

INTERFACE :

Innovation in the digital era



PRODUCTIVITY AND DIGITAL

The debate on the productivity growth slowdown has been quite heated lately, especially in the US between Robert Gordon's followers and techno-optimists like Erik Brynjolfsson and Andrew MacAfee. Who is right? Who is wrong? It is still highly debatable.

As from the end of the 1990s, productivity growth has slowed down in many European countries, and there is a significant drop in comparison with the US. Our European firms have not yet fully entered the digital era and have insufficiently invested in digital technologies.

Is it a good sign? Probably: it leaves room for manoeuvre in Europe. The adoption and larger diffusion of digital technologies into our firms should bring about an improvement of our productivity growth.

It implies the implementation of specific public policies: this is what our issue explores. Human Capital support, especially through the improvement of the active population skills; coordinated industrial policies and a true digital single market as well as innovation policies are needed. These are the three themes on which Confrontations Europe is offering concrete recommendations here.

www.confrontations.org

communication@confrontations.org



DIGITIZING THE EUROPEAN INDUSTRY (P.2)

Khalil ROUHANA | Director of "Components and Systems" Unit, DG Connect, European Commission

FRENCH GERMAN VISION (P.4)

Tobias KOLLMANN | *President of the German "Young Digital Economy" Advisory Board (BJDW)*

Amal TALEB | *Vice-President of the French Digital Council*

Benoît THIEULIN | *Former President and Member of the French Digital Council*

HUMAN CAPITAL (P.7)

Benedickt BENENATI | *Vice-President Digital Communications, Renault*

Sandrino GRACEFFA | *Managing Director, Smart Belgique*

Carole ULMER | *Director of studies, Confrontations Europe*

INDUSTRY 4.0 (P.10)

Laurence HONTARREDE | *Chief Strategic and Marketing officer, BNP Paribas Cardif*

François NICOLAS | *Vice-President for Integrated Care, Sanofi*

INNOVATION (P.12)

Marie EKELAND | *Vice-President of France Digitale*

Aymeril HOANG | *Head of Innovation, Société Générale*

Eva PAUNOVA | *Member of the European Parliament*

Alain SCHLESSER | *General Manager of the Pays de la Loire Chamber of Commerce and Industry*

OUR RECOMMANDATIONS (P.16)



DIGITALIZING THE EUROPEAN INDUSTRY: REAPING THE FULL BENEFITS OF THE DIGITAL SINGLE MARKET



Khalil ROUHANA | Director of “Components and Systems” Unit, DG Connect, European Commission

Industry is one of the pillars of the European economy – the manufacturing sector in the European Union represents 2 million enterprises and 33 million jobs. Recent studies estimate that digitisation of products and services will add more than €110 billion of revenue for industry per year in Europe in the next five years. Delivering on its Strategy to create a Digital Single Market, the European Commission launched on 19 April 2016 its first industry-related initiative. The aim is to mobilise around €50 billion of public and private investments by 2021 to help manufacturers catch up in the global race for the fourth industrial revolution.

The “DigitiseEU” package

The “DigitiseEU” package is composed of 4 Communications that outline measures. The Digitising European Industry initiative is the “chapeau” initiative which puts forward a set of measures at EU level to support and link up national initiatives for the digitalisation of industry. Other initiatives also form part of this package, namely: the European cloud initiative aiming to develop cloud-based services and a world-class data infrastructure to ensure science, business and public services reap benefits of big data revolution–; concrete measures to speed up the standard setting processes to boost digital innovation and an egovernment Action Plan 2016-2020, to boost the public sector’s role in stimulating demand for digital solutions.

What is at stake with digital innovation?

Digital value chains are critical for the competitiveness of all sectors. Three dimensions of value creation from digitisation can be highlighted: there are innovations in products of all types (new products, or more efficient products), there is digital transformation of processes and there are radical/disruptive changes in business models, blurring boundaries between products and services. All these effects are profoundly reshaping value chains all around the world. That is why it is crucial to think digital when you design new product, new process, new business plans.

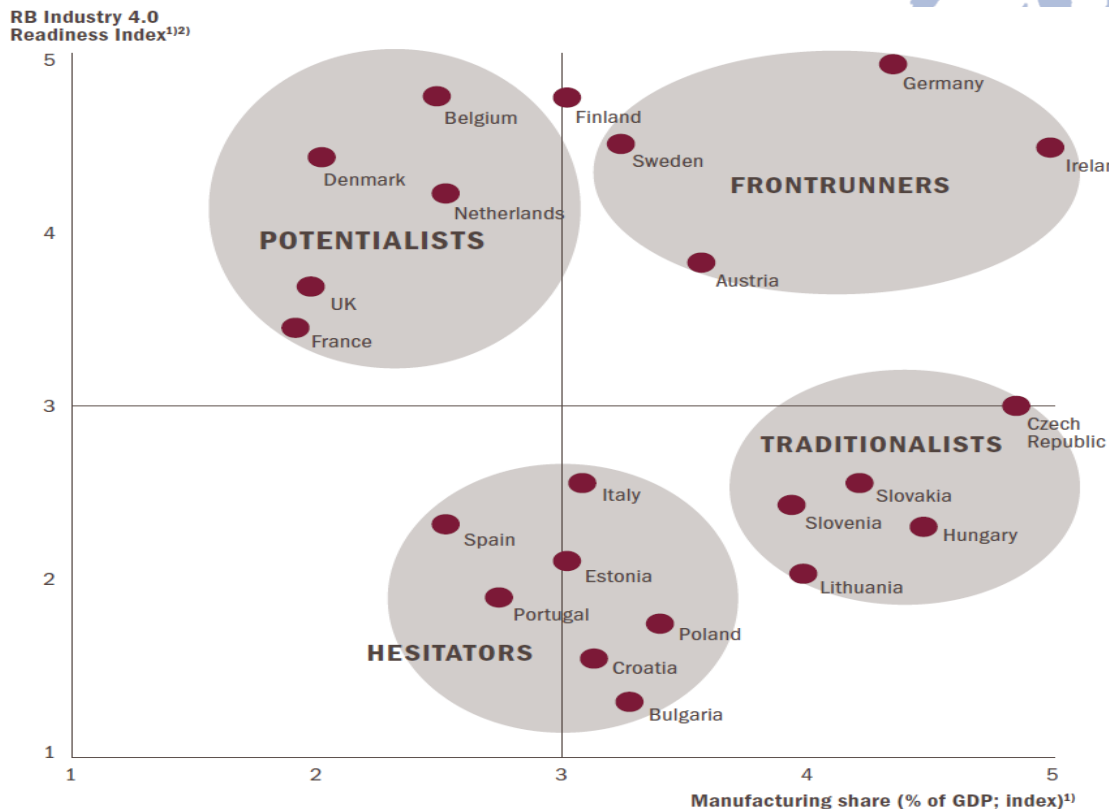
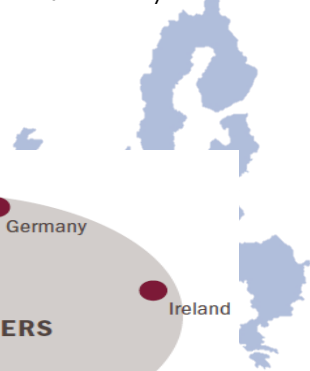
Technologies are driving the change: Internet of Things (embedded software, sensors, connectivity...) Big data (analytics, storage, Cloud ...) and artificial intelligence (robotics, automation, machine learning, self-driving,..) are at the centre of this revolution.

Where does Europe stand?

Europe has strong digital strengths and notably solid professional and vertical markets in automotive, industrial, medical, aerospace and defence, etc. as well as leading companies in these fields. Not all sectors are concerned however.

Europe faces also many challenges. Despite the strong digitisation in high tech industries in some Member states, we face slowness and disparities in adopting digital solutions in SMEs and non-tech sectors. Less than 2% of SMEs use advanced digital technologies. Moreover, they still do not use digital to innovate on their own products. There is therefore a gap between high tech companies moving forward, and many other firms are still lagging behind. We need the whole economy to move forward. Europe does also face new competition from non-EU internet/web industry, while it is quite weak on the web. A fragmented landscape of standards and lack of interoperability (there are around 30 national initiatives on “Industry 4.0”); a strong need for digital skills and re-skilling of the work force as well as legislative and regulatory issues are also challenges that the EU has to tackle. Europe still encounters strong disparities in terms of digitisation readiness: while Germany and Ireland are frontrunners, Spain or Portugal are hesitant.

CONFRONTATIONS



Roland Berger

What to do about it?

There are 3 fundamental prerequisites to put forward: an effective Digital Single market – the Commission has launched its Strategy in May 2015, dealing with platforms, copyright issues, e-commerce - world-class digital infrastructures (not only telecom ones, but also cloud and data infrastructures) and easy access to finance.

We need to step up our digital innovation capacity. The main objective should be to ensure that any industry in Europe, big or small, wherever located and in any sector can fully benefit from digital innovations to upgrade its products, improve its processes and adapt its business models to the digital change. Member States are active on Industry 4.0, but we need a framework of coordination to avoid fragmentation and to allow for efficient articulation and scaling-up of those initiatives.

A comprehensive policy initiative would foster the combination of various policy instruments (financing, legislation, coordination) and steer bottom up innovation as well as support for focused actions. Addressing the whole value chains spreading across Europe and opening up new opportunities for start-ups and SMEs in a true DSM is key. To that end, fostering public-private partnerships for leadership in digital value chains is an important tool. Furthermore, prioritize and accelerate industry-driven standardization is a central point of such a comprehensive strategy. Legislation needs sometimes to be adapted to the digital age: we should indeed closely analyse what should be done in terms of data ownership, security and liability. All Europeans are not yet ready for the digital age: a strong focus on preparing them, through education, training and re-skilling is of tremendous importance. (April 2016)



HOW TO MAKE EUROPE A DIGITAL LEADER?

Tobias KOLLMANN and Amal TALEB | *President of the German "Young Digital Economy" Advisory Board (BJDW) and Vice-President of the French Digital Council (CNum)*

Tobias Kollmann, President of the German "Young Digital Economy" Advisory Board (BJDW), and Amal Taleb, Vice-President of the French Digital Council (CNum), both attended the Conference "Innovation at the digital era: reinventing our economy" organized by Confrontations Europe at the European Economic and Social Committee. At this occasion, they exchanged their views on how to make Europe the next digital leader.

During the last years, digital waves have rolled in from the United States. They have been about big data, the Internet of things (IoT) and cloud computing, and they have hit Europe very hard. "Today, we are awaiting a digital tsunami that is already on its way here (with blockchain, quantum technologies for instance)", point out Amal Taleb and Tobias Kollmann. The tsunami will shake the foundations of our political and social structures, so it is an urgent matter to prepare for its arrival.

Where does the EU stand?

Considering the so-called Unicorns¹, many of the 161 identified ones are from the digital economy, but we have too few of them in Europe, according to Tobias Kollmann. 93 are from the United States, 38 are from Asia and only 15 unicorns are European. Among those 15, 4 are located in Germany, 4 others are in the UK, 2 in Sweden and 1 in France. "Europe is not really present in the worldwide online competition dominated by digital start-ups" T.Kollmann acknowledges.

Furthermore, the listed "Digital-big-5" from the USA have a higher market capitalization than all listed German DAX-30-companies together. "We need to realize that Europe does not take part in the digital game" he argues. In other words, he stresses that a digital "made in Germany" or digital "made in Europe" does not exist at the moment. Tobias regrets that Europeans are always asking themselves the same question: "With which innovative digital business process or digital business model could a start up from the Silicon Valley – with a lot of venture capital on board – disruptively change the next industry?". Yet, the answer to this key question is: "do it yourself!" He would like us to be bold and try

to build up the appropriate platform on our own. He emphasizes the need to take actions ourselves and open ourselves up to online-competition as quick as we can.

How is digitalization working?

"Digital transformation is important for every industry, because innovative digital business models also attack the traditional industries", he explains. According to him, no industry can escape this transformation because of 2 phenomena:

On the one hand, there is the piranha effect when small but very aggressive start-ups try to address single blocks of the value chain. They do this with superior digital business processes and bite themselves into the market. This is what Fintech start-ups are currently doing in the banking industry.

On the other hand, there is the elephant effect of big digital players using their market power to leave their original fields of business and enter new markets. By doing so, they trample down everything in their way

with their digital market power. Google will trample down the insurance industry by getting an insurance license for the European market via London and will try to attack the automotive industry.

Netflix will try to kill the linear Television, AirBnB is already a game changer in the leisure and travel industry and Amazon just started delivery in Germany which will place huge pressure on companies like Saturn and Media Markt and also on the food industry, which suffers from Amazon Fresh or Amazon Pantry.

"The old rule that the big ones will eat the small ones is not true anymore. The new rule in the digital world is that the fast ones will eat the slow ones."

« The new rule in the digital world is that the fast ones will eat the slow ones »

¹ Unicorns are firms, which are not yet listed but have company valuations of more than one billion USD

CONFRONTATIONS



Good steps from the EU Commission

Both Tobias Kollmann and Amal Taleb warmly welcome the latest “Digitise EU” package issued in April 2016 by the European Commission, seeing it as a good signal. “Data centres, European cloud, 5G as well as standards and certifications are important issues which will help Europe develop a competitive advantage for the EU industry” A.Taleb highlights. In this regard, she argues that the European Commission’s work seems to be the way “to leave with this tide and reach our destination”. Nonetheless, there is still a strong need to make sure that European industry is in a position to make use of those new technologies so she is also looking forward to seeing what actually is coming forward.

What are the solutions?

In light of their own experience, both Tobias Kollmann and Amal Taleb bring forward solutions to help Europe tackle the digital transformation.

For Amal Taleb, education and skills are key. In the EU, there is not enough people who have a proper grip of all these technological issues. She calls for teaching people about electronic issues while framing them into the humanity sector. In other words, she stresses that coding is very important, but it is also crucial to make sure that people are aware of broader issues related to math and history. In her opinion, that’s the only way to make sure that the digital revolution is beneficial and applicable in our culture. She calls for cross-fertilization of higher education authorities and academics across Europe.

Funding issues are the second point Amal puts forward. So far, in Europe, we create our businesses on a basis of debt and not on the basis of our own resources, and this means that our companies depend on the traditional banking sector so they are not yet in phase with the technical developments which have happened in our culture.

A.Taleb also thinks the public authorities need to set up a legal framework to develop confidence, which has to be clear, readable and properly applied across territories. To do so, she stresses the need for

standards which will be easily used by our companies and will allow them to develop in Europe. “It could be a good idea to try challenge non-European actors and force them to align with our European standards, especially when it comes to the protection of personal data, infrastructures, identification rules and other issues related to security. All of this will allow European companies to grow in a legally reliable environment so it represents a competitive advantage”. She also addresses the issue of developing confidence in platforms. Looking at the B2C relationships to platforms, she makes clear that European consumers don’t have confidence but they do nonetheless operate via non-European platforms. In this regard, she stressed the need to think of how European businesses might be able to communicate among themselves and how they might be able to choose their interlocutors in Europe on the only basis of merit. She also calls on the EU and Member States to think about the impact the digital transformation is going to have on jobs and on work.

Tobias Kollmann emphasizes three main points. First, the need to build up innovative start-ups that have the potential to develop into the next generation of world market leaders from Europe. Second, the need to transfer our traditional industries and our small and medium enterprises into the age of digitalization to retain as many firms as possible. Thirdly, because neither number 1 nor number 2 are going to happen soon, Tobias highlights the need to bring together both sides and support collaboration between start-ups and the traditional industry or SMEs. “Start-ups represent digital innovation and the traditional industry companies represent market access, so together it is likely to create a win-win situation for the digital economy in Europe”. He strongly believes that the cooperation between industry from Europe and start-ups from Europe is the key of success for our continent to become an important digital player. (April 2016)

« The cooperation between industry from Europe and start-ups from Europe is the key of success for our continent to become an important digital player »

WHAT SHOULD BE THE TWO PRIORITIES OF THE EUROPEAN STRATEGY?



Benoît THIEULIN | Former President and Member of the French Digital Council

Six months of online and cross-country consultations culminated in the seventy proposals set out in the Digital Ambition report. The French Digital Council released the report to the government in June 2015. It outlines the main thrust of a French and European digital transition policy. In the short term, there appear to be two priorities: review the way in which the innovation economy is financed and ensure the loyalty of online platforms to their users.

Lack of expertise in new business models

Why is it so important to look at how the digital economy is financed? Because this type of economy requires entrepreneurs to innovate constantly, grow fast and operate in the international arena right from the start. All of which requires capital. European businesses are funded primarily by bank loans, unlike American SMEs which rely on capital market financing to the tune of 80%. Traditional sources of finance need to be adapted to new business models. This can be done in numerous ways; the banks, which are major sources of funding, must develop more appropriate products and services. The public authorities could also amend the rules on the taxation of savings, in order to channel the latter into long-term investment and further guarantee the supply of available funds. Furthermore, financial analysts and national stock exchanges do not have the necessary expertise in the digital and innovation field so, too often, scale-up companies go to the United States or Asia to make their initial public offering or to sell their business to an industrial giant. What happened with digital advertising company Criteo, which is now listed on Wall Street, is likely to happen again if Europe does not improve its expertise in analysing new business models.

Create a European network of rating agencies

The French Digital Council has proposed setting up market places dedicated to financing innovation and targeting sectors in which Europe already has a pool of scale-up companies, for example Internet of Things, eHealth and data management. These proposals are directly relevant to Europe's Capital Markets Union project, which aims to make Europe an attractive market place for businesses worldwide.

Another key objective is the development of a reliable regulation system. It is vital that we improve our understanding of this development model, which is shaking up traditional methods of economic regulation and challenging the protection of individual rights, and will make its way into banking, transport, etc. in the future. We have recommended taking steps to ensure the loyalty of platforms, and setting up a European network of rating agencies for this purpose. We firmly believe that, in an audience economy, regulation should be more social and driven by the market. Producing facts and evidence on the practices (both good and bad) of online platforms requires a broad spectrum of expertise – interface design, technical skills, etc. – which cannot be provided by lawyers alone. Our cooperation with French businesses concerned by the Google Search case revealed the need to objectify the difficulties encountered by professional and private users of platforms. The Commission has a substantial pool of technical expertise but it is for internal use only. It would be helpful if any useful information were shared with civil society, the market and investors. Platform users themselves could play a valuable role in these endeavours, alongside the large communities of engineers, scientists and associations that already do some of the work by popularising, for example, the General Terms of Use (GTU) of online platforms. We hope these proposals will be examined after the European Commission's consultation on platforms. Lastly, while the Juncker Commission's positive action in favour of the Single Digital Market is commendable, Europe is soon going to have to do more by laying out the options for a development model able to withstand major digital and environmental transitions going forward. (July 2015)

CONFRONTATIONS



THE DIGITAL TRANSFORMATION: TRANSFORMING THE WAY WE WORK



Benedikt BENENATI | Vice-Président Digital Communications, Renault

For Renault, as for any large company, the question is not “should we accept a digital transformation?” but “how can we go about it?” Recruiting data scientists and big data specialists is of course a priority for Renault, but for the digital transformation to be successful such skills are not enough. We need to change the way we work, and Renault has understood this. Going forward, leaders will play a key role in encouraging collaboration and cross-functionality in a traditionally hierarchical and vertical system. The challenge lies in giving employees an opportunity to learn from first-hand, structuring experiences of sharing, peer-to-peer networks, crowdsourcing and open innovation. Although these are abstract concepts, they are epitomes of our new digital world.

IMPORTANCE OF « SOFT »

Increasingly, managers are recognising the importance of “soft” stuff, too often abandoned by the more rational organisations. General Electric CEO Jack Welch was therefore right, “the soft stuff is the hard stuff”. Because when it comes to the crunch producing a tool or defining a process is not what poses most problems, motivating and inspiring people is much more difficult. And it can't be achieved by issuing orders.

It fundamentally changes the leadership model. Bosses - who have understood that innovation goes hand in hand with a degree of risk-taking- are accepting to let go. The digital transformation begins in a manager's head. To overcome these new challenges and ensure a certain agility, they realise they need to trust their teams, and encourage and speed up cross-functional cooperation and the co-creation of new solutions.

But you cannot simply ask your teams to abandon their silos or be more creative. Very few people will naturally move out of their comfort zone – change is scary, and it's perfectly human of us to think so. The digital transformation is above all a human challenge. We must smooth the way for change, and it's the manager's new job to do so, encouraging teams to move forward and therefore helping them grow, and if this also secures long-term business all the better.

RENAULT EXPERIENCE

Which is why Renault decided to launch a series of initiatives, to move from words to deeds, in order to

« The digital transformation is above all a human challenge »

create the right conditions for this change to actually take place. In the past few months, an increasing number of Renault employees have lived the experience. Rather than watching traditional PowerPoint presentations, several hundreds of colleagues from different geographic regions and holding different positions have taken part in some highly interactive and totally unexpected sessions, involving for example physical experiences sufficiently amusing to allay fears but with the very serious aim of creating concrete value for the company. Two sessions in particular – “marketplace” and “co-building” – have allowed participants to experience collaborative sharing of good practices and co-building of innovative solutions addressing very real business issues. Such experiences require meticulous preparation in order to identify issues and establish the appropriate good practices and briefs. But whether or not such initiatives are truly successful depends mainly on how well managers assume their new role of inspirational leader and facilitator, their main mission being to motivate, to inspire and to encourage networking and communication between teams, beyond silos.

LONG AND COMPLEX PROCESS

It's a long and complex process, that will work only if managers show determination and are willing to set the example, through their behaviour, to transform the way we work. (May 2016)

WORKERS ARE MORE INDEPENDANT, BUT ARE THEY UNDER-PROTECTED?



Sandrino GRACEFFA | General Manager of SMart Belgium

The traditional salaried employment model, in which workers had a stable, permanent contract, is no longer prevalent. The rise in digital technology has led to the emergence of a new, more independent and “hybrid” type of worker, requiring the development of an appropriate social protection system.

The employment market is undergoing profound changes. In the past, a company's centrality (and this includes cooperatives) was dictated largely by its production plant or equipment. Machines played a key role in production. Nowadays, working tools are increasingly intangible. In today's companies, production has become completely dematerialised and is based more on creative capacity, knowledge and intellectual conception. Digital technology has affected both economic development processes and the way we interact socially, in the private and public spheres alike. We are moving more and more into an economy based on the manipulation of symbols. And the process is far from over.

Jobs destined to disappear

One of the most obvious consequences of the emergence of Web 2.0 applications is the growing irrelevance of intermediary jobs in all areas. As far as business organisation and work practices are concerned, it is likely that some jobs, long considered essential, will now become a little (or a lot) less so. In fact, digital technology creates direct links between producers and consumers, which makes for a short supply chain.

A person can set up business at the top of a mountain, produce highly specialised goods or services there, and still find potential buyers all over the world. But to make a living from their specialist knowledge, that person must broaden their skill set because it is not enough just to be a producer. Basic sales, administration and accounting skills are also needed.

Being an independent producer forces workers to develop a range of peripheral skills, even while digital technology reduces the need for such skills; many sales and administrative tasks can be done automatically through easy-to-use interfaces.

Web 2.0 has put many micro-producers on an equal footing. With social media and other types of collaborative platform, we have now found ourselves in an unprecedented situation, since there are almost as many suppliers as users. Which opens up new potential for change in the employment market and in production.

There is a risk that these changes will create a fiercely competitive environment and bring about widespread fragmentation, with individual workers encased in the bubble of their micro-enterprises.

The latest report by the International Labour Organisation – World Employment and Social Outlook: Trends 2015 – explains that traditional employer-employee arrangements with a stable employment contract are declining in favour of new forms of work, particularly self-employment. The figures are edifying: salaried employment now accounts for just half of global employment and less than 45% of salaried workers are employed on a full-time, permanent basis.

Building a new employment relationship model

Artists and creative workers have been in the vanguard of these changes. Temporary worker status is no longer reserved exclusively for specific types of production, such as intangible goods and artistic, cultural and intellectual products, but is becoming increasingly prevalent in all sectors of the economy. More and more “hybrid” workers (who are independent but not registered as self-employed) share the same socioprofessional conditions as artists and other creative workers.

So it is important to develop a new employment relationship model that encompasses flexible and casual work and ensures that all workers are fully protected. (Oct 2015)

HOW IS DIGITAL TECHNOLOGY CHANGING THE WORLD OF WORK?

Carole ULMER | Director of studies, Confrontations Europe



The digital revolution is compelling us to rethink, and even reinvent, the way we work. Numerous in-depth and divergent debates have taken place about the number of jobs created or lost, the way jobs are changing and even the notion of “worker”. And they have led us to rethink capitalism. We are witnessing a Uberisation of the economy, a robot invasion and a growing number of self-employed workers and “slashers”¹. How should we approach the emergence of this new economy which, although it has not materialised everywhere, is clearly occupying our thoughts? What are its characteristics? What questions does it raise in terms of regulation?

How many job losses

The first issue is the number of jobs threatened with extinction. According to a study conducted by Roland Berger Strategy Consultants, three million jobs will disappear in France by 2025 due to the rise in automation and the digitisation of our economy². On the other hand, argues Gunther Oettinger, the European Commissioner for Digital Economy and Society, many new jobs will be created. Today, while no-one agrees on the figures, there is a general consensus that adjustments will be needed across all sectors. So although the postal sector must overhaul its core business, it has more opportunities to diversify, thanks largely to digital technology. However, not all of these opportunities will create new jobs³.

Repetitive jobs at risk

The second issue is the impact on the nature of work. The growth of Big Data and automation will not only affect “manual” jobs, but also highly qualified and intellectually demanding jobs. *“In the digital age, the more repetitive a job is, the more likely it is to be automated. Insurance brokering is a good example⁴.”* According to David Autor of the MIT, machines also make abstract and creative work more productive. To put it plainly, robots could replace a good many solicitors and assist surgeons, but they could not be a substitute for hairdressers.

The employment contract in question

The third issue is the Uberisation of our economy. Work is becoming an object of trade, via digital platforms, and prices and volumes vary over time depending on supply and demand. The relevance of the employment contract – a pillar of our societies – has been called into question by the growth in self-

employment. Freedom and entrepreneurship, proclaim some with delight; vulnerability and erosion of the welfare state, say others. While salaried work is still by far the most common⁵, it is questionable whether it still sets the benchmark today. It could be argued that digital technology has eradicated the main advantage of salaried work, namely cost savings on transactions, which is the logic behind any business⁶. Because of these changes, companies themselves are evolving. Business models based on sharing or on free access to goods and services are becoming more widespread. Data are the new black gold; they are more highly valued than many tangible assets. The market capitalisation of Tesla (0.02% of the global automotive market) is equivalent to that of General Motors! Such circumstances create a high probability of sectoral upheaval when the platform – through network effects and reputation – becomes the key market reference and makes a clean sweep (the winner takes all).

The very nature of capitalism is at stake

The potential impact is considerable, in terms of both volume and quality. The debate is legal, sociological, psychological and inherently political. There is widespread uncertainty as to how all these changes will pan out. Some fear there will be more losers than winners. But, as Martin Wolf points out: “A form of techno-feudalism is not what we wish for. Above all, technology itself does not dictate the outcomes. Economic and political institutions do.” In our digital age, it is the very nature of capitalism that is at stake. Politicians are facing a huge challenge because the impact on traditional areas of regulation, such as labour law, competition policy and taxation, is so high. (Oct 2015)

¹ A person with multiple careers

² Middle classes facing digital transformation”, Roland Berger Strategy Consultants, October 2014

³ See the summary of the Digital Lab Workshop hosted by Confrontations Europe on 9 July 2015, www.confrontations.org

⁴ Ibid 2

⁵ Salaried employment accounted for 90% of jobs in France in 2014 (source: INSEE)

⁶ “The Nature of the Firm”, Ronald Coase, 1937

CONFRONTATIONS



INSURANCE: SOME BARRIERS CAN BE OVERCOME THROUGH DIGITALIZATION

Laurence HONTARREDE | Chief Strategic and Marketing officer, BNP Paribas Cardif



While some obstacles may be easy to overcome to improve cross-border supply of insurance products, others are more difficult to apprehend: On the one hand, differences in national legislation, like civil law, insurance contract law, taxation, which is an important barrier preventing from directly providing financial services cross-border. Differences relating to insurance fraud may also play a role in the decision to offer products cross-border. On the other hand, insurance products are designed in function of the environment of the country in which the product is to be sold: product design, risk pricing, claims handling and support are all influenced by the local market and regulatory conditions. A decision to enter a foreign market therefore requires an extensive understanding of and compliance with the regulatory and supervisory requirements of that market.

Further examples of the many factors that must be considered as part of an insurer's risk calculation include:

- Life insurance products are dependent on the national civil laws and taxation regime of the markets in which the products are offered; account needs also to be taken of the local taxation conditions

- Anti-money laundering legislation is a barrier that prevents the provision of life insurance products on a cross-border base

- Health insurance is an area of Member State competence; the specific role and tasks of private health insurers therefore depend on the national health system.

Some barriers can be overcome by digitalization and innovation which could ease the conclusion of cross-border contracts: technology can enable insurers to conclude distance contracts by verifying the identity of potential clients with electronic signature, but this will only be possible if the legal environment allows insurers to use these technologies easily. Technology can also assist insurers in collecting easily more information about other markets or about foreign customers. It can provide them with more sophisticated data about individual risk.

The insurance sector is embracing digitalization, to respond quickly and efficiently to new customers' expectations. In order to avoid any form of financial exclusion, the industry's business model is evolving towards a multichannel environment where insurance services are made available through digitalized channels as well as through more traditional channels. The regulatory initiatives should not favor one channel over the other, thereby allowing the diversity of channels to benefit consumers, whose cultures, needs

and preferences vary between markets. In addition, financial education in the digital environment should become a priority for all stakeholders, in particular public authorities.

It can also be reminded that the General Data Protection Regulation and the NIS Directive already offer a high level of protection. Insurers remain vigilant

« Financial education in the digital environment should become a priority for all stakeholders, in particular public authorities »

in order to ensure consumer's trusts, manage risks and cover new business opportunities. In addition, the EU-level framework must take into account differences in the nature of

products: a "one-size-fits-all" approach, which does not recognize the specific features of insurance products, is likely to be damaging for the industry and, ultimately, for consumers.

Regulatory initiatives should have a clear benefit for consumers and not restrict their access to a wide and diverse range of appropriate insurance products and services. When deciding on new consumer policies and specific consumer protection legislation, the benefits to consumers and their needs should be thoroughly assessed: benefits must then be balanced against the costs of implementation and the risk of overregulation that can hamper product innovation and growth and requirements should be tailored proportionate and adapted to consumer needs. Moreover, there are only very recently agreed new rules under IDD, just entered into force, which enhance conduct of business rules for the entire sales process and further strengthen the level of consumer protection as well as the new data protection framework. These rules apply to any new digital technologies that impact the distribution of insurance products. (April 2016)

DIGITAL HEALTH – A PARADIGM SHIFT FOR HEALTHCARE SYSTEMS

François NICOLAS | Vice-President for Integrated care, Sanofi



Combining medicine, services and technological devices to improve diabetes management

In health care, digital has the potential to significantly improve many processes, especially when it comes to creating new solutions for integrated care to improve patient outcomes. As a pharmaceutical company, Sanofi's traditional role has been to develop medicines for physicians to prescribe, but with diseases like diabetes much more than medicines will be required. People suffering from diabetes need to make considerable changes to their behavior. They have to measure their glucose levels several times each day, carefully take into account what they eat and drink and make sure they get enough physical exercise. Digital technologies could help in the creation of comprehensive solutions related to the behavior and lifestyle changes that people often make after being diagnosed with diseases such as diabetes.

Together, Sanofi and Verily (formerly known as Google Life Sciences) recently announced a joint venture designed to contribute to the advancement of diabetes management. This new company will bring forward solutions that could improve diabetes care by bringing together sensor devices, data, analytics and patient-reported information. It is believed that digital technologies can make diabetes care simpler for patients and healthcare providers. Making care less complex could contribute to a shift from reactive to proactive diabetes management and make living with this disease easier, which could help patients achieve better outcomes.

Challenges to the digital transformation

When it comes to digital transformation within the pharmaceutical industry, there are both internal and external challenges. Internally, the need for a cultural shift could be an initial barrier to digitalization. It is difficult to switch from a business model where the focus has been to develop medicines over long periods of time to a model where companies provide

creative, integrated solutions for shorter periods of time.

Moreover, the pharmaceutical industry will have to acquire the skills required for a digital transformation. Data scientists, people with a broader knowledge of technology and employees who understand consumers will all be needed, working hand in hand with experts in developing medicines. Moreover, digital can provide companies with a direct interface with patients and caregivers. To overcome the challenges associated with digitalization, Sanofi has entered into several partnerships with technology companies.

In terms of external challenges, trust is key. Companies will need to ensure that trust is developed when delivering their new services which is something the industry cannot do by itself. A clear regulatory framework needs to be established, and the larger question of what type of regulatory environment could be most appropriate, including societal concerns, will need to be considered.

Expectations from public authorities

Data. The clearer the framework (i.e., the more harmonized it is within Europe), the better. Health care involves personal data, and more specifically personal health data, which is another category. The main point is to ensure that trust is developed between all the actors.

Change of business model. It is not going to be easy to change the business model in healthcare – whether you are a start-up or an established company. However, business model changes will have major impacts on the different actors, including public and private insurers, and on the way healthcare providers are being paid.

Europe needs to take a leadership role and try to move the agenda forward, for the benefit of all patients and to reduce healthcare costs. Public authorities should work to ensure that this issue is considered at a European level – the only relevant level if the region is to remain competitive vis-à-vis the rest of the world. (July 2016)

CMU: A NECESSARY UTOPIA FOR START-UPS

Marie EKELAND | Vice-President of France Digitale



In France, the dearth in seed capital for start-ups allegedly amounts to at least two, or even as much as four billion euros. Yet there is no shortage of talent. Does the answer lie in the future Capital Markets Union? Marie Ekeland, Vice-President of France Digitale, gives us her take on the situation.

How dynamic is the start-up sector in France?

Marie Ekeland (M.E): It is astonishing that the changes occurring in the economy right now are neither visible nor understood. According to the poll that we conduct every year with Ernst&Young, digital start-ups financed by venture capital in France grow by an average of 42% a year. They generate 40% of their turnover abroad. Every year, their workforce increases by 25%. The average age of their employees is 32. 92% of these employees are on permanent contracts, whereas in the rest of the economy 96% of new hires are temporary. Their business model is based on a new concept, i.e. sharing, of both risks and of the value created. The ratio between management salaries and average salaries is two to one. 92% of start-ups distribute shares to their employees through stock option plans, free share allocation and stock-based compensation (SBC). On average, one third of employees benefit from such schemes. So instead of looking backwards and trying to rescue ailing companies, our politicians should be preparing for the future.

How is start-up financing flawed?

M.E: France is very good at providing early-stage financing, but very bad at helping companies to expand internationally with funding rounds of 50 to 100 million euros. There is a terrible shortage of professional business angels in France. But the main problem is that, because of current tax incentives, French people tend to invest their savings in risk-free, short-term assets rather than the real economy. €518.3 billion are invested in personal equity plans, savings certificates and life insurance. 7% of individual shareholders have an average age of 60, compared with 15% ten years ago. Yet digital technology is changing our economy completely. To facilitate the transition and make the French economy more competitive, we must create international champions; and we must provide the capital needed to do so. France has some very dynamic SMEs, but they are struggling to grow. We need to fix the economic escalator. France has no other choice but to use savings more effectively to

finance business growth. It is all the more necessary because French people are strongly encouraged to invest in shares for their retirement, as the pensions system is running out of steam. However, very few young people own shares. There is a real problem with the financial culture in France.

Do the objectives of the CMU meet the needs of start-ups in Europe?

ME: The objectives of the CMU are vast. The goal, in a way, is to bring down the barriers to investment and reduce fiscal complexity and friction in the European capital market. At present, investment and business are largely restricted to the national sphere (with expansion into the international arena being very costly in legal fees). In the future, if the CMU enables European funds to attract foreign capital and invest in European, rather than national, start-ups all over Europe, that will be a decisive step forward. The CMU may be utopian, but it is a good idea. Today, the majority (68%) of the world's venture capital goes to the United States, while only 15% goes to Europe.

To rectify the situation, do we need to create a European stock exchange ?

M.E: The real question is whether we should set up a stock exchange in which vertical sectors are recognised not only in Europe but also worldwide. The stock market in Europe today is too generalist. There is far less market depth for a given vertical than in the United States, where investors have become specialists in high tech, for example, because they have been investing in high-tech start-ups for the last ten years. In Europe, there are no institutional investors that specialise in high-tech innovations and are keen to purchase that type of stock. Rather than trying to catch-up, Europe should be securing a leading position in new vertical markets so that companies in those markets, wherever they are in the world, will choose to launch their initial public offerings in Europe. Medical imaging and digital fashion are good examples. However, I am concerned that Europe will get left behind in this new economy in the making. (April 2015)

WORK TOGETHER TO INNOVATE

Aymeril HOANG | Head of Innovation, Société Générale



The Silicon Valley can seem to embody technological progress, and for European actors it is tempting to try to replicate the achievements of the US. However, Europe has already acquired good assets for innovation of its own, such as its diversity, hubs and diversified ecosystems. We should seek to further develop these existing resources and structures. We need to try to understand what type of future we have ahead of us. Doing so is a big challenge but is central. FNC chips, which can be implanted under the skin, constitute a good example of the uncertainty of the future. These chips could replace people's badges for the cantina, our transport passes, as well as credit cards, passports, manual house keys, and so on. Innovation of that kind raises important concerns. It is difficult to determine whether the ethical and legal problems associated with certain new technologies will make us reject inventions such as FNC chips. Could we reach a collective decision on knowing if this type of progress is something we actually wish for, and will we be capable of resolving those issues? Many other inventions could be used to illustrate how the transition from today's society to the world of tomorrow isn't just characterized by rapid technological development but also by a large degree of uncertainty. More advanced and far-reaching forms of artificial intelligence are being developed will soon force us to face new challenges of various kinds.

Cognitive friction is needed

How should we face the uncertainty to make the most out of future opportunities? The so-called digital economy is characterized by cross-cutting applications, requiring the participation and contributions of many different stakeholders at once. Working in silos is no longer an option, especially since the ongoing data revolution entails that all sectors will be affected by the increasing access to personal data. The best approach for getting a comprehensive picture of what is going on is to work together in between stakeholders. Start-ups and large groups cannot stay isolated, but have to exchange knowledge in order to understand the environment

and be able to move forward. The French government adopted a cooperation approach in its recent work with the French Tech. It engaged players such as large groups, start-ups and local stakeholders, and made them meet and work together. The project marked an important step forward. In order to do so, these different players had to identify themselves to get to know each other and then they had to locate themselves to get together in a physical place. Physical spaces constituting platforms for different players to meet are now blossoming: centres for cooperation between stakeholders have now been established in various big cities. It is important to stress that this development isn't dependent on public initiatives in all cases, there are also private centres such as *La Paillasse* in Paris. These examples have proved that cognitive friction generates new knowledge, ideas and know-how – assets that we need to be able to tackle the future. Public authorities should help different actors to find each other and meet.

What could large groups do?

The first step that groups have to take is to start working in a more cross-cutting manner. The hierarchical organization structure common among large groups can easily hinder cross-cutting work. Second, large groups should look beyond their core activities and closely look at what is going on in all the different economic ecosystems that exist. In this regard, Société Générale has concluded a number of partnerships agreements with innovation centres, which could bring about cognitive friction. An open innovation approach is beneficial for society as a whole. Some start-ups, like the ones in *La Paillasse*, are indeed working with the objective of having a positive social impact. Last year, *La Paillasse* started a competition intended to result in the creation of a lake of health data which is to be used to find ways of combatting cancer. Société Générale is backing up this kind of initiatives to contribute to a better society in the long-run, while it allows itself - at the same time - to benefit from new learning. (July 2016)

CAN WE CREATE INNOVATION THROUGH REGULATION ?

EVA PAUNOVA | Member of the European Parliament (EPP, BG)



Although it sounds oxymoronic, the answer is - yes. While regulators cannot create innovation themselves, they can still establish an enabling innovation environment. In order to assess which regulatory approaches have innovation enhancing potential we must bear in mind how innovation happens. It requires challenging those things we think we know with certainty. It's about having individuals take risks and change the established perceptions. And here is where regulation comes in play.

Regulators can enable innovation by developing education in a way that stimulates skills like imagination, creativity, digital skills for work with new technologies, critical thinking and complex problem solving. This is a cause I have been working for passionately. In 2015 we launched Education Bulgaria 2030 together with public and social partners. The initiative aims at mapping the way for quality education and training systems which makes young people competitive on the evolving labour market and provides them with the skills needed not only to find decent jobs but also to be the next innovators.

« Public regulation can be a powerful stimulus to innovation »

Innovation happens from challenging the established, commonly believed truths and myths. Regulation can stimulate this process by giving enough incentives of people to do so. One way is to reduce the administrative burden for starting a business. Thus we allow many more people to enter the market but in order to benefit they must come up with a better product than the existing ones. They must offer something new and innovative. It's a well proven fact¹ that cartels undermine innovation and this point is not made frequently enough. In the comfort zone of their illegal agreements, cartelists have lower or no incentives to invest in innovation. In this respect EU competition regulation is a crucial enabler of the innovational environment.

We all know the basic truth that no-one is as smart as everybody. Regulation on technology transfers from university to industry can ease the implementation of innovative ideas through patenting, acquisition and transfers of innovative ideas from the university to the

private sector. Patents foster ex ante innovation by inducing people to invent because of the prospect of profiting from those inventions. But patents also improve the allocation of resources by encouraging rapid experimentation and efficient ex-post transfer of knowledge across firms.

A perfect example of EU policy making efforts in this regard is the recently announced plan of the European Commission to create European Open Science Clouds, which will offer researchers and scientists and professionals in the technological industry a digital environment to store and re-use their data.

It is of utmost significance to maintain the incentives for businesses, universities and research institutes to invest in research and innovation. It is equally important that we ensure availability of funding – especially for those research fields that are less appealing for the industry because they do not provide imminent added value for the company. The EU is doing quite well in this aspect funding research and innovation under the Horizon 2020 program. It is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available from 2014 to 2020.

All this shows us that, under certain circumstances, public regulation can be a powerful stimulus to innovation. It is our duty as regulators to identify these circumstances and use the right measures to pave the way for innovation to become the new norm in European economy. (May 2016)

¹ For example, the OECD "Report on the nature and impact of hard core cartels and sanctions against cartels under national competition law" of 2002 concludes that "a cartel

shelters its members from full exposure to market forces, reducing pressures on them to control costs and to innovate".

PAYS DE LA LOIRE LEADS A THIRD INDUSTRIAL AND AGRICULTURAL REVOLUTION

Alain SCHLESSER | General Manager of the Pays de la Loire Chamber of Commerce and Industry



The Pays de la Loire Chamber of Commerce and Industry announced its support in 2013 along with the region's Chamber of Trades and Crafts and Chamber of Agriculture for a *Troisième Révolution Industrielle et Agricole* (TRIA) initiative. By accepting a role in this project, the Loire consular networks have committed themselves to addressing today's global economic, demographic and climate challenges, all of which are already making their effects felt locally, with the aim of becoming future business incubators

TRIA, inspired in particular by the work of J. Rifkin, embraces a clear "vision", that of actively supporting companies throughout their digital and energy transition so that they become drivers for future Pays de la Loire economic development. TRIA currently assists some 200,000 Loire companies, helping them to become more "agile" by making use of four competitiveness levers: the energy and environmental transition; improved global performance ; new economic models; and the digital revolution spearheaded by new technologies and connected objects. The chambers make practical tools and schemes available to businesses in each of these areas, including PEPS for controlling energy production, DINAMIC for improving internal performance, ACT'IF for mapping incoming and outgoing flows of materials in order to pool resources, the functional economy club, the Eco-Produire ecological initiative and CSR.

To develop sectors with strong growth potential, TRIA has also set itself the objective of creating a smaller group of some 3,000 "challengers", future intermediate-sized enterprises or unicorns providing cutting-edge products or services in six sectors structuring the regional economy: renewable energy; positive-energy buildings; ecomobility of goods and people; energy conversion and storage and smart grids; big data and connected objects; and ecologically intensive agriculture.

The Pays de la Loire region is fortunate enough to have its own favourable and dense ecosystem of semi-public stakeholders, including various clusters. They play an important role in supporting and promoting sectors at the forefront of innovation and in developing a production knowledge unique in

France, as evidenced by its major OEMs (Airbus planes, STX cruise ships, Alstom offshore wind turbines) and their dense subcontractor network. More recently, and somewhat surprisingly, numerous private initiatives have also been set up aimed at providing direct support for such companies. Enterprises like the *Cité des Objets Connectés* in Angers (fab lab created by several manufacturers) and the Startup Palace in Nantes (accelerator for digital start-ups) tend to prove that government intervention is no longer strictly necessary, that private initiatives are in fact more agile and more responsive in terms of keeping up with revolutionary trends.

Such revolutions are necessary for future growth, and for innovative projects and businesses to be successful they must be underpinned by efficient national and European innovation policies. We have to make Horizon 2020 and InnovFin type programmes more accessible in order to more rapidly meet the needs of "agile" companies and "challengers". The Juncker Plan, which provides for the establishment of investment platforms as well as funding for business investment projects in the form of bank loans rather than grants, seems to us a good solution for such companies. Finally, while it is important that we "detechnocratise" access to structural funds for public and semi-public structures, these funds must first be brought back up to an acceptable and realistic standard in terms of control, legal certainty and availability, at the risk of becoming increasingly unusable – and therefore unused. To make the transition, it is essential that companies have access to investment and that our innovation ecosystems be sufficiently agile. (May 2016)

« Projects and businesses must be underpinned by efficient national and European innovation policies »

CONFRONTATIONS



OUR RECOMMANDATIONS

« Innovation in the digital era : reinventing our economy »



- **INVEST IN HUMAN CAPITAL FOR A SUCCESSFUL DIGITAL TRANSITION**

1. Adapt educational and training systems to 21st century needs

- Make sure digital skills are included in the curriculum from nursery school to higher and continuing education (today, only 20% of training programmes include a digital component).
- Develop **new educational tools** like MOOCs (massive open online courses) and SPOOCs (small private online courses) and new, least-cost forms of education widely accessible to millions of Europeans. To reform learning methods and schools, Member States should also draw inspiration from best practices already in place across Europe.
- Promote **lifelong learning**, for example using new, digital-based training methods (e-learning, blended learning, etc.) accessible to all workers.

2. Adopt a holistic approach to skills

- Adapt education to the digital age: the challenge is not only to provide current and future generations with the technical skills associated with new technologies, but also to **build a new culture** of collaboration and entrepreneurship. The skills required go beyond just learning to code. Among other things, a propensity for initiative, critical thinking, creativity and teamwork is essential.
- Make the transition **from managing jobs** (which tends to protect existing jobs at all costs and hence encourages relocation rather than the redeployment of workers across Europe) to **managing the skills** allowed by digital tools,
- **Support cooperation between industry and other stakeholders** to tailor vocational and academic training in ICT to labour market needs.
- Give businesses the resources they need to invest in skills and training. **Investment in human capital by private stakeholders and through the EFSI plan must be effective.**

3. Support mobility of talents in Europe

- Attract new talent by adopting a **European Start-Up Visa**.
- **Extend the Erasmus for Young Entrepreneurs programme internationally** to encourage mobility among entrepreneurs from the incubation phase.

4. Accompany labour market's mutations and new forms of employment

- Initiate a **European debate with all stakeholders on the new welfare system** in the digital age and encourage Member States to engage in **discussions with all stakeholders on sharing the value** created by innovation and digitalisation.
- Develop **social indicators** to monitor these societal changes

5. Position social dialogue at the heart of the digital transformation

- Make sure the challenges raised by the digital transformation are incorporated into European social dialogue at all levels.
- Social partners and businesses must join forces to introduce **long-term solutions for maintaining business competitiveness while making sure workers get the retraining they need**. Social partners have an essential role to play in encouraging workers, the unemployed and those furthest from the labour market to seek training in order to prevent discrimination based on age or qualifications.

CONFRONTATIONS



→ Introduce this new culture into companies through a **horizontal, rather than vertical management approach**. Put the focus on cooperation rather than hierarchy.

- **DIGITALISATION OF INDUSTRY AND EUROPEAN COMPETITIVENESS**

1. Create a true, united common market

→ **Continue efforts to harmonise** taxation in Europe
 → Continue simplifying administrative formalities under the Better Regulation initiative.
 → Facilitate the growth of European start-ups by introducing the concept of a **European innovative enterprise**.

2. Implement an ambitious and coordinated European Digital Strategy

→ Aim to develop **a strategy that catalyses private initiatives**, by taking inspiration from successful schemes such as Industry 4.0 in Germany and fostering cooperation and partnership.
 → **Establish a roadmap of key projects** (e.g. Internet of Things, a European cloud and cybersecurity) around targeted industrial sectors (energy, transport, health...) in order to create a continuous chain between research, innovation and the market and coordinate them through European calls for projects.
 → Set up **public-private partnerships to promote digital technology** (e.g. the ECSEL91 initiative in the electronics sector or IMI– Innovative Medicines Initiative–).
 → Develop a **social network connecting managers of small and intermediate-sized businesses**.
 → **Lead the way in standard setting**, thus enabling the security of industrial processes, developing trust among users and providing for interoperability of systems.

3. Support our innovative companies in their international growth

→ Establish a real **“innovation diplomacy”** to simplify funding for internationalisation projects and improve support for companies seeking to establish operations abroad.
 → Create a **“one-stop-shop”** to centralise internationalisation information and procedures.

4. Data: a regulatory framework conducive to innovation

→ Reaffirm personal data protection as a fundamental right, while endeavouring to establish a framework that **guarantees the portability of data and rights**.
 → Support the harmonization of provisions included in the new General Regulation for Data Protection (GDPR)
 → Support the creation of a European data agency.
 → Distinguish between personal and non-personal data when drafting regulations and dealing with the public.

- **DEVELOP INNOVATION ECOSYSTEMS**

1. Promote cooperation between large companies and start-ups as a new model of European competitiveness

→ Create a **European forum of international perspective** to enable start-ups to promote their projects and set up an **online “one-stop-shop”** for the same purpose.
 → Share **best practices** employed in certain countries to combine start-up flexibility with the market accessibility enjoyed by large companies.
 → Propose a **code of good relations between large companies and start-ups** and provide partnership agreement templates.

2. Facilitate the establishment of actual innovation sites, letting stakeholders take the lead

CONFRONTATIONS



- Support the development and networking of **thematic European innovation centres** involving a range of different stakeholders and encourage sharing of best practices at European level.
- Promote exchange and cooperation between teachers and entrepreneurs.
- Establish regular international benchmarks for new innovation practices.
- Restore the **innovation culture** within European, national and local public authorities by providing support for training public officials.



3. Facilitate access to loans.

- Create a European Capital Markets Union (CMU) and increase venture capital investments in Europe.
- Enable **more savings to be channelled into innovation**
- Promote **the creation of a European stock market** (in vertical markets of strategic European interest, such as cybersecurity).
- **Develop a European business transfer market** to boost investor confidence by facilitating buyouts of European start-ups and encouraging IPOs.
- Develop an ecosystem of competent stakeholders by providing **support for training** in this area.
- Facilitate the **access of start-ups to financing under the Juncker Plan**

4. Facilitate SMEs and independents access to public procurement

- Promote the introduction of a **Small Business Act II**.

5. Make room for the principle of innovation in regulation

- Develop a **European right to experimentation** in line with the principle of innovation promoted by the European Commission

Contact:

Carole Ulmer, Director of Studies, Confrontations Europe

Tel: +33 (0)1 43 17 32 90 / Mob: +33 (0)6 03 11 84 14

E-mail: culmer@confrontations.org

Louise Decourcelle, Project Manager, Confrontations Europe

Tel: +32 (0)2 213 62 72 / Mob: +32 (0)471 53 23 62

E-mail: ldecourcelle@confrontations.org

Keep up with our latest news and activities on our website: www.confrontations.org