Bargaining upfront in the digital age

This project is co-funded by the European Union

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

Agreement Ref. n. VS/2019/0280

Lise Meylemans, Ezra Dessers
HIVA KU Leuven - BELGIUM

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' organisation 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, seven interviews with national trade unionists, conducted in April 2020, and seven focus groups with 60 worker representatives, organised in February and March 2019

PARTNERS:

FIM-CISL (Italy) - Coordinator
ACV-CSC Metea (Belgium) - Partner
ADAPT (Italy) - Partner
Catholic University of Leuven (Belgium) - Partner
IF Metall (Sweden) - Partner
Luleå University of Technology (Sweden) - Partner
Technic University of Cartagena (Spain) - Partner
Ruhr University of Bochum (Germany) - Partner
UGT-FICA (Spain) - Partner
Workers' Education and Training College (WETCO) (Bulgaria) - Partner

This project is co-funded by the European Union

INDEX

1.
GOVERNMENTAL POLICIES FOR THE DIGITALISATION OF THE ECONOMY

Belgium has a three-level governmental structure which includes the Federal state, the Communities (Flemish, French and German-speaking) and the Regions (Flemish, Wallonia and Brussels-Capital), all three are equal from the legal viewpoint, but have powers and responsibilities for different fields (Belgian Federal Government, 2020). Concerning digitalisation, no specific division of responsibilities has been made. From the interviews it was suggested that digitalisation can be seen as a typically horizontal industrial policy aimed at creating a favourable framework for economic activity and innovation. As each Region is responsible for their own economical and industrial policy, the main focus of digitalisation policy thus lies at the regional level. This results in three regional and one federal policy regarding digitalisation in Belgium. However, there is no formal alignment of the different digital action plans in Belgium (Larosse, 2017).

Federal policy: "Digital Belgium". At the federal level "Digital Belgium" (2015-2020) outlines an action plan based upon five priorities with each three to six projects dealing with concrete actions which fall under federal competence: (1) digital infrastructure; (2) digital confidence and digital security; (3) digital government; (4) digital economy; and (5) digital skills and jobs. With this action plan the federal government strives to put Belgium on the global digital map. Three objectives should be achieved by 2020. First of all, Belgium should make it to the digital top three of the European Digital Economy and Society Index, which summarises relevant indicators on Europe's digital performance and tracks the evolution of EU member states in digital competitiveness (European Commission, 2019). Secondly, a thousand new start-ups should be created. As a final objective, 50,000 jobs should get digitally transformed across various sectors (Larosse, 2017; Digital Belgium, 2017; FOD Economie, 2018).

Results and following steps. This initiative was launched in 2015 and will end this year, in 2020. Up until now, the results of the action plan have not been formally evaluated by the Federal government. Yet, concerning the first objective Belgium ranks in the top three of the European Digital Economy and Society Index of 2019 (European Commission, 2019). Based on the interviews with policy experts, it is expected the Federal government will continue to pursue this policy. The

details of this policy are, however, still unclear.

Flemish policy: "Industry 4.0". "Industry 4.0", launched in 2017, is the main digital strategy for the manufacturing industry in Flanders. The strategy is embedded in a comprehensive, long term, transformation strategy "Vision 2050" as one of the most crucial societal challenges. In this "Industry 4.0" strategy the Flemish region strives to become a frontrunner in the use of production technology and Industry 4.0 concepts by 2050. The action plan was developed along five axes in which the Flemish government commits itself to the following action points: sustain a platform as a central point of information concerning industry 4.0 and its implications; strengthen the knowledge base by additional research supporting the transition; accelerate application; contribute to good environmental conditions; and support international cooperation (Larosse, 2017; Flemish Government, 2017; Flemish Government, 2016).

In addition, support to research and innovation for industrial transformation is given through "Flanders Make" (for advanced manufacturing) and through "the Spearhead Clusters" (Larosse, 2017). This last initiative is embedded in a broader cluster policy which promotes cooperative relations and concentrates on organisations characterised by innovation, growth ambitions and an international perspective (Flemish Government, n.d.a). Besides these initiatives, "Made Different" is an initiative financed by the Flemish government and was established in 2012 as a bottom-up initiative to coach industrial companies to turn them into agile, high-tech smart manufacturing organisations. These companies play an exemplary role for their peers and are called "factories of the future". The program was also adapted in 2017 by the Walloon government (Larosse, 2017).

Results and following steps. Concerning the continuation of this digitalisation policy, interviewees expect this to be a continuing key objective for the Flemish government. Interviewees pointed out a future change from a triple (governmental, industrial and research actors) towards a quadruple helix framework in which also citizens will be given a voice (Flemish Government, n.d.b).

Wallonia policy: "Digital Wallonia". Comparable to the "Industry 4.0" policy in the Flemish Region the digital policy for the Walloon Region is embedded in a broader, comprehensive long-term strategy for revitalisation of the economy with a broad societal support "Plan Marshall 4.0" (2015) which was created and revised out of the previous Marshall plan from 2005. Five priorities were listed with the fifth being digital innovation which was translated in "Digital Wallonia" (Larosse, 2017). Digital transformation of the entire economy, through digitising operations in all companies is one of the core objectives in this "Digital Wallonia" strategy (Larosse, 2017). In December 2018, an updated digital strategy for 2019 until 2024 with five key priorities

was set up: creating a strong digital sector, increasing the digital maturity of companies, stimulating the adaption of digital skills and an entrepreneurial attitude, developing an e-government and public services, enabling a digital territory through smart and connected to broadband networks (Digital Wallonia, n.d.; Wallonia Government, n.d.). The implementation of the digital transformation part of the Digital Wallonia strategy was significantly accelerated in 2017, in particular with the start of the Made Different Digital Wallonia initiative (Larosse, 2017).

Similar to the Flemish spearhead clusters policy, the Walloon government has also implemented a cluster policy in order to strengthen cooperative networks around research, innovation and training. This initiative is shaped through 6 "Pôles de Compétitivité" in promising areas of growth (Larosse, 2017; Digital Wallonia, n.d.). Especially the Pole "MecaTech" (for mechanical engineering) will be strongly involved in the digital transformation actions (Larosse, 2017).

Brussels' policy: "beDigital.brussels". "Bedigital.brussels" is an integrated digital strategy launched in 2017 for the region of Brussels-Capital which gathers all Brussels' digital initiatives under a common label. The initiative forms an umbrella for three government plans to position Brussels as international quality label for the digital transition: "Smart City Brussels", the "Regional Innovation Plan 2016-2020" and the "Nexttech.Brussels 2017-2020" plan (Larosse, 2017). With "Smart City Brussels" being the backbone of the overall digital strategy, the plan concentrates on improving critical factors such as connectivity, investment in human capital, use of internet and digitalisation of public services. Secondly, "Nexttech Brussels 2017-2020" aims to help ICT companies grow and improve. The focus is on three technological domains: Internet of Things (IoT), Virtual Reality, Big Data management and Artificial Intelligence. Finally, the "Regional Innovation Plan 2016-2020" pays particular attention to three strategic priority areas that reflect the Region's strengths. With "ICT – Digital economy" as one of the defined priorities, the plan will support innovation in the ICT sector, sensibilisation and training to develop ICT competences (Larosse, 2017; bedigital.brussels, n.d.).

Results and following steps. The government of the Brussels-Capital Region also committed itself to continue this digitalisation policy for the upcoming years. After evaluation of the policies discussed above, Brussels strives to develop a strategy towards 2030 for the transition of the Brussels' economy; "Go4 Brussels 2030". This strategy aims to decarbonise all sectors, increase support for those sectors active in the circular economy, the social economy or the digitalisation of the economy (be.brussels, n.d. ; be.brussels, 2020).

2.
GENERAL INDICATORS FOR THE MANUFACTURING SECTOR

Level of employment. Employment in manufacturing amounts for 12.5% of total employment in Belgium (Eurofound, 2019). This level of employment in the manufacturing industry in Belgium fluctuates around 600,000 employees with a significantly larger share of men employed in manufacturing (around 450,000 workers) and around 150,000 female workers (Eurostat). These numbers have remained quite stable over the past 5 years. Table 1 compares the number of employees between the key sectors of the manufacturing industry in Belgium, specified for employment status. It is apparent from this table that the metal sector is by far the largest sector in manufacturing, employing over 272,000 workers.

Table 1. Employment by sector and employment status (2018)

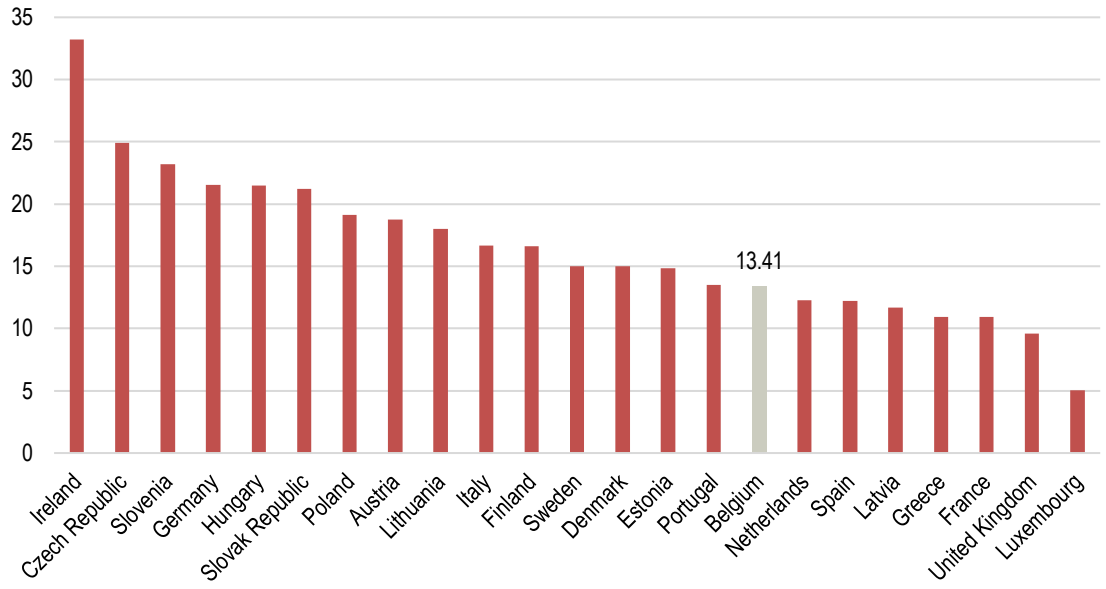
Sector	Blue collar workers	White collar workers	Total
Chemicals	41 738	84 501	126 239
Wood	17 075	/	17 075
Clothing and textiles	26 333	10 572	36 905
Metal	199 498	72 702	272 200
Paper	7 533	3 064	10 597
Stone and glass	15 210	226	15 436
Nutrition	56 783	27 197	83 980

Source: Steunpunt Werk en Sociale Economie, 2019

Productivity rates. Figure 1 shows the value generated by the manufacturing sector in the EU28, calculated as a percentage of total value added generated in each country. Value added is calculated as the value generated by producing goods and services and it is measured as the value of output minus

the value of intermediate consumption. Belgium is found on the right-hand side of the graph (13.4%). In comparison with other European countries, the share of valued added created by the manufacturing industry in comparison with the total value added is below the EU average.

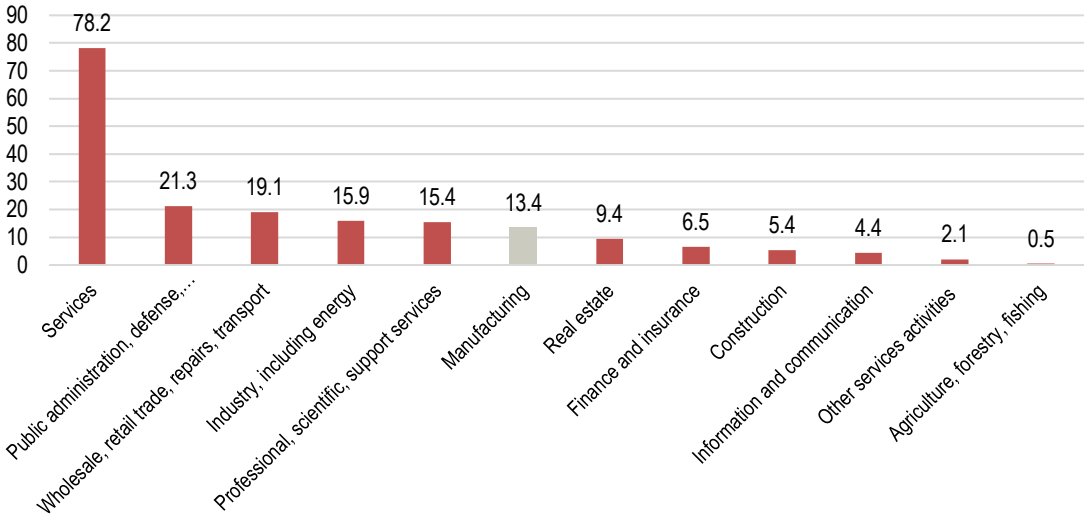
Figure 1. Value added (in %) by manufacturing in Europe in 2019



Source: OECD Data

Figure 2 compares the added value (in %) of the manufacturing industry with other sectors in Belgium. Services stands out as being the sector that contributes most to the total value added for Belgium. Manufacturing is situated somewhere in the middle in comparison with other sectors (Statbel, 2018).

Figure 2. Value added (in %) by activity in Belgium in 2019



Source: OECD Data

Employee profile. Based on data extracted from the Belfirst databank of Bureau Van Dijk (version 2020/04/08) more detail is gained on the employees' profile for the manufacturing industry. Here a remark should be made that only manufacturing companies which have to present a public annual account in Belgium have been included. This excludes smaller companies and firms with a parent company abroad. However, this data gives us an overall insight of the employees' profile in the manufacturing industry in Belgium. The data shows that 60% are blue collar workers and almost 90% of employees have a permanent contract. Concerning the education level, more than half has completed secondary education as highest education level.

Level of digitalisation. Concerning the integration of digital technology in companies, Belgium ranks top three in the Digital Economy and Society Index of 2019 in comparison with other EU countries. According to the European Commission (2019) the well-designed policies at federal level, Flanders, Wallonia and Brussels contribute to this. Although Belgium scores rather well concerning digitalisation in general, Eurofound (2019) notes the relatively limited application of digital technologies in the manufacturing industry across Europe. This limited application of digital technologies in manufacturing was also confirmed by a study in the metal and textile industries in Belgium (Meylemans, Vanderstukken, Vereycken & Ramioul, 2019). Highly digitalised technology, described as Industry 4.0, has currently only been implemented in digital frontrunner companies in manufacturing in Belgium. In this perspective, a recent survey (Flanders Make, 2019) demonstrated a contrast between larger companies and smaller ones in manufacturing. In general, large companies tend to have a digital strategy,

while smaller firms tend to underestimate the digitalisation trend.

Main priorities and issues at stake

Impact of digitalisation on jobs. Agoria (2018) provides a clear overview of the types of jobs for which numbers of employees are declining, steady, increasing, and of the newly emerging and changing jobs in the Belgian labour market. Jobs that are disappearing are those of unskilled manual workers, desk clerks, cashiers and administrative clerks. The number of people working as nurses, care personnel, digital experts and scientists or engineers is increasing. Also new jobs are created by digitalisation, including mobility planners, consumer coaches and information processors. Finally, sales representatives, shop assistants, and production operators are some examples of jobs which will continue to exist and for which the numbers remain stable, although they are likely to change content-wise. Furthermore, impact of digitalisation is expected to vary by sector. An increase in the number of jobs can be expected, mainly in the education sector, care, services to companies and individuals, the financial sector, hospitality, construction, transport and logistics and ICT. Yet a decrease in employment is expected, mainly within the manufacturing industry, in sectors such as chemicals and pharmaceuticals, food, textiles, wood, construction, media and digital entertainment, agriculture and metal and electrical engineering (Agoria, 2018).

Impact of digitalisation on competences. The digital transformation thus creates new competency needs: the so-called T-shaped skills (generic as well as specific competencies).. In this digital age, an employee should not only be proficient in his or her technical domain, but also have broader generic skills such as communicative, problem-solving but also digital skills (European Commission, 2019). This overall picture was also acknowledged by interviewed trade unionists from the manufacturing sector. Manufacturing has undergone a major trend towards automation. As a result, purely operational tasks have largely disappeared. Employees have therefore been reassigned to controlling and problem-solving tasks, such as interpreting digital outcomes from robots, and timely detecting of errors and the ability to intervene swiftly. In addition to these technical skills, generic and soft skills become more and more important. Whereas everyone used to perform their own task, it is now important to consult the team when errors are discovered. Although the general competence levels in Belgium are rather high, Belgium is performing only moderately in terms of adapting to these new competence needs (Jandrić & Ranđelović, 2018; OECD, 2019). Trade unions are addressing this by transforming their "education funds" to "career funds". In contrast to the former education funds, career funds concentrate on a broader mission: sustainable employability of an employee on the labour market instead of only organising and funding job-specific training. For achieving this, career funds

also focus on generic and soft skills besides the needed hard technical skills.

In conclusion, manufacturing has a significant share in the Belgian economy with the metal sector as the most important industry within manufacturing. However, Belgium remains primarily a service-oriented economy. Much automation has taken place through digital technology. The competence needs shift towards digital and generic skills such as communication and problem-solving. In the following chapter, the complex structure of social dialogue in Belgium and more concrete in the manufacturing industry will be discussed.

3.
FUNDAMENTALS OF INDUSTRIAL RELATIONS IN BELGIUM

The Belgian industrial relations landscape consists of a dense network of social dialogue bodies with various social partners (and in some cases the government). This section we discuss the complex structure of industrial relations in Belgium and more concrete in the manufacturing industry. The characteristics of the Belgian social dialogue system include: union participation, recognition and integration; a legal framework; centralised and strong organisations on both the employers' and the employees' side; socio-economic policy concertation; a mix of self-governance (paritarism), subsidiarity and state action with regard to social security; mechanisms of information and consultation (but not codetermination) in the workplace; and ideological pluralism among the actors (especially on the trade union side) linked to historical "pillarisation" (Van Gyes, Van Herreweghe, Smits & Vandekerckhove, 2018). Table 2 presents an overview of the main organisational bodies at the different levels the Belgian Social Dialogue system.

Trade union density rate and collective bargaining coverage.
According to ETUI (2016a) the Belgian trade union density rate is among the world's highest and estimated around 55%. In its evolution throughout the years only a slight decrease could be observed (OECD.Stat(b)). Together with the Scandinavian countries Belgium seems one of the few whose trade unions appear to have avoided the sharp decline in membership, in particular by expanding member services (ETUI, 2016a; OECD.Stat(b)). Furthermore, the collective bargaining coverage is around 96%, which means that nearly all employees are covered by a collective agreement (ETUI, 2016b; OECD.Stat(a)).

Social partners.
Main trade union organisations:

- The Confederation of Christian Trade Unions (ACV/CSC): connected to the Christian worker movement, with almost 1.7 million members.
- The General Federation of Belgian Labour (ABVV/FGTB: linked to the socialist worker movement, with over 1.5 million members.
- The Confederation of Liberal Trade Unions of Belgium (ACLVB/CGSLB): related to the liberal movement, with 290 000 members (ETUI, 2016a; Lenaerts, 2018).

Main employers' associations:

- The Federation of Belgian Enterprises (FEB/VBO) which groups together more than 50 sectoral employers' organisations of which companies are direct members.
- The Union of Self-Employed Entrepreneurs (UNIZO) represents SMEs, self-employed and liberal professions in Flanders.
- The Union des Classes Moyennes (UCM) represents SMEs, self-employed and liberal professions in Wallonia (ETUI, 2016a; Lenaerts, 2018).

Table 2. Industrial relations bodies

Level	Body	Partners	Purpose
National level	National Labour Council	Paritary composition: trade unions and employer organisations.	Serves as an advisory body to the government and parliament for social issues.
	Central Economic Council	Paritary composition: trade unions and employer organisations.	Serves as an advisory body to the government and parliament for economic issues.
	High Council for Prevention and Protection at Work	Paritary composition: trade unions and employer organisations.	Serves as an advisory body to the government and parliament for measures concerning the well-being, health and safety of workers.
	Group of Ten	Paritary composition: 5 representatives of trade union organisations and 5 representatives of employers' organisations.	Serves as a negotiating body, responsible for the inter-professional agreement which covers topics such as wage levels, working conditions, working times, training, etc.
Regional and community levels	Sociaal-Economische Raad van Vlaanderen	Paritary composition: trade unions and employer organisations.	Serves as an advisory and research body to the Flemish government and organises social dialogue between employer organisations and trade unions.
	Vlaams Economisch Sociaal Overlegcomité	Tripartite composition: trade unions, employer organisations and Flemish government.	Serves as a negotiating body, responsible for the Flemish inter sectoral agreements.
	Conseil Economique et Social de la Région Wallonne	Paritary composition: trade unions and employer organisations.	Serves as an advisory and research body to the Walloon government and organises social dialogue between employer organisations, trade unions and the Walloon government.
	Economische en Sociale Raad van het Brussels Hoofdstedelijk Gewest	Paritary composition: trade unions and employer organisations.	Serves as an advisory and research body to the government in the Brussels' region and organises social dialogue between employer organisations, trade unions and the government in the Brussels' region.
	Brussels Economisch Sociaal Overlegcomité	Tripartite composition: trade unions, employer organisations and government in the Brussels' region.	Serves as a negotiating body, responsible for the policy with a social-economic dimension.
	Wirtschafts- und Sozialrat der Deutschsprachigen Gemeinschaft Belgiens	Paritary composition: trade unions and employer organisations.	Serves as an advisory and research body to the German-speaking community and organises social dialogue between employer organisations and trade unions.
Sectoral level	Joint committees per sector	Paritary composition: representatives of employers and employees.	Serves as a negotiating body, responsible for the collective agreements for their sector; concerning wages, working conditions, etc.
Company level (For companies with at least 50-100 employees)	Works Council	Paritary composition: Company's managing director and one or more representatives appointed by the director and employee representatives elected by the workers.	Serves as an advisory body, a corollary of their right to information, and have decision-making powers on certain issues, e.g. the drafting of staff regulations, the allocation of annual leave, etc.
	Committee for Prevention and Protection at Work	Paritary composition + prevention adviser: employee representatives, members representing the employer and a neutral prevention adviser.	Serves as a mainly advisory body, but they also have the right to issue a prior opinion on certain matters, such as the introduction of new technologies and specific measures for the design of workplaces.

Source: Lenaerts, 2018 & ETUI, 2016a

Industrial relations in the manufacturing sector in Belgium

The process of collective bargaining in the manufacturing industry is mainly located in the representing joint committees at sectoral level. These committees traditionally are the key level of social dialogue in Belgium. Belgian legislation draws a general framework in which these sectoral negotiations can take place. However, according to some trade unionists, this legal framework feels too tight and sometimes limits them in negotiating more freely with employers.

In social dialogue at the sectoral level, employee organisations hold on to some guiding principles. First of all, income, work and training must be assured at all times. A second focus lies on quality of work throughout the entire career of an employee. During the interviews, trade unionists discussed four main topics which are being negotiated at sectoral level in the manufacturing industry for which they follow these guiding principles. A first topic revolves around the retention and attraction of workers in manufacturing. Currently, the manufacturing industry in Belgium is facing a large shortage of technical workers. They anticipate on this by focusing not only on inflow by graduating students, but also by re-educating workers. A second priority is the transformation of the education funds to career funds as discussed above. Thirdly, joint committees in manufacturing are developing a framework focusing on the various aspects of quality of working life: training, work-life balance and ergonomic measures. The last, but not the least topic, is income assurance which remains a key topic in social dialogue for manufacturing.

Irrespective of these common guidelines and priorities, each joint committee also has its own specific features. To explain this, the metal sector, which is also the largest sector in the manufacturing industry in Belgium in terms of employment (see Table 1), is given as an example below.

Collective bargaining at the sectoral level: example of the metal industry. The metal industry can be divided in (1) the metalworking and construction subsector in which workers are represented in joint committee 111 (blue collars) and 209 (white collars), (2) the steel subsector, which is represented through joint committee 104 (blue collars) and 210 (white collars), and (3) the non-ferrous subsector with joint committee 105.1 (for blue collars) and joint committee 224 (for white collars). Although these three subsectors are all included in the metal sector, differences can be noticed in their industrial relations landscape (Van Gyes, Van Herreweghe, Smits & Vandekerckhove, 2018).

Whereas the metalworking and construction subsector has a historical tradition of sub-sectoral bargaining and bargaining by province, the main level of collective bargaining in the steel and non-ferrous sector has always been the company. This metalworking and construction subsector is seen as the key

bargaining venue in the manufacturing industry and sets an example for smaller joint committees. A wide spectrum of topics is discussed within the joint committee 111 (which is the largest joint committee within the metal sector), such as wage increases, flexibility, working time, time credits and working conditions. The steel and non-ferrous sector has traditionally been dominated by a few very large companies, which explains the importance of the company level in collective bargaining (Van Gyes, Van Herreweghe, Smits & Vandekerckhove, 2018).

Regarding the social partners in the metalworking and construction subsector; ACV-CSC (represented by ACV-METEA for blue-collar workers and the Flemish LBC-NVK and French CNE-GNC for white-collar workers) is currently the largest trade union, due mainly to its stronger representation in the Flanders region and also among white-collar workers. The ABVV-FGTB metal federation has traditionally been more militant (also within the socialist trade union itself). In the early 2000s the Flemish and Walloon federations were separated. White-collar workers are represented by BBTK-SETCA in the socialist confederation. The third Belgian confederation ACLVB-CSLB is much less represented in the sector (although their numbers are growing). For the employers' associations, GSV (Groupement de la Sidérurgie – Staalindustrie Verbond) is the employers' federation active in the steel sector, although because the sector has traditionally been dominated by a few very large companies, it has significantly less bargaining power and capabilities than its counterpart Agoria in the metal sector (Van Gyes, Van Herreweghe, Smits & Vandekerckhove, 2018).

4.
APPROACHES AND PRACTICES OF NATIONAL TRADE UNIONS FOR DIGITALISATION IN THE MANUFACTURING SECTOR

Besides the general policies regarding digitalisation developed at the federal and regional level in Belgium, trade unions also undertake actions and initiatives in this regard. These include research projects, awareness-raising campaigns, training activities, etc. Interviews with trade unions representing the metal, textile and chemical sector (which is the second largest sector in manufacturing in Belgium, see Table 1) were conducted, with interviewees from different trade union organisations, including ACV-CSC BIE, ACV-CSC METEA, and MWB FGTB-ABVV (Métallurgistes Wallonie-Bruxelles).

Table 3. Overview of interviews

Interviewee	Organisation	Topic
William Van Erdeghem	ACV-CSC METEA	Approach, actions and initiatives of ACV-CSC METEA on digitalisation.
Bart De Wit	ACV-CSC METEA	Digitalisation policy at federal level and in the Flemish Region.
Antoine Dedry	ACV-CSC METEA	Digitalisation policy in the Walloon and Brussels Region.
Lieve De Preter	ACV-CSC METEA	Social dialogue in manufacturing concerning digitalisation and career funds.
Vera De Norre	ACV-CSC METEA	Digitalisation and the effect on jobs and competences, switch to career funds.
Dimitra Penidis	ACV-CSC BIE (focused on chemical sector)	Approach, actions and initiatives of ACV-CSC BIE on digitalisation
Jean-Michel Hutsebaut	MWB FGTB-ABVV	Approach, actions and initiatives of MWB FGTB-ABVV on digitalisation.

General approaches and practices of national trade unions

Vision and perspective. Whereas ACV-CSC BIE and MWB FGTB-ABVV currently have no official position note on digitalisation, ACV-CSC METEA has included Industry 4.0 as one of their core topics starting from 2017. ACV-CSC BIE and MWB FGTB-ABVV indicate the importance of the European level in developing a strategy for the Belgian chemical sector and refer mainly to national and European documents. In the case of ACV-CSC METEA a change in presidency (in 2017) was key in establishing a digital transformation strategy. MWB FGTB-ABVV focuses on its core objectives in which digitalisation is both seen as an instrument to achieve objectives, as a challenge towards some objectives.

Research activities. Various trade union organisations participated or set up research projects to map out digitalisation in the manufacturing industry. ACV-CSC BIE participated in the European research project for the European chemical industry "Our Future Workplace - digital transformation in the chemical industry" (2018-2019). This project was a starting point for ACV-CSC BIE to reflect and focus on digitalisation as a topic. Moreover, ACV-CSC METEA took initiative to roll out a research project (2018-2019) which studied the definition of Industry 4.0, the presence of new digital technologies in the metal and textile sector in Belgium, the implications of this digital technology on work and the attitude of their members towards digitalisation. For this, a large survey was developed, and focus groups were organised. This project was used as a starting point for a national congress of ACV-CSC METEA in November 2019.

Communication and awareness-raising campaigns. In this field, the ACV-CSC METEA congress on Industry 4.0 "METEA MOVE" is one of the key initiatives recently taken. The main objective of this congress was to prepare employee representatives and trade unions officers for the digital and technological revolution and hear their voice in order to develop a broader digital strategy. As for the chemical sector, ACV-CSC BIE is currently developing an information note in which challenges and impacts are summarised to inform shop stewards as well as trade union officers and to elaborate on a sectoral position regarding digitalisation. Besides this note, ACV-CSC BIE relies mostly on European documents for the chemical sector, such as the roadmap 2015-2020 on the impact of innovation and digitalisation. Although MWB FGTB-ABVV did not yet develop campaigns focusing exclusively on digitalisation, topics to be taken into account concerning digitalisation have been indicated in which digitalisation is included as an opportunity as well as a challenge.

Training activities. In addition to the education and career funds (discussed in Section 2) trade unions often organise training activities for employee representatives and trade union officers themselves. During the preparation stage

of their congress, ACV-CSC METEA set up an introducing day for its trade union officers at "Living Tomorrow" (a social innovation project that aims to prepare people for and inform them about the future) in which they were introduced to new technologies and workshops were held. Besides this, four days of training, in which raising awareness on digitalisation was a central focus, were organised for the key employee representatives. In the current post-processing stage of the congress, further training initiatives are being developed. In the chemical sector, trainings will be organised in late autumn 2020 in which the information note will be presented to the employee representatives. For this, ACV-CSC BIE is preparing a lexicon explaining all terms concerning digitalisation and checklists for the shop stewards to use at the company level.

Lobbying. As far as lobbying towards public institutions is concerned, interviewees from ACV-CSC METEA stressed their willingness and readiness to weigh on future policies concerning digitalisation and new technology and to co-determine the strategy for manufacturing in Belgium. For the following sectoral negotiations, specific demands will be made based on their research findings and congress outcomes. Furthermore, in ACV-CSC METEA external partnerships have been established (e.g. with FNV in the Netherlands and IG Metall in Germany).

Collective bargaining. Some examples of collective bargaining at sectoral level concerning digital technology were discussed with the interviewees, who all indicated difficulties to reach sectoral agreements on the topic of digitalisation, which results in few or no sectoral agreements on digitalisation in the manufacturing industry. Whereas trade unions are in favor of developing a general framework for the sector, they have the impression that employers would rather negotiate at the company level, which would leave it to the individual company to specify the framework. Several examples were given. In the subsector of electricians and garages, track and trace systems have been introduced. Despite the efforts of ACV-CSC METEA no sectoral framework was reached. ACV-CSC BIE unsuccessfully tried to integrate the topic of digitalisation during the sectoral negotiations 2019-2020 which was rejected by the employer federation (Essenscia). At the company level, Solvay Group created a global framework agreement on digital transformation in their European Works Council. A good practice was given by MWB FGTB-ABVV who successfully demanded and obtained a joint declaration to be signed by the employer and trade union. In this declaration, both parties promise to engage in inclusive and people-centred digitalisation in which everyone (every worker and every company) has the opportunity to develop and grow.

Experiences from the shop floor

Examples of digitalisation and new technologies. In the focus groups, several examples of new digital applications and technology were

discussed. Most companies are making great progress concerning digitalisation. Participants cited examples of shop floor workers using digital tools such as tablets and smartphones. However, as discussed in Section 2, the implementation of highly digitalised technology, described as Industry 4.0, is still limited. According to the president of ACV-CSC METEA, Wallonia is the frontrunner region concerning the implementation of digital technologies in manufacturing in Belgium. During the focus groups, various examples of digitalisation were discussed. The focus groups gave a first indication in how many companies these technologies were present. Table 4 shows several examples of digitalisation and new technology under Industry 4.0. The presence and application of these tools were discussed during the focus groups. The various technologies are ranked from present in several companies to present in no or few companies.

Table 4. Examples of digitalisation and new technologies

Present in…	Examples of digitalisation and new technology	Application
several companies	Industrial robots	*Production.*
	Employee measurement and registration technology	*Experiments with wearables, apps for batching in, tracking systems and tools for safety.*
	Tracking technology for products or material	*QRcodes, RFID. Contains extra information about product.*
	Machine to machine communication	*Cyber physical systems: digital communication between machines-machines and machine-worker.*
	Automated guided vehicles	*Fixed programmed routes vs. self-driving vehicles which map out the route themselves.*
	3D printing	*Printing specific individual components.*
	Image recognition	*Quality control.*
	Cobots	*Mostly experiments. Not yet cooperative, only operating in the same room.*
	Drones	*Outside control.*

	Speech recognition	*Order picking with headset.*
	VR and AR technology	*Maintenance, tool for training, tool for clients. (Other examples of cognitive support systems: pick-by-light.)*
Few/no companies	Exoskeletons	*Currently nowhere in use. Only in discussion.*

Source: focus groups

Some nuances must be made. Firstly, since only employees from digital pioneers were selected to participate in the focus groups, this overview cannot be generalised for the manufacturing sector in Belgium. Furthermore, even the majority of these participants were not familiar with all digital technologies that were discussed. For example, the presence of VR and AR technology was only mentioned by two participants. In addition, frontrunners seem to be situated in specific sectors, especially in the metal industry. Secondly, similar technologies could hide differences in their level of built-in intelligence. According to the experience of the participants, the artificial intelligence in most technologies the manufacturing companies are using today is still rather limited.

Experiences with digitalisation and new technologies. As regards workers' experiences, perceptions and attitudes towards digitalisation and new technology, the image is rather ambiguous. On the one hand, employee representatives pointed out fear and resistance of workers towards the change caused by digitalisation and especially the speed at which this change takes place. Furthermore, the rapid change in terms of skills also has an emotional impact. Workers with a certain seniority feel as if their value decreases. They feel pressured to gain new knowledge and to develop new skills. Those employees are under the impression that their years of experience are no longer an added value compared to younger employees. On the other hand, employee representatives also acknowledge the advantages and positive elements of digitalisation. Participants believe their jobs will become more interesting and as soon as you can work with it, technology is expected to make work easier.

The function, purpose and implementation process of digitalisation are seen as the key factors determining the workers' attitude towards digitalisation. Concerning the function and purpose of new technology, applications which are implemented for control or pure automation purposes are facing the most resistance. In contrast, most workers are positive towards technology which is used to increase safety or to support and train workers. Also, the implementation of new technology has an impact. Resistance to

new technology could be limited when employees have been informed in advance and thus have been able to get used to the idea. Allowing workers to participate in this implementation process, such as organising test phases with feedback moments, has a positive influence on employee motivation in working with new technologies (Hyclak & Kolchin, 1986).

REFERENCES

Agoria, *Digitalisation and the Belgian labour market. Shaping the future of work*, 2018, retrieved from Agoria: *https://info.agoria.be/hubfs/Be%20The%20Change/Summary_Report_EN_V1.pdf*

Be.brussels, *Strategie Go4Brussels 2030. Naar een economische, maatschappelijke en milieutransitie voor Brussel*, Brussels, 2020

Be.brussels (n.d.), *Gemeenschappelijke Algemene Beleidsverklaring van de Brusselse Hoofdstedelijke Regering en het Verenigd College van de Gemeenschappelijke Gemeenschapscommissie. Regeerperiode 2019-2024*, Brussels

bedigital.brussels. (n.d.), *Opdracht*, retrieved from: *http://bedigital.brussels/nl/a-propos/#Mission*

Belgian Federal Government, *Government*, 2020, retrieved from *https://www.belgium.be/en/about_belgium/government*

Biatour B., C. Kegels, *Growth and Productivity in Belgium*, Federaal Planning Bureau België, 2017, retrieved from *https://www.plan.be/uploaded/documents/201710170946530.WP_1711_11557.pdf*

Deloitte, *2016 Global Manufacturing Competitiveness Index*, 2016, retrieved from *https://www.oregon4biz.com/assets/e-lib/IndRpt/AM/GlobalMfgCompIndex2016.pdf*

Digital Belgium, *Digital Belgium. Status June 2017*, 2017, retrieved from *http://digitalbelgium.be/wp-content/uploads/2017/07/compressed_Brochure_DB_FINAL.pdf*

Digital Wallonia (n.d.), *Digital Strategy (2019-2024)*, retrieved from *https://www.digitalwallonia.be/en/digital-strategy*

ETUI, *Industrial Relations in Belgium: Background Summary*, 2016 (a), retrieved from *https://www.etui.org/Covid-Social-Impact/Belgium/Industrial-relations-in-Belgium-background-summary*

ETUI, *National Industrial Relations. Belgium. Key Facts*, 2016 (b), retrieved from *https://www.worker-participation.eu/National-Industrial-Relations/Countries/Belgium*

Eurostat database, *Employment by sex, age and economic activity (from 2008 onwards, NACE Rev. 2)*

Eurofound, *The future of manufacturing in Europe*, Publication Office of the European Union, Luxembourg, 2019

European Commission, *Index van de digitale economie en maatschappij (DESI). Landverslag 2019*, 2019, retrieved from *https://ec.europa.eu/digital-single-market/en/scoreboard/belgium*

European Commission, *Skills for Smart Industrial Specialisation and Digital Transformation*, 2019, retrieved from the European Commission: *https://op.europa.eu/en/publication-detail/-/publication/21a549e7-05c8-11ea-8c1f-01aa75ed71a1/language-en*

Flanders Make, *Industry 4.0 – After the Hype. Where do we stand today?*, 2019, retrieved from *https://www.industrie40vlaanderen.be/sites/default/files/downloads/200109_rapport_industry_4.0_survey_-_fl_make.pdf*

Flemish Government, *Startnota transitie 'de sprong maken naar industrie 4.0'*, 2017, retrieved from *https://www.vlaanderen.be/publicaties/transitieprioriteit-de-sprong-maken-naar-industrie-40-startnota*

Flemish Government, *Visie2050. Een langetermijnstrategie voor Vlaanderen*, 2016, retrieved from *https://www.vlaanderen.be/publicaties/visie-2050-een-langetermijnstrategie-voor-vlaanderen*

Flemish Government (n.d.a), *Het Vlaamse clusterbeleid*, retrieved from *https://www.vlaio.be/nl/clusterorganisaties/het-clusterbeleid/het-vlaamse-clusterbeleid*

Flemish Governement (n.d.b), *Vlaamse regering 2019-2024 Regeerakkoord*

FOD Economie, *Digital Belgium: de digitale agenda voor België*, 2018, retrieved from *https://economie.fgov.be/nl/themas/online/strategie-voor-een-digitale/digital-belgium-de-digitale*

Hyclak T.J., M.G. Kolchin, *Worker involvement in implementing new technology*, in *Technovation*, 1986, 4(2), 143-151, doi: 10.1016/0166-4972(86)90005-2

Jandrić M., S. Ranđelović, *Adaptability of the workforce in Europe – Changing skills in the digital era*, in *Zbornik Radova Ekonomskog Fakultet au Rijeci*, 2018, 36(2), 757-776, doi: 10.18045/zbefri.2018.2.757

Larosse J., *Analysis of National Initiatives on Digitizing European Industry. Belgium*, 2017, retrieved from the European Commission https://ec.europa.eu/futurium/en/system/files/ged/be_country_analysis.pdf

Lenaerts K., *Industrial Relations and Social Dialogue in the Age of Collaborative Economy. National Report Belgium*, CEPS Research report, CEPS, Brussels, 2018, December, retrieved from CEPS, *https://www.ceps.eu/ceps-publications/industrial-relations-and-social-dialogue-age-collaborative-economy-belgium/*

Meylemans L., A. Vanderstukken, Y. Vereycken, M. Ramioul, *Industrie 4.0. Resultaten enquête. Aanwezigheid en impact van nieuwe technologieën in sectoren van ACV-CSC METEA*, Project Industrie 4.0 ACV-CSC METEA, HIVA KU Leuven, Leuven, 2019

Meylemans L., A. Vanderstukken, Y. Vereycken, M. Ramioul, *Rapportering focusgroepen*, Project Industrie 4.0 ACV-CSC METEA, HIVA KU Leuven, Leuven, 2019

OECD, *OESO Skills Strategie Vlaanderen*, 2019. retrieved from OECD, *https://www.oecd.org/skills/nationalskillsstrategies/OECD-Skills-Strategy-Flanders-Executive-Summary-Dutch.pdf*

OECD Data, *Value added by activity*, retrieved from *https://data.oecd.org/natincome/value-added-by-activity.htm*

OECD.Stat(a), *Collective bargaining coverage*, retrieved from *https://stats.oecd.org/Index.aspx?DataSetCode=CBC*

OECD.Stat(b), *Trade Union*, retrieved from *https://stats.oecd.org/Index.aspx?DataSetCode=TUD#*

Sociaal Economische Raad van Vlaanderen, *Visienota 2018: 'De transitie naar een digitale samenleving: aanzet voor een integrale beleidsagenda'*, 2018 (b), retrieved from

https://www.serv.be/sites/default/files/documenten/SERV_20180117_digitalisering_ADV.pdf

Statbel, *Kerncijfers. Statistisch overzicht van België 2018*, 2018, retrieved from *https://statbel.fgov.be/sites/default/files/files/documents/NL_kerncijfers_2018_web1a_v2.pdf*

Steunpunt werk en sociale economie, *Werknemers naar sectorgroep, paritair comité, statuut, geslacht en arbeidsregime*, Gewesten, België; 2005-2019, 2019, retrieved from *https://www.steunpuntwerk.be/node/2917*

Van Gyes G., D. Van Herreweghe, I. Smits, S. Vandekerckhove, *Opposites attract? Decentralisation tendencies in the most organised collective bargaining system in Europe - Belgium in the period 2012–2016*, in S. Leonardi, R. Pedersini (eds.), *Multi-employer bargaining under pressure – Decentralisation trends in five European countries*, ETUI, Brussels, 2018

Wallonia Government (n.d.). *Déclaration de Politique Wallonie 2019-2024*