



Roberto VIOLA, Director General DG CNECT
Photos: credit François de Ribaucourt
www.deribaucourt.com

PAPERS PRESENTED AT
THE EUROPEAN FORUM FOR MANUFACTURING
POLICY DINNER DEBATE ON

“DIGITISING EUROPEAN INDUSTRY –
NEW MODELS FOR MANUFACTURING”

WEDNESDAY 21 JUNE 2017
Members' Salon
European Parliament - Brussels

MISSION MANUFACTURING: KEEPING INNOVATION & COMPETITIVENESS IN EUROPE

On Wednesday 21 June 2017, the European Forum for Manufacturing Policy Dinner Debate: 'Digitising European Industry, new models for manufacturing' was held in the European Parliament, chaired by MEP Reinhard BÜTIKOFER, Rapporteur and Member of the Industry, Research and Energy Committee.

The objective of the Forum was to discuss Europe's industry digitisation, especially the new business models offered by the data economy and the legal aspects to their development.

The Commission has recently published the annual Europe's Digital Progress Report 2017 which monitors progress in digital policies in the Members States, such as developments in connectivity, digital skills and legislative initiatives regarding free flow of data. We are living a digital revolution which is transforming our societies. The aim of the meeting was to exchange views on the chances which digitalisation offers in Europe for economic activities and jobs, but also to exchange on the challenges our industry is facing.

The roundtable discussions focussed on several main points:

- Digitising EU Industry: Data as a Key Driver
- EU Data: Growth through new business models for manufacturing
- Rules for the EU data Economy: Regulation versus freedom of contract

The Roundtable brought together MEPs, senior Commission staff, the Maltese Presidency and senior representatives from manufacturing companies across Europe.

The keynote speech was delivered by Roberto VIOLA, Director General of Communications Networks, Content and Technology (DG CNECT) from the European Commission.

The first session was led by Reinhard Bütikofer MEP, Rapporteur followed by Joachim Schuster MEP, Rapporteur for Opinion on the Regulatory aspects of digital platforms and new working relation, representing the Employment Committee, Pilar Del Castillo MEP from the ITRE Committee and Jaromir Kohlicek MEP, Vice Chair of the ITRE Committee.

Manufacturing companies such as Atlas Copco, Schneider Electric, Siemens, ABB, Toyota, Caterpillar and CNH Industrial gave concrete examples of how digitalisation is part of society today.

ORGALIME, The European Engineering Industries Association also made a presentation.

The highlights from the presentations are included below.

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



➤ WELCOME & INTRODUCTION



Reinhard BÜTIKOFER, Member of the Industry, Research & Energy Committee

Good evening Ladies and Gentlemen. On behalf of my Parliamentary colleagues from the different political groups, I would like to welcome you most warmly to your European Parliament. My name is Reinhard BÜTIKOFER MEP, I am a member of the Green/EFA Group from Germany and member the Industry, Research & Energy Committee and Parliamentary Rapporteur on Digitising European Industry.

For those of you attending a European Forum for Manufacturing for the first time, it was established in 2009 by the then Chair of the Internal Market Committee. It is cross party and has a rolling programme of meetings. This brings together the Commission and Parliament to debate policies relating to European Manufacturing.

We have full agenda this evening. I would therefore be grateful if all speakers – both manufacturing and my parliamentary colleagues – could please keep strictly to their 5 minute slots so that everyone's voice is fairly heard.

➤ DIGITISING EU INDUSTRY: DATA AS A KEY DRIVER



Peter Köhler, Member of the Supervisory Board, Weidmüller Group

Dear Member of the European Parliament Mr Bütikofer, dear Members of the European Parliament, dear Director General Roberto Viola, dear Representatives of the Maltese Presidency of the EU Council M. Sant, dear Industry Representatives,

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



I would first of all like to thank you, Mr Reinhard Bütikofer, for hosting us, for chairing this Dinner Debate, and for your commitment to pushing the topic of digitisation high on the European Parliament's agenda – a topic that is so important to our European engineering industry.

We welcome your report of 10 May [on “Digitising European Industry”](#), and were pleased to see it adopted by an overwhelming majority of the European Parliament's plenary on 1st June. It provided a thoughtful analysis and call for action on the [Commission Communication on “Digitising European Industry”](#) of April 2016.

We support the four aspects developed in the report:

a) Firstly, we fully agree that the industrial digitisation strategy should be integrated in an overarching industrial policy. Such a policy will not only contribute to Europe's Industrial Renaissance, but can also help solve Europe's most important economic and societal challenges. In this context, we particularly appreciate the Parliament's call on the Commission to ensure the 20% target for industry's share of EU GDP is reached by 2020.

b) Secondly, we agree that to underpin this strategy we need a framework that supports investment, including in infrastructures – for example energy, telecommunications, and transport.

c) Thirdly, this support needs to target both the European digital and the digital security industry. Here, the EU must maintain and develop its leadership – not least for strategic reasons. And this will require greater support for EU R&D programmes.

d) Fourth and finally, we are convinced that education, training and lifelong learning - even if it is not a core EU competence - must be promoted between the Member States by exchanging best practices and through specific EU supporting programmes.

EU engineering industries support the EU's economic recovery

What is the role of the European engineering industries in this digital Industrial Renaissance? Well it is clear that our sectors will be central in supporting the EU's economic recovery. According to Orgalime's latest forecast, growth in the mechanical, electrical, electronic, and metalworking industries is estimated to be 1.0% in 2016 and 1.7% in 2017. Turnover is set to rise from €1977 billion in 2015 to €2024 billion in 2017. Employment is also on the up for the fourth year running – and is set reach 11 million in 2017. Needless to say, manufacturing is a driving force for the whole European economy. And now, we are already seeing that a substantial part of our growth is being linked to digitisation and the data economy. The Hannover Fair this year clearly evidenced this.

Data as key driver

On the one hand, digitisation is about making production processes more efficient, more flexible, and more sustainable. But beyond this, the data generated by digitisation will become a key driver for growth: industries are developing new business models based on the aggregation, clustering, combination and processing of large amounts of non-personal raw data. And this is transforming their positions on European and global markets. There can be no doubt that the future competitiveness and innovative power of our industries will be strongly dependent on the capacity of our companies to evaluate and manage the data generated.

Cooperation with the European Union is a must to create the right framework conditions

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



For our European businesses operating in the European and global markets, cooperation at the EU level will be vital to create the right framework conditions. It is clear that there is a high level of interest in digitisation – just look at the large number of reports adopted by the European Parliament in the first half of this year. And we as industry are more than happy to discuss in more detail with MEPs the opportunities offered by digitisation in terms of jobs and growth in Europe, but also to explain the challenges our industry is facing and the supportive measures our industry may (or may not) require.

Our concern is that we must avoid repeating the mistakes made too often here in Europe, where regulation stemming from an over-cautious approach by policy-makers has driven investment in innovative new technologies offshore. For us in the engineering industries, we do not yet know the many shapes these new data-driven business models will take - so it is too soon to consider regulating them.

If – as we believe will be the case – data and therefore the free circulation of data is to fuel Europe’s re-industrialisation, then the EU and national frameworks have to facilitate this, with both levels acting in a coordinated way. In this way, they can help European industry’s vision become a reality: a vision that sees industrial strength working in tandem with digital innovation - creating new and better jobs, new business models, new opportunities, and where lead technologies generate sustainable growth.

Therefore, we need a comprehensive strategy on data – something that was missing from the European Commission’s Communication on ‘Building a European Data Economy’ of January 2017. Such a comprehensive strategy would, for example, better synchronise European initiatives and measures to convince and support small and medium size businesses to invest in data analytics tools and instruments. This strategy should also address cybersecurity, and guarantee the legal protection of companies’ know-how and trade secrets. Without these essential elements, it will be difficult for a flourishing data economy to emerge.

The strategy must include a global dimension. Digitisation and Industry 4.0 in particular do not stop at any borders – neither national nor European. Speaking for my own company, Weidmüller has a long tradition of being globally active with business partners around the world. When it comes to data flows between factories, logistics, value chains, production lines, or products, we should assure the free movement of non-personal data – without any protectionism or lock-in effects. To build a successful data economy, the EU perspective is not enough: we must always bear in mind this global data dimension.

Two panels

Moving on to the programme ahead of us this evening: two themes are particularly at stake when talking about digitisation, and this is why we have chosen to structure our Dinner Debate in two panels: beginning with the theme of “EU data economy: growth through new business models for manufacturing”, followed by the theme of “rules for the EU data economy: regulation versus freedom of contract”.

Panel 1: “EU data economy: growth through new business models for manufacturing”

Looking at the first topic of ‘EU data economy’: growth through new business models for manufacturing’, a number of points are important from our standpoint in the engineering industry. Special attention must be given to allowing new business models to develop. Discussions must firstly take into account the fact that it is becoming more and more difficult in the engineering industries to



distinguish between the “traditional” and the “collaborative” economy: business models often combine elements of both, or have parallel approaches.

Moreover, the digitisation of industry is an on-going process which might develop in different ways and will not necessarily follow the path of the collaborative economy. As such, companies must enjoy the flexibility to explore new technologies and business models, while at the same time benefitting from legal certainty and a reliable framework. No new piece of legislation should be introduced before it is made clear that the issues it aims to tackle cannot be dealt with under the current regime or by contractual means.

With this in mind, platforms should be seen as business models and not as an undertaking or an industry sector – and therefore should not be the object of *ad-hoc* legislation. The current legal framework is/should be sufficient to address this issue.

Panel 2: “Rules for the EU data economy: regulation versus freedom of contract”

And looking ahead to the second panel, our industry has a number of priorities when it comes to possible future rules in the EU data economy, particularly on the issue of regulation versus freedom of contract. We are convinced that a functional digital single market depends on an innovation-friendly framework for the flow of non-personal data within the European Union.

Such a framework is also a prerequisite for making the EU a competitive location for new data-based business models.

The principle of freedom of contract is a fundamental rule of contract law in all European legal systems. It applies to business-to-business transactions and is the foundation of a free market economy. Freedom of contract should naturally be the basis of B2B relations concerning data exchange and flow of data overall.

Intellectual property rights, trade secrets, the right of companies to protect their know-how and the remaining legal framework should be fully respected in the digital world.

With regards to research activities (for example in H2020 EU-financed research projects), use of the concept of “open” data has to keep in mind the right for companies to decide and negotiate to what extent and under which conditions they share data. Excessive openness requirements would discourage cooperation between the private sector and scientific research, and hurt the global competitiveness of European industry and research.

Conclusion

In conclusion, then, we need a European approach if we are to fully unlock the potential of a flourishing data economy. In terms of both the opportunities and the challenges facing European industry, we need a sincere, consensus-driven and pragmatic discussion. This discussion should not be led by fears and pessimism. I personally believe that optimism creates opportunities and can combat wrong perceptions and paralysing effects.

This is why we should define our goals and objectives based on European values and with confidence. In an age of global disorder and political instability, now more than ever there is a strong need to refocus on our European values and the “European way”. And one of our long-standing values and the source of European prosperity is the European industrial sector. We hold the key to

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



a new industrial age, one that can create new jobs, growth and wealth for our European continent if we are fully committed to the digitisation process.

So thanks again to Mr Bütikofer, to the representatives of the three EU institutions and to the industry experts for agreeing to participate in the exchange of views on this topic that is of crucial importance to our industry. It is only through dialogue between the various stakeholders from all areas involved that we can prepare the ground for smart policy decisions.

➤ KEYNOTE SPEECHES



Reinhard BÜTIKOFER, Member of the European Parliament

Mr Reinhard Bütikofer made the following statements:

On the issues talked about in the report on Digitising European Industry, there has been harmony across the political spectrum.

The report was optimistic but also realistic: we are forced to acknowledge that there is a high sense of urgency, and that we are not leading the charge

With regards to services, the US is way ahead of Germany. The 10 biggest US Tech companies make 25 billion more in Germany than German tech companies make in the US.

International competition is underway especially from the US and Asia.

We need a clearer vision/ guiding principle

The core aim of the report was to demonstrate that we cannot allow a digital divide between society but also between nations – otherwise, we will be left weaker.

We need an EU wide strategy. Sector specific and National pillars will not be enough. Indeed, we need an umbrella strategy.

SMEs must play a major role, as they have sadly been lagging in terms of digitisation. There is a need to help SMEs get on board.

In this context, access to finance is very important. In Germany for example, the government has helped and there are public funds to help with digitisation. But compared to China the funds are thousands of times smaller.

Use of EU funding mechanisms should be continued, but private investment sector funding also needs to be facilitated.

Competition with non-EU states is just one element. The competition entering the EU market is of great concern too.

Cybersecurity is a big deal, and has the potential of playing an important role in the digitisation strategy. This should be pursued with a lot of effort.

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



The report advocates data sovereignty but warns against regulation that doesn't involve all stakeholders.

This is built on the strength of the EU standardisation framework.

The social dimension of digitisation and data will also play an important role for both labour issues and education.

On the topic of education, re-learning, e-learning, upskilling, life-long-learning, etc, are vital, but in the EU, we are not very good at establishing a comprehensive strategy for these. The funding mechanisms that do exist in Europe however should be integrated into these traditions for better effect.



Roberto VIOLA, Director General DG CNECT, European Commission

Mr Viola made the following statement:

Mr Viola is optimistic and the message seems to be the same everywhere, between political parties, industry, trade unions, which is good.

The EC recognises that digitisation is a very transformative process and important in the EU.

In April 2016, the EC prepared a number of communications on data. Since then, the DG CONNECT has been reorganised and its focal point more directed at digital industry.

Pleased to see that many SMEs are going along with digitisation. People believe that what we are doing is the right thing. Industry 4.0 is everywhere and is a fantastic opportunity.

But what is the problem then? Surely, the EU should be at the top? Everyone seems to be in on it, from leaders to the EU institutions to companies.

The problem is, we need to work together.

As an example: supercomputers are becoming hugely important, yet in the top 10 supercomputers unveiled not long ago, not one came from the EU. This is dramatic. The reason for this is because they are proposed as national products. But European nations are simply too small compared to the US or China. As such, EU Member States need to work together.

Another example is the use of connected cars and highways. The EU is in a prime spot to do this, it's in our interest, and it's something that can cross borders.

What about the data-economy? Is there a need for a strategy? Sometimes there are too many strategies.

Concerning the Package:

- free flow of non-personal data is a must.

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



- no need to rush on regulation of data but we do need to address the issue that some big (usually) foreign companies have access to huge amounts of data which cannot be acquired by SMEs, putting them at a huge disadvantage. Data sharing is needed: voluntary agreements between stakeholders is a solution. Public authorities may also need data acquired by companies for issues like road services.
- Cybersecurity: not enough attention has been paid to this in Europe. There are not enough response teams. A new scheme will be presented: a cybersecurity strategy for Europe.

➤ INDUSTRIAL POLICY AND DIGITISATION: OUTCOME OF THE MALTESE PRESIDENCY OF THE EU COUNCIL AND PERSPECTIVES



Peter James SANT, Technical Attaché for Industry, Permanent Representation of Malta to the EU

Mr Sant kicked off his presentation by mentioning that the Maltese Presidency had three main objectives in relation to the area of industry, namely:

1. Pushing for the need of having an updated European Industrial Policy Strategy;
2. Promoting the exchange of best practices between Member States and EU Institutions in particular on access to finance, SMEs, innovation and digitisation; and
3. Opening the door of the Council of the EU and inviting different industry key and distinguished stakeholders to speak on European industry and competitiveness.

Mr Sant recalled that during the last May Competitiveness Council, the Ministers adopted the Council Conclusions on a future EU industrial policy strategy. The ultimate aim of these Council Conclusions is to call on the Commission to provide a holistic EU industrial policy strategy for the future in time for the European Council meeting in spring 2018. The EU Member States would like this strategy to present medium to long term strategic objectives for industry and be included in the framework of the Commission's 2018 work programme. The EU Competitiveness Ministers also called on the Commission to accompany with this strategy an action plan which should include concrete measures, developed in close consultation with Member States and relevant stakeholders. The industrial policy strategy should also include an assessment of the impact of mainstreaming industrial policy into the EU strategic initiatives taken since the beginning of 2015."

During the Maltese Presidency, the EU Member States and EU Institutions (including the European Investment Bank and the European Investment Fund) had the opportunity to exchange best

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



practices and experiences concerning access to finance, financial instruments, start-ups and scale-ups, business transfers and innovation. The Informal Meeting of Ministers for Competitiveness (5 – 6 April 2017) held in Malta focused on the life cycle of Small and Medium Sized Enterprises and was a unique opportunity for Ministers, SMEs and policy makers to network and share their experiences in order to further identify the key initiatives that can be taken to improve the ecosystem for European enterprises.

As part of its commitment, the Maltese Presidency opened the doors of the Council of the EU to different stakeholders. The Maltese Presidency invited both multinationals and Small and Medium Sized Enterprises to voice their point of view on different subjects. Amongst others, the areas that were covered during the past months were: a) the Start-up and Scale-Up Initiative; b) the European Defence Action Plan; c) the future of the EU Chemical Industry, the Cumulative Cost Assessment on Glass and Ceramic Industry, logistics and innovation. Furthermore, the Maltese Presidency also organised a joint Working Party between the Industry and Better Regulation formation about the Digitisation of Industry, an attaché visit to the European Investment Bank in Luxembourg, and field trips to a Belgian cosmetic SME and Maltese enterprises. These onsite visits provided the attachés first-hand experience of the challenges and opportunities of running a business in the EU.

➤ EU DATA ECONOMY: GROWTH THROUGH NEW BUSINESS MODELS FOR MANUFACTURING



Filip VANDENBERGHE, Managing Director, Atlas Copco India

Atlas Copco is a world-leading provider of sustainable productivity solutions. The Group serves customers with innovative compressors and air treatment systems, vacuum solutions, mining and rock excavation equipment, power tools and assembly systems, and construction equipment. In other words, there is absolutely nothing that you have touched whereby our products were not involved in the process of making it. Today Atlas Copco develops products and services focused on productivity, energy efficiency, safety and ergonomics. The company – is top ranked on all major indexes related to sustainability and ethical behaviour - was founded in 1873, is based in Stockholm, Sweden, and has a global reach spanning more than 180 countries. In 2016, Atlas Copco had revenues of BSEK 101 (BEUR 11) and about 45 000 employees.

Panel discussions and Q and A session



Impact of Digitization within Manufacturing and New Business Models at Atlas Copco Compressor Technique Business Area (Headquartered in Wilrijk-Antwerp)

1. Within the manufacturing area

Drastic reduction by more than 50 % in the Time to Market in the R&D&I cycle's.

New products not only virtually designed (3D et al) but today also virtual testing, virtual development of the manufacturing process and the assembly process. Virtual modelling of the assembly lines inclusive tools, logistic functions and operator tasks. Virtual simulation of ergonomics of the line and virtual simulation of line balancing in relation to the nr of variants on the assembly line.

The need to build prototypes – pilot batches and zero series has been almost totally eliminated.

Additive manufacturing

Atlas Copco sees good potential in 3D metal printing, not for service parts, but for specific parts that are manufactured directly and synchronic on the assembly line and will define the variant components at the very end of the process. The advantage is huge as by defining the variance as late as possible on the line, the flexibility and reaction time to customer demand will increase whilst the logistics becomes less complex.

Our general concerns around 3D printing (when outsourcing the making of then parts) are the ownership of the data. Product File – Process file and tooling file are fully digitized. We need a legal framework, to avoid that minor changes in any of these digital files lead to the definition of a new product whereby the supplier can claim the “new” IP towards the Developer

2. New Business models towards the Customer base

Today a lot of digitization is used in the predictive maintenance programs that we (and a lot of Engineering Companies) offer to their customers

Compressors are linked via Smart Link via the internet to Hubs across the globe, where service technicians monitor the performance and status of the compressors and compressor rooms of our customers. Today they can take over the compressor and compressor room and bring the installation in a safe mode and plan the intervention to restore

However new business models are under study and test, whereby the customer hardly is aware of the equipment and installations he has or needs. The customer is guaranteed that he will have compressed air in line with his needs and in line with the cost expectations, equal as he gets electricity out of the plugs or water out of the tap.

We talk about

Compressed air As A Service (CAAS) &
Machines As A Service (MAAS)

The test and studies so far we are doing is to find the real value and money in the model.

The value is not in the data but in the Artificial Intelligence that is built on the algorithms and models. If this models are not accurate enough (failure rate must be less than 0.1 %), they will result in wrong interventions, wrong or unnecessary replacement of components etc. etc. and to a new diagnosis and visit. Then the money is gone!

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



The other challenge and concern is: how can we secure our business and avoid “UBERIZATION” and avoid that Data scientists or 3rd party players slip into our service business and position them between the Customer and the Manufacturer and run with the money.

Data ownership has to be protected by a legal frame work

3. Some Q and A issues.

On mayor challenges.

There is a huge sense of urgency needed in the digitizing transformation process of the industry and to reach the European Strategy to realize 20 % of GDP thru the Make Industry, as we are absolutely not in the driver's seat today

The greatest challenge for almost all European players, is the huge lack on technical skilled talent. As well in vocational training as by high school's as universities.

Taxes on robots and robots

We should not have double taxes. It is now several times proven that countries and companies with a high level of robotization in manufacturing are the best performers in turnover and profitability, and are the best recruiters. They also grow their employment by far the best.

Robots are a tool to become more efficient, and thus to grow the business in a more profitable way. A more profitable Profit and Loss account also leads to a higher Tax income for the country, so it would be counterproductive to put taxation on the robots a pay consequently twice taxes.



Alain DEDIEU, Senior Vice President Strategy Industry Business, Schneider Electric

Schneider -electric is a worldwide leader in Energy management and Automation having strong positions in Europe and also in North America and in China. Thanks to the EcoStruxure architecture that Schneider -electric developed based on an open and cybersecure IOT platform, we are delivering end to end solutions and digital services for most of the leaders in industries like O&G, Mining mineral metal or Food & Beverage, water waste water Industry segment.

Actually the industry has been using asset connectivity and data management for years, but the scope of possible have been expanded by new capabilities coming from the IT sector called the CAMA (Cloud - Analytics - Mobility - Artificial Intelligence) and as such we are still very dependent of the global large players on the IT Industry.

The value as Industry players is based on the deep knowledge of the applications to deliver new services. For example Schneider electric works on the empowerment of the workforce by new

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



training / simulations systems or giving more information than visible directly in the process to help making the right decision (digital twin of the plant). Of course the new millennial generation that will replace the baby boomers has different experience and expectations about the New technologies; Digitization is native for this generation. This is our role as Industrials and legislators to prepare and to attract this new generation in to the Industry sector.

Another for better efficiency of the Industry another application is asset performance, and Schneider has been already developing for numerous applications both in the machinery business (fleet management) and for large process industry. Here again the nature of the value we could provide is not about mass data management but also vertical analytics and customer business understanding. But the most important change we are facing with digitization and IIOT will be around the business model changes. By connecting the assets being a device, a machine or a plant, to the artificial intelligence we will be creating new services that will generate new business opportunities. By connecting the machines and the process their performance along the life cycle (design / operation / maintenance) will be under better control and could be subject to data drive services. This is the emerging need for energy efficiency performance contracting model or Machine as a service. Another service opportunity will be the connection of the supply chain with the Automation providing solutions for mass customization and business agility driving finally to better customer response and also better productivity.

As a conclusion the main issue that Industry is facing, is to be often compared to the B2C business where the commercial value is mostly based on additional services based on the trading of Data. Despite the fact what we have to partner and use technologies develop by the well-established global leader's IT, our commercial relation to data, privacy and trading model is very different. Our Industrial customers are looking mainly after solution and digital services to create efficiency and differentiation and above all cybersecurity. To give back leadership to Europe the legislators should keep in mind that the economy will get huge benefits to remain open and globalized in a cyber secure frame of work.



Thomas HAHN, Head of Corporate Technology Unit, Chief Expert Software and Industry 4.0 Expert, Siemens

Data, Data Economy or generally spoken the importance getting value out of the data is increasing and has a very high relevance for manufacturing industries – which of course has for Siemens a high importance too!

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



As we all know the increase of available data is very significant - today and in the future - especially in industrial environments. Important for manufacturing industries is to create value out of the data to improve efficiency, to enhance flexibility and quality and to develop new business models and services for our customers.

For Siemens digitalization overall has a top priority as supplier of automation systems to our customer and as user of our own automation systems in our approx. 300 plants worldwide

Siemens is one of the founding members of the European BDVA and the PPP (Big Data Value Organisation). BDVA is an industry driven organization with close to 200 members across EU incl. more 30% SMEs. BDVA Strategic priorities are

- Data Innovation Recommendations
- Develop Ecosystem
- Guiding Standards
- Know-How & Skills

Let's have a look at concrete application examples...

1. **Wind parks – Research projects (Alice):**

We analyze the performance of each wind mill with respect to wind directions, and to shadowing effects between the mills and learn how to optimize the position of each wing of each wind mill. Here we have to combine edge computing and HPC – to optimize the single mills wings but also to make use of actual weather forecasting. We are using artificial intelligence algorithms - to be precise neuronal network algorithms.

And as result improving the energy output of a wind park of by 1-3%

2. **High-Speed Train:**

26 high-speed trains are in use at Renfe Spanish Rail Company (Madrid-Barcelona-Malaga). We have a performance contract with availability guarantee and passengers are reimbursed for delays >15min.

Data analytics of on-board sensor data of critical components are used for predictive maintenance. Results are an on-time rate of 99.9% and due to high reliability 60% passengers switched from aircraft to train.

3. **Pad printing machines:**

A Belgium SME is the specialist for pas printing machines. They are using a Cloud-based fleet management connected with MindSphere – our open industrial IoT platform.

The service operation and production could be improved and an increase of repair rate by > 20% was realized via remote access.

Overall in Manufacturing industry we have to have a holistic view – along the complete value chain from product, production up to the service and the way back and have to use data along this complete value chains

A few wishes from our side regarding the political framework conditions:

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



- First, a closer cooperation between the EU and the national and regional research programs, especially in the area of data and the data economy – preferably inside the Digitizing European Industry (DEI) initiative.
- Secondly, in a business-to-business environment we need secure and industry grade free flow of data. E.g. productions sites are connected to each other and data have to be exchanged. Making sure that these adoptions of European legislation truly lead towards a homogeneous single European market.

Regarding the GDPR (general data protection regulation) should the national interpretation by the DPA (data protection agency) of the guidelines should not deviate from GDPR's articles.

Another more worrying example of new legislation is the actual Commission Proposal for a copyright directive in the Digital Single Market: this proposal would restrict Text & Data Mining (TDM), using automatic data processing & analyzing without the explicit permission of the Publisher. This would make any professional use of TDM in e.g. Industrie 4.0 impossible.

Finally: Data ownership, access and liability issues are adequately addressed by existing legislation. That is why we do not see the need of a possible EU framework for data access or the creation of new data access rights. Current rules and practices allow adapting to the needs of the parties and provide the appropriate setting to share data based on contractual terms, allowing innovation.

But again: There is a lot that we Europeans can do to drive digitalization and EU data economy, to set up the right cooperation, to build ecosystems, to establish an adequate regulatory framework - only there where needed.



Johan VERMEIREN, Group Senior Vice President, Service & Digital, Industrial Automation Division, ABB

ABB is a EUR31bn company with 132,000 people active in Power & Automation for utilities, for industries and for transport & infrastructure. With strong roots in Europe ABB is today present in more than 100 countries. We have been active in the digital field not just since Internet of Things was invented but already long before. We have more than 180 digital products and differentiate ourselves from other players in digital by not only collecting and analysing the data but also by initiating the actions to optimize cost, quality and safety. We close the loop to the assets by taking data back to the physical world through our automation solutions.

One of our core digital offerings is the **ABB Collaborative Operations**. Our Collaborative Operation Centres are remotely connected to our customer assets. They monitor the performance of these assets and the customer processes, provide technical support and apply analytics to optimize our customer's operations. We have several Collaborative Operation Centres all over the world and are

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



investing heavily to bring even more centres even closer to our customers. Example: about 1,000 ships sailing around the world are connected with Collaborative Operation Centres in Oslo, Helsinki, Singapore, Miami. Thanks to the data we collect from these assets and the operations, we prevent problems from happening, but we also provide data to the captains on which route to sail in order to minimize fuel consumption.

Critical points to guarantee optimal results for our customers:

- **Free data flow and safe data flow.** Economies of scale also apply to digital. The possibility to exchange data across borders and among global experts is therefore crucial. Safe data flow is actually a show stopper if not addressed.
- **Local availability of analytics skills.** Local availability of analytic skills is needed to fuel the pool of domain specialists, which are mostly local as their manufacturing processes are local. Local availability of analytic skills is also provides for people who as a next step in their career can support other local companies to become digital leaders and therefore support innovation and economic growth in Europe.
- **Business models which align interests of customers and service provicers.** A very efficient way of doing that is connecting P&Ls by sharing the benefits and using performance-based contracts.

Policymakers can help by

- **making data protectionism impossible;**
- **supporting companies who build local analytic capabilities;**
- **creating incentives for the benefits that are shared between the customer and its digital partner.**



Joachim SCHUSTER, Member of the European Parliament

Work on online platforms play a central role in the debate on the digital world of work. Some call it crowd or gig work- some call it sharing or collaborative economy. The EMPL-Committee recommends using the more objective terminology 'platform economy', which refers to the feature that work is provided on or intermediated by online platforms.

The impacts for workers are quite different from those in the context of Industry 4.0. In the platform economy, the debate is not focussing on automation and the possible job losses. On the contrary, in the last few years, the platform economy has been growing exponentially and it is expected to

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



create rather than to reduce jobs. Moreover, tasks are still carried out by humans but outsourced via the internet to a large number of people (the “crowd”). Platform work can be both: A physical service that has a local dimension or a digital service that is transmitted via internet and can be performed anywhere in the world. As the digital business models are diverse, the pay and working conditions involved often differ very widely.

This digital business models do not only lead to the creation of new products and services, but also to the disruption of traditional market concepts and the local economy. Now, we face the situation that many national and regional governments in Europe become active to address the challenges and regulatory grey zones. To avoid fragmentation of the single market, we urgently need a comprehensive legal framework on European level taking into account the impact on the life and work of millions of Europeans.

Looking at the debate on European level, there is a large disregard of the social dimension of the digital economy. This is also reflected in the Digital Single Market Strategy. The European Commission and many forces in the European Parliament follow the laissez-faire approach as best possible answer, or even promote further deregulation. This approach is dangerous. We need to ensure that employment and social policies keep pace with the digitalisation of labour markets and shape the development in a socially just and sustainable manner. More and better social protection has always been part of the answer to technological revolutions.

I agree, that new types of employment and work on online platforms can offer a better work-life balance, additional income and new chances for people distant from the labour market. However, there is also the risk that new working arrangements in the platform economy undermine current social and employment standards and give rise to precarious forms of employment. Competitive advantages should be built on innovation and efficiency, not on social or wage dumping. Therefore, I am convinced; we have to create a level playing field between the platform and the traditional economy. All rights and obligations should apply to all actors in the same way- no matter if online or offline.

This is also the basic approach of the EMPL opinion on ‘Collaborative Economy’ adopted in March 2017. Main principles:

1. Identify activities in the platform economy that are properly categorised as 'work' by distinguishing between 'commercial' and 'non-commercial' activities of platforms, workers and users;
2. Stress that all workers in the digital economy are either employed (employees) or self-employed based on the primacy of facts. This prevents platforms to simply state in their terms and conditions that everyone active on the platform is self-employed;
3. Apply existing legislation to the platform economy where possible and make regulatory adjustments where necessary, instead of reinventing the wheel;
4. Ensure that the platform economy, like any other economy, must pay tax and social contributions and comply with employment and social legislation;
5. Ensure adequate social security for self-employed workers, who are key players in the digital labour market;
6. Stress that freedom of association and collective action are fundamental rights that must apply to all workers and exclude individual platform workers from anti-cartel-measures;
7. Ensure the fairness of ratings on online platforms which constitute the digital market value of platform workers;

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



In conclusion, we have to strike a fair balance between the promises of technology and the protection of workers. Rather than inventing social rights specifically for new forms of employment, we have to find ways to integrate non-standard work into our social regulations. This requires a clear European framework to establish minimum standards on working conditions, social security and income policies for all workers in the platform economy. The implementation of the framework should remain the competence of the Member States.

Important in the process will be the role of the employees and the trade unions who have to re-define their roles within the digital economy. **One pioneering project in this area is the “Code of Conduct for paid Crowdfunding”**. These self-imposed principles, developed by German crowdsourcing companies, serve as orientation for fair cooperation between all actors involved and defines responsibilities of modern businesses in the digital world of platform work.



Pilar DEL CASTILLO, Member of the European Parliament

Mrs Del Castillo made the following statement:

Industry is a crucial part of EU success in the future. Resources must be given to the manufacturing industry.

Again, there is a lot in common across the political parties and institutions concerning the issues raised so far.

Despite shortcomings, the EU provides unique opportunities for the digital transformation. Despite such good conditions, the market is very fragmented. The digital is not regional but universal

Connectivity is needed in all sectors – such as telecoms back in the day. The landscape has now changed dramatically. All sectors are being touched by the digital transformation.

Although industry is still a very competitive force globally, there is a need to gain a position of leadership. We are almost facing a paradigm shift: data was once seen as something restricted to social media and advertising, but because of the IoT, data and digitisation are becoming closely tied to industry, and are offering a huge system of communications. Machine to machine communication will enable huge amounts of data to be gathered.

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



Jaromir KOHLICEK, Member of the European Parliament

Mr Kohlicek suggested a few examples:

1. Switzerland now has trains that stop automatically if no contact from platform.
2. Paris now has some metro lines that do not have any driver at all, it's all through autopilot.
3. He worked for the glassworks industry, and with machines. Over the years, the machines became increasingly 'digital' but so far have always needed some form of manual work to help. Digital means work has existed for a long time and the EU needs to keep this in mind.

➤ RULES FOR THE EU DATAT ECONOMY: REGULATION VERSUS FREEDOM OF CONTRACT



Eva VIRTUTE, Legal, Toyota Material Handling

Dear Ladies and Gentlemen, Dear Representatives of the European Institutions, Dear Colleagues,

It is a pleasure and an honour for me to be here this evening and to share with you views and ideas on the new scenario and on the opportunities that this *digital times* are bringing to us. So, first of all, I would like to thank you for the invitation.

I have listened to interesting speeches in the previous session and it is evident that, from different perspectives, the European Institutions and the European Industries are faced with an important cultural change which is affecting people's behaviour, the customer approach and expectations, and

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



the industry' s way of doing business. And, inevitably, we have a lot of questions on what should be the role of the laws and of the policy makers in this specific context.

As legal advisor of Toyota and as Chair of the Technical & Regulatory Committee of FEM, the European Materials Handling Federation, I have witnessed first-hand the change that digitization is generating within the companies and the production sites.

The digital technology and the use of data is transforming and innovating the whole supply chain, from the assembly line to logistics, from the delivery planning to e-commerce. New business models are being investigated or already carried out, while new skills and competences are needed and must be acquired.

There's no doubt that the use of data plays a key role in the development of new (smart) products, new (smart) services and new competitive scenarios. For this reason, it is of a crucial importance that both the European and national legal frameworks are innovation friendly and support the industry in its challenge.

In particular, in a *B2B system*, in which the materials handling industry operates, the use of non-personal data or of machine generated data, is the basis of a new generation of products, of safer machines and a friendly partner to monitor the efficiency of the goods produced, to improve the solutions functioning in the plants and to contribute to a "*greener*" industry.

Let me give you an example of data technology from Toyota Material Handling Europe ("TMHE"), a part of Toyota Industries Corporation which deals with materials handling equipment under the brands of TOYOTA, BT, RAYMOND and CESAB. TMHE is active all over Europe and, in the last fiscal year, has reached a turnover around 2.0 billion euros and employs about 9.500 people.

TMHE combines the expertise accumulated in various logistics sites with cutting – edge ICT (e.g. (Information and Communication Technology) to offer a fleet management system that supports the establishment of efficient logistic sites for customers, in different market and countries.

For instance, in Europe, we propose the "I-Site" system, a solution based on cloud technology – offering data, analysis and ongoing advice and which allows the possibility to check the status of each truck, including the utilization rate and the battery consumption, by means of a telematics unit communication between individual machines and a central database server. The solution contributes to eliminate what we call "muda" (namely, waste) and ensures a more efficient fleet operation, supporting the reduction of the environmental impact.

But to develop smart products and to have a competitive European materials handling industry, we need to maintain and preserve that necessary flexibility which only contracts can provide and that is vital in the business relationship. Maintaining the *freedom of contract* makes it possible to adapt to a digital environment that is in constant evolution.

However and besides that, companies need to be ensured that their intellectual property rights and intangible assets are protected, not only in the "tangible" world, but also in the digital one, in order to plan secure investments in EU.

The lack of a unique and clear scenario in terms of (non-personal) data ownership and management and the different national legal and administrative requirements, create uncertainty and lack of confidentiality on how to handle the data exchanged or acquired and on the liability profile, with a direct impact on the costs borne by the companies and on the industries' business strategy. Many materials handling companies operate at supranational level, with different production sites or operation centres. One of the main problems they face results from different rules in force in the EU

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING
POLICY DINNER DEBATE



Member States, which often create difficulties and extra costs during the handling and the process of data transmission and storage, especially in terms of time and administrative requirements.

All the examples mentioned are just to say that we are called to be responsible and find a way to preserve the European values, products and intangible assets and to transform our passion to innovate and to create into a *new competitive way to do business, to develop new skills, new values, new goods*. And I know that the materials handling industry can be supportive of this evolution, but in order to do this, we need to have the support of our Institutions, looking for a fertile ground where smart and innovative factories may create smart products, contributing to the *Europe's economic growth*.



Jérôme BANDRY, Director EU Government Affairs, Caterpillar

Thank you. As you know, Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives. People usually know us for the 3 million Caterpillar products at work across the globe in Construction Industries, Resource Industries and Energy & Transportation. It is however less known that our customers operate the largest industrial fleet of B2B connected assets in the world, at **around 470,000 and counting**.

You may not know either that across the globe and every year, construction cost overruns are estimated at between 2 and 4 TRILLION dollars, according to the Rosenfeld study (Journal of Construction Engineering and Management). Some 60% of the overruns are controllable, and connectivity is going to be the key driver to preventing overruns and un locking trapped value, through new data-based business models that allow:

- Better equipment management (where telematics allows machines to be located and to be loaded to a safe but full capacity)
- Better productivity (with fewer, more efficient hauls, as well as lower downtime through equipment monitoring or augmented reality for service technicians)
- Better safety (due to less traffic and more ergonomic features, such as fatigue risk management systems)

Two examples of what we can already do, today, with existing technology:

1. We did a test using available machines to compare traditional and data technology optimised construction of a road segment: starts with a drone surveying the site. The result is half the time

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



overall, 31% less man hours, 34% fewer equipment hours, 46% fewer project hours, 37% less fuel consumption, and a lower environmental footprint.

2. Automation is also changing the ways mines and quarries operate, from fully autonomous haulage trucks to remote control dozers. In just over three years, Caterpillar has moved over 300 million tons autonomously, outpacing manned operations by nearly 20% all with zero lost time injuries.

But for that to happen, we need connected worksites; Machine to Machine communication, contractual freedom for business-to-business transactions when it comes to data exchange and data analysis, and without excessive openness requirement; an affordable, secured and predictable way to move around for legitimate business reasons; as well as an innovation friendly environment.

So what could go wrong if we don't get the legislation right? Well, in a nutshell, we could become so perspective and build so many barriers to the flow of data, the usage of data or the localisation of data that in the end, we see machine to machine/business to business applications failing short of delivering a competitive edge to our customers.

Let me give you two very basic examples of what can happen if we implement the current e-privacy Regulation draft to machine-to-machine and the end-user is the data subject:

1. We can equip work tools with trackers to be able to locate them quicker on a job site. So we can have a bucket with a Bluetooth tracker that sends location information when a cell-phone is nearby. That becomes quite handy if you have a large worksite and quite many buckets, and Joe doesn't know where Jim left the bucket. Well that is confidential information under the draft e-privacy regulation, and consent is required from "all the communicating parties". And frankly, Mr Bucket doesn't know how to do that, nor does he have a screen or other means to log and transmit consent. And it becomes even worse if it was "Joe or Jim's" consent, not the ACME Company that actually employs many people like Joe or Jim.
2. The ACME company purchases a construction machine, with a telematics device that transmits machine information (hours, location, fuel usage, fault codes...). That information is needed for the efficiency of the machine, not to intrude into the operator's life during his or her working time. The manufacturer wouldn't even know who that operator is. But the current e-Privacy Regulation draft would require consent from the operator, including on bits and pieces of the equipment, such as connected engine, that have no screens where the consent can be readily presented and obtained. So are we going to have to replace the big red safety button to stop the equipment by a multitude of successive "consent" buttons before we can start the machine?

I could go on for much longer, but this hopefully helping you understand that machine to machine data can't be treated as personal data. We can get consent from our customers and manage the risks through contractual arrangements. We cannot get down to the asset level or the operator level. Data produced by machines, engines and entire fleets, through hardware, software, electronics and sensors, generate state-of-the-art information uniquely tailored to improve our customer's operations. Combining technology and services brings the information to life through key analytics that enable sustainability and save money, time, and even sometimes lives. In the end, that's why we do it.



Vik VANDECAVEYE, Data Economy Issuers, CNH Industrial

Introduction

I will talk to you about the **data exchange in agriculture**. Many falsely believe farming to be a somewhat traditional, backward sector. Nothing could be farther from the truth. To a good degree, the Data Economy and data-driven support services are already **a reality** here and now in the world of farming and farm machinery. For instance, a combine harvester today not only harvests thousands of tons of wheat in a matter of hours, but also terrabytes of data.

I'm in charge of the data management strategy at **CNH Industrial**. We are one of the world's leading manufacturers of agricultural equipment, construction equipment and commercial vehicles (trucks and buses). When we started, in 2011, we called it connectivity and analytics, because "internet of things" was not yet a common term; neither was the term "data economy".

Today CNH Industrial is working on building the "**eco-system**", i.e. the collaboration between different value chain players. Collaboration can concern **vertical** integration (i.e. within farming and with other equipment manufacturers) and **horizontal** (collaboration across industries, like the food industry, or automotive). In this respect I'm the chairman of the *digital farming* workgroup in CEMA, the voice of the European agricultural equipment manufacturers.

Allow me to start by making two remarks on the value and the ownership of data.

Value of Data

5-10 years ago, it was not so clear what and where the value of the data would be:

- We thought data was mostly **customer centric**, for the benefits of farmers. Today we see a lot of value is also for the manufacturers. Manufacturers can use the data to build better tractors. It remains difficult to quantify the value of data, because there is so much untapped or unproven potential.
- Data is used by many parties with **different goals**. Although all the data is coming from the same device – in our case, for instance, from the tractor or combine harvester - different rules apply depending on the usage of the data and intentions of the data consumer.
- Our view is that the **value comes from doing things**. Data only brings value when we use it in our activities. This means in the agro-food value chain:

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



- The farmer optimising his farming activities (contractors, agronomists, insurance, ...). Farmers become more productive while using less input like fertiliser and chemicals.
- Manufacturers like us using data to build better machinesSeed companies creating better seeds
- Consumers us info to take more care about the food they eat (security, safety, governments, ...)
- There is additional aggregated value through **networking and eco-systems** (collaborative economy, benchmarking and optimisation). Farmers will be part of data-driven or data-supported networks, rather than independently operating on their own. Completely new innovations will see the light of the day eventually, but in the end, the value comes from *doing* something.

Data Ownership

As regards data ownership, the mind-set has fundamentally changed over the last 5 years. The data is an integral part of the operation of the machine. We consider 2 major types of data: the **machine data**, which are the digital electric signals to make the machine work, and the **agronomic data**, the measurements performed during the operation of the machine, like yield information. In the past: many believed that **who captures the data**, owns the data. Some suppliers that were delivering the data capturing devices, thought it was their data. Today, there is a common understanding that the data **belongs to the subject** (or it's owner) being measured. E.g. the yield data is from the farmer's field, so it's the farmer's data. So what challenges does this bring and what do we need to do to make the data economy work in our sector?

Challenges

- In the case of agriculture, the data from the farmer is not consumer data. It is **company data** – it reveals all aspects of the farmer's business. The data represents what the farmer is working for to stay relevant in a challenging environment. It's what he is doing for a living, and for his family.
- **Data cannot be anonymised** (the field is always identifiable). We need trust before exchanging information.
- There are **different business models** that require **different agreements** for data usage.
 - In most cases customers get services, or better products, or agronomic advice.
 - In some cases farmers get money in return for their data (but lose control).
 - Farmers can also be part of an integrated supply chain, where the food processor plans the activities in order to optimise the complete production chain, from seed till shop.
 - Farmers have created coops to manage their data, or to manage data access rights.
- There is no one-rules-all winning strategy. In this phase of growth, **freedom is required to let the market experiment**. We need to ensure there is sufficient competition on the value creation from data.

Requirements

What we need to make the data economy work.

- **Data exchange** – without data exchange, there won't be value created. We are also investing heavily in the development of standards.

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING POLICY DINNER DEBATE



- **Transparency:** if there is data captured or exchanged, the people involved need to make agreements on what the data is used for, how it is potentially shared with other parties, etc.
- For this to function, we firmly believe we need a **sectorial dialogue**. In our case, we have started such a sectorial dialogue in farming: CEMA – COPA (farmers and cooperatives) – Fertiliser Europe (input suppliers). We are in dialogue with these parties to create guidelines on how to handle data (a “data management policy”), in order to create trust to make the digitisation happen faster.

Conclusion

A consensus between different parties involved in data exchange is the best solution, rather than implied regulations.

- The **use cases are very diverse**, there is not a one-fit-all solution.
- **Everybody** involved in data management **is aware** of the peculiarities of ag data management, and looking for the best solutions for their use case and the parties involved.
- The **market is in development**. We will kill innovation if we limit the box to think in. How we see the world today is different from how we will see it tomorrow. Our vision is limited by our lack of knowledge. We don't want our knowledge to become limited by our lack of vision.

➤ THE NEXT STEPS



REINHARD BÜTIKOFER, Member of the European Parliament

DG GROW with Bienkowska is under pressure from the EP, trade unions and industry that an industrial strategy is needed. We are at a moment in time when things are beginning to move.

We need a European approach – we need to team up between nations.

There is a need to look at infrastructure: access to technology needs to be spread out evenly across regions so that everyone benefits.

Innovation: 3% of GDP is supposedly meant to be invested in innovation in each country. Many do not reach this, and there is the question as to whether the bar should be raised. Difficult discussions lie ahead.

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING
POLICY DINNER DEBATE



➤ Q&A

Timothy Naylor: what do you think is the key challenge facing digitisation in Europe? Is it scale? The EU has 'human' problems (no common language, fragmented market, etc) – is this disadvantage?

Koehler replied: EU does not have a scale problem as there are enough people, and the number of SMEs going international is increasing all the time

MEP Bütikofer doesn't believe that compartmentalisation is the issue. This can be overcome by political will – and so far there is a lot of consensus across the board. A bigger challenge could be whether we can conquer the direction the power of the industrial revolution will take. This issue has not been settled, and it will be seen whether it will be a scourge or a blessing. It could tilt either way. The Report emphasised opportunity. To make this narrative stick, a lot more work in the public sphere needs to be done. We need to show people how digitisation can help deal with the biggest societal challenges that we face (climate change, demographic changes etc).

Viola: It is difficult to compare the EU to other countries (as we are democratic and so on) and our values and way of life comes at a price. We respect workers and listen to everyone, we have a welfare system, and all of this means that the processes at work in Europe are going to be a bit slower than elsewhere. But this is as it is, and it is something most people will be happy accepting. What needs to be done, is to get young people into technical work. Member States have a central role to play in this, and they must train young people.



Antony FELL, Secretary General, European Forum for Manufacturing (EFM)

We wish to thank most warmly REINHARD BÜTIKOFER MEP for his excellent chairmanship and for the time he devoted to this meeting.

A very warm thank you goes to ROBERTO VIOLA from the European Commission for his attendance with us tonight.

PAPERS PRESENTED AT THE EUROPEAN FORUM FOR MANUFACTURING
POLICY DINNER DEBATE



We would also like to thank ORGALIME for the sponsorship of the evening as well as our MEPs, our speakers from the manufacturing sectors who have all respectively contributed to tonight's stimulating discussion.

The next European Forum for Manufacturing Roundtable & Dinner Debate will be on THE COMMISSION'S "**ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE**".

This will take place in the European Parliament on **Wednesday 6 SEPTEMBER 2017 from 18h30 to 22h00**.

Miguel Arias CAÑETE, Commissioner for Climate Action & Energy from the European Commission has been invited to deliver the keynote speech and will include interventions by **European companies active in this area**.

Interventions will be invited from **Parliament's Industry, Research & Energy Committee** as well as the Rapporteurs and shadow Rapporteurs for both the ITRE and ENVI Committees.

To register, please contact my colleague Chloé Matagne at cmatagne@euromanuforum.com and for more information about this event. Deadline for registration : **21 JULY 2017**.