of working life, during the 1940s and 1950s in a climate of consensus with Swedish Employer Association (SAF). This resulted in a period of industrial development without precedent in Swedish history and industrial works benefited in the form of increased standard of living (Olsson 1977, Johansson 1988).

Trade union members, however, paid a high price for this increase in standard of living in the form of a physically more burdensome working environment and a critical debate took place at the 1966 LO congress (LO 1966a, 1966b). In spite of the criticism, the solution turned out to be expanded cooperation.

During the late 1960s, criticism of the existing policies grew and at the 1971 LO congress work environment and democracy issues had a central role. The work environment debate centred on the much discussed LO survey published in 1970 (Bolinder). Although it was limited to the physical environment, the results were sensational. Over 80% of LO members indicated they were affected by physical environmental problems. These work organisation issues were dealt with in the report Demokrati i företagen (Democracy in Companies) (LO 1971). Compared to the 1966 measures, the proposed solutions were more developed and focused on group organisation. For the first time, we can discern traces of “the good work” concept even if it was not yet formulated. Inspiration came from the socio-technical school and its attempts with autonomous groups in Norway (Thorsrud & Emery 1969). The concept was transformed into a normative theory in form of six psychological requirements:

1. The need for work to involve more than just endurance: work should involve a certain amount of variation although this does not mean new things have to happen all the time.
2. The need to learn something from the work and to continue learning.
3. The need to make decisions, at least within the limited area the individual calls his or her own.
4. The need of status – at least a certain degree of understanding and respect at the work place.
5. The need to see a connection between the work and the surrounding world – at least to see a certain correlation between the work performed and what is considered useful and valuable.
6. The need to see that the work can be combined with hope for the future without this necessarily having to include promotion.

In the beginning, industrial democracy was organised in cooperation with the Swedish Employer Association (SAF). This cooperation, however, did not work as smoothly as originally thought, a situation that led to the initiative being moved to SAF and its local member companies. Volvo’s Kalmar factory can be seen as the foremost example of employer-initiated organisation development from this time.

The lack of success led to a growing division between SAF and LO, causing the trade union movement to turn to the Social Democratic Party for support to secure a minimum degree of co-determination guaranteed by law. The debate on how work should be organised continued at LO’s 1976 congress. The congress report entitled Solidariskt medbestämmande (Joint co-determination) (LO 1976) formulated de-
mands in terms of “co-determination in one’s own work situation” and “changes through group organisation and the opportunity for job rotation and job enlargement”.

At the congress the division between SAF and LO seemed greater than ever and the climate worsened as LO began demanding power over the means of production. LO introduced the proposal for the Employee Investment Funds, which would have eventually led to all industrial production becoming employee control and owned.

1.2. The Swedish Employer Association goes its own route

Employers and the trade union movement took different routes in terms of development of working life and work organisations. Swedish industry had experienced a booming economy for many years and access to labour was limited. Encouraged by the economic boom and the threat of the Employee Investment Funds, SAF developed its own vision for future technology and work organisations under the name Annorlundafabriker (Different kinds of factories) (Aguren & Edgren), which was introduced in 1979. The production-technical theory presented in the report Annorlundafabriker is summarised in four criteria for good production systems and, to some extent, a good work.

1. **Small, independent production systems.** Smaller units that have their own resources for service and administration.
2. **Disconnecting men and machines.** The increased automation means that operators can be freer in their work where they manage several machines or a larger process.
3. **Interesting work roles.** This means teamwork and work assignments that offer the individual variation and the opportunity to use his or her knowledge and abilities. Individuals should influence their own work situation and take responsibility for their and the group’s results.
4. **Sustainable and efficient production system.** Simple and sustainable product flows. For example, work should be organised in several small parallel groups rather than in assembly lines. Sick leave can then often be managed within the unit without significantly impacting the production system as a whole.

We can easily conclude a clear relationship between SAF’s vision of interesting work roles and the six psychological demands introduced by Einar Thorsrud and Fred Emery. One could ask whether SAF and LO now agreed on what a good work actually involves. This, however, was not the case. The question of power over the means of production made it impossible to continue cooperation. LO’s largest union, the Swedish Metal Workers’ Union, wanted to push the issue.

1.3. The Swedish Metal Workers’ Union retakes the initiative . . .

The Swedish Metal Workers’ Union (Metall) formulated its famous concept of “the good work” at its 1985 congress. The report was entitled *Det goda arbetet* (The Good Work) (Metall 1985) and discussed work from many aspects, where the production-technical and work organisational issues were central. Metall’s analysis did not differ significantly from the one presented by the employer’s side. Based on this analysis, Metall formulated nine principles for how good work can be attained. These principles constitute “the good work”.

1. **Job security.**
2. **A fair share of production earnings.**
3. **Co-determination in the company.**
4. **A work organisation for cooperation.**
5. **Professional know-how in all work.**
6. **Training – a part of work.**
7. **Working hours based on social demands.**
8. **Equality at the work place.**
9. **A working environment without risk to health and safety.**

If one compares Metall’s “the good work” with Emery and Thorsrud’s six psychological demands, it becomes evident that Metall has expanded the perspective from the work place to conditions on the labour market. This can be interpreted as an effect of the existing tension between Metall and the employers. Metall was trying to strengthen its position on the labour market where government regulations are increasingly being challenged.

At the 1989 congress the ideas about collective capital ownership through employee investment funds were toned down while demands for group organisation became clearer (Metall 1989a). The autonomous group should be the smallest organisational unit.

Metall’s formulation of criteria for “the good work” were quickly adopted by the trade union movement as a whole. At the 1991 LO congress, a large congress report was presented under the title, *Det utvecklande arbetet* (The developing work) (LO 1991), which identifies four principles for developing working life. *Fairness and security*, which argues for development of general competence so that professional workers can avoid getting stuck in one job. *Human value* emphasises the individual’s self-confidence and growth. *Development of the professional role* includes lifelong learning. The forth principle claims that work *should be organised in a rational way*. This principle is a similar to our modern concepts of “lean” production.

1.4. . . . at the same time as the industrial context changes

At this time (late 1980s and 1990s) “the good work” meets a new industrial context that is often called Lean Production.
Lean production is not a new idea. In fact, it has been a guiding star throughout the growth of industrialisation. Adam Smith argued for thrift with manpower in his classic example of needle production (Smith 1776/1976). Frederick Winslow Taylor refined lean production in his article “The Principles of Scientific Management” (Taylor 1913/1972). Industrial production has since then continually been on diet, but its character has varied over time and this variation has been the key for how work has been organised. The Tayloristic tradition, which was developed more by Henry Ford and others, basically means work that is short-cycled with standardised work assignments that can be conducted by unskilled labour. During the late 1980s, a relatively drastic shift occurred primarily related to new problems confronted by industry (Hegeson & Johansson 1992). These were primarily low accessibility in the production system and major quality problems in products. To this point, production technicians had tried to solve problems by investing more, although in too many of these cases the investments had not been profitable enough. Now other solutions were needed based on the more efficient use of existing production equipment and at the same time taking advantage of the potential found among skilled labour. Organisation and leadership thus became more important.

Unskilled labour could not handle the advance technology’s control systems. One single skill was not enough. Multi-skills were required when it came to service and maintenance. The solution involved training operators and integrating assignments that previously were performed by specialists.

The Japanese challenge in the 1980s resulted in quality issues coming to the forefront. Two trends can be pointed to in the discussions around the quality of products: extensive division of responsibility and decentralisation of production. Both cases involved organising work in relatively autonomous groups.

Work organisations based on relatively independent groups also allowed increased volume flexibility through parallelisation of production flows. The ability to adapt to changing market preferences was eased by applying a group concept. The broader range of competence and experience among a well functioning group allowed for quick adjustments to changing demands on the product.

Most business owners agreed that the future hold some form of group organised production not linked to a work cycle and where the work is enriched with extensive decentralisation of what was previously staff work. When used correctly, the increasing demands for customisation, dependable deliveries, service, and quality can lead to a positive development where higher prices can be charged for added value and a new type of skilled and independent work assignment can be created.

To summarise, we can conclude that Swedish industry was confronted with a series of structural problems and the solutions corresponded with trade union demands from the 1970s and early 1980s for a new work organisation. The struggle for industrial democracy was not a real struggle at all, but rather a new type of consensus between companies and unions. The companies not only accepted demands for group work, but also took up the initiative to develop them. Competence development was also introduced as a new element in discussions about a new work organisation.

1.5. A new management discourse

These complicated patterns and to some extent even contradictory trends can also be seen in the rich flora of new management theories spreading across the world during the 1980s and 1990s. The original impulses often came from Japan, but their advocates was American researchers and consultants. (Furusten 1996).

Below is a summary of the major management concepts (production and organisation models, methods and tools) of the last 15-20 years in an approximate chronological order, as they have appeared in Sweden.

Lean Production (Womack, Jones & Ross 1991) was the first major production concept in Sweden in the 1990s after the Japan euphoria of the 1980s. Its popularity has since risen and fallen, but today (2007) the concept has achieved a renaissance albeit a modified form. The focus is on effective resource management that is achieved with the help of fewer personnel, smaller spaces, shorter processing times, smaller stocks, and fewer suppliers. Continual improvements, (kaizen), (Imai 1986) and Just in time production (Zappala 1988) are important part of Lean Production. This often means a flow-based layout where machines are either placed in line-like flow groups or in concrete assembly lines, which is becoming more common. Even so, the organisation structure is maintained nearly intact. Personnel are expected to be disciplined, flexible, responsible, multitalented, and be prepared to work overtime. In Sweden, employees are simply called “colleagues”.

The other major concept, Total Quality Management (TQM) (Feigenbaum 1961), is closely related to Lean Production. It has had a similar popularity timeline and is still around, but it is often an integrated module in other concepts. The basis for TQM is that all errors and deviations have basic causes that can be addressed and that preventive quality measures are profitable. The goal is “zero errors”. Working with TQM also means measuring and calculating errors and variations, documenting and standardising of routines and work methods, certification for a quality system, and, above all, focusing on quality and customer value. Six Sigma (McFadden 1993) and Total Productive Maintenance (Nakajima 1988) can be seen as relatives to TQM. Important aspects are participation and commitment in quality work both from management and
personnel. The organisational form promoted by TQM is a group-based organisation where the supervising role of managers is toned down, teamwork is emphasised, and walls between sections are removed.

Another major trend in the 1990s was Time Based Management (TBM) (Stalk & Hout 1990). This is the concept that is based most on reducing through times. It has major aspects of classical capital rationalisation and is time and process oriented. ABB’s T50 project is perhaps the best-known Swedish organisation example. T stands for time and 50 for a 50 per cent reduction in time from order to delivery. The organisation forms that TBM promoted, particularly in Sweden, were objective oriented work teams with good opportunities for learning and competence development.

The concept Business Process Re-engineering (BPR) (Hammer & Champy 1993) came in the mid-1990s and all operations are seen as business processes, activities that create value for a customer. Re-engineering stands for a radical transformation of the entire company and a fundamental new approach.

The Boundaryless Organisation (Ashkenas 1995) is a more comprehensive management concept with the central idea to make the company’s borders more porous. The company’s organisation is compared to a living organism where information, resources, ideas, and energy can easily pass through all membranes.

Ideas and thoughts about individual’s learning in work play a central role in all modern management concepts, especially in Learning Organisation (Senge 1990). A common definition of a learning organisation is that it is both an organisation that learns and an organisation that encourages learning among its members.

Balanced Scorecard (Kaplan & Norton 1993) is a tool for objective controlled production that strengthens control and overview and centralisation of relatively detailed information to the upper management. Balanced Scorecard can be seen as a method for managing a flat and integrated organisation.

The Individualised Organisation (Ghoshal & Bartlett 1997) is the flattest and most integrated of the modern management concepts. The model is based on the entire company being large and global to take advantage of scale, but each part or unit is to be small and locally based.

Corporate Religion (Kunde 1997) is about creating a corporate culture around the business idea and brand. The corporate culture should be so strong that it aproaches becoming a religion for the employees.

Knowledge Management is a concept that is linked with the learning organisation (Sanchez & Heene 1997). The concept has two purposes or perspectives. First of all, it is a strategy for converting passive knowledge into active that can be stored in databases.

Secondly it is a strategy to convert individual knowledge into organisational knowledge.

We can conclude that some management models can in one respect be seen as reactions to each other. Lean Production and Total Quality Management (TQM) are clearly rationalisation and efficiency strategies. Time Based Management is also a capital rationalisation strategy but has a somewhat softer touch. The learning organisation, the boundaryless organisation, and the individualised organisation, however, are almost entirely within the corporate management field and the “social system”. Even current popular models like Lean Production and TQM, which have seen a renaissance, have developed in this direction. Nevertheless, to a great degree, they have the similar concrete content and in many cases very similar normative messages.

The Swedish version of the new management discourse is based on the Boston influences but also by the actual production context in the Swedish industry. Below we will try to capture the main features of the Swedish version of the new management concepts, something we call ‘the Swedish dialect’.

1. Rational flows. The major trend is that the physical layout of production is designed based on the product flow, either in liner-like product groups or in conventional assembly lines.

2. Integrated product groups. Even work organisations are based on processes and flows. It can be a comprehensive approach in production planning and “mentally” dissolving borders between functions, departments, and units such as corporate culture, business idea, and end customer. But it can also be production-wide systems for communication and knowledge transfer within flows or processes. A more advanced form is concrete mixing and integration of work assignments within respective flows or processes. It can also involve direct geographic and personnel integration between functions within the production organisation. “from order to delivery”. One aspect of this is job rotation. The employees should have an overview and knowledge of a large section of the production. This provides greater flexibility in staffing.

3. Flat organisations. Another trend that is not as clear is that there are fewer management levels and a more decentralised decision-making. The more advanced forms involve delegating of work assignments and responsibility from middle management and supervisors downward in the organisation to production personnel and autonomous work teams. The production work is controlled by production goals and action plans. Work supervisors function more as coaches than supervisors. Emphasis on teamwork, communication, and cooperation increase in importance. A common method is objective controlled or autonomous groups with coordinators. Participation, commitment, and creativity are considered important and
have clearly highlighted the importance of the *individual*. The management of the organisation is also focused at the individual (not the collective). Individual salaries and development talks are common ingredients.

4. **Learning in work.** Knowledge transfer, competence development, and learning at work for production personnel are considered important. It is also a question about changes into a *workplace culture* that follows developments in the industry, such as new production techniques, new products, and new quality demands.

The international management literature paints a bright and optimistic picture assuming that companies actually implement the current management concept. There are great hopes that modern organisation forms with a high degree of learning and competence development will create work conditions that combat stress and work-related health issues. The concepts of sustainability and healthy organisations are often used in the debate. One can ask if we finally have found the form of the good work.

Unfortunately, we must conclude that the picture was not only positive from either the company’s organisations, or the employees’ perspective. Many studies from the 1990s show contradictory findings of the effects of work organisational development. There are successful examples with both good working environments and effective organisations and also positive financial numbers (Thurman et al. 1988; Vink et al. 2006). At the same time, a long series of negative tendencies are visible in working life – increased number of people on long-term sick leave and with work-related injuries, burned out personnel, stressed people, and overburdened people (see Rasmussen, 1999; Thompson & Warhurst, 1998). Much of Taylorism remains in modern organisational forms and can continue to give the same types of work-related problems (Thompson & Warhurst, 1998).

The new production concepts and the strong focus on deregulation have also influenced the work environment efforts in a more direct form. Inspired by the quality work being done by industry, particularly standardisation efforts related to ISO9000, there were first changes to national directives for internal control and then to systematic work on environment efforts. In both cases, it involved ensuring companies to have a system for their work environment efforts rather than controlling the actual work environment. In the new system the basis for local cooperation has been reduced, a change that was accelerated when occupational health care was deregulated in 1993 (Johansson, Frick & Johansson 2004). Occupational health care lost both its social assignment and its government financing. Occupational health has become a personal activity rather than something to be connected to work and production and to be dealt with during working hours by employers.

### 1.6. A good work for both men and women

When the trade union movement formed in 1898, it was a movement for men by men (Hirdman 1998). In the 1960s, however, the concept “gender roles” arose and radicalised the entire debate. But when *The Good Work*, was published in 1985, it was only in general terms they described equality between men and women. A few years later, in *The Developing Work*, equality issues were included but primarily in the form of the need to value women’s work higher and nothing about changing fundamental structures on the labour market.

LO’s 1996 congress, however, saw a new trend. The congress agreed that both class and gender were sources of oppression and this influences how life and work are shaped (Class and Gender 2006). Today, ten years later, LO describes itself as a feministic organisation promoting ideas related to equality and gender that are based on gender theory. Equality is highlighted as one of the basic union issues, particularly when it comes to wages, work, and the working environment. And perhaps there is an opening for more radical changes such as quotas.

*To summarise* we can see that “the good work” has change in character over the year. Some new demands had been added and some has been lost. By the end of the century we can identify a discourse circulating around seven demands on the future good work.

1. Work should be organised at the group level.
2. Work should contain a certain amount of autonomy and personal decision-making.
3. Work should have a certain degree of breadth and variation.
4. Work should include development and continual learning.
5. Workers should have a good and safe work environment.
6. Work should be secure.
7. Work should organised for both men and women.

2. **WHERE IS “THE GOOD WORK” TODAY?**

We will now put the discussion on “the good work” a step further to see how it relates to today’s industrial context.

2.1. **Lean Production dominate the scene**

A summary of developments allows us to conclude that traditionally industry has attempted to achieve efficiency increases in production through distinct division of labour and standardisation of work. Group work and delegated responsibility became concepts unions worked for and which later were achieved as employer rationalisation strategies. During the last decade, however, the assembly line experienced a renaissance in Swedish industry, often labelled *lean*. In conjunction with the assembly line trend came increased demands for taking advantage of the individual’s full resources as part of the production system. These partially contradictory tendencies certainly
offer opportunities for both productivity and improvements in the working environment but also pitfalls. There is a need for a new focus in production, a focus on integrating work environment and organisational factors in production development.

We will now relate to our definitions of “the good work” and attempt to highlight them against the background of the new industrial and rhetoric context.

1. **Work should be organised at the group level.** We can see a clear trend where the perspective instead is shifted from the group to the individual. The group/team is no longer the smallest planning level for employers. At the same time, the group and group work are central to most of the new management concepts, such as TBM, BPR, and the boundaryless flow organisation, but these stop with a rhetoric that cannot stand up to the drastic rationality of Lean Production.

2. **Work should contain a certain amount of autonomy and personal decision-making.** The picture is contradictory here as well. Nearly all concepts and particularly quality concepts clearly point to delegating responsibility and authority to the work group or individual so that they can make their own decisions about how work is to be planned and organised. At the same time, we see the Lean concept prepare the ground for the return of the assembly line. The pace of the lines is often not as short as during the heyday of the assembly line, but they are considerably shorter than with group-organised work. Work assignments are standardised and autonomy and one’s own opportunity to make decisions are considerably reduced.

3. **Work should have a certain degree of breadth and variation.** Here we once again see a discrepancy between the rhetoric and the reality. Although most of the concepts speak of expanding work assignments and increasing horizontal and vertical integration, the Lean concept’s dominance and the assembly line’s return are worrisome. Breadth and variation are placed in opposition to standardised, repetitive work.

4. **Work should include development and continual learning.** The management rhetoric emphasises continual competence development, which can be achieved to a certain degree, but the standardised work assignments do not provide any significant opportunity for learning. ISO 9000 and other quality assurance systems are clear examples of this. Even more comprehensive concepts – such as TQM, Six Sigma, Balanced Scorecard and Knowledge Management – contain tools to first collect knowledge and skills from workers and then determine the best work routines. This type of standardisation creates a sense of replaceability and disqualification among workers (Wärvik & Thång, 2003).

5. **Workers should have a good and safe work environment.** The return of the assembly line also creates problems on this level. In general, the more “lean” the production becomes, the greater the risks for one-sided work movements and physical over exertions (Winkel & Neumann 2005).

6. **Work should be secure.** We note changes for the worse in terms of job security insurance while the number of temporary employees has increased. The increased internationalisation has resulted in employment security being less obvious than previously. Production can be moved to low-wage countries on short notice. The increased use of outsourcing companies results in employment security not being linked to the work place in the same way it once was.

7. **Work should organised for both men and women.** At this point we can note a positive change during the last decade. Equality and gender are now on the agenda for both the unions and the employers, but we can still see an obvious discrepancy between rhetoric and practice.

The problems are complex and have many causes. Some critical analyses of modern organisations show that parts of the explanations are imbedded in the organisational concepts themselves. Seen from this perspective, the management concepts and organisational ideas have had limited success (Rvik, 2000; Milkman 1998). If we compare Metall and LO’s vision of “the good work” with the new management concepts, they converge to a great degree in rhetoric, but diverge in practice.

The question is then whether “the good work” is merely an obsolete vision or if it can be recreated and adapted to the new industrial context we are dealing with in the twenty-first century. Our starting point is that this is something that can be done and that must be done, not once and for all but rather as a continual development process.

2.1. The new good work
The “good work” concept is not a management concept and it can appear to be uniquely Swedish. It is a vision sprung from the Swedish work environment research and labour market tradition of cooperation and negotiation between trade unions and employers, but it also has a strong international basis in the same idea tradition as the modern management concepts. The “new good work” has to acknowledge that we live in a new industrial context that creates new prerequisites and new opportunities for development. These can be summarised as three changes to the industrial context.

- The first change in the industry is the strong focus on *lean production*. Lean production has become a concept that combines and integrates many of the other concepts, but the main purpose is to reduce costs where rational flows are an important component. Many of Taylorism’s problems will return as issues.
• The other change, which is in part contrary to the Lean concept, is the efforts to involve the individual’s total competence as a resource in the company’s internal rationalisation work. In contrast to Lean, this involves increased autonomy and increased learning.

• The third change is the globalised market. This is a development that clearly reduces national discretion. Production can be moved to countries with low wages and weak regulation of conditions on the labour market.

The development towards Lean is neither possible nor desirable to stop. The global market requires a rational production, something that even LO had realized as early as 1991 in its congress report. Instead, we need to find forms of “the good work” that fit into the framework of Lean.

A “threat” as well as “hope” for “the good work” concept is the individualisation of work. The individual going before the collective is something that characterises most of society’s sectors. From “the good work” point of view this is a problem. A powerful collective is the guardian for “the good work” while at the same time “the good work” is ensuring that the individual’s learning, competence development, ability to innovate, and creativity become a part of the production system.

The picture we have painted above may seem too pessimistic from “the good work” perspective. It is undoubtedly pessimistic, but all is not lost. As we have previously noted, forms for “the good work” have to be found within the framework that a Lean-heavy working life can offer. The survival of “The good work” is not primarily about finding new criteria for a good work but rather focusing on important demands that can have significant impact and going from general, sweeping formulations to concrete and effective measures.

Considering these new conditions we will attempt to formulate some new criteria and reformulate some old ones for “the good work”. Our hope is that it will be more focused and in a more direct way lead to concrete results.

1. The smallest planning level should be the group. All control is to occur toward the group as an operative unit and all employees are to have control over their own work cycle. This very concrete demand summarised several of the demands for a good work that Metall and LO have put forward. It guarantees a breadth in work while also providing meaningful autonomy. The demand can also be combined with a Lean approach. Even an assembly line can be organised around a group-based organisation even if it does not have the most optimal potential.

2. Learning includes general/generic knowledge. The demand for learning in work is supported by both employers and employees. To guarantee development in one’s professional role and inhibit becoming stuck in the demands of a special employer requires a certain degree of generalness in competence development.

3. Integrated operator maintenance. Broad work roles are a classic demand that can also be combined with the ideas behind the new production concepts. In addition to operator maintenance, many other work assignments can be integrated, but maintenance is often the most obvious.

4. “Affirmative action” for underrepresented groups. Gender equality and integration are on the agenda of both employers and trade unions but not much is happening. At the same time, it has been shown that problems can be solved if the will exists. A careful informal system of “affirmative action” can provide good results.

5. Systematic work environment efforts. A working environment without risks for health and safety should be a given at every workplace. Developing the work environment requires an organisation that continually examines which work environment risks exist and ensures they are addressed.

The degree to which these demands will be realised within a ten-year period is a question to follow in future research. By reconnecting with Metall’s strategy from 1985, it is possible to move positions forward. The stage is now set.

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