



DIGITISING CONSTRUCTION MACHINERY

THE ROLE OF RESEARCH FUNDING AND REGULATION

*18h00 - 21h30 Roundtable Dinner Debate
Wednesday 21 November 2018*

European Parliament





Paul RÜBIG MEP, (EPP Austria), Budgets Committee,
Industry, Research & Energy (ITRE) Committee

Paul RÜBIG MEP, Chair, welcomed participants to the European Forum for Manufacturing Roundtable Dinner Debate in the European Parliament which was supported by CECE – Committee for European Construction Equipment. He highlighted that funding for this area was key and paid tribute to the excellent activities of the European Forum for Manufacturing.



Khalil ROUHANA, EUROPEAN COMMISSION,
Deputy Director-General, DG Connect,
Directorate General for Communications Networks, Content and Technology

Digitalisation transforms products, production and business processes, and business models. Digitalisation of all sectors of the economy is needed for the EU to reinforce its competitiveness, build a strong industrial base and manage the transition to a smart economy.

Digital tools and technologies that are already available today can produce large improvements in cost, scheduling and productivity during construction projects. They can also help to better monitor and assess the service level performance of buildings and infrastructure during the whole life cycle, in particular from a sustainability point of view.

- However, the level of investment in digitalisation is still rather low in construction compared to other industries. CECE is to be congratulated for its active role in promoting the opportunities of digitalisation and new business models.
- The Commission has launched the Digitising European Industry initiative in 2016. The EU is investing via the Horizon 2020 framework programme, and will invest in future via Horizon Europe and the Digital Europe Programme.
- Dedicated EU sponsored activities related to the digitalisation of the construction sector include projects under the Energy-efficient Buildings Public Private Partnership (PPP), a preparatory action to define a digital industrial platform for the construction sector, and gathering individual efforts together, especially in the field of public procurement, e.g. by supporting the EU Building Information Modelling (BIM) Task Group.
- In order to advance digitalisation of industry, appropriate regulation needs to be in place in addition to funding. As examples, the regulation on free flow of non-personal data, the April Data Package, the Cybersecurity Act, General Data Protection Regulation (GDPR), and the ePrivacy Regulation.
- The ePrivacy proposal covers the transmission of Machine to Machine (M2M) communications but does not cover the applications layer. Transmission refers to the transport of information, for instance from the device to the server of the M2M/IoT (Internet of Things) provider. The applications layer refers to the processing of information, for instance in the device or on the server of the M2M/IoT provider. The reason to cover also the transmission of M2M communications is the protection of the confidentiality of electronic communications.



Confidentiality of electronic communications is not limited to personal data as those communications may also contain business secrets of legal persons.

FINANCING THE DIGITAL TRANSFORMATION OF THE CONSTRUCTION INDUSTRY



Davide Meinerio, I&D CONSULTING, Managing Director

Digitalisation is widely recognised by machinery manufacturers and by the construction industry as a whole as the main technology and business trend. Digital transformation is indeed happening in the machinery sector, as much as in other parts of the larger construction industry - such as building and rental sectors. Therefore, in the last 8 months CECE carried out research specifically dedicated to this subject.

The scope of the research was to conduct an enquiry into the digitalisation of the construction sector so as to gain a better understanding of the dynamics and evolution of the changes triggered by new digital technologies. In particular, the study was meant to provide the actors involved in the sector with a comprehensive picture about future trends in the new digital scenario.

Considering the size and complexity of the construction sector, the research was conducted following a qualitative approach which combined the analysis of existing reports with interviews held with companies from across the construction sector (targeting Original Equipment Manufacturers - OEMs, contractors, rental companies, dealers, IT providers and end-users).

Throughout the study, digitalisation is intended as a wider and more complex issue than the adoption of digital technologies per se. It means transforming business model by leveraging the potential of digital technologies to create new revenue and provide higher value.

I would like to proceed by focusing on the major results of the study.

1. The first element to stress is the importance of data in the construction sector. For most of the companies that took part in the research, digitalisation means accessing information to gain insights and leveraging the “power of information” that stems from the collection, analysis and management of data to provide new solutions with a higher value added. On one side, collecting, integrating and crossing large datasets from processes and operations in the ecosystem helps better investigate problems and inefficiencies in the construction site of the future. On the other, the knowledge generated from data analysis opens the way to the provision of new and innovative outcome-based solutions whose costs and returns can be determined *a priori*. The potential therefore lies in the use of data, not in its ownership.

Therefore, considering the complexity of construction projects, in order to reap the full benefits of data there is a need to find new agreements on data sharing, that in turn entail new forms of collaboration among the actors of the value chain. In that regard, one positive example that has been investigated in the research is represented by the EU Code of Conduct on Agricultural Data Sharing.



2. A second element that emerged from the interviews is the need of new forms of public support to digitalisation of the sector, with a particular focus on SMEs. Companies tend to favour three different forms of public support:
 - a. EU grants for R&I: in that regard, companies in the sector would like to see a section of future work programmes of Horizon Europe devoted to the construction sector – in line with what was already started with the call DT-ICT-13
 - b. New schemes - such as PPPs or Joint Undertaking (JU) - dedicated to the digitalisation of the construction sector that foresee a joint effort from the public and the private side. This would partially relieve the construction industry from investment costs that they could incur, thus freeing resources for SMEs to accelerate their digital transformation
 - c. A last form of support should be devoted to training and education at two levels: the first level (more technical) to equip current and future employees with the necessary technical and digital skills; with the second level (managerial) to create a new class of executives (or innovation managers) capable of leading and managing organisations in the new digital scenario.
3. Lastly, most of companies agree that best examples of digitalisation occur when public sector finds the right balance between mandating the adoption of digital technologies (push) while reducing burdens (i.e. tax breaks, incentives) to companies that take the digitalisation path (pull). Considered that public procurement accounts for a major share of total construction expenditures worldwide, making governments one of the industry's main clients, any minor step that a government takes in support of digitalisation can generate a significant impact.

That is why the construction industry advocates for a change of paradigm towards the “best value for money” principle in public tendering in order for digitalisation to happen. This is particularly important for facility management, where digitalisation can play a fundamental role for all intervention aimed at improving efficiency and sustainability.

Laura Tordera, FERROVIAL, Head of R&D
ENCORD, Secretary General

The world is changing and the construction industry needs to change at least as fast as the rest of the sectors. In this framework, the key is digitalization and digitization. Digital technologies are crucial in this change. The role of BIM is essential in this context, both for providing new use cases and for facilitating the existing ones.

We have different technologies for different phases in the construction process, we can highlight the main ones:

- in the design and engineering: virtual and artificial intelligence as well as surveillance technologies
- in the construction phase: intelligent equipment and robotics
- in the operation phase: sensors for predictive maintenance and augmented reality.





And big data and analytics for the whole life cycle. “Data is the new oil, the new currency in the digital world”. But it is not only the data, it is the use of this data that is the most important element in this equation.

We can safely say that digitalization will change the rules of the game.

Digital technologies are enabling companies to:

- boost productivity
- manage complexity
- reduce project delays
- enhance safety and security.

Small improvements will translate in huge benefits for companies, governments and society in general.

The industry as a whole needs to drive this transformation. We shape our built environment and we should continue being the leader of this transformation.

Digitalization of the construction sector should be one of the main priorities of the European Union agenda. European mandates are needed.

Helena Lovegrove, DIGITALEUROPE, Director

DIGITALEUROPE is the Association representing the interests of the digital technology industry in Europe. Our members consist of some 60 corporates from the IT, telecom and consumer electronics industries and over 40 national tech trade associations across Europe.



Digital Manufacturing is of core interest to our members and we have recently set up an Executive Digital Manufacturing Council consisting of the CTOs (chief tech officers) and senior vice-presidents of many of our members including European leaders such as Bosch, Siemens and Schneider-Electric as well as global leaders operating in Europe such as Microsoft and Hitachi. The work of this group focuses on a wide range of issues that the EU needs to get right to secure this competitiveness. The group has three overarching goals:

1. growth in GDP
2. new enabling technology to achieve a cleaner environment and
3. enhancing skills.

I would like to focus my remarks on the latter tonight. Skills are key to a successful digital transformation.



The European Commission has identified that over 40% of citizens in the EU lack even the most basic IT skills. Skills they identify as ranging from using an excel spreadsheet, sending an email, performing online search to having a video conference.

In addition, there are forecasts (by empirica) indicating that EU will be missing over 500,000 needed ICT specialists by 2020 while at the same time unemployment among youth is about 20%.

This situation needs to be addressed. The European Commission has indeed an ambitious program in their next Multi-Annual Financial Framework (MFF) to address the skills gap, though ESF+, Erasmus+, ERDF, Horizon and the Digital Europe programme and we are very pleased about that. In particular we are happy that the digital Europe programme includes investment also in the more advanced ICT skills. We do believe that the budget could be a bit more ambitious.

Perhaps for this audience, two current ongoing EU initiatives could be worth mentioning here tonight: the Digital Skills and Jobs Coalition (DSJC), launched by the Commission in 2016 (we are on the governing board and we have also been supporting Commission with the activities) and the Digital Traineeship Opportunity.

The DSJC is an initiative under the EU's skills agenda that brings together Member States and stakeholders, including social partners, to pledge action and to identify and share best practices, so that they can be more easily replicated and scaled up. So far the coalition has managed to achieve excellent results. In two years, since December 2016, it has gathered almost 400 members across sectors and collected over 100 pledges to train Europeans in digital skills. There has been everything from pledges to retrain job seekers, teachers, providing coding classes for children, to actions targeting IT professionals. Many of our members, ICT companies, have offered trainings all across Europe and on-line and the majority of pledges has so far come from the ICT sector. However, there is a growing number of pledges also from other sectors.

The Digital Traineeship Opportunity is an initiative that allows companies to take trainees, funded under Erasmus+, and train them according to their specific ICT needs.

Looking forward, again, we need to do more to address the problem and we call for the most ambitious programme possible in the next MFF. Because without adequate digital skills, we will not have a successful digital transformation.

Dimitrios PAPANIMOU MEPA, Vice President Parliament,
Regional Development Committee

Some say that the future is blurry and this is why we should be afraid of it. I disagree. The future is blurry unless you know how to create it.

Automations are accelerating the digital transformation. They promise a smarter future for the construction industry and its 1.36 trillion turn-over. The pace of change even in manufacturing is unprecedented. Whether we





are going to take advantage of this transformation or not, is related to the degree of the capacity we have to organise the future.

We live in the age of:

- micro and nano technologies
- robotic assistants increasing the productivity rates
- 5G technologies
- and machine learning.

This revolution is embraced by the European Commission - but this is not enough. The digitalisation of the construction industry should be developed not as a counter-scenario of the existing policies but as the mainstream course that we will all have to pursue in the coming decades.

The European Commission and the Member States need to step in and drive this process by organising their own administrations and working cultures in a way which enforces this digital transformation of the construction industry but at the same time it guarantees the working rights and the work ethics of the future labour force.

To my view, we should focus on the opportunities emerged by giving the space to High Skill Digital workforce - investing in research of the robotics sector as well as in their role in the future of work.

The moment has come for us to invest in exploring and forecasting the regulatory frameworks needed to lead. Greek Government over the past 3 years has managed to include Greece into the international map of digital transformation. A key-moment for Greece is when recently the Ministry of Digital Policy, Telecommunications and Media took the decision to focus on technological innovation for all sectors including the constructing sector. A Labour Market Diagonis Mechanism is designed to help produce insight as to who needs reskilling and for what technology.

In addition to this, the Greek Government took the initiative and in the coming weeks will establish an Institute for Technology Politics and the Future. This will be a policy oriented Institute that takes high tech seriously, makes sure it is politically elaborated by stakeholders across Greek the economy focusing on sector specific issues and labour in the corresponding industries.

Not everything is running smoothly and I cannot say that there are no challenges. However, for the very first time in Greece there is a Government with courage and determination to lead on the digitalisation of all sectors. We are happy that, even though it is a small country, its efforts bear fruits for the future generation.



THE E-PRIVACY REGULATION: A POTENTIAL OBSTACLE TO DIGITAL MACHINES

Charlotte Le Bozec, CATERPILLAR, Head Regulatory Affairs,
CECE, Chair of Data Working Group

1. Background on E Privacy

We are living the digital revolution, where technology is evolving so rapidly that it is hard to follow its benefits and impacts, where business models are being revisited and challenged. We went through communication between individuals, to individuals talking to objects and objects talking to each other and even “thinking” by themselves.



The Digital Single Market is a reality and it is seen as an enabler to foster growth in the economy.

The Construction Industry is no different from the other industries and is grasping opportunities by embracing technology to optimize the use of machinery and increase efficiency on job sites.

An example is Caterpillar - Connectivity has approximately 600,000 connected assets which analyse data fuel consumption, weather condition impacting efficiency, location of the product etc

Connectivity has also brought safety in the Industry (sensors/ trackers etc)

- driver/operator: monitoring driving (tired- alarm to alert the driver)
- work tools location - no need to search on the job site
- autonomous vehicles which change direction to avoid collision - collaborative environment
- preventive maintenance

Trust and security in digital services are key and are part of the digital strategy

- reform of the data protection framework : GDPR
- higher level of privacy protection for users of telecommunication services (E Privacy)
- cybersecurity package (not addressed today)

a. GDPR

Directive was replaced by Regulation which protects natural persons only.

Manages to address IoT concerns through 3 principles:

- privacy by design (think about personal data at the original of the project)
- accountability (business is responsible to protect the information)
- transparency for natural person whose data is being used

The Regulation also allows for different grounds to be able to use the information (consent, legitimate interest)



b. E Privacy - privacy of communications:

Directive 97/66/EC, the Telecommunications Privacy Directive.

- telecommunications sector only
- applies to the processing of personal data in connection with publicly available services in public telecommunications networks.

E Privacy Directive 2002/58/EC (private life and Telecommunication) repealed D 97/66/EC

Changes:

- extension of scope : from traditional voice telephony (circuit switched connections) to data transmission, use of internet (encompass packet switched transmissions).
- includes specific protection of location data of a user of a publicly available electronic communications service. (new type of services available over cellular and satellite networks allowing the exact positioning of a mobile user's terminal equipment.)
- introduces the protection of information stored in terminal equipment.

Take aways:

- securing confidentiality of communications etc of people
- Text for Telecommunications companies

The E Privacy, like the Directive on personal data, needed to be updated to fit in the new Digital Single Market. However one can wonder today if the path chosen has brought all the benefits it wanted to.

2. Draft E Privacy -Discussions:

a. Legislative Process

Goals:

- extend the scope to over the top services (OTS) - services which deliver audio, video, other media content over the internet eg: WhatsApp
- finalize the text so that companies comply with it on the same date as for the GDPR (ie May 25, 2018) as it applies to natural persons

Outcome:

- the text was drafted in January 2017
- the Parliament adopted its report in Oct 17
- however 827 amendments were tabled and the report was adopted with a small majority (31/24)

After one additional year of work , the draft is still being debated before the Council, which is



still trying to address concerns.

b. Examples of concerns in the construction industry

The construction industry was very surprised and confused about the draft.

- M2M

Reference was made to M2M in the Preambles – ‘Whereas’ of the initial draft. CECE sought clarity to understand whether M2M was in scope or not. Depending on the people, the answer varied.

Today, M2M communication is within its scope. Why? Moreover, how will the Industry be able to address the current requirements?

The need to protect natural person/consumers and to bring more transparency when using their information is clear. What is the need to protect the communication between an excavator and its bucket?

In the construction industry, M2M communications are not about capturing information about natural person but about the working environment and the product itself.

In a B2B (Business to Business) environment why should the same rules apply as in a B2C environment? The GDPR already applies to protect employees using machinery and work tools.

The industry struggles in seeing how private life could be at stake in the construction environment, which is deemed to be professional. In addition the scope of the text was extended to apply to legal entities.

Where is the trade secret exchanged between a machinery indicating that it needs fuel and the office of the construction company using the machinery on a worksite?

- End user

In an M2M environment, who should be considered as the end user, who should consent? The operator? In such situation, would he/she need to consent every time the machine is transmitting, jeopardizing his/her safety?

The company using the machinery? In such situation, could an agreement at the legal entity suffice? CECE is of the opinion that the basis of business-to-business relations should remain the freedom of contract even when concerning machine-to-machine data exchange.

- Other topics

Other question about the definition of communication services, how to approach the requirements around the terminal equipment now that GDPR has already been implemented etc.

At the speed at which technology evolves, AI will be in our industry tomorrow. How will the E Privacy Regulation address this?



Conclusion:

Today what the industry is seeking is clarity about this regulation, its requirements and its potential impact on how the connectivity of product has been developed.

Time should not be the driver for the approval of a text which has so many collateral implications.

If there is a need to regulate in the B2B environment, we urge you to continue engaging with all sectors to better understand what would be strictly necessary.

Take the time to think about the consequence and rule by principles.

Tom Valbak, TRACKUNIT A/S Denmark,
Vice President Business Development

Trackunit is a technology and (globally leading) telematics company within the construction segment with its HQ in Denmark, +15 years in Heavy Equipment telematics

The presentation focus is on:

- “The Connected Jobsite” aiming to eliminate machine downtime
- data integration and data sharing for efficiency gains (inventory/asset management, operational efficiency, crew and personnel safety)
- empowering the equipment operator as a key part of the industry Eco-System at the connected job-site
- working towards safer job-sites via wearable technology implementation and operator authentication.



Key challenges within the construction industry

- Lack of digitization in general – Construction is last of all sectors reg. digitization (McKinsey Study)
 - For the connected job-site to happen, data sharing is crucially needed across various software platforms, vendors and institutions. The data needs to be standardized and accessible in a cyber secure environment which is to be considered greatly by the legislative powers when shaping the regulations of tomorrow
- Large construction projects are on average 80% over budget and 20% late
 - Digital integrations can help e.g. 5D BIM is a great example of how digitization can help eg in Norway where the first full-scale BIM projects have yielded amazing savings both in time and overall costs
- Availability of skilled workforce is a primary challenge



- Automation/digitization needed in order for a shrinking workforce to be able to work smarter and with greater efficiency to still produce the output needed for the industry. If EU regulations become too strict these efficiency gains might be hindered and we cannot expect a significant growth in output as seen in other sectors that reaped the benefits of digitization
- If we are to attract new and young talent to work within the industry, we have to adapt to the ways of the new generations which includes a much more digital approach. The new technology and software solutions that we are seeing being deployed in construction can attract more young people to be interested in the sector and help mitigate the risk of a shrinking workforce. If these new incentives are unintentionally hit by stricter regulations to hinder deployment these solutions will become cumbersome to enable and the benefits can disappear in administrative burdens
- Points for careful investigation
 - Ensure that legislation does not hinder the growth spurt that the construction sector has just initiated
 - Ensure availability and secure access to standardized data lakes of IoT data for current and future insights for optimization, efficiency and safety gains. This is what the governing body should ensure and work towards and raise funding for
 - Ensure that the fear of legal repercussions do not hinder the growing interest in adopting digital solutions within the industry. Hence, a very clear guideline to explain (in layman terms) even to the smallest construction company how this might affect him and what he has to do (and not necessarily hire consultants for) is needed. Enlighten and empower the actual data-controller for this entity to make a decision that lean towards more digitization without fear of legal data repercussions

Martin Sebestyén, ZEPPELIN RENTAL, Fleet Manager
EUROPEAN RENTAL ASSOCIATION (ERA), Chair Technical
Committee

- 1) Machines get more and more intelligent. Due to this it is necessary to help operators working with the machines in the right way.

Automation is taking place already. The question is how an operator job will look in the near future. In the next couple of years Robotics could start in the construction equipment industry.

- 2) Machine trainings can be organized in a more efficient way when data can be used to analyse the usage of a machine.
- 3) The fuel consumption of construction machines can be reduced significantly by operating the machines with the maximum of technical possibilities. And the increase of a support





- by machines to do a more efficient work with them is taking place all the time (see above “automation”)
- 4) BIM will help to organize construction sites in a better way. This already started in the north European countries and will spread to the south in the next years. Also here a machine-to-machine communication is necessary to get the construction sites organized. With this a workflow of all different parties working on a construction site can be planned and monitored. So each operator / operator group knows which working process to do at which time.
 - 5) Anti-theft is a topic which is very important for rental companies as well as construction companies. The values of equipment on construction sites can be very high and there is no fence which protects the machines. Due to this today rental companies use GPS tracking devices inside the machines to locate equipment which got stolen and report the data to the police forces to get the machines recovered. This is common use today and the customers accept by signing the rental agreements their commitment of data use by the rental companies. Even more the construction companies start to use GPS tracking devices for themselves a) to protect their equipment and b) to locate it on large construction sites.
 - 6) “Attachment recognition” is another topic the OEMs of construction equipment started to work on. By sharing data between a machine and it’s attachments it will be possible to prevent using the attachments with the wrong hydraulic oil flow and with this to damage the attachments as well as the construction machines. In other words the hydraulic oil flow can be set up by the machine when it recognizes the attachment which gets fitted to it and can adjust the hydraulic oil flow on the ideal level automatically (which can be quite different between different worktools).



Peter KOUROUMBASHEV MEP, (S&D, Bulgaria),
Industry, Research & Energy Committee

Background

The ePrivacy regulation (ePR) proposal repeals the ePrivacy Directive 2002/58/EC and it aligns its rules to those of the GDPR. New services of interpersonal communications, that coexist today with traditional communication services have remained unregulated, resulting in far-reaching insecurity in terms of privacy and personal data protection. The ePR is indeed a much needed addition to the privacy legislation family in the EU, but there are some misunderstandings regarding its correct applicability to certain types of M2M communication. It is important to highlight that the transmission of M2M communications are already covered by the current ePrivacy Directive. This remains unchanged under the ePrivacy Regulation. Moreover, not all types of these communications fall within the scope of the ePrivacy rules. For instance, two machines’ communication, which is not transmitted via a publicly available electronic communication service, is not covered by this new piece of legislation.

Different Positions

There are stakeholders that are of the opinion that the ePrivacy Regulation should cover all M2M communications, irrespective of the type of network or communication service. Others believe M2M has to be completely excluded from the scope. In my opinion, the truth is in the middle: not all M2M communication need to be covered, as some are strictly limited to a closed corporate network for example in a construction site or a factory.



What is the added value of the ePR

What makes the ePR an important step forward towards successfully achieving more secure communications is that it protects the confidentiality of all publicly available electronic communications, not limited only to personal data. Businesses want to be able to rely on the protected and confidential communications, for example in the cases of inter-banking communications or industrial productions' metering data transmitted using publicly available electronic communications service. If these communications fall outside the scope of the ePR, it can seriously harm and jeopardize the way confidential information is shared. Moreover, article 6 (Permitted processing of electronic communications data) will apply only to the transmission of these communications and not to the "application layer".

Another potential issue arises from the interpretation of article 8 (Protection of information stored in and related to end-users' terminal equipment). This article is intended to protect the integrity of a device, irrespective of its ownership by a legal or natural person. It is crucial for the person who uses the device (natural or legal) to have control over the flow of information from and to the device in order to maintain the confidentiality and integrity of the information stored in it.

On the question of consent, there are also ongoing debates. If information is needed to provide an information society service explicitly requested by the end-user, consent will not be needed. This is the case for IoT providers who have a customer relationship with end-users and provide them with a service requested by that end-user. If such providers wish to access more information from the device for another purpose, they normally are in a position to get consent easily, considering their customer relationship with the end-user.

Takeaways and personal position

The argument that the immediate extension of privacy rules to machine data is not justified because machines have no fundamental rights, is true, *sensu stricto*. However, these machines belong to either a natural or a legal person who deserves protection. Therefore, nowadays, there are indeed certain types of machine data between two devices that need to be protected and confidential.



John HOWARTH MEP, (S&D, UK), Regional Development Committee

Events in recent years and months have raised concern among consumers on the security and privacy of personal data. To those developing applications that depend upon the availability of and use of mass consumer data this is a double-edged dilemma. Without a data privacy framework in which consumers are confident of their privacy, both the quality and quantity of data available to innovators declines. Thus consumer confidence in the security and privacy of their data is paramount.

This is the context for any debate on the reasonable limits of data use. The major IT companies have long since understood that when consumers lose confidence in a service dealing with their data, they lose confidence in the service as a whole. In the past 12 months it has become a priority in this



parliament. The e-Privacy Regulation, and with it the GDPR which has just entered into force, are political necessities to protect citizens and allow them to make informed decisions about the use of their data.

However, by expanding the scope of privacy legislation beyond the remit of traditional telecommunications companies, we run the risk of jeopardising innovation in sectors which require mass data, **but not necessarily personal data, to produce intelligent solutions. The challenge for EU legislators is to find a balance.**

e-Privacy State of Play

The Commission proposal was published in January 2017. It aimed to update the scope of existing legislation to include new forms of electronic communications, as well as streamlining legislation with the updated GDPR. New forms of electronic communications include Machine-to-Machine communications (M2M communications), becoming increasingly prevalent in the manufacturing sector through developments in AI. A manufacturer employing digital machines which communicate with each other may have to comply with the proposed regulation.

The European Parliament position has sought to mitigate the spill-over effects of including M2M communications. Recital 12, governing M2M communications, highlights: “the transmission of machine-to-machine communications involves the conveyance of signals over a network and, hence, usually constitutes an electronic communications service.” This supports the Commission’s assertion that the proposed regulation cannot offer comprehensive data protection to users if it does not cover M2M communications at all.

However, the Parliament position goes on to clarify what constitutes an electronic communication for the purposes of the regulation, stating: “... it should not however apply to machine-to-machine communications that have no impact on either privacy or the confidentiality of communications such as transmission between network elements”.

The Council is still to adopt its general approach and has discussed at length the issue of digital machines. The most recent compromise text reflects the Parliament position in reiterating that M2M communications normally constitute an electronic communication. It remains to be seen whether the Council will also advocate an exemption for those M2M communications which do not process data which has an impact on user privacy.

The use of digital machines in manufacturing

The use of digital machines and the Fourth Industrial Revolution will transform the nature of production. In the future manufacturing processes could include interaction between machines and computers dealing with CAD, big data analysis, and manufacturing processes such as 3D printing and laser cutting. However, in theory such processes could undermine individual privacy, as data is passed from one machine to another during manufacturing processes.

In this context it is unavoidable that machine-to-machine communications are subject to rules regarding privacy of communications. However, a blanket requirement for user consent in all machine-to-machine communications **would severely limit the ability of manufacturers to realise productivity gains from the use of digital machines and artificial intelligence.**



The challenge for legislators

The challenge for us, as Members of the European Parliament, is to find a delicate balance between reassuring citizens of their high levels of personal privacy, whilst ensuring that communications which have no real impact on privacy are not subject to counterproductive rules and consent processes.

In this respect the work of the European Parliament would seem to heading in the right direction. It would not be correct simply to exclude M2M communications from the scope. If our personal data was unprotected as soon as it is passed from one device to another, citizens would lose confidence in privacy legislation and service providers. It is therefore in everyone's interest that data is protected throughout all processes.

The question is rather that of scope, and what do we consider to be sensitive communications which need protecting? More work needs to be done to refine this definition, but the solution of including M2M communications, with a clear exemption for those communications which are essential to the functioning of digital machines but have little to no impact on data privacy.

Another solution explored in the Council would be to differentiate between different data processes in M2M communications, with only the transmission of data considered to be in the scope of the e-Privacy regulation.

Conclusions

The legislative process on the e-Privacy file has not yet concluded, and it is not clear at this point what the final result will look like. What is clear is that any option put forward must satisfy three conditions. The legislation must:

- Increase consumer confidence in the privacy of data as Artificial Intelligence and the Internet of Things become more prevalent in our daily lives
- Anticipate technological developments and avoid unnecessary spill-over to domains with little relevance to the protection of privacy
- Provide business with legal certainty as to which M2M communications are within the scope and therefore subject to privacy rules.

If the Council adopts an ambitious text the overall result will be an effective protection of user privacy, and need not be an obstacle to innovation and digital machines.

Riccardo Viaggi, CECE, Secretary General

He stressed the need to collaborate intensively to lead and support the construction industry in order to enable a successful digital transformation of the whole industry. In order to remain competitive in an increasingly globalised market, the EU economy must transform itself digitally, which requires an appropriate political, regulatory and financial framework at the European level. This must become one of the building blocks of a true vision for a forward-looking and ambitious Industrial Policy Strategy for the EU.





Antony Fell, EUROPEAN FORUM FOR MANUFACTURING, Secretary General

The next meeting will be on Wednesday 5 December and will look at Automation in the Automotive Industry especially focusing on the Environment and Safety.

I would like to conclude by thanking both the CECE and the EFM teams for all their excellent efforts in preparing this Forum this evening and finally to thank Paul Rubig for his chairmanship tonight.

