



*Bargaining
upfront* in the
digital age



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TRADE UNIONS IN THE DIGITAL AGE: COUNTRY FICHE ON SWEDISH MANUFACTURING SECTOR

Agreement Ref. n. VS/2019/0280

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January 2021

This country fiche has been realised within the framework of the BargainUp (*Bargaining Upfront in the Digital Age*) project (VS/2019/0280), co-financed by the European Commission. The project is led by the Italian metalworkers' organization FIM-CISL, in partnership with the trade unions ACV-CSC Metea, IF Metall and UGT-FICA, respectively from Belgium, Sweden and Spain, the Workers' Education and Training College (WETCO) of the Bulgarian trade union confederation CITUB, the Italian research centre ADAPT, the Luleå University of Technology (Sweden), the Technic University of Cartagena (Spain), the Catholic University of Leuven (Belgium) and the Office of Cooperation between the Ruhr University of Bochum and IG Metall (Germany). This country fiche has been developed thanks to a desk research, five interviews with IF Metall national trade unionists and a focus group with 18 worker representatives, organised between September and November 2020

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1.

GOVERNMENTAL POLICIES FOR THE DIGITALISATION OF THE ECONOMY

Swedish government policy is generally very positive towards all forms of digitalisation, but there is an awareness that problems can arise, mainly in the form of redundancy of manual workers and at the same time a shortage of skilled labour.

Notably, there is one national strategy for the digitalisation of Swedish economy.

Smart Industry strategy. In January 2016 the Swedish Government (Social Democrats and the Green Party) formed a strategy to strengthen the development of Swedish industry, called *Smart industry*, with the purpose to strengthen the industrial sector's competitiveness and reinforce Sweden's position as an attractive location for industrial production (Government Office of Sweden 2016a). The idea is that to remain competitive in a changing global market, the Swedish industry must be at the forefront of the digital transformation and adopt sustainable production methods. The strategy was formed in close dialogue with the social partners. The smart industry strategy focuses on enhancing companies' ability to manage the rapid transformation of Sweden's industrial sector. Four focus areas have been chosen:

• **Industry 4.0.** The goal of *Industry 4.0* is that companies in the Swedish industrial sector are to be leaders of the digital transformation and in exploiting the potential of digitalisation. According to the strategy, actions in the following areas are required:

- Stimulating the development, spread and use of digital technologies that have the greatest potential to lead the industrial sector's transformation.
- Exploiting the potential of digitalisation broadly, irrespective of industry, company size and geographical location.
- Encouraging new business models and organisational models in order to tap the potential of the new technology.
- Meeting new knowledge requirements that are brought about by digital development.
- Adapting framework conditions and infrastructure to the digital era.

• **Sustainable production.** The objective of *Sustainable production* is that increased resource efficiency, environmental considerations and more sustainable production will contribute to the industrial sector's value creation, job creation and competitiveness throughout the entire

country. According to the strategy, implementation needs to be directed at the following:

- Developing new or improving existing technologies, goods and services with consideration given to sharp reductions in emissions, the phasing out of particularly harmful substances, higher energy and resource efficiency, greater reusability and recyclability and higher environmental performance.
 - Exploiting the potential of new digital and other technologies for the transition to a fossil free and circular economy.
 - Encouraging circular economy business models.
 - Ensuring that regulations and other governance mechanisms incentivise and facilitate resource efficient and environmentally friendly production and a sustainable supply of raw materials.
- ***Industrial skills boost.*** The objective of *Industrial skills boost* is that the system for supplying skills at the local, regional and national level is to meet the industrial sector's needs and promote its long-term development. According to the strategy, implementation needs to be directed at the following:
- Increasing interest in science and engineering and increasing the attractiveness of industrially relevant study programmes.
 - Improving the matching between the industrial sector's labour requirements and the education system at all educational levels.

- Ensuring that the education system provides students with not only the right knowledge, but also with the right capabilities and skills required in the knowledge society and for the transition to a digitalised and circular economy.
- Improving the conditions for lifelong learning.
- Promoting career changes and mobility between the higher education sector and the business sector.

- ***Testbed Sweden.*** The objective of *Testbed Sweden* is to lead research in areas that contribute to strengthening industrial production in Sweden. According to the strategy, implementation needs to be directed at the following:

- Targeting research and innovation investments at areas that have a particularly great potential to contribute to new industrialisation and long-term competitiveness.
- Opening up the public sector in order to provide the industrial sector with a testbed for solving societal challenges in close collaboration with other actors at the local and regional level.
- Increasing the use of innovation friendly procurement practices.
- Promoting research collaboration between academia and the industrial sector, as well as developing the institute sector.
- Making Sweden a more attractive place for researchers to work.
- Making Sweden a more attractive place for companies to invest in and carry out R&D activities.

The *Smart Industry* strategy is intended to lay the foundation for a concerted national effort. The Government will act to facilitate structural transformation in the industrial sector. The tools will include laws and regulations, investments in enterprise, education and innovation, public procurement and opening up the public sector, providing testbeds and open data.

The Government's strategy has been concretised in two action plans (Government Office of Sweden, 2016b, 2017) where 82 different activities are presented. A description of the government's overall efforts can be found in *En politik för tillväxt och utveckling i svensk industri* (Government Office of Sweden, 2018).

Main achievements get by the plans and the gaps to be overcome

It is difficult to evaluate the effects of the *Smart Industry* strategy because it is a strategy that includes both measures initiated by the strategy and measures that have been started earlier and have been integrated with the strategy. In both cases, the strategy aims to give an extra boost to development.

A key issue is the availability of broadband in households and companies. When a strategy for broadband was introduced in 2016 (Government Office of Sweden, 2016), 77.8% of households and companies had access to broadband of at least 10 Mbite/s, while only 6.1% had access to

more than 30 Mbite/s. The goal with the strategy from 2016 was that 95% of all households and companies should be connected to broadband in 2020 of at least 100 Mbitd/s and that 98% should have access to broadband by 2025. In an evaluation from 2019 by *The Swedish Post and Telecom Authority* (2019), the forecast is made that 85-88% will be connected in 2020 and 97-98% will have access to broadband in 2025.

Sweden comes in second place, after Finland, **in the Digital Economy and Society Index (DESI)** which is a composite index that summarises relevant indicators on Europe's digital performance and tracks the evolution of EU Member States in digital competitiveness. For further information, please check [here](#).

An important part of the Government's strategy was *Digilift* that was formed together with the parties in the labour market (including the Association of Swedish Engineering Industries, Teknikföretagen, and IF Metall). The assignment was completed between 2016 and 2020. The overall goals of the programme were to increase the companies' knowledge of the potential of digitalisation to increase competitiveness, and to increase the capacity of the participating companies to digitalise their operations. An evaluation (Ramboll, 2020) shows that the *Digilift* has reached 929 companies, which almost corresponds to the original goal of 1000 companies. The participating companies are overall very satisfied with the support they have received through the program. The

programme has contributed to increasing the companies' insights knowledge of digitalisation in general and what it means for the business. The participation is likely to have contributed to companies implementing digitalisation activities, that otherwise would not have occurred or that activities have been moved forward, expanded or improved. Nine out of ten companies state to have initiated work with a digitalisation project as a result of their participation in *Digilift*.

Another important part of the government's strategy was **to give the Sweden's innovation agency, Vinnova, the task of implementing collaborative projects** to increase the conditions for Swedish industry to strengthen its competitiveness with the help of digital solutions; stronger research

environments for digital technology and new applications in business; strengthened collaboration between different strategic innovation areas as well as methods and concepts for how this type of collaboration can best be promoted and further integrated into the agency's work. The assignment was carried out during the period March 2016 to March 2019. The project was evaluated (Vinnova 2019) and the clearest result consists of a project portfolio and the work done and the results obtained so far in the projects. In March 2019, Vinnova had financed 67 projects with the goal of developing digital solutions applicable in Swedish industry. The projects have worked with various aspects of digitalisation such as 5G technology, sensors, big data and additive manufacturing.

2.

GENERAL INDICATORS FOR THE MANUFACTURING SECTOR

Number and size of companies in Sweden.

According to the Swedish Agency for Economic and Regional Growth, there are today about 1,2 million companies in Sweden. The majority of these, just over 96%, are small companies with fewer than 10 employees. Small and medium-sized companies (0–249 employees) together make up 99.9% of all companies. The large companies with 250 or more employees thus constitute only a thousandth of the total number of companies. If we instead look at the number of employees, turnover and value added, the picture changes. Although the large companies make up only a very small proportion of the

number of companies, they account for almost 40% of the turnover and value added in the business sector, as well as just over a third of the number of employees. The small companies (0–49 employees) account for about 40 percent of sales and value added, and about 45% of employees in the business sector. The medium-sized companies (50–249 employees) in turn account for about 20% of sales, value added and employees in the business sector.

Data on the manufacturing industry.

If we narrow the perspective to the manufacturing industry, we get the following picture (Figures from Teknikföretagen 2020):

Turnover	936.823 million SEK
Added value	280.129 million SEK
Export value	655.537 million SEK

As seen above, the Swedish manufacturing industry is highly export-dependent, with 70% of production being exported. The added value corresponds to approximately one million SEK per employee.

To illustrate the development, we have chosen to present a ten-year perspective. Based on figures from Statistic Sweden, productivity development over the past 10 years has been relatively good, a trend that is drastically broken by the Corona pandemic in the spring of 2020.

Figure 1. Productivity in the Swedish manufacturing industry. SEK per hour worked, in 2019 prices

Source: Ekonomifakta

During the same period, the table below shows that the total number of companies has decreased while the smallest have increased in number. This

can be understood as the fact that there is a positive climate to start new companies while the established companies merge into larger companies.

Figure 2. Number of companies in the Swedish manufacturing industry

Number of companies	2008	2018
1-9 employees	7.649	7.997
10-499 employees	3.658	3.126
More than 500 employees	73	55
In total	11.380	11.178

Source: Teknikföretagen, 2020

If we instead look at the number of employees, we get the following picture:

Figure 3. Number of employees in the Swedish manufacturing industry

Number of employees	2008	%	2018	%
Male	266.015	80	224.796	79
Female	68.310	20	58.175	21
In total	334.325		282.971	

Source: Teknikföretagen, 2020

We can see that the number of employees has decreased by more than 50,000 persons over the past 10 years. More women have been hired, but the change is marginal. The industry is still

unequal in terms of gender, despite trying to recruit more women. If we link the change to the educational level, we can see an interesting pattern.

Figure 4: Level of education in the Swedish manufacturing industry

Level of education	2008			2018		
	Male	Female	In total	Male	Female	In total
Primary education	15	16	15	11	9	10
Secondary education 2 years	31	27	31	27	19	25
Secondary education 3 years	26	25	26	30	30	30
Post-secondary education 2 years	13	11	12	13	14	14
Post-secondary education 3 years or more	15	20	16	18	27	20
Information is missing	0	0	0	1	1	1

Source: Teknikföretagen 2020

The table shows that the level of education has increased for both women and men over the past 10 years, but it has increased significantly more for women than for men. Whether this means that women get more qualified jobs or if they are just over-qualified remains to be shown.

The distribution between white-collar and blue-collar employees has been relatively stable in recent years. A rough assessment based on figures from Statistics Sweden gives the following picture.

Figure 5. Distribution between white-collar and blue-collar in the Swedish manufacturing industry

	2014	2018
White-collar	44,6 %	44,2 %
Blue-collar	55,4 %	55,8 %

Source: calculations made by combining the Swedish Standard Industrial Classification (SNI), 2007, with the Swedish Standard Classification of Occupations (SSYK), 2012

Main priorities and issues at stake

The Association of Swedish Engineering Industries (Teknikföretagen) has outlined eight focus areas where they have concrete proposals for sustainable growth and investments in Sweden. Three of these are interesting from a digitalisation point of view:

Digitalisation. Teknikföretagen sees digitalisation as an opportunity for increased productivity, new business opportunities and as an enabler for increased environmental and sustainability work. For an optimal exchange of the possibilities of digitalisation, Sweden needs a functioning digital infrastructure, increased access to cutting-edge

expertise and investments in cyber security. To achieve this, Teknikföretagen works, among other things, for:

- Increased public funding that ensures a rapid and market-based expansion of broadband throughout Sweden.
- Increased funding for research, testing and applications in digitalization.
- A national cyber security centre.

Sustainability. Teknikföretagen means that the Swedish manufacturing industry is knowledge-intensive and is characterised by advanced and customized production. Production in Sweden is also more environmentally sustainable and more digitalised than in many other countries. Many

manufacturing companies are also pioneering in meeting the UN's climate goals, which promote change and knowledge development throughout the innovation chain, from universities and colleges, to research institutes and companies. Teknikföretagen works for:

- Government funding for strategic innovation programs that support companies' ability to conduct advanced manufacturing in Sweden.
- Investments in smaller companies in the industry to increase their ability to develop competitive production.
- Strengthened competence and innovation capacity within Industry 4.0, so that digitalisation and sustainability are fully developed.

Skills development. According to Teknikföretagen, Sweden's competitive advantage is its high-tech know-how. Access to the right technical competence is absolutely crucial for companies' ability to grow and invest in Sweden. Many of Teknikföretagen's members have difficulty in finding the skills they need for their operations and for Sweden to be able to be a world leader in new technology areas. The rapid changes in technology mean that more and more people will need to further develop their knowledge during their working lives. The technology companies work, among other things, for:

- Stimulates colleges and universities to develop and implement educations in collaboration with the labour market.
 - Colleges and universities receive an assignment for lifelong learning and further education of professionals.
- Increased investments in the

development of flexible courses aimed at professionals in industry.

If you look at Teknikföretagen's priorities that are related to digitalisation and skills development, they do not differ significantly from the government's strategy *Smart Industry*. It may not be so surprising since the government's strategy has been formulated in dialogue with both Teknikföretagen and IF Metall.

For further information, please check [here](#).

3.

FUNDAMENTALS OF INDUSTRIAL RELATIONS IN SWEDEN

Industrial relations in the Swedish manufacturing industry have their foundation in both national legislation and collective agreements between trade unions and employers, where the laws and collective agreements are strongly linked to each other. Swedish labour market policy is based on the industrial relations being set by the social partners in collective agreements. When this does not work, the partners seek political support for a change in legislation. Traditionally, there is a very strong link between trade unions and the Social Democratic Party, which has resulted in relatively labour-friendly legislation such as the right to holidays (5 weeks), parental leave (480 days), shorter working hours, labour representation in company boards, a better working environment, participation in decision-making at the workplace, and increased employment security.

Social partners. Industrial relations system in Sweden consists of three major social partners (besides the state) namely the *Swedish Trade Union Confederation (LO)*, the *Swedish Confederation of Professional Employees (TCO)* and the *Confederation of Swedish Enterprise (Svenskt Näringsliv, SN)*. A third and smaller trade union partner is the *Swedish Confederation of Professional*

Associations (Saco) focusing on university graduates.

The LO only organises blue-collar workers; it is a Scandinavian peculiarity to have separate, nationwide trade union confederations for blue- and white-collar workers. The central confederation for salaried employees in Sweden is the TCO. A difference between the three trade union confederations is that while almost all the LO affiliates are industry unions, the Saco affiliates are based on occupations and the TCO unions cover about 50% based on industry and 50% based on occupations. Both the TCO and the Saco organises employees in the private as well as in the public sector.

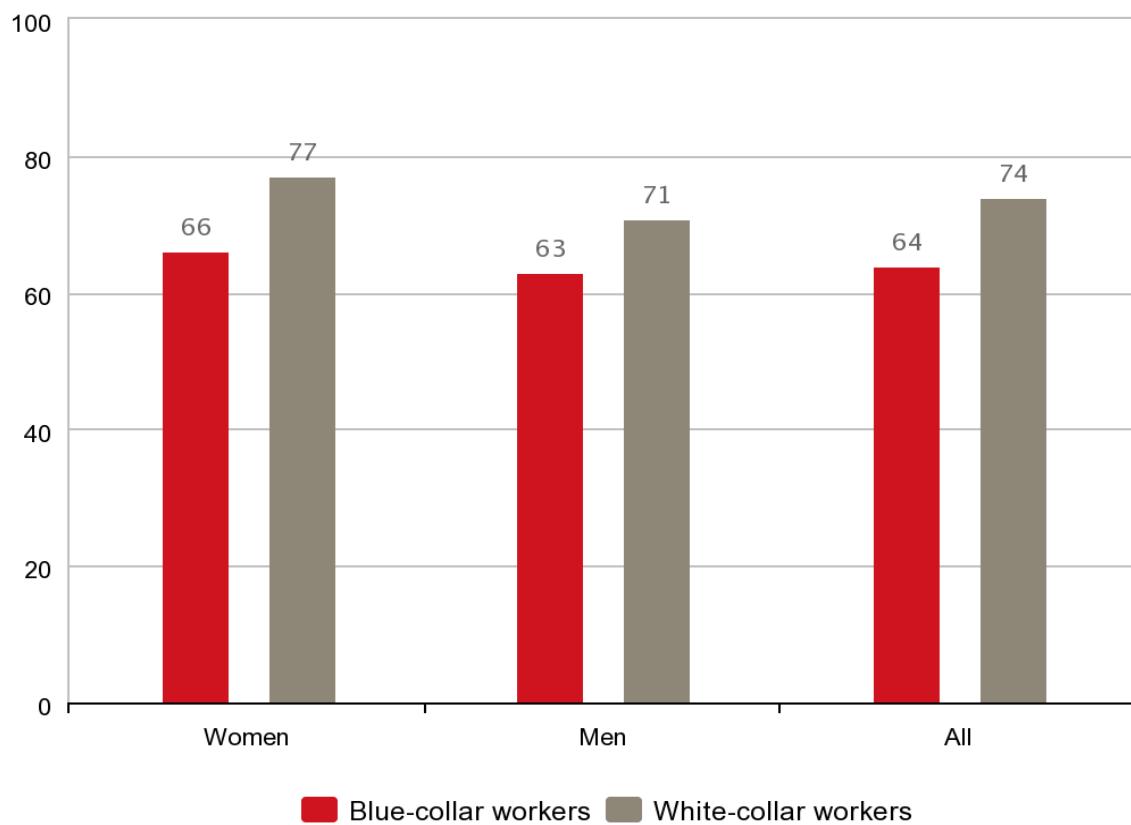
One complicating factor in the bargaining rounds is that even though the three trade union confederations organise workers in the private as well as in the public sector, this is not the case with the employers' associations. In the private sector, the same association normally negotiates with affiliates of all three union confederations LO, TCO and Saco. Governmental bodies are represented by the *National Agency for Government Employers (Arbetsgivarverket)*. The counties and municipalities are represented by Swedish Association of Local

Authorities and Regions (*Sveriges Kommuner och regioner*).

Trade union density. Trade unions in Sweden have traditionally been strong and the trade union density is among the highest in the world. This is often explained by the insurance system with union-led unemployment schemes funded partly by (payroll) taxes and partly by fees paid by the members of unemployment funds. Another related variable of importance is the combination of strong encompassing central and local organisations. The centralisation prevents fragmentary union coverage, promotes bargaining power and facilitates solidarity wage policies, while an extensive network of local union branches well integrated into national unions brings the unions closer to their members. The unions formally negotiate over remuneration and other issues with their employer counterparts also at firm level, in order to adapt the central agreements to the local

environment, and there are no works councils in Sweden (Fulton 2013).

Three unions are outstanding when it comes to the number of members. The largest one is *Unionen* (part of TCO) with 600,000 members. The second largest union is the *Municipal Workers' Union (Kommunal)*, affiliated to LO and organising more than 514,000 employees, of whom about 80% are women. The occupational groups belonging to the union range over a great variety of jobs, such as health care and nursing, cleaners, garbage collectors, school janitors, real estate caretakers, meter maids, kindergarten teachers, firefighters and many other services. In total, they make up one eighth of the Swedish labour force. The third largest union, *IF Metall*, has about 317,000 members, of whom 23% are women. They are active in sectors such as mechanical engineering and plastics industries, building materials industry, mining, ironworks, textile and garment industries, and automobile repair-shops.

Figure 6. Rate if trade union organisation by class and gender, in 2016

Source: LO Fakta

Collective bargaining in Sweden. The overall level of coverage of collective agreements is high – estimated at 88%, with 83% coverage in the private sector and 100% in the public sector (Kjellberg, 2013).

The key level for collective bargaining in Sweden is the industry level, but with considerable room for local complements. This is often done through a nationally agreed increase on the total pay bill, with local negotiations on its distribution. Agreements also often include fall-back arrangements, which set the increases to be paid if no local agreement is reached, and frequently there is also a guaranteed minimum

increase for individuals. This decentralisation and flexibility are more common in the public than in the private sector. This means that the pay for more than three-quarters of employees is set by a combination of industry and local negotiations (Fulton, 2013).

As well as pay and working time, most elements of life at work can be covered by collective bargaining. Some, such as topping up sick pay, compensation for accidents or pension levels that exceed state provision, both for disability and in old age, are dealt with through industry level bargaining. But local level negotiations can cover a range of issues like training or the introduction of new

technology (Fulton 2013). Local negotiations are results of bargaining in the workplace. If the workplace has a local union club, the negotiations take place between elected union representatives and employer representatives. If there is no local club, representatives of the local branch negotiate with the employer.

The manufacturing industry in Sweden is dominated by two unions, IF Metall for blue-collar workers and Unionen for white-collar, which negotiate collective agreements.

Employee representation at work. In Sweden it is trade unions who provide employee representation at work. There is no separately elected structure along the lines of the works councils which exist in many other European states. A key reason why unions have this role is the very high proportion of the working population in Sweden that are union members (74% for white-collar and 64% for Blue-collar). The Swedish model is built on trust between the parties and union strength in the negotiations is not a result of legal requirements. The legislation which gives unions these wide-ranging powers at the workplace is the Co-determination at Work Act (1975) and the Development agreement (1982). The Development agreement, signed by social partners only, provides instructions on how the Co-determination Act (MBL) is to be applied in the workplace. The agreement expresses the direction that the parties agree on when it comes to developing companies' efficiency, profitability and competitiveness and creating conditions for employment, security and

development at work. A very important element of this union-based approach is that it leaves many of the practical details to be worked out locally through negotiations between employers and unions or union clubs. Unlike in some other European states, the legislation does not contain a series of detailed provisions which must be complied with (Fulton 2013).

The workplace representation is provided through the trade unions, operating under their own rules, and there are no statutory regulations which lay down how trade union representatives should be chosen; it is for the unions to decide. The 1974 Act on Trade Union Representatives does not set down a fixed period of time off for trade union activity at work. It simply states that paid time off should be provided "as required" but should "not, however, be longer than what is reasonable considering the conditions at the workplace". Local collective agreements often define what is regarded as "reasonable" and the position varies widely, but an indicator may be one full-time union representative for every 500 members in the local union (Fulton 2013).

The Board Representation (Private Sector Employees) Act. The Board Representation Act empowers employees to appoint board members in companies bound by collective bargaining agreements. The main purpose is to give employees, through the employees' organisation, a better view of and influence over the management of the company. Employee

representatives have the same standing and responsibilities as other board members, except when there may be a conflict of interest, such as issues regarding collective bargaining agreements and industrial action. Employees of companies with at least 25 employees are entitled to appoint two members and two deputy members to the board and in companies which more than 1.000 employees, three members and three deputy members. If there is an executive committee, employee representatives are entitled to participate in its work. This also applies to other planning bodies within the company, where such bodies deal with issues that are to be decided on later by the board of directors. The Board Representation Act plays an important role in the relationship between club and company. Many members hold these assignments for a long time and are not seldom also important people in the board's internal work. Many CEOs choose to anchor initiatives early with union members.

The Work Environment Act. The Swedish Work Environment Act 1977 (*Arbetsmiljölagen*) points out the responsibility for the employer and stipulates the basic demands on a good work environment. The act emphasises preventive actions as well as cooperation between employers and employees. However, the cooperation does not diminish or abolish the employer's responsibility to carry out any measures necessary for the safety and health of the employees.

• Safety committees. At every worksite where fifty or more persons are regularly employed, there shall be

a safety committee consisting of representatives of the employer and of the employees. Safety committees shall also be appointed at worksites with smaller numbers of employees if the employees so require. Employees' representatives shall be appointed from among the employees by the local trade union organisation having a collective agreement with the employer. The safety committee shall participate in the planning of work environment measures at the worksite and observe their implementation. It shall maintain close observations of the development of questions relating to protection against ill-health and accidents and is to promote satisfactory work environment conditions.

• Workers safety representatives.

The main task of the worker safety representative is to make sure that the employer operates a well-functioning management system regarding work environment issues, especially issues such as planning for major changes. Safety representatives are typically appointed for three years by the local labour union. If there is no union, then the employees can appoint representatives directly. The employer cannot appoint workers safety representatives.

The Co-Determination Act. The Co-Determination Act concerns the relationship between the employer and the employees through their local employees' organisation. The most significant areas of the Co-Determination Act are the collective bargaining agreement and the peace

obligation, the right to negotiate, the right to information, the right of interpretation and right to veto. The right of co-determination does not in principle go further than a right to information and consultation before the employer decides regarding significant changes. Some of the provisions of the Co-Determination Act are semi-discretionary and may be derogated from or supplemented by collective bargaining agreements, so called co-determination agreements. In summary, the law contains the following:

- **Right of Association.** Both the employee and the employer have the right to join associations and to engage in their activities. It is a right that has been regulated by statute for many years and forms the major legal basis for joint action by the employees' and employers' organisations. There is no need for a certain proportion of the employees to be associated in order to create a local branch of an employees' organisation, in Sweden the threshold to create an employees' organisation is low.

- **Right and Obligation to Negotiate.** Employees' organisations have a right to negotiate with the employer in areas regarding the relationship between the employer and members of the organisation. Employers have a corresponding right to negotiate with employee organisations. An individual employee does not have a legal right to negotiate according to the Act. Before an employer takes any decision regarding significant changes in their activities or in the working or employment conditions of individual employees, negotiations

with the relevant employees' organisation must be initiate before a decision is made. The obligation to negotiate does not cover the day-to-day management and direction of how the work should be carried out. Issues that must be negotiated are, for example, the introduction of a new organisation, downsizing, hiring of a new manager, changing an individual's area of work and similar significant changes. If the employer decides without negotiating, they may be liable to pay punitive damages. Such damages are decided by the Labour Court.

- **Right to Information.** The employer is obliged to regularly inform his local negotiation partners about the development of their business in financial and operational terms as well as about personnel policy guidelines. In principle, the Co-Determination Act states that there should be an open attitude at the company giving the employees access to information about the general progress of the company.

- **Collective Bargaining Agreements.** Collective bargaining agreements must be in writing and are concluded by an employer or an employers' organisation and an employees' organisation. In general, industrial action is not permitted when there is a valid collective bargaining agreement. According to the Co-Determination Act, a party planning to take industrial action must first give notice to the opposing party and to the National Mediation Office. A special mediator may then be appointed to settle the dispute. This

can be done even without the consent of the disputing parties. Industrial action can be postponed by the National Mediation Office for a period of up to two weeks. Any dispute over a collective bargaining agreement that is already in effect must be solved through negotiation and can, as a last resort, be tried by the Labour Court.

- **Right of Veto Over Engagement of Subcontractors.** An employer planning to engage a subcontractor must first initiate negotiations with the relevant employees' organisation. The reason for negotiations in such cases is to give the employees' organisation an opportunity to examine, for example, whether the subcontractor applies illegal

employment conditions. Employees' organisations have a right of veto if the employees' organisation declares that the action that the employer intends to take may be deemed to violate legislative provisions or the collective bargaining agreement or otherwise be in conflict with the established practices in the industry.

- **Right for the union to use consultants.** There is a right to employ employee consultants at the company's expense when closures or major changes occur. The clubs bring in their own consultant who goes through the company's decision-making basis. Almost always, it works very well and the company takes on ideas from this second opinion.

4.

APPROACHES AND PRACTICES OF NATIONAL TRADE UNIONS FOR DIGITALISATION IN THE MANUFACTURING SECTOR

This section is based on two types of sources, one focus group interview with 18 officials from IF Metall and five individual interviews. The focus group consisted of 15 men and three women and the individual interviews of three men and two women. All interviewees have top positions within the union such as chairmen of clubs or regions, ombudsmen, negotiator, study organiser and board member. They are found in various companies spread all over Sweden.

Below we start with an overall description of how new technology is perceived by the interviewees and then discuss how their practice has been affected.

General perception and attitudes of national trade unions

Perception of the impact of digitalisation on Swedish companies. The basic conception is that IF Metall is positive to new technology and the technological development. There is a deep-seated notion that “we are not afraid of the new technology, we are afraid of the old”, implying that without

new technology, the industry loses its competitiveness and employees lose their jobs. Of course, there are concerns about individual cases, but the general perception is still to affirm the new technology. The overall positive attitude may be due to the fact that the Swedish industry has no history where companies lay off employees due to the new technology. Major redundancies have instead been due to not being competitive and thereby forced to close down production or move it to low-wage countries.

At the same time, there is a great awareness that technological development and digitalisation will have an effect on almost everything in working life and affect all members. This creates opportunities as well as problems. The opportunities are mainly in three areas:

- An improved work environment. Workers still suffer from manual work in poor working conditions. Automation can help remove bad jobs.
- The content of the work is improved. Monotonous jobs can be replaced with more challenging and interesting tasks.

- Safe and well-paid jobs. Competitive industry that saves jobs in the long run.

The risks of digitalisation are also emphasised.

- Automation will lead to loss of some jobs, it is inevitable. An operator who previously operated a single machine can now operate several.
- More members will work remotely.
- More members may have to work alone.
- Digitalisation and AI can be pushed too far. There is a risk that work will become too simple and de-qualified.
- The boundary between work and leisure becomes less clear if you are to be constantly connected. You are constantly at work.
- Risk of privacy problems. Surveillance must not come too close.

We do not want a “Big brother sees you” workplace. At the same time, when used correctly, technology can contribute to increased safety. You know that you will be found if something were to happen.

The pressing concern of skills development. No one should be left behind and everyone should have access to skills development so that they can meet the requirements of the new technology. There is also a concern among the older workforce who are not interested in new technology, while the younger ones want the new technology. A common comment is that we are at a turning point where professional pride in the future will be based on something else than manual work skills.

There are plenty of examples of successful skills development when new technology is introduced. In general, new technology means that members also receive the skills development needed to cope with the technology shift. When it comes to more general skills development, the interest is not as great, according to the interviews. “Employers often talk about the major skills shortages that exist in companies, but when it comes to investing in competence and skills development, it is often seen only as a cost. But if there is no internal supply of skills and skills development, it will be difficult for companies to survive”, the unions argue. Companies have to create a structure where it is a natural part to develop skills with a certain regularity, for example to take a course every six months.

There is a big difference between large and small companies. In large companies, there are often established competence development programmes where you can develop in your work and change tasks during your time at the company. There may be programmes to obtain a license for certain work tasks, but there may also be more general training. One successful example is when a company validates its entire staff and then adapts training initiatives to complement the employees’ skills. There are good opportunities to finance this type of more general training effort through the European Social Fund (ESF), especially in connection with structural changes.

The issue of representation of blue-and white-collar workers. In Sweden,

there is also a discussion about the demarcation between white- and blue-collar workers, as they are organised in different unions, IF Metall and Unionen. There has been a gradual shift in the demarcation between white- and blue-collar work where IF Metall absorbs more of what was previously white-collar tasks. This is a dilemma where a thinkable development is that IF Metall approaches the German model, which would mean that metal members and production-related officials will be part of the same union.

IF Metall digitalisation agenda and its promotion. Digitalisation has been on the agenda for a long time. It is difficult to define when technology will switch to digitalisation, one sign may be when tasks have been moved from the shop floor into control rooms. It is seldom a question of a distinct technological leap, but rather a matter of a continuous development of the production. It is the company that takes the initiative in technology issues, and the union participates on their given terms. On IF Metall's agenda, the issues mainly appear in connection with the discussion about the sustainable work. Digitalisation is discussed primarily at regional level, and they try to get it out to the local clubs, but it is difficult to create an interest in the issues. At club level, it is said that IF Metall does not pursue the issue as much as it should.

IF Metall members' perception of digitalisation. The interviewees explained that it is difficult for them to get a discussion about the technology on a general level. The discussion instead

takes place when new technology is introduced on the shop floor and primarily involves the safety representatives in the discussion. Those involved in the development feel proud of the new tasks they have to learn, but not everyone gets the opportunity to participate. Awareness of digitalisation and its consequences differs depending on which company our members are working in. According to the interviewees, some companies are at the forefront of technological development, testing different ways to change and adapt the work according to the wishes of the union members, but unfortunately there are still many who do not care. IF Metall's members are not worried about new technology, on the contrary, they see opportunities for development of the work. The younger ones take more advantage of the new technology, but the older ones also want to be involved. This requires that you have the competence development that is needed.

The approach at the local level. The issue of new technology is widely discussed at the central level. At IF Metall's congress 2017 an extensive material on *New Industry* was presented (IF Metall, 2017a), which contained a lot about the need for continuous competence development. However, there are no central guidelines for how the issue should be dealt with at the local level. Here you have to adapt to the new technology from case to case. There is a document from 2017 titled "Action plan for the future industrial work" (IF Metall, 2017b) which was intended to guide the local work, but it did not have

the expected impact. The material will be updated and released in a new version.

Practices of national trade unions

Research activities. There are a number of projects at the central level in which IF Metall, employers and researchers participate. One such project is *The Production Boost* (<https://www.produktionslyftet.se>), where IF Metall's former union chairman Göran Johansson is the leader. The project aims to prepare and facilitate the introduction of new technology and work organisation on human terms. Another project is *The Robot Lift* (<https://tillvaxtverket.se/amnesomraden/digitalisering/robotlyftet.html>), which deals with robotisation and visualisation, where opportunities for working remotely were discussed. One example of this is a robot that refills powder in the 3D printers and another clean the spaces that are hazardous to health. It is very common for IF Metall's members to participate in local research projects initiated by employers, but as specialists rather than a union official. A direct collaboration with researchers, independent of the company, is the international projects *SUNI* and *BargainUp*. IF Metall has also published a debate book *Industrial visions – Eight voices about the Swedish industry of the future* with a number of researchers (IF Metall 2020). Collaboration with researchers at the local level is unusual. One example of a local collaboration is the project *Attractive Workplaces through Industry 4.0 (ARB4.0)*, where IF

Metall collaborates with Luleå University of Technology. The project aims to formulate recommendations for both attractive workplaces and skills development. Further information available [here](#).

Training activities. When it comes to development issues, it is important that the union has competent representatives who can work with the clubs in the area, local change leaders who can start up the change processes. At the central level, there are a number of trainings activities that IF Metall's representatives and functionaries can follow. There is, for example, a recurring training course on *Payroll systems and work organisation*, that covers five days and the participants come from five to ten workplaces at a time. There is also a central digital membership training for old and new members where union representatives participate as supervisors. A positive effect of the Covid-19 pandemic is that digitalisation has jumped several years forward. Now there are online conferences, such as the latest central study conference. There are no training activities at the local level that deal with new technology, apart from what is given through the previously mentioned project ARB 4.0.

Collective bargaining. The *Co-determination act* and the *Development agreement* covers all types of issues. The structural problems that arise during digitalisation can be solved within the framework of the Co-determination Act. The development agreement, which has existed since the 1980s, describes how to work with development issues and

regulates how the influence is to be organised. IF Metall is involved in the dialogue on technological development, but it does not normally lead to direct negotiations. They are involved in setting the rules of the game, for example, what the company may control and who should have access to private information. At the local level, safety representatives must be involved in all development projects. Sometimes there are discussions about the demarcation between what belongs to IF Metall and what are white-collar tasks. The companies are often positive that IF Metall takes on new tasks. IF Metall is open to setting salaries for certain tasks outside the collective agreement, but the company is more restrictive about it.

At the local level, new technology is not on the negotiating table, here the companies decide. According to IF Metall, the companies would save time and money if they had greater faith in the knowledge that exist among blue-collar workers. However, there are examples of when local agreements have been signed.

One example of local activity is the local agreement reached in 2013 between IF Metall and AB Volvo on a joint development programme for the workplaces of the future at Volvo's Swedish factories. The purpose of the project was to shape the workplaces and working conditions of the future. In 2018, a pilot project was started at the factories in Skövde, Umeå and Gothenburg. The task was to create a new way of working that is based on relatively autonomous working groups that can handle an entire production chain with as little help as possible from production support, e.g. Maintenance,

Production Engineering, HR, Finance, etc. A working group would comprise 20-30 people and the three pilot departments were given relatively free hands to experiment. The projects are run in collaboration with the employer and can include both new technology and a changed work organisation. Then there is the dissemination of experiences to the entire company.

IF Metall believes that in order to get real momentum in the collaboration, it must be written into the collective agreement linked to salary claims. Having the right to participate in strategic meetings may not be a competence measure directly, but still important in the long run. Participating in a large development project is a real skills development, unfortunately only for a few, but perhaps for more members in the future. At SSAB in Luleå, the union has demanded that their members should be involved in the process of developing the test facility for Hybrit, a method of making steel without coal.

Furthermore, in 2004, collective bargaining set up a fund for the management of occupational transitions, that could be particularly useful today in the light of possible reorganisations and restructuring led by digitalisation. More specifically, in 2004, as a complement to the Employment Protection Act, the Swedish Trade Union Confederation for blue-collars (Landsorganisationen i Sverige – LO) and the Confederation of Swedish Enterprise (Svenskt Näringsliv) concluded an agreement to establish support measures in case of redundancies for shortage of work. In

that occasion, the Employment Transition Fund (Trygghetsfonden – TSL) was constituted as a joint body in charge of executing the agreement. TSL is one of the 10 Job Security Councils in Sweden, established by social partners and financed by employers with the aim of anticipating and managing structural changes. TSL's solutions encompass guidance to workers in the search for a new job, the start-up of a new business and the enrolment in educational paths. When needed, TSL can also provide for short vocational training courses and the validation of professional knowledge and skills to sustain people's employability. TSL's solutions apply to all workplaces facing restructuring and covered by a collective agreement with a trade union federation affiliated to LO. Today, TSL's chairman comes from the Swedish Metalworkers' Organisation (IF Metall). Further information is available [here](#).

IF Metall involvement in public policy making. IF Metall has great opportunities to influence the government and its policies. IF Metall's chairman is a member of the Social Democratic Party's executive committee and the union board meets with government representatives regularly. Collaboration is facilitated by the fact that the Prime Minister has a background as chairman of IF Metall. One example is the government's strategy *Smart Industry*, which IF Metall has participated a great deal in shaping. At the local level, there is extensive collaboration with authorities such as the Industrial development centres, the Swedish agency for economic and

regional growth, the public employment service, tests and development centres, technical colleges, universities and the principals of the local schools.

Multi-stakeholder programmes. There is a large amount of successful cooperation between the Association of Swedish Engineering Industries' (Teknikföretagen) and IF Metall in the previously mentioned projects *The DigiLift*, *The Production Boost* and *The Robot Lift*. In these projects, both employers and researchers are represented. A local example is the previously mentioned *ARB4.0*. In connection with major changes in production that can lead to redundancies, trade unions can hire an external consultant who can verify the credibility of the companies' calculations. It is an opportunity that is not used so often.

Impact of digitalisation on trade union membership and activities. According to IF Metall, trade union density cannot be improved that much, as in principle everyone is already a member. In the mining industry, trade union density is almost 100%. Centrally, the goal is 85% and today IF Metall is at 77%. It is easier to become a member of the union, now it can be done with a digital signature. The fear that digitalisation will result in a reduced number of jobs may contribute to an increased number of members, but so far, no such effect can be seen. One common opinion is that, what really affects is the fear of Covid-19, as more people have joined the union to get access to unemployment benefits. For many members, it is more about *what*

you get if you join the union instead of wanting to be involved and change.

Centrally, IF Metall has an advanced website where you can find information about almost everything. They also use Facebook, Twitter, Instagram and YouTube to spread information to union representatives, members or prospective members. Many clubs have their own websites, and some are active on Facebook. The websites present news on, for example, what the safety representatives have to report. Some clubs provide opportunities to ask questions and get answers via the website. Internally, digital meetings are becoming more common, especially in times of the Covid-19 pandemic. This has been a great advantage for the large

districts as it is easier to get to the meetings when you avoid long drives on bad roads.

IF Metall's clubs have a good attendance on member meetings. There have been considerations about the opportunity of allowing for online participating at these meeting. But the wish for eye contact with its members as well as the risk of lower attendance has kept the meetings from being carried out online. By using the internet, the clubs could widen the dialogue in local matters and possibly increase the democratic influence. It can also be used for quick surveys among its members. New ways of communication and decision making could amount to a boost for the trade union democracy.

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