European Commission

EU Industry Days 2019

Summary of the discussions

#EUIndustryDay #InvestEU

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This report was prepared by:
The Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
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The Directorate-General for Research and Innovation
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Acknowledgements:
The authors are grateful to all the participants in the third EU Industry Days for their contributions to this publication.

Third EU Industry Days

5-6 February 2019

Summary of the discussions

Key statistics

1,559
participants

2,904 virtual participants followed web-streamed sessions

>295K
impressions

@EU_growth

>4.6K
engagements

>150
speakers

>30 sessions

>30 EU-funded projects @Expo

34,082
web visits*

* between 23 January and 11 February

EU Industry Week 2019 Local events and Open Door Days

>100 events

20 countries

TOP TWEETS @EU_GROWTH

Market,Industry&SMEs @EU_Growth · Feb 5

.@JunckerEU at #EUIndustryDay 2019: The economy is transforming before our eyes. To succeed, we must be the first to adapt, the first to shape it. #EUindustry can lead the way. We are home to some of the world's best innovators and entrepreneurs. #investEU

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Market,Industry&SMEs @EU_Growth · Feb 5

.@EU_Commission VP @jyrkikatainen launched the Circular Plastics Alliance at #EUIndustryDay today. The aim is to achieve 10 million tons of recycled #plastics by 2025. More on the Alliance: europa.eu/rapid/press-re... #PlasticsStrategy #PlasticPledges #CircularEconomy

EU Environment and Jyrki Katainen

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PLENARY SLI.DO RESULTS

What is the biggest challenge for industry towards 2030?

Cybersecurity	11 %
Technology Uptake	12 %
Dependency on Foreign Actors	3 %
Qualified People	22 %
Transformation to climate-neutral industry	53 %

What are the biggest opportunities for EU industry / your company in the coming years?

Access to talent and skills	18 %
Decarbonisation and circular economy	31 %
Digitalisation and new technologies	42 %
Global markets	4 %
Single Market	5 %

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Introduction

Keynote speech by Jean-Claude Juncker, President of the European Commission

The diversity and richness of this year's EU Industry Days agenda shows how far and wide industrial policies go. They cut across our entire economy and society: from investment to innovation, from skills to space, and from clean energy to construction. It was in this spirit that the Commission launched its comprehensive industrial strategy in 2017, which brings everything that we already do together under one roof.

This is about preparing us for the future. Our economy is transforming before our eyes, and the world around us is changing faster than ever. And if Europe is to succeed, it cannot afford to fight that transformation. Rather, it must be the first to adapt to it, and the first to shape it. And I believe our industry can lead the way.

We have a lot to build on. Europe's industry provides a livelihood for millions. It is a home for some of the world's best innovators and entrepreneurs, and it is the driving force of Europe's continued economic recovery. The numbers speak for themselves. Both the EU and the euro area are now growing. More than 239 million people are now in work, more than ever before. 12 million of those jobs were created since the start of this Commission's mandate. The creation of 12 million jobs is not solely due to the work of this Commission, but if we had lost 12 million jobs, the Commission would be responsible for that. Investment is back, with the Juncker Plan alone helping to trigger more than €375 billion in investment, helping 856,000 small businesses in the process. Industry has been there every step of the way, employing more than 32 million people directly, and many more indirectly: for every manufacturing job, another 2.5 jobs are created across the value chain.

This shows that industry truly drives our economy, but more than that, it helps us punch above our weight on the global stage. Industry accounts for more than two thirds of our exports, and is one of the main reasons we have partners lining up at our door to secure free-trade agreements.

Take the agreement with Japan, which came into force last Friday. This is a game-changer for our industry. It will open up a new marketplace, home to 635 million people and a third of the world's GDP. It will save European companies €1 billion in duties every year. And most importantly, it contributes to our principles in areas such as labour, safety, climate and consumer protection, making these principles the global gold-standard. This is the trade that Europe will stand up for with our like-minded partners around the world. Together, we are redesigning global trade for the modern economy.

Let me be very clear: we are not naïve free traders. We will not trade for the sake of it or compromise on our principles for a quick deal. I cannot accept that those who work hard to make ends meet suffer at the hands of those who dump, de-regulate or distort the market. This is why we have shown our teeth by raising tariffs on cheap steel coming from China or taken a no-tolerance approach on the forced transfer of technology. It is why we have modernised our trade-defence instruments and have just recently agreed new rules on screening foreign investment in areas that may affect security or public order.

Just as a level playing field in the global market is essential for our industry, so too is a level playing field essential at home, in our single market. We will always allow competition that is fair for business and ultimately fair for the consumer. We have shown this time and again. We want strong European companies that can compete on the global stage.

In the-nearly 30 years since the first European merger rules came into place, we have approved more than 6,000 deals and blocked less than 30. This is a message for those who say that the Commission is composed of blind, stupid, stubborn technocrats: 6,000 deals have been approved, and only 30 were blocked. This shows that we believe in competition — as long as it is fair for all. We will never play politics or play favourites when it comes to ensuring a level playing field.

This is what allows our entrepreneurs and innovators to thrive. There is no lack of talent, no lack of ideas in Europe — you see this for yourselves with the 23 Young Industry Leaders who have joined us today. Our job is to make sure that we use all the tools we can to make sure they fulfil their potential.

This is why we must also get on with deepening the single market, our best asset in this increasingly competitive world. Countless European Councils have called for the completion of the single market. It is time we match that rhetoric with delivery on the ground. The single market allows businesses all over Europe to work together to create and market new products free from customs and technical barriers. It helps bring down costs, improve the quality of materials, and give customers more choice. But there are still far too many barriers preventing the single market from fulfilling its full potential. We can do better.

In particular, we need to make it a priority to complete the capital markets union to ensure that industry has access to the finance it needs to innovate and to grow. Overall, we have made 67 proposals to help complete the single market. And 31 of these proposals still need to be agreed by the co-legislators — the Parliament and Council of Ministers. This should be our focus in the weeks and months ahead.

At the same time, we must also look further ahead. We are in the process of discussing our new long-term budget for 2021-2027. This is about choosing what we want our union to achieve. This is why the Commission's proposals focused on the areas that matter the most — and the areas where investment can really add value.

The future of Europe's industry will depend on its ability to adapt by investing in new technologies and embracing the digital and ecological transitions. This is why, when it comes to industry, we have to put our money where our mouth is — right across the board.

Funding for research and innovation will be increased by 50% to reach €100 billion. A digital Europe programme worth €9 billion will support Europe's digital transformation. A quarter of our budget will support our clean energy, climate, and sustainable development targets; and we will take our successful investment plan for Europe to the next level with the new InvestEU programme.

This shows how industry will be central to the future of our economy. But for me, like for so many others here in this room, industry is also personal. My own father was a steelworker. The steel plant was the heart and soul of our local community in the deep south of Luxembourg. What I saw growing up still shapes the way I see the world today. I saw honest, hard-working people developing their skills, contributing to society and earning a fair wage. I saw how industry was firstly about people and I saw the stability that industry gave to my family.

Of course, industry today looks very, very different. Technologies have changed and ways of working are different. Climate change poses as many major challenges as it does opportunities for European companies to take the lead globally.

Ultimately, Europe is still an industrial society — both at heart and in practice. And we should still always think about what our economy can do for people, rather than what people can do for the economy. This is why I have made the European Pillar of Social Rights a personal priority. It is about ensuring things like equal pay for equal work in the same place. It is about providing a work-life balance so that everyone can have stability at home and stability at work. It is about equipping people with the right skills in the changing world of work.

Around a third of European employers say they cannot find people with the right skills to grow and innovate. But 44% of Europeans still lack basic digital skills, and we also have many highly qualified young people in jobs that do not match their profiles. Our new skills agenda for Europe is helping to plug the skills gap and support workers, young and old, to develop new skills for today's job market. When it comes to adapting to the modern world, skills and jobs should be our number one priority.

You will hear a lot today about how globalisation will shape the future of our industry. But I believe that if we are ambitious and can make the most of our potential, Europe and its industry can help to shape the future of fair globalisation. Yes, there will be challenges. Europe's industry has always shown its willingness and ability to adapt. This is what it must continue to do.

Keynote speech by Kristalina Georgieva, Interim President of the World Bank Group

It is pleasure to be back in Brussels among so many friends and former colleagues, and it is an honour to address you today. You have a lot on your mind these days. 2019 is shaping up to be a tougher year than the year we left behind.

Global growth is slowing down. In our projections for Europe this year, we see growth of 1.6% versus 1.9% last year. International trade has lost momentum, commodity prices are softening, and several emerging markets are facing financial stress. What is even more important to recognise — something I know you are thinking about — is that the risks are higher today than they were just a year ago.

There are risks related to trade tensions. At the World Bank, we assess that we might see a decline of about 3% in global exports and about 1.7% in global income. That translates into around US$1.4 trillion — not a trivial amount. We know that there are clouds of uncertainty over Europe. This is related to Brexit, and of course some anxiety comes with the elections for the European Parliament and the appointment of the new European Commission. There are reasons to be alert, but not alarmed — yet.

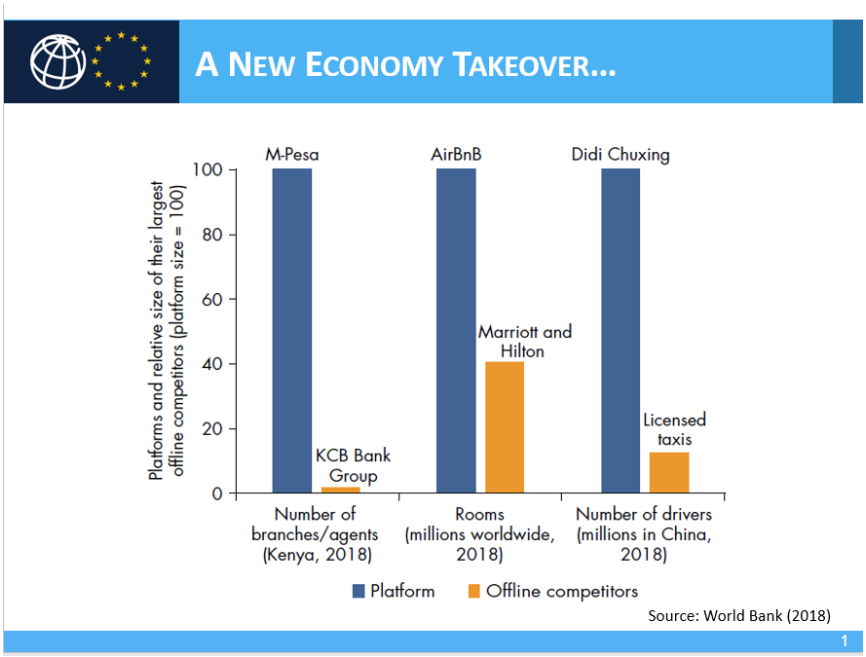
I want to share my reflections from Davos this year. There is a tendency for the mood to swing one way or another, towards the extremes. Last year in Davos, everybody was more optimistic than the economic fundamentals suggested was appropriate.

This year in Davos, the mood was much darker than the economic fundamentals suggested was appropriate. It is in the spirit of being alert, but not yet alarmed, that I want to talk to you about uncertainty and why we should embrace it. Uncertainty can come from climate change. Climate risks are more severe, but so is the opportunity to transform to a new climate economy. On this issue, Europe is ahead of the curve.

When we talk about the 'new climate economy', we talk about the potential to create an additional $26 trillion of wealth. European businesses have a huge role to play in this. We talk about 65 million additional new jobs that could be created, and again they can be for European workers.

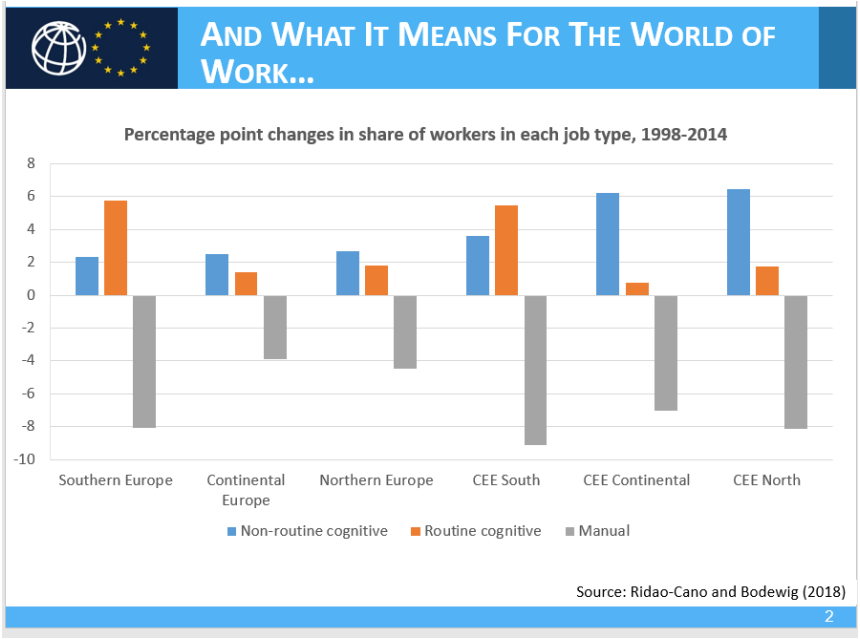
Another uncertainty that provides a great opportunity is related to connectivity and the digital economy. I want to tell you a story that brings me back to the days when I first came to Brussels in 2010. My former colleagues gave me a send-off with the coolest of presents. They queued for 48 hours to buy it for me. It was an iPad. Five years later, I was talking to my granddaughter about life when I was her age — 5 — and how in those days there were no computers and no TVs. She looked up at me and said, 'So you only had iPads?'

Change has happened in a short period of time, and this is what we are embracing. We must embrace it even more. It is a change that we see across the board, as the digital economy increasingly takes over. I am going to present to you two slides.



The first slide shows how, in a short period of time, companies that were created around the time I got my iPad have managed to overtake competitors from the traditional economy. The first company is 'M-PESA', which operates in mobile banking. In comparison to a very well-established bank, it is already a giant. The second company is Airbnb, and the slide shows how it compares to traditional hotel chains in terms of the numbers of rooms each operates. Traditional hotels are dwarfed by Airbnb. And the third company is an Uber-type service in China, Didi Chuxing. In comparison to traditional licensed taxis, Didi Chuxing is a long way ahead. This trend is important for European businesses because it shows that we need to embrace innovation much more aggressively and take risks to compete. Unfortunately, none of the companies I have presented on this chart is European. So there is work to do. And we also have to be extremely focused on the rapid development of the new digital economy, because as President Juncker has said, it is transforming the nature of work.

That is where I will take you with my next slide, which shows a very simple message. Across Europe, from North to South and among new and old Member States, there has been a strong increase in the number of cognitive jobs. Not surprisingly, this has also been accompanied by a decrease in manual jobs. The message of this chart is that we are generating new cognitive jobs at a rate approximately equal to the jobs we are losing on the manual side. In a recent World Bank report, 'Growing United', we show that over the last 15 years, manual jobs across the EU have declined by around 15% while creative and analytical jobs have gone up by the same amount.



At face value one may ask: what is the problem? After all, 15% more and 15% less is an equal balance. Except the people in the new cognitive jobs are not the people who have lost their jobs in the manual-labour sector. Skills are the most important asset for Europe. And if I may take this a little further, the development of skills is also hugely important for Europe, or we may see growth in inequality and growth in populism, which for Europe is unacceptable.

We take pride in being the region with the lowest levels of inequality, and we ought to protect that. Unfortunately, what we have seen is that over the last 15 years, the poorest 10% of our people have become poorer. They have become 7% poorer. The richest 10% of Europeans have become richer by 66%. For this reason, the jobs and skills agenda for Europe is also an equality agenda, a democracy agenda and pro-European agenda. It is the most important agenda today.

My third message is that European businesses must not only step up on our own continent. We also have a mission to go where opportunities are greatest: and that is in the continent of Africa. Because Africa is furthest behind — only 22% of people in Africa have access to the internet — Africa is where we can achieve the most by accelerating a digital revolution. At the World Bank, we have borrowed the term 'moonshot' from President Kennedy's speech in 1959. We are going on a digital Africa moonshot mission, and I want you to join us on this journey. Our objective is to have every African citizen, every African business, and every African government service digitally enabled by 2030. This is an opportunity for European businesses because I very strongly believe you have the capacity to bring digital identity systems to Africa. You have the capacity to work with the new African free-trade area because of your proximity. You have the experience of building e-government systems. And you have the experience to build e-commerce in Africa. What is more, it is paramount for stability that we lift up the prosperity of Africa and create the jobs that are so absolutely necessary for the young people who will enter the job market. So what does this all mean for the policymakers in Europe?

Obviously, it is critical for European policymakers to strive in this period of uncertainty to provide more clarity for you, for European businesses.

President Juncker talked about some of the ways in which this is being done through bilateral trade agreements, the Juncker Plan, and the concentrated efforts to reduce red tape for European businesses. I would stress three absolutely critical points.

The first is investment in R&D. This is not only important for the vibrancy of the European economy. It is also important to connect European universities and research centres with themselves and with the rest of the world in a way that creates a breeding ground for entrepreneurship in Europe.

The second is investment in people. I cannot think of a more important investment that Europe ought to make. The World Bank has created a new ranking — the Human Capital Index. Currently, Singapore is at number one. Next year, or the year after it would be good to see a European country right there on top. The skills agenda is also an agenda for business. Business has a responsibility to invest much more in skilling and reskilling workers in Europe.

The third point is that it is very important for European policymakers to recognise that agile, adaptable policies — including social-protection policies — are the policies that are best suited to the 21st century. Adaptable social safety nets will work much better in this new economy than traditional worker-based social-protection systems.

Last but not least, we must increase support for European businesses to go to risky places, and this is where we at the World Bank are your best partner. We are there.

President Juncker talked about the EU budget, and it is well aligned with our priorities. Vice-President Katainen has just published an article about priorities and they are right on target. You have very clear directions, the right directions, about where to go. What is left — as Nike would say — is to 'Just Do It'.

Keynote speech by Elżbieta Bieńkowska, European Commissioner for Internal Market, Industry, Entrepreneurship and SMEs

Our economies are changing at a very fast rate. This digital revolution offers massive opportunities for our firms to be more efficient, and to offer new products and services. More importantly, it offers new opportunities for our citizens, such as more and better jobs. And above all, it offers opportunities for improvements in our daily lives. I am thinking in particular of e-health and treatments for illnesses at much lower cost.

These changes are taking place in a globalising economy. Physical transport remains important, but data flow matters even more. This is good for both Europeans and the rest of the world. Europe is in strong position in this thanks to our strong single market — it is our most important asset in helping our companies to be resilient.

Let us not be too idealistic. There are many in Europe who do not see the future in happy terms. There are many who fear that they will become victims of this change, that their job will be replaced by a robot, or that their company will be relocated. When we talk about opportunities, they ask whether these are limited to those that meet in Davos. When we talk about digital innovation, they

worry about data privacy and data leaks, and think about young students protesting to speed up action against climate change.

Some of our global counterparts answer these fears with new tariffs, new subsidies, and breaking international rules. Renationalisation and protectionism, building walls around their countries and their ailing industries. We are not immune from that sentiment in parts of Europe. We now have more barriers in the single market than 10 years ago. We are shooting ourselves in the foot. Many times the Commission has put forward proposals that would have delivered value for our citizens and companies. Too many of these proposals have been at best watered down and at worst blocked entirely. And as Dieselgate showed, even where rules are adopted, they are often flouted at local level.

We cannot ignore the fears and frustrations that are out there. We cannot dodge the pushback against many of the values that are central to the EU. Some of the fears are misplaced, and we must not be afraid to rebut them. But some of the fears are more legitimate, so we must listen more to our citizens and we must do more to address their concerns. We need the trust of citizens and 'we' means governments AND industry; we have a joint responsibility.

When our citizens complain about certain large corporations evading taxes, they are right. When our citizens get angry about car manufacturers installing cheat devices, I agree. When they say that globalisation is littering our oceans and is polluting our air, they deserve action. On the one side, we need a balance between encouraging digital transformation, innovation and globalisation. On the other side, we must ensure that the benefits are felt by all our citizens, that rules are fair, and that business is sustainable.

We have made a lot of progress. For the first time, we have taken an integrated approach to industrial policy, linking innovation, investment, skills, decarbonisation and the single market. The Commission, Member States and regions have each played their role in permanent cooperation with industry. We have promoted digital transformation, and we are doing more on standardisation to make our values into global standards — look at what we have achieved with eco-design and REACH. We are working to tap the potential of Artificial Intelligence.

On globalisation, we have presented a proposal for a European framework to screen foreign direct investment (FDI). We are working to reform the multilateral trading system, and we are increasing access to markets outside the EU. As you know, the Japan-EU free-trade agreement has just entered into force.

Perhaps the biggest shift has been towards decarbonisation, circularity and sustainability. Look at what we have done on the circular economy. Today, Vice-President Katainen will launch the Circular

Plastics Alliance. With this initiative, we want to achieve the target of at least 10 million tonnes of recycled plastics in new products by 2025. Look at the Battery Alliance. Europe needs to invest in a competitive and sustainable battery industry; we need large investments in several EU countries. This alliance is about joining forces with Member States and industry. These are just two examples of how industry can take the lead on sustainability.

We have taken good steps, but we can and must do more: sometimes voluntary approaches work, and sometimes the best tool is more effective enforcement. We must not shy away from regulating where necessary and proportionate.

We must tackle the digital threats and move to a true security union. We must be in full control of our telecom and internet networks. We must be prepared against hybrid warfare. We must enforce the GDPR. We must resolve data ownership in areas such as car data and medical data. Tech companies must play their full role.

On globalisation, we need to preserve the benefits of openness, while mitigating its side effects. All international partners have to play by the same rules. Let me be clear: China is the elephant in the room. China is a WTO member, but it is not a member of the Global Procurement Agreement. To address this in Europe, I call upon the Council to move forward with the International Procurement Instrument. We have to give Member States the tools to defend themselves. Europe welcomes foreign direct investment, but we cannot be naïve. We cannot allow investments to threaten our political system and our security. Our EU foreign direct investment screening is probably just the first step. All Member States should have the possibility to block FDI on national security interests. We are not there yet. Globalisation also means working with allies such as Canada, Australia and Japan. It also means that we must do more on sustainability, decarbonisation and circularity. This is a challenge, but it is also an opportunity.

This takes me to the crux of what I want to say today: industrial policy can be an engine of convergence, but the EU cannot deliver this on its own. This is a joint responsibility based on four principles to build ownership and a common industrial policy.

The first principle is to think regional. A common industrial policy means that no region will be left behind and no worker will be left behind. Regions know best how to help themselves if we enable them. Each region must have enough leeway and resources to do what they know best. We must support them in their transition, to make sure that no region perceives the single market as making them worse off. We must provide workers of all regions with the right skills for the future. Our smart specialisation strategy is about precisely this.

The second principle is to think about strategic value chains. Do we accept that we are not able to build strategic satellites without the help of countries outside the EU? Do we accept that we are not able to deploy 5G networks without the help of countries outside the EU? Do we just accept the Chinese ‘Belt and Road’ initiative? Do we want to be pro-active or reactive in Europe? This is not about being protectionist, this is about being strategic. To be concrete, we have to move away from State-aid control to State-aid policy. It should be a State-aid policy that focuses on strategic value chains. We have to protect these value chains with trade-defence instruments and FDI screening. We already identified the strategic value chains: high performance computing, batteries and microelectronics. During the Industry Days, we will unveil our additional proposals.

The third principle is to think about innovation and sustainability together. Do we want to achieve a sustainable economy by command-and-control? Do we want to forbid our citizens to drive cars? Do we want to forbid industrial production in Europe? My answer is no. I want Europe to produce zero-emission cars. I want incentives to develop clean production technologies instead of bans. I want innovation and technology to be the solution and to pave the way to sustainability.

We need Artificial Intelligence to reduce greenhouse gases by managing traffic flows. We need renewable bio-based materials that make our industries globally competitive. Our circular economy strategy is about precisely this. Our long-term energy and climate strategy was written in this spirit.

The final principle is to make industry responsible. Industry must provide the innovation and economic leadership. It must put sustainability at the core of its operations and strategy rather than being an add-on label. This is about business taking legitimate commercial decisions but doing so in a way that respects the environment, society, human rights and, above all, European values. It is also about businesses paying their fair share of taxes. Doing this means sustainable profits, sustainable growth and new market opportunities.

If we take these four principles seriously, we will build a common industrial policy. The common industrial policy will deliver on convergence, and European industry will take global leadership to shape this industrial revolution to the benefit of our societies. This is why we are here today.

Two years ago, we launched EU Industry Days to stimulate a debate on the long-term future of industry. We had a one-day event with 600 participants. Now we have a full two days with 1,500 participants and more than 70 events all over Europe.

This is my last Industry Days speech as a European Commissioner. I thank you for the great collaboration over these years. I wish you the leadership, vision and the courage to fight for it.

Day 1

Dialogue between Jussi Herlin, Vice Chairman of Board of Directors of Kone, and Mate Rimac, founder and CEO of Rimac Automobili

Kone has been founded in 1910, Rimac Automobili in 2009, still both the established company and the new-kid-on-the-block successfully position themselves in Europe and on a global stage.

Europe's competitive advantage in global markets has been based on high value-added products and services. In particular European SMEs have succeeded in conquering highly specialised niche markets by becoming world leaders in their area. These market developments were underpinned in the past by technological innovation, high-skilled workers, a regulatory environment that drives 'cleaner' outputs and intact European industrial value chains. Building on the global reputation that European goods are superior in quality, there is a unique opportunity to provide additional value – and gain international competitive advantage – by accelerating the integration of technology, services and design.

At the same time, there are still significant challenges for business in Europe. First, the presence of venture capital funds in the EU is declining. And in the last 5 years, the share of venture capital funding in total world investment has decreased from 17% to 10%. In 10 years, when the results of this major decline in venture capital investment becomes more visible, Europe will face an even bigger gap. However, venture capital funds have experienced tremendous growth in Asia, where they account for 40% of overall investment. There has also been strong growth in venture capital funding in the United States. Europe has not been able to close this financing gap. In case of Rimac Automobili, required funding for development came from private investors, not national or EU funding, which comes too slowly to support the manufacturing and business development process. Therefore, if the EU wants to increase its support for innovators, it should reflect on new funding methods and support measures.

The second key challenge is access to talent. All robust business plans for further expansion and growth have a particular focus on the development of skills. This focus is also a response to the serious brain drain in many regions across Europe. It shows the increasing role for industry in upskilling the workforce.

The final challenge, and opportunity at the same time, is related to digitisation and Artificial Intelligence. That is for example the case in the automobile sector. Autonomous driving will be one of the greatest revolutions in the coming years: it will significantly improve quality of life and productivity, and create a world without automobile accidents, traffic police, fines, the search for parking places, etc.

High-level roundtable: industry and the future of globalisation

Jyrki Katainen, European Commission Vice-President for Jobs, Growth, Investment & Competitiveness

As the global environment is evolving, industry will be evolving with it. And those who are ahead of the curve, usually also end up getting the best rewards.

We can all see the benefits of further globalisation. For industry, its stronger position on the global stage could also play a role in strengthening Europe's place in the world. And a strong Europe is the best asset for guaranteeing a rules-based, multilateral world order.

The European Union can play a positive role in shaping globalisation – and this particularly true for sustainability. Sustainability is part of Europe's DNA. By modernising our economies, the way we produce and provide services, fully embracing circular economy and reaping the benefits of new technologies such as Artificial Intelligence, we can shape the future according to our values.

Arancha González, Executive Director of the International Trade Centre

Knowledge, innovation and growth are critical for the success of EU industry, especially in the context of globalisation. Europe has 7% of the global population but produces almost 25% of the world's Nobel-prize-winning researchers. Europe's main challenge is to turn this research into innovation and economic growth. However, Europe is not making the most of its knowledge due to the fragmentation of its markets.

Addressing this problem requires a drive for values, sustainability, inclusiveness and partnerships. Values go far beyond economic returns — business growth should promote improvements in the wellbeing of workers and communities while maintaining the health of the environment around us. Stepping up support for the internationalisation of micro-, small- and medium-sized enterprises (and especially businesses owned by women) is also crucial to increasing their competitiveness and thus to ensuring economic growth.

If Europe wants to sustain its industrial leadership role it needs to improve its medium- to long-term policies and ensure that these are implemented.

Carl-Henric Svanberg, Chairman of the European Round Table of Industrialists, Chairman of Volvo

The European Union and European integration in general have delivered great benefits for Europe's citizens. Our common European values of freedom, human dignity, democracy, equality and the rule of law have been a model for the world since the Second World War. This example — and Europe's lead on multilateralism and free trade — are more important in 2019 than ever.

The rules-based international system, of which European integration has been such an important part, is at risk from both east and west. It is also at risk from within due to increased nationalism. Europe risks being squeezed between China and the US. In spite of these challenges, this is a time of great opportunity. European industry is uniquely placed to address issues such as the energy transition and digitalisation.

Increasing the competitiveness of European business should include: support for R&D and innovation; increased investment (in particular in Artificial Intelligence and the roll-out of 5G); and the further development of a comprehensive EU industrial strategy. It should also permit 'European champions' to develop healthily and compete globally. We have to address the skills gap and ensure lifelong employability. We all need to work together to reduce social inequality and promote inclusive growth in Europe.

We believe in close collaboration between business, EU institutions and Member States to maximise the benefits of the new opportunities while also managing any risks.

Li Yong, Director-General of the United Nations Industrial Development Organisation

Globalisation is essential for the development and strengthening of the global economy, and the opportunities associated with globalisation are huge. These opportunities include more investment in technology and skills development. A country with a strong trading profile will be able to take advantage of the opportunities associated with globalisation.

In order to strengthen the global investment environment there is a need to ensure that national investment policies and regulatory frameworks are favourable for the global economy. In addition, it is necessary to ensure strong partnerships between institutions, the private sector, civil society and the national governments benefiting from FDI to build a comprehensive development framework for industry. The most important megatrends to watch for are: (sustainable industrial policy; (ensuring that everyone has access to jobs; implementing cleaner industrial policy to ensure a sustainable future; and the new industrial revolution and the responsibility of developed countries to help developing countries enforce the right policies.

Partnerships are critical to achieve the sustainable development goals and foster industrial development partnerships. The European Union should take the lead in giving guidance to different partners. With this guidance and support, we will be able to achieve a market response. When the EU takes on this leading role, the private sector will follow its example. The private sector is rarely an agent of change; it needs to be guided through good regulatory frameworks and good examples.

Session: industry for people – creating value for society

Participants in this session generally agreed that industry and investors bear an important responsibility in driving positive social change, and the discussion in this session revolved around how the responsibility for this change was (or should be) affecting their activities in practice.

There was consensus on the need to go beyond the measurement of profits and losses when assessing the economic value of a company. Social and environmental impacts can/should be measured too, and these impacts should inform business decisions. Robust and common standards are needed to measure social impacts. Participants felt that seeking to achieve a positive social impact or pursuing a 'purpose' made economic sense at company level. It also made sense for people in the company and for specific brands. For example, when values are built into the business models of companies from the very beginning (as in the case of social enterprises), these values can be critical in attracting support from consumers and/or external stakeholders (local authorities or other businesses). This support will in turn boost economic growth.

Participants said that there were still too few investors that were ready to take risks and work hand in hand with companies to create a positive impact over the long term. Investors needed to be educated about what 'impact' means, measuring outcomes and not only results/outputs. Participants in the session also said that standards for impact measurement were useful, if they were understood as a common process of embedding social considerations into companies' business models.

In this context, participants said it was necessary to hold companies accountable for their societal impact. They agreed that this requires measurement and transparency, and that civil society and governments should play an active role in this. There was a consensus on the need for corporate social responsibility to be at the heart of business strategies and to drive change internally.

This session recommended the need for action in the following areas:

- development of change indicators, analytical methods and standards (preferably common)
- robust accountability mechanisms
- redefining risk taking
- systematising success factors and formulating new incentives to lead to cultural change, especially for investors and stock markets
- identifying 'neutral third parties', which could help drive this change with trust. Good examples of this include the role of the International Trade Centre (ITC) in ensuring that private standards are mutually recognised and the ITC's initiative on sustainable fashion.

Session: sustainable industry – circularity and carbon-neutrality

The EU has already reduced its greenhouse-gas emissions by 22% since 1990, while increasing its GDP by 58%, providing an example of absolute decoupling. The strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy was adopted by the Commission in 2018 as an investment strategy for a more prosperous economy. Climate change mitigation and circularity go hand in hand together with innovation. Participants in this session agreed that the 'Circulars' prize awarded to the Commission in Davos in 2019 in the 'public sector' category was a recognition of this spirit and the Commission's leadership on the circular economy. However, participants also said that a series of challenges remained. Examples of these challenges included

energy-intensive industries (where circularity can help unlock massive greenhouse-gas-emission savings) and the Innovation Fund under the revised EU Emissions Trading Scheme (ETS), where a call for proposals will be launched in early 2020.

The participants in this session agreed that circularity and carbon-neutrality were the only way to go. The use of primary raw materials could double by 2060 compared to today on a business-as-usual trend. A 'net-zero industry' (i.e. one that uses no new primary raw materials) is a goal that must and can be reached: 75% of the required effort for a 'net-zero industry' is doable with technologies that are already on the market, while 25% needs to come from additional innovation. Participants in the session discussed how the European Climate Foundation was launching its 2050 industrial transformation programme that will help analyse potential and deliver on this goal. Steel is one of the best examples of successful circularity and decarbonisation: steel production has already decreased its carbon impact by 50%. Carbon capture and use (CCU) can be part of the solution, but a number of technical applications of CCU cannot qualify as sustainable.

Participants in this session also agreed that net-zero emission policies were a game-changer. They said that the circularity component of climate policies needed to be more emphasised, and that public authorities should provide incentives by shifting the tax burden from what is desirable to what is not. In the session, it was mentioned that the ETS carbon price today is around €23 per tonne, which makes a huge difference compared to even a year ago in terms of shifting incentives. Session participants agreed that business competitiveness cannot be the collateral casualty of this transition: ambitious policies must incentivise businesses to innovate in greener products and services, enabling them to conquer markets first. There was agreement in the session that policymakers need to learn from their mistakes, such as in the case of biofuels, where regulations created an incentive that was then removed a few years later, generating a large quantity of stranded assets; it is essential to understand the market in-depth before making policy choices.

There was also agreement that businesses must radically transform their model and act as service-providers. Digitalisation was widely acknowledged as a driver of this need. Electrification and autonomous cars could lower the amount of steel needed for transport by up to 30% between 2030 and 2050. Consumers and lifestyles must be part of the equation. Consumers need to get the right information in order to make the wisest choice. The session discussed an example of this type of consumer information: the introduction of carbon footprint labels. Innovation needs a market, and ambition needs a level playing field. Ideally, this level playing field would be achieved by the introduction of a worldwide carbon price. Industrial innovation offers promising prospects and must benefit from a favourable policy framework.

The discussion with the audience focused on the following topics.

- The EU ETS and its free allocation system, and how this system largely benefited energy-intensive industries. One participant said this was incompatible with sustainability.
- The difficulties of convincing businesses to make the necessary investment. The panel suggested converting fossil fuel subsidies into low-carbon subsidies, saying that this would use taxpayers' money to accelerate the transition rather than undermine it.
- The product environmental footprint and some methodological problems of this footprint when accounting for by-products. Panellists said that thorough lifecycle-assessment analysis and adequate knowledge of market forces were critical, as the example of biofuels showed.
- The need to consider the industrial demand side.

- The option of a border adjustment tax to create a level playing field. The panel suggested that taxes should be lower when a product/material's toxicity is lower in general and does not violate WTO rules.
- The difficulties in creating low-carbon manufacturing for batteries in Europe.

Session: industry and trade – between regionalisation and globalisation

The debate in this session focused on challenges and opportunities for EU companies (in particular small and medium-sized enterprises (SMEs)) when expanding to markets outside the EU such as China and Vietnam. Everyone at the session agreed that EU trade deals create economic opportunities for Europeans, which create jobs in SMEs as well as in large companies. Everyone also agreed that the EU's ambitious trade agenda helped to ensure fair competition and a level playing field for European companies outside the EU.

Speakers suggested that timing was very important, and that before EU companies choose to expand to a third country market they need to evaluate local conditions and their own objectives carefully. Speakers said that for an SME from a smaller Member State, EU support structures in countries outside the EU (e.g. the EU-Japan Centre for Industrial Cooperation, the EU SME Centre in China) provided invaluable support, training and assistance when cooperating with counterparts outside the EU. In the case of Vietnam (and work on the EU-Vietnam free-trade agreement) other factors such as social and labour rights also played an important role. Speakers said that a slowdown in the ratification of the wide-ranging EU-Vietnam free-trade agreement could negatively affect opportunities for EU businesses.

A central issue throughout the debate was: (i) the importance of the values that the EU adheres to in international cooperation; and (ii) the importance of innovation, research and investment in human capital and skills. Speakers also mentioned: (i) challenges related to digitalisation (e.g. the implementation of the General Data Protection Regulation) for smaller companies within the EU and outside the EU; and (ii) examples of cluster cooperation and how EU funding (via the COSME programme) can help in these cases.

Speakers agreed that, in a fast-changing world, it was vital: (i) for EU companies to expand to markets outside the EU; (ii) for those companies to do detailed market research; and (iii) for the EU to offer wide-ranging support such as via the above-mentioned business support structures in countries outside the EU.

Clean Energy Industrial Forum

The second edition of the Clean Energy Industrial Forum — showcasing EU industrial leadership for the energy and climate transition

Following the 'Clean Energy for All Europeans' package (30 November 2016), the Commission set up the Clean Energy Industrial Forum. The Forum aims to help EU industry take advantage of the growth opportunities arising from the clean energy transition. It is part of the Commission's efforts to engage more closely with industrial stakeholders, using its ability to facilitate discussions at the European level to support value chains in key energy union sectors.

The second edition of the Forum took place in Brussels on 5-6 February 2019, and was a part of the EU Industry Days. The Forum featured four discussion sessions, which focused on:

- how **EU regions and cities** promote local industrial value chains which are both competitive and sustainable (i.e. supporting the clean energy transition);
- the substantial progress achieved under the **EU Battery Alliance** (that culminated with the launch of an innovation platform dedicated to batteries) and the Alliance's role as a test case for the EU's industrial policy;
- the **regional industrial transformation of carbon regions** (thanks to the Commission's 'coal regions in transition' initiative), its multi-level governance, its social dimension and supported strategies/projects in 7-8 Member States;
- the impact of the **deep decarbonisation of energy-intensive industrial sectors**.

Clean Energy Industrial Forum: opening session – reinventing regional and local sustainable value chains

The EU has worked hard in recent years to foster synergies between industrial value chains and local economic ecosystems. Modernising the EU's economy, boosting investment, promoting growth and delivering jobs are critical for implementing the energy union and making progress in the fight against climate change. Industrial stakeholders and local authorities — cities and regions — are key players in this fight. This is why this session focused on concrete examples of how industrial actors and local authorities can better work together to foster competitive and innovative value chains that are rooted in local ecosystems.

This session first highlighted the 'coal regions in transition' initiative, launched by the Commission to: (i) help these regions (13 regions in 7 countries) plan for the structural changes linked to the energy transition in coal and carbon-intensive regions; and (ii) cater for potential negative socio-economic impacts. One of those successful regions is Belgian Limburg, where a coal-mining site was transformed into a tourist hotspot with a hotel, a climate research centre and a public park. All the energy for this centre is generated through solar panels and an innovative battery-storage installation.

Smart specialisation approaches, promoted by the Commission, can also foster cooperation between industry and regions. One example given in the opening session was the recent interregional partnership for smart specialisation on 'sustainable materials for batteries', which now involves 22 regions across the EU (with more regions from Central and Eastern Europe expected to join). The partnership aims to increase the uptake of advanced materials in the production of prototype battery cells, using sustainable and competitive technologies. The partnership also aims to shorten the validation time required for new advanced materials or technologies, with a focus on recyclability. Its success depends on: (i) the identification of cross-sectoral and cross-regional needs; (ii) the active involvement of industrial partners in pilot projects; (iii) quick delivery on one or two business cases; and (iv) securing a financial and political commitment from regions and other stakeholders.

Finally, cities also have a role to play. In the session, one example of the role played by cities was given by Lappeenranta (Finland). Lappeenranta reduced its emissions of greenhouse gases by 40% between 1990 and 2016, and aims to reduce emissions by 80% by 2030. It also strives to attract companies by creating enabling conditions for the cooperation between industry and research. Regional companies have benefited from the conditions provided by Lappeenranta to develop a model of a small gas turbine with low emissions that uses renewables and non-standard fuels.

Finally, the session discussed the interest of the European Covenant of Mayors, a collective network of cities collaborating with the Commission, in promoting the role of cities in promoting clean energy.

Clean Energy Industrial Forum: the European Battery Alliance – how quickly is European industry eating €billion market cake?

This session was organised by EIT InnoEnergy. In the session, participants argued that Europe had to find its competitive advantage in the batteries sector and to make full use of legislative and funding instruments to compete with the leaders in battery technology. However, participants cautioned that competitors should not be ostracised and agreed that economies were interdependent and value chains were global.

The session discussed how technology was maturing, as illustrated by the decreasing cost of batteries. Participants agreed that more capacity for cell manufacturing was essential to sustain the rapid growth in battery demand. The session discussed how manufacturing capacity was already blossoming in Asia, but that it was also strong in Europe with players like Northvolt. The fact that Asian companies were building up manufacturing capacity in Europe was proof, argued participants, of the EU's competitiveness for cell manufacturing. They agreed that there was clearly no market risk.

Participants said that Europe should bet on sustainability: the entire battery manufacturing process and use-cycle should minimise the CO_2 footprint. A key success factor for sustainability is to have a compact supply chain, which also guarantees quality local jobs. Finally, the session discussed how Europe needed to secure fair access to non-EU resources, and should invest to further promote recycling.

Participants in the session said that the European Battery Alliance had shown that Europe should act together to build an ecosystem, with public and private stakeholders pulling in the same direction to compete with Asia and the US. They agreed that improvements were still needed, for instance to reduce the distance between investors (public and private) and the battery ecosystem, to make sure that projects come to life.

Clean Energy Industrial Forum: regional industrial transition in the new EU budget and its role in the European economy

This session discussed the regional aspects of the industrial transition.

Speakers highlighted the need to set up a fair energy transition fund for coal regions in Europe, as a separate fund outside of current funding allocations. They said that the fund should be at least €4.8 billion in the next EU budget for 2021-2027, and that all coal regions should be taken into consideration. Speakers said that at the same time, it was very important for regional authorities to use and combine all current and future financial tools to support transition in the most efficient way.

The speakers stressed that financial resources were just one part of the process. The other part is to share the experience of all involved partners: this is the best possible way to introduce already-proven actions to significantly improve the efficiency of transition.

The speakers discussed a good example of this in Silesia. The clean energy transition in this Polish region should be seen as a natural progression of the Silesian economy, which has become more diversified.

A common secretariat for the fair energy transition fund will become operational in spring 2019. It will gather data on best practices for the regulatory, financial and social-fairness aspects of the transition. This information will be widely disseminated among all involved actors in Europe to avoid repeating mistakes and improve efficiency in dealing with the challenges ahead.

This session was organised by the Pro Silesia Association, which is an alliance of businesses, universities and the Silesia region.

Clean Energy Industrial Forum: the deep decarbonisation of energy-intensive industrial sectors – industrial and social impacts and opportunities

The trend we are seeing today of energy-intensive industries moving towards deep decarbonisation implies not only new technologies, but also new social approaches. This session discussed the social aspects of this transition and how it will affect our everyday life, requiring new skills and creating jobs for highly qualified people. The on-going transition will help build an innovative industry that is better for the next generation and for the planet. The session discussed how the steel sector was technologically ready for the next steps in decarbonisation.

Participants in this session argued that there was a need for a concrete action plan to reduce greenhouse-gas emissions and reach the set targets with concrete short- and long-term goals, rather than strategy making. They agreed that the key factors for success were: (i) a stable and predictable policy framework; (ii) public support to de-risk investments; (iii) and the development of an 'anticipating' policy for skills to ensure that middle-aged workers will have appropriate skills and stay in employment during the next decade.

This session was organised by industriAll.

Session: how do industrial cooperatives contribute to circular economy?

EU industry's best asset is its entrepreneurial diversity. To bring together insights from across Europe, this session brought invited speakers from Italy, France, Spain and Denmark. The speakers all represented cooperative companies, a unique form of organisation in Europe's business landscape, related to the circular production methods.

A speaker from Italy's Cooperativa Scalvenzi told how the cooperative and its partners (from ME Group) created the first electric scooter completely designed and produced in Italy. Its environmental benefits are that it produces zero emissions, makes no noise, and has a battery that can be removed and recharged everywhere. The next speaker talked about France's Acome, founded in 1932, which is committed to sustainable development on three levels: minimising the carbon footprint and reducing waste production; a particular focus on people; and commitment to the sustainable development of the local community. Spain's Mondragon Corporation pursues sustainability through product innovation, the reduction of waste, and the reduction of raw material use. Denmark's LOGIK & CO is entirely composed of worker-members who earn the same salary and benefit from the same

social security rights. The cooperative business model integrates the circular way of production: capital accumulation and inter-generational transmission are thus natural drivers of the circular economy.

CECOP – CICOPA (the European confederation of industrial and service cooperatives) underlined that many cooperatives combine innovation, competitiveness, sustainability and inclusion. It said that they are the best way to inject democracy into the economy and society broadly. It argued that if we don't achieve democracy in our economic environment we will not be able to achieve democracy in any other field.

This session was organised by CECOP-CICOPA Europe.

Session: thinking circular – how to make SMEs fit for the circular economy

Participants in this session agreed that industry was showing a growing interest in the concept of the circular economy. Thanks to public and private initiatives like ACTIF (online platform which quantifies and geolocates the resources of companies and organizations) or recircular (active and collaborative platform that connects businesses for the valorization of waste as raw materials), companies are expanding their local network of collaborators, creating new flows of secondary raw materials. Participants also stressed that the support of regions was essential in fostering local initiatives. They said that one of the most promising ways to develop this support was by starting with green public procurement practices.

Finally, the session participants agreed that the lack of funding and capital for the deployment of more circular models for SMEs was a big obstacle.

This session was organised by EUROCHAMBERS.

Session: intangible value creation through design — a key success factor for Europe

This session was organised by the Bureau of European Design Associations (BEDA) in collaboration with Cumulus International Association of Universities and Colleges of Art, Design and Media.

Participants in this session said that strong stakeholder dialogue was required in today's challenging economic environment to better understand how design can best serve other industry sectors to improve sustainable competitiveness in Europe. They said that a key question was how to raise awareness of the value that design can add to products and services in EU. Sectors that make efficient use of intellectual property rights generate more exports and boast higher pay levels. The participants argued that intellectual property rights emerge from various types of creative work, i.e. research, development, innovation, design, etc.

This session helped to build a shared understanding between stakeholders representing various industries on how design can better serve intangible value creation to improve Europe's competitiveness. BEDA, Cumulus and industry representatives said they would filter this shared knowledge into their strategies and action plans. They said the outcome would support the Commission in its work on the current EU design action plan (drawn up in 2013), and provide input to produce a second European design action plan. This session was the third co-creation workshop in a series of workshops to be organised in collaboration with relevant stakeholders in Europe.

Session: sustainable cross-cluster networking – a game-changer for European industry in a global digital economy

Meta-clusters (which consist of at least three clusters in three different regions) are instrumental in cross-regional business development, as they have a clear added value compared to a regional cluster in global business development.

Participants in this session agreed that the digital economy faces much shorter development and life cycles than was previously the case. They said that there was therefore an urgent need for funding schemes with shorter application processes and durations. Cascade funding is already doing this to some extent, providing an efficient and flexible funding scheme to reach SMEs. However, participants said that the voucher amount (€60,000) was limited and should be higher. The sustainability of funded projects (including through Horizon 2020 Innosup) strongly depended on the value/strength of the ecosystem built during the project and the added value shown to the SMEs.

Session participants said that sustainable clusters of excellence were a good foundation for building a sustainable meta-cluster. Clusters are well connected to their regional authorities and therefore well aligned with its smart specialisation strategy. They said that regional clusters benefit from a degree of intimacy between SMEs, where the meta-cluster provides the outreach to a larger network of potential business partners, even on a global scale.

The participants stressed that the Commission should consider more funding options for cross-regional sustainable cluster collaboration to give longer-term support to EU SMEs.

This session was organised by Silicon Europe.

Session: we need more space – how to foster high-tech entrepreneurship

Why space is such a promising sector for Europe? Because it is a strong driver of innovation. This session looked through different lenses (i.e. the entrepreneur, the innovation agency, the Commission and the European Space Agency) to shed a light on the potential of space-based technologies and the data derived from satellite infrastructure. Participants in the session agreed that entrepreneurship was the nexus between technology and innovation.

Participants said that space can fulfil different roles in promoting innovation. Space can be a differentiator for established firms that want to differentiate their products and services from their competitors. It can also be an enabler, whereby an entire business is built on space, as the start-up company Skyflox illustrates. Participants argued that the real added value of the space industry is that it has disruptive technologies and requires disruptive thinking. For this reason, space research attracts new talent, and people who want to do new and disruptive things. Participants also said that more and more people working in the space industry come from different educational background, i.e. without traditional education in astrophysics or similar disciplines. The space industry gives companies a chance to differentiate themselves from their competition.

This session was organised by European Space Agency.

Session: developing sustainable markets – the role of circular bioeconomy in the EU

The EU bioeconomy is crucial to a transition towards a circular, renewable and resource-efficient society. This session discussed how biorefineries are banking on the new consumer trends for healthier and bio-based products, and how they are promoting the creation of a long-term stable legal framework lasting 10-15 years.

Public-private partnerships such as the Bio-based Industries Joint Undertaking help companies de-risk substantial investments and structure their value chains. The session participants agreed that the EU needs to tackle hurdles in R&D programmes, the constraints of EU competition law, and the overrated focus on basic research. However, they also agreed that the EU is in a very competitive position in the sustainable production of renewable raw materials.

The participants said that it was important to promote the visibility and uptake of bio-based products so they appeal to consumers.

Consensus was reached between the audience and panellists on three key issues. First, renewable raw materials should be processed in bio refineries. Second, investment is needed in public-private partnerships. And finally, market uptake of bio-based products remains an issue due to lack of awareness, lack of visibility, and confusion in terminology. The debate showed: (i) that the bioeconomy is large; (ii) that biorefineries and pilot plants exist in Europe today; (iii) that public-private partnerships are instrumental in bringing actors together and implementing research and innovative techniques; and (iv) that the EU can rely on the bioeconomy to develop a strong industrial presence.

This session was organised by the European Bioeconomy Alliance.

Session: energy-intensive industries – innovating for a sustainable future

This session featured a panel of stakeholders from energy-intensive industries. The panel called for a new industrial strategy at EU level that would align the energy and industrial transitions, stimulating synergies between the two. They said that the strategy should have a major R&D pillar, which is necessary to develop a competitive low-carbon economy. It should also promote mechanisms to support capital expenses, strategic low-CO_2 products, and a safety net for EU industry. Moreover, it should also address the issue of improving EU competitiveness in global markets.

The participants also discussed why there was a need for a new industrial strategy now. They said that, as each industrial revolution is preceded by an energy revolution, the EU should be prepared to take advantage of synergies generated by the two, encouraging industrial symbiosis. They agreed that an EU strategy for long-term greenhouse-gas (GHG) emissions would be successful only if it contained such an industrial strategy. Finally, they argued that energy-intensive industries are a key part of EU value chains.

What are the main challenges to be addressed? The first challenge the participants identified was the need to ensure a competitive environment and a level playing field for the EU's energy-intensive industries. The second challenge they identified was time: 2050 is only one investment cycle away from tomorrow for many energy-intensive industries. The participants also cited other challenges in R&D, electricity pricing, infrastructure, financing and investment (cap-ex and op-ex), and the regulatory framework.

Energy-intensive industries play a constructive role in developing solutions to promote the transition to a low-CO_2 economy. However, the session participants stressed that the development time of breakthrough technologies is long, and many of these technologies have not yet reached the level of industrial-scale demonstration. The Commission's Innovation Fund will support the development and deployment of breakthrough technologies and its first call for proposals will be published in 2020. The panel stressed that the availability of low-carbon electricity at low prices was key for the future of energy-intensive industries. The session stressed the need to build fruitful collaborations between different industrial sectors and stakeholders, Member States and the EU. Participants said there was an urgent need to start a socially fair and cost-efficient transition in order to achieve net-zero greenhouse-gas emissions by 2050.

This session was organised by the International Federation of Industrial Energy Consumers.

Session: manufacturing as a service – the promise of additive manufacturing for the EU economy

Additive manufacturing (AM) is facilitating the emergence of the 'prosumer': consumers that can produce the items they need at the point of use, disrupting the traditional value chain and forcing manufacturers to rethink the way they deliver products and services.

Participants in this session argued that this shift may lead to a fairer, more inclusive society, with personalised products and services. The participants said that the EU was in a strong technical position to embrace AM, and that its strong heritage in the craft industry should be leveraged as part of the growth opportunities.

However, participants also stressed that there were a number of challenges the EU needed to address before AM could fulfil its potential in Europe. Meeting these challenges will need continued support, funding, and coordination from the EU and national bodies. These challenges include: technical problems (material knowledge, stand-alone software, machine performance); legal and regulatory issues (intellectual property rights, data privacy, health and safety, quality assurance); and training needs (upskilling, reskilling and standard certification processes).

At production level, servitisation (the process whereby manufacturers increasingly sell services in addition to goods) and digitalisation both require capabilities that not all manufacturers have. The panellists said that vertical integration of technologies and digitalisation would allow these companies to be more flexible rather than trying to keep up with all technologies separately. A supportive environment for AM would prioritise students with workforce training and relevant skills.

The added value of AM lies in the innovation generated by its combination with digitalisation. Participants said that practical examples of affordable, fully-integrated manufacturing that included AM were still in development.

This session was organised by the I-Form Advanced Manufacturing Research Centre.

Day 2

Keynote speech by Margrethe Vestager, European Commissioner for Competition

The EU Industry Days event brings together many voices in our society: SMEs as well as multinationals; the inventors with bright ideas for Europe and the rest of the world; trade unions and civil society.

We need that broad involvement. Because the vision for our European industries should not be set by the loudest voices. It should be formed openly and by involving everybody. Exactly in the European way at its best.

I am particularly pleased that 23 young leaders of industry will also share their thoughts with us. Because today's discussions are, in the end, really about their future.

Newcomers, just like older and established companies before them, deserve a fair shot at success. At their disposal is a single market with 500 million consumers. They have to compete to attract customers. Here, they can test out new ideas and hone in on their core skills so they can become competitive and conquer the rest of the world. And it has served us well.

We have growth in almost all Member States. And the strongest growth is in those Member States with the lowest GDP to start with. In other words, we are growing together. We have a large trade surplus in machinery — €200 billion in 2017. Our surplus for manufactured goods is even larger at €286 billion. 7 out of 10 Europeans have a job. That figure has never been so high in our history.

There are good reasons to be proud of the work that has already gone into creating a single market. There are good reasons to be proud of our industries, which are already flourishing.

At the same time, we have so much work ahead of us. Digitalisation is transforming all our industries — not to mention the rest of our society. We are not as strong as we should be in some of the sectors that will form the future. As we become more interconnected, we also become more vulnerable. There are concerns about foreign investments, which can affect our security. An increasingly volatile global political landscape is putting our global trade system under strain.

To tackle all these challenges, you will not be surprised to hear that I, as Commissioner for Competition, firmly believe that open and fair competition is going to play an important role.

But competition is only one ingredient. We also need a strong industrial strategy. A strategy that builds on — but also goes beyond — our single market.

The starting point must be what has made Europe strong: its openness and diversity.

Strong in diversity

In my daily work as Competition Commissioner, I have the privilege to meet many businesses. These companies come from all corners of our continent, and all parts of our economy.

One is designing hearing aids to help millions of citizens communicate with their loved ones. Another is developing ground-breaking biological treatments for cancer. Some are producing important inputs for other companies — such as steel or copper. Others are building the newest wind and gas turbines to generate the electricity of the future.

They all have one thing in common: their competitive spirit. The drive to become a champion, each in their own field, by simply being the very best at what they do. Exposure to competition is the most important engine for this progress. We get the most out of this engine when competition is open and takes place on a level playing field. And one of the great benefits of the single market is precisely that it creates room for larger companies to emerge without us having to sacrifice competition.

What is also striking about the businesses I meet with is their diversity. Some of the companies are big. Some are small. Some are well established with a proud and long history. Others are young and dynamic, full of fresh ambition. We derive strength and resilience from this diversity. We should not fall into the trap of thinking that bigger is always better. Yes, we also need very large corporations, because there are challenges that only they can pull off. At the same time, the ecosystem is stronger if its entire fate does not depend solely on one or very few companies.

Ingredients of industrial strategy

Building on these strengths of diversity and open competition, we need a number of actions within the following five areas:

1. the Single Market;
2. skills and talent;
3. infrastructure — both digital and physical;
4. addressing market failure;
5. the international fight for fair competition.

First of all, we can still do more to remove the barriers that block companies from growing so that the single market works seamlessly. There is more work to do, especially when it comes to services and the digital marketplace. The playing field has to be level. That is why we insist that all firms — including the digital giants — pay their fair share of taxes.

Secondly, we must nurture our human talent, from school to the very last job. We need to strengthen research and education. This is reflected in the Commission's proposal for the next multiannual financial framework (MFF), where we propose to double the budget for Erasmus+. Horizon Europe will be the most ambitious research and innovation-funding programme ever, with a proposed budget of €100 billion.

Thirdly, we need to invest in infrastructure, both digital and physical. Recently, we simplified our State-aid system to allow even more aid to be deployed without needing to first notify us. For the next MFF, we have proposed an InvestEU fund, which will use €15 billion from the EU budget to unlock €650 billion of overall investment.

Fourthly, our public and private sectors must team up to get the best out of each other. And this is where a genuine industrial strategy comes in — industrial strategy can work hand in hand with competition policy.

If we want to assert European independence when it comes to some of the most critical cutting-edge technologies, we must bring together an entire value chain — from basic researchers and universities down to the customers.

When the market alone does not allow highly innovative research-and-development projects to get off the ground, the State should step in. And when taxpayer funding is involved, we must make sure we get a return on our investment and that the knowledge created is shared widely.

A good example is the initiative on important projects of common European interest (IPCEI). This last December, the Commission gave its first green light to such a project. France, Germany, Italy and the UK will jointly fund a very large research-and-development project in microelectronics. It will unlock significant private funding, and will involve large companies, SMEs, start-ups and researchers. Importantly, they will share the knowledge they create as widely as possible.

This was the first project approved under our special, leaner rules for State aid for projects of strategic European interest. Hopefully, when everybody has this experience to draw on, more projects will follow — because there are a number of other areas that could benefit from such European cooperation. That choice is for Member States and their companies to make.

At a recent conference about the future of competition policy in the digital area, we invited Nobel Prize-winning economist Jean Tirole to give his advice on how to address some of the challenges that digitalisation poses for competition policy. He used the opportunity to also advise on industrial policy.

Among other things, he urged us to pay close attention to how we decide where funding is allocated. He urged us to ensure that funding does not distort competition and is spent where there are market failures to repair — not just where special interests are strong. We must be ready to take risks with our investments. But things do not always turn out as planned. That is why it is a good idea to also involve private investors, as they are usually very good at cutting their losses when necessary. And I believe that is right.

Fifthly, we must work to ensure a level playing field. This effort should not stop at the border of the single market. We must lead by example, as we have done with the modern free-trade agreements with Canada and Japan.

At the same time, we must use our size to insist on fair competition globally. That is why Commissioner Malmström is working to get global subsidy disciplines higher up on the global trade agenda in the World Trade Organisation.

This work will take time. In the meantime, we must stand ready to protect our interests. We need robust enforcement of trade defence when global competitors engage in dumping or are propped up with subsidies. We must insist that if other countries want unfettered access to our public procurement market, they should also give us access to theirs. We must be more serious in screening foreign direct investments that affect our security. The new foreign direct investment screening tool is there to pave the way for closer cooperation. There is indeed plenty of work to do. Some of it is for us in Brussels. A lot of it is for our Member States.

Conclusion

Great thinkers like Jean Tirole give us homework for these European Industry Days. We must reflect carefully on the right policy proposals for our industry. But we already see how his thinking could work.

If we ask all the different industries represented in the room today if they believe their sector deserves a bigger share of Europe's support, I think they would all say yes. That is only human.

If we instead ask those industries for example to find partners in their value chain and solve a European challenge like climate change, the picture is different. People from different corners come together. People who did not feel empowered dare to speak up. New ideas are sparked.

That type of thinking can renew European industry. It builds on what makes this continent strong – openness and diversity.

We need an industrial strategy not for the few, but for all of Europe.

Accelerating technological development and increasing connectivity will impact industry, organisations, individuals and society. As we are experiencing more rapid change than ever before, we need to prepare for the transformation by realising that strategic skills development and continuous learning will be of key importance for the future of our industry.

Speech by Claudia Olsson, founder and Chair, Stellar Capacity

Member of the Industry 2030 Roundtable at the European Commission, appointed Young Global Leader by the World Economic Forum

Currently, a bit more than half of the world's population has entered the online realm. And in the coming years, even more people will enter this realm and start using the internet actively. This will increase knowledge, interactions, the speed of development, change and innovation. Networking effects will bring about unprecedented opportunities.

We have only seen a glimpse of the potential of 5G; its deployment and wider commercialisation in the coming years will enable many of the previously articulated visions for the internet of things to materialise. Geography can be further transcended and data latency can be brought to a minimum. In parallel, we will be able to unlock more value from data, through the advancement of artificial intelligence capabilities. For example, 'transfer learning' and 'one-shot learning' techniques might have a profound impact going forward. Technology is also becoming more integrated and connected to us humans. For example, people-literate-technology might further develop to help systems interpret not only what we say but also what we actually mean. This brings ethical questions and challenges, but it also raises the prospect of relevant and impactful solutions for many different industries.

The speed of technological change highlights the need for humans to develop and meet this technological progress. Companies are starting to realise the importance of continuous learning and digital upskilling. Research from the World Economic Forum indicates that companies are recognising that complex problem-solving, creativity and people skills need to be complemented with active learning skills. In a recent report, the World Economic Forum suggested that every employee may need 101 days of additional learning between now and 2022 to bridge their skills gaps.

Meanwhile, organisational structures also change. We see that more organisations are realising that we are moving from decision-making in formal hierarchies, to leadership in more networked structures, sometimes referred to as 'wirearchies'. New systems require updated leadership. Creating a sense of shared purpose and setting common goals may be elements of navigating this decentralised structure. A networked organisation can align its entities, the nodes, in a clear direction if they have a shared vision and a well-defined purpose that motivates, inspires and sets out the path forward.

In conclusion, this may also be the way forward for Europe, where a shared purpose based on our values could lead us on the path to a prosperous Europe. In addition, embracing technology development can help us to fulfil our potential and the full potential of Europe.

From decarbonisation to Artificial Intelligence: challenges and opportunities for EU industry towards 2030

New global trends driven by digitalisation, automation, advanced manufacturing, energy and resource-efficiency as well as servitisation support the emergence of new, and often disruptive, business models. These trends boost innovation, value creation and industrial transformation and can offer major business opportunities.

The rapid and disruptive pace of change creates profound uncertainties and it is important to reflect on how to address the challenges they pose to transform them into chances for a better future for business and society. This session aimed to present and provide a "reality check" of the work carried out by different high-level expert groups established by the Commission in recent months and bring their contributions together in the context of a single consistent framework for the European industry in 2030.

Ineke Dezentjé Hamming-Bluemink, President of FME the Dutch employers' organisation in the technology industry, member of the Industry 2030 high level industrial roundtable

European industry is being profoundly transformed by digitalisation and the need for decarbonisation. The High-Level Roundtable Industry 2030 is preparing a paper for June, advising the next Commission on how to ensure that by 2030 European industry will be a global leader, responsibly delivering value for the society, the environment and the economy.

I participate in the Industry 2030 roundtable because I believe we can beat the American eagle and the Asian tiger. Europe can be the new digital leader. But we need to accelerate digitalisation. We need to manage the transformation. And industry needs to deliver on the needs of all people and societal challenges.

There is an urgency. We see disrupting new technologies, geopolitical balance shifts and growing protectionism. We need to increase our R&D, both public and private; swiftly adopt low-carbon methods; invest in strategic value chains and innovation ecosystems; speed up the digitalisation of our industry; and massively invest in the upskilling of all Europeans in the face of rapid technological change. We need a new societal deal.

We need bold ideas. The High-Level Roundtable Industry 2030 is working on that right now. We want to put innovation at the heart of the EU by fully leveraging the innovation networks of large

companies, SMEs and start-ups together with research institutes and universities. Let's make all digital innovation hubs into skills hubs, with schools moving to join innovation ecosystems. Let's develop financial instruments to support the transition to a low-carbon industry and make Europe the circular industrial champion. Let's make Artificial Intelligence a top priority for the new Commission. And maybe let's make a European Artificial Intelligence course (such courses already exist in Finland and the Netherlands) free for all Europeans.

Antti Vasara, CEO of VTT Technical Research Centre of Finland, member of the Strategic Forum on Important Projects of Common European Interest

The Strategic Forum on Important Projects of Common European Interest (IPCEI) is about innovation investment. It is crucial that the IPCEI process is coordinated at European level to speed up the deployment and sustainability of strategic new technology. The future speed of technological development and the size of the changes on the horizon have been grossly underestimated: no Member State can tackle these alone. We in Europe must be proactive and ambitious to renew European industry so it can face the digital and decarbonisation transformation.

From our work in the Strategic Forum and the Industry 2030 high-level group, it is clear that Europe's strategic value chains are built on key enabling technologies. It is also clear that those value chains are selected based on their technological innovativeness; their economic and market potential; and their societal and political importance for Europe. The strategic value chains are key for our industrial sectors, and potentially give the highest collective return on invested money and innovation efforts. For this potential to become reality, we need different actors (academia, research organisations, companies, investors and public authorities) from different sectors to join forces and reach critical mass in innovation ecosystems. Innovation ecosystems act as the fuel for strategic value chains, and act as the engine for exponential leverage of public and private investment.

The diversity of ecosystems in the EU is a unique critical advantage. And this diversity can be cultivated by pan-European policy interventions and dedicated measures to promote cross-border and inter-regional collaboration. The EU must develop this potential by bringing together our existing strengths. Even though value networks are global, we need to have critical strategic value chains in Europe. Investments should be focused on value chains for sustainable production in Europe to provide jobs and prosperity for Europe.

Science and technology is crucial. The practical applicability of key enabling technologies needs to be demonstrated, and we need strong pilot environments for this purpose. This means top facilities with highly skilled people and continuous interactions between companies and research communities.

Dimitri de Vreeze, member of the management board of Koninklijke DSM and board member of the European Chemical Industry Council

The EU should give more support to sustainable frontrunners. The principle of a level internal EU playing field is too often used to pull frontrunners down to mediocrity, especially by incumbents who are not willing to change.

Innovative systems and policies like carbon pricing (the EU's ETS) are key tools to redirect and scale up investments towards low-carbon technologies. Green public procurement is another powerful tool to promote sustainable innovation. It demonstrates the leadership of the EU and Member States

in enlarging the market for sustainable products. But the EU also needs to walk the talk. It should not only ask companies to implement sustainability, but also set a good example.

Both companies and authorities should promote and enable transparency in products and value chains. This will accelerate the transition to a circular economy. The disclosure of information on materials in products to all actors will enable recyclers to better recycle and create clean and safe streams of secondary raw materials. It will also enable consumers to assess durability, reparaibility and health aspects, so they can make safe choices.

The EU could promote digital product factsheets/passports, making information available about materials in products and their recyclability to boost circular products. To achieve this, clear definitions will be necessary for terms like 'circular', 'recyclable', 'waste', 'side streams', 'bio-based', etc. If labels are used, they should discriminate: they should not be based on a minimal requirement for products, but should instead promote only the best and most sustainable products.

Input from the High-Level Expert Group on Artificial Intelligence[1]

Technology is a crucial driver of innovation and productivity, and Artificial Intelligence is one of the most transformative technologies of our time. It can help achieving sustainability, growth and competitiveness, and inclusion – thus contributing to individual and societal well-being. Trustworthy Artificial Intelligence is not an end itself, but can be a means to enhance individual and societal well-being. This requires sustainability, in order to safeguard our societal and natural environment for generations to come. It requires growth and competitiveness, so as to grow the pie, secure employment opportunities and generate beneficial progress. And it requires inclusion, to allow everyone to benefit therefrom.

Europe has set its overarching ambition on a human-centric approach to Artificial Intelligence. This concept can be captured in the notion of Trustworthy Artificial Intelligence, characterised in terms of three components – being lawful, ethical and robust – and in line with the core tenets of the European Union: fundamental rights, democracy and the rule of law. The Ethics Guidelines for Artificial Intelligence[2] constitute a crucial first step in delineating the type of Artificial Intelligence that we want and do not want for Europe.

While such delineation is necessary, it is however not enough to ensure that Europe can also materialise the beneficial impact that Artificial Intelligence can generate. Taking the next step, Policy and Investment Recommendations for Trustworthy Artificial Intelligence[3] therefore present a set of recommendations on how Trustworthy Artificial Intelligence can actually be developed, deployed, fostered and scaled in Europe, all the while maximising its benefits whilst minimising and preventing its risks.

[1] Based on the Policy and Investment Recommendations for Trustworthy Artificial Intelligence presented by the High-Level Expert Group on Artificial Intelligence.

[2] https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai

[3] https://ec.europa.eu/digital-single-market/en/news/policy-and-investment-recommendations-trustworthy-artificial-intelligence

Input from the High-Level Expert Group on the Impact of the Digital Transformation on EU Labour Markets[4]

Digitalisation is driving rapid changes in the labour market influencing the nature, quality and productivity of work. European leaders and industry face the challenge of making use of these developments to foster economic growth and employment, while ensuring decent working conditions, social protection and equal opportunities for all. To help Europe capture the benefits of digitisation there is need for action in 3 main areas.

First, a skilled workforce supporting digitalisation. Enabling digital skills personal learning accounts, allows workers to acquire relevant skills throughout their. The accounts would belong to the worker and would be portable from job to job. Moreover, scaling up career counselling and creating innovative learning environments would enable better career choices and active pursuit of relevant training for all Europeans. Then, supporting labour market intermediaries would reduce structural skill gaps especially for women in STEM, workers at risk of automation and the ow-skilled.

Second, managing new labour relations. We need to work on preventing occupational safety and health risks like mental health and stress related issues resulting from digitalisation and increased volatility in today's world of work. In addition, equalizing the (administrative) treatment of standard and non-standard work arrangements is needed. Finally, to reinvigorate social dialogue we need intensified and better organized dialogue of workers and social partners especially in the platform economy.

Third, a new social contract. We need to ensure neutral social protection against unemployment, sickness and other life circumstances independent of employment status. The increasing number of Europeans with non-standard employment should have access to social protection. We should also create a Digital Single Window for employment contributions and taxes for self-employed working on online platforms for multiple and rapidly changing employers. Finally, we also need redistributing the value of digital ownership, e.g. through treating data as either capital, labour or intellectual property. To the extent that workers' and consumers' data are used to increase the firm's value, this should be recognised and compensated accordingly.

Speech by Antonette Miday, Africa Basque Challenge

Africa is the youngest continent in the world, a continent on a positive trajectory. It has a young population with enormous untapped potential. This goes against the story often heard about African youth: a story of poverty, unemployment, war-stricken individuals, increasingly violent extremism, and desperate migrants who die in their thousands on the Mediterranean Sea. Young Africans live on a continent that is largely seen only as a source of raw materials for industries in western countries**.** One example is cobalt, two thirds of which comes from Congo, a country marred by decades of conflict. However, no effort is being made to help the continent benefit from its enormous raw material resources.

An estimated 60 per cent of the entire continent of Africa is aged below 35. And according to the United Nations, in the next three generations, 41% of the world's young people will be Africans. The world, and in this case European industry, must pay attention to this bulging world population. It can

[4] Based on the final report of this group.

do so by harnessing the potential of young people in Africa for innovation and entrepreneurship, and by reversing the trend whereby millions of educated and skilled African young people migrate annually to the west for work and a better life, creating huge knowledge gaps in the countries they leave. Investing in young people is key for Africa's development and a transformative agenda on the continent.

The right investments in innovation and technology will allow young Africans to compete at a global level and take advantage of increasing opportunities in the digital economy. EU industry is strategically positioned to play a key role in unleashing the true potential of Africa's young people. This is at the heart of the Africa Basque Challenge. Barriers that must be overcome include: skills acquisition, research, resource allocation, and a re-assessment of the traditional educational system.

The Africa Basque Challenge is an innovative approach that is breaking down the barriers to skills acquisition. The initiative seeks to create conditions for young people from Europe and Africa to think creatively and come up with innovative business ideas. It is based on key principles including:

- private and public partnerships;
- intercultural teams of young entrepreneurs, multicultural leaders and change makers with a global mind-set;
- strong values of co-creation, teamwork, solidarity and cooperation;
- learning by doing: a new mind-set.

The Africa Basque Challenge is a transformative journey where young people learn by creating. The approach challenges the traditional education systems in most African countries. These traditional education systems are failing millions of young Africans, who are not adequately prepared for entrepreneurship and innovation in a shrinking job market. Access to education is about more than the acquisition of diplomas. The education system must transform the individual and society.

The Africa Basque challenge takes cognizance of the fact that young people are Africa's most powerful change agents. It recognises that, for the continent to rise to the next level, we must put the voices of its young people at the heart of any development. In terms of process, the Africa Basque Challenge started with a simultaneous (operating in both Africa and the Basque region in Spain at the same time) call for innovative and transformative ideas in August 2018. A boot camp was organised in Nairobi (Kenya) in November 2018 for 44 selected young people from Kenya and the Basque region. The final boot camp will be held in Bilbao in February 2019 for the participants to conclude the process of ideation, business planning, prototyping and pitching. The methodology used by the Mondragon Team Academy promoted creative thinking among the participants.

Already, 11 companies built by young people are being prepared for market, and the process will continue during the February boot camp. Mentorship and coaching will continue until June. The companies are being prepared to become real start-ups, creating jobs for the participating young people as well as for other young people in their communities.

High level dialogue on industry and innovation

Pierre Gattaz, President of BusinessEurope

Innovation is key to modern economies. Today, more than ever, there is an acceleration of the global innovation race. We need to constantly innovate in the way we run our businesses if we do not want to become obsolete and irrelevant to consumers. Innovating is of course also essential to stay competitive in the global marketplace.

Many countries around the globe are taking action to boost innovation. Since 2000, 24 countries have established national innovation agencies. In China, industrial investment in R&D is growing fast: it rose 20% between 2017 and 2018 (compared with only an 8% increase in the EU and a 9% increase in the US). EU companies are leading the global technology race in strategic industrial sectors such as automobiles, pharma and aeronautics. But Europe comes up short in some deep-tech areas that are shaping the next wave of innovation, such as AI or new materials.

The accelerating global innovation race is both an opportunity and a threat. It is an opportunity because it increases business opportunities everywhere and because the deployment of many of these innovations will help improve people's way of life and allow people to live better and longer. Accelerating global innovation is a threat because Europe could rapidly become irrelevant as a place of new ideas, new products and new solutions. R&D-intensive companies are often global and agile companies that can rapidly adjust the location of their R&D investments ('innovation leakage').

The EU has great potential to be on the winning side in the global innovation race. As Europeans, we manage to do things that would not be possible to achieve alone. Think of space projects like Ariane or Galileo. Think of Airbus. We must identify new big projects like these. What do I expect from the EU in terms of investments and priorities? No silver bullet, but a mix of actions. Three actions are key.

Firstly: finance. Public spending is important to de-risk investments and to leverage private investments. The Commission has counted that €1 invested in Horizon Europe could generate a return of approximately €11 of GDP gains over 2021-2027. By allocating €100 billion to Horizon Europe, the Commission made an effort in challenging times (e.g. the negative impact of Brexit on the EU budget). But €100 billion is not enough to fill the gap of €150 billion a year needed to reach the EU's own 3% R&D investment target. In the final negotiations with the European Parliament and Council, the ambition must go beyond this €100 billion. The budget for Horizon Europe will be a clear expression of the policy ambition. Let's have a VERY ambitious EU innovation policy.

Secondly: skills. Business is facing a shortage of talent and skilled people to strengthen the innovation capacity of companies. By 2030, Germany, the UK and France alone could face a combined talent shortage of more than 9 million unfilled jobs, with a significant share of these jobs in highly skilled positions. Companies are ready to collaborate with governments, universities, and primary and secondary schools to develop training and educational systems to ensure that today's students are ready for tomorrow's jobs and careers.

Thirdly: mind-set and culture. If anyone in Europe is asked whether they are in favour of innovation, probably 99% will answer positively. However, if the question is whether European researchers, engineers and companies should be allowed to take more risks to explore new and innovative solutions, the answer would be more uncertain and perhaps even negative. And probably just a few

people would realise that a negative answer to this question means that innovation will then happen outside Europe. Too often, the reflex is to look first at the risks of a new product as opposed to its benefits. Europeans have their feet on the brakes whenever they face innovation because of this fear reflex. We should accept the fact that there is no innovation at zero risk. Of course, risks should be assessed and managed. But they cannot be entirely avoided if Europe wishes to remain competitive. That is the thinking behind the innovation principle.

Jean-Eric Paquet, Director-General of DG Research and Innovation in the European Commission

Innovation is already high on the agenda of European leaders, and we are progressing on the creation of the European Innovation Council. But our Directorate-General on Research and Innovation in the Commission is also reinventing itself. It will soon be reorganised around the topics of sustainability: the future of the planet, putting people in the centre, and developing prosperity. This will enable us to create integrated solutions that can be deployed in various policies. We also need to give direction to research and innovation. By giving industry a competitive edge, the next wave of innovation can be an immense opportunity for Europe, in particular by connecting digital technologies and AI with industry. Europe has an outstanding industrial fabric, science base, and skilled people. And with the help of European instruments, research and innovation can team up even more closely with industry.

Europe is still a major global player in innovation, but we are not on an upward trend in international benchmarks. We should take such signals seriously. Economic partnerships, such as with Japan, will allow smooth operations on a global market. We can also take it as a positive signal that China is perceived as leading on climate change. But we have to stay ambitious in Europe: climate and the environment need regulation that promotes solutions.

Europe is particularly well-equipped to work on systemic approaches, and deeply transform societies and economies to deal with the challenges ahead. We also have governance mechanisms that bring all key actors together. Europe is not short of talent, skills and ideas, and that is reflected in the number of start-ups it has. The challenge is scaling up, and this will be addressed by the European Innovation Council. On the question of financial support, more work is needed on the insolvency framework; venture capital; innovation and science-friendly regulation; the push for technological solutions; and broadening the range of innovators. We should have a public debate on this, as the example of the European Court of Justice decision on CRISPR/Cas9 shows (it classified plants obtained by recent techniques such as CRISPR/Cas9-mediated genome editing as genetically modified organisms, therefore implying the requirement for pre-market risk evaluations).

Finally, I see increasing cross-fertilisation between technologies and sectors such as biotech or clean tech. Europe should use its expertise, skills and institutions to create new services and platforms for the future. European markets need to act according to the rules of the game, and ethics should be one of the key principles of our action. Both the European ethics framework and the data framework can create innovation. We should also look at other forms of crosscutting innovation, such as social innovation. With Horizon Europe, the Commission is making an effort to work co-creatively across policy areas and various parts of the EU institutions. This type of approach is the future.

Session: industrial Artificial Intelligence – solutions for Europe's 2030 challenges

Participants in this session agreed that Europe needs an industrial strategy that focuses on maximising the contribution that industry can make to our economy and society — and that Artificial Intelligence will play a central role in this. Industrial Artificial Intelligence is already delivering many benefits for Europeans and had the potential to do much more: from improving efficiency and productivity in industrial production processes, to enabling cross-sector innovation to solve challenges in areas such as climate change, mobility and healthcare. However, participants agreed that certain challenges would have to be addressed if Europe was to become a leader in the global race and make the most of the technology's potential for society. Support is needed for SMEs to help them tap into the benefits of digital technologies like Artificial Intelligence. More funding for research and innovation is required to bring innovations to the market. The development of skills and education also remains a key objective (both attracting young people to train in these fields and re-skilling those already in work). Participants in this session also agreed that concerns around automation and employment needed to be addressed, while recognising that automation can also improve working conditions and create jobs through gains in competitiveness. Participants agreed that a robust cybersecurity framework would be essential, not only to safeguard data and economic interests but also to gain citizens' trust in Artificial Intelligence. Finally, ethical guidelines will also be important for building trust, even though questions remained on how these guidelines should be implemented.

There was a consensus that, with the right framework in place and by leveraging European values to create a competitive advantage, industrial Artificial Intelligence can deliver multiple benefits for all Europeans.

This session was organised by Orgalim, an organisation representing Europe's technology industries.

Session: manufacturing and 4.0 skills

This session discussed how European industry must better anticipate the skills needs of the future and attract people with information-and-communications-technology skills to the manufacturing sector. Participants said that the manufacturing industry needed to invest in people and put in place the right talent-development strategies for transversal, technical and soft skills in society that can unlock market potential and build competitiveness.

Participants agreed that Europe needs to become better at anticipating the skills needs of the future — especially in the area of data analytics and digital security — and design the right curricula for technical schools. They said it was essential to work together in partnerships and make the most of the best practices that already exist at EU level (examples of these best practices include the European Alliance for Apprenticeships and Digital Skills and the Job Coalition). Furthermore, the participants said that the use of digital solutions on the shop floor would make small-scale, traditional industry relevant to people with information-and-communications-technology skills. They said that entry barriers have never been lower for manufacturing SMEs. Participants argued that the industry needs to invest in people, incentivise and empower them with training and life-long learning, and let them drive success and innovation in manufacturing. They said that the most important non-technical skills for the future will be flexibility and adaptability.

This session was organised by CECIMO — the European association of machine tool industries.

Session: data in materials and manufacturing

Delivering on the opportunities of materials and manufacturing within 'industry 4.0' requires adding meaning to data (semantics), enabling interoperability, and linking up silos. This session discussed how to achieve this. In the session, the huge benefits of structured data, common knowledge frameworks and interoperability were demonstrated, and the importance of supporting the uptake of such digital technologies in industry was emphasised. Participants said that the benefits of this included greater efficiency of material use, improved interactions in the manufacturing value chain, and new business-model opportunities. The session participants agreed that the current lack of semantics and interoperability were key barriers to accessing the value hidden in raw data (estimated to be €36 billion) and to improved decision-making. 'Ontologies' (sets of concepts and categories in a subject area or domain that show their properties and the relations between them) are a core element of a set of solutions proposed by the panel, and were endorsed by audience contributions. All stakeholders were encouraged by the panel to collaborate and create a harmonised semantic knowledge framework open to everyone. Participants in the session said that investments were needed to train the workforce in digital skills (including semantic technologies). The importance of overcoming 'non-technical' challenges such as legal, regulatory, security and data-sovereignty issues was highlighted. Participants also stressed the importance of building a system of trust and rewards for data sharing. They said that such a system, together with a widely agreed ontology, would enable digital marketplaces to function efficiently. An audience poll in the session showed a big gap between the need for data interoperability/semantic technologies and the current capability in these areas. It confirmed the need for action in this important field to support the successful digitalisation of materials and manufacturing. The participants also expressed strong interest in working across domains in an alliance for digital materials and manufacturing.

This session was organised by Goldbeck Consulting Ltd.

Session: a competitive European eco-system for R&D, innovation and digitalisation

This session discussed how the public-private-partnership (PPP) model should be viewed from the perspective of Europe's competitiveness, growth and welfare. The PPP model enables collaboration between researchers, innovation actors, and small and large companies.

Session participants asked what challenges were facing today's PPP model, such as the EU's 'Factories of the Future' PPP. The biggest challenge is to achieve continuous work after project completion. There is also a communication challenge in taking stories from different projects. SMEs are an important target group for this communication, and they should be engaged to a greater extent. Another important issue that arose was funding when projects are close to commercialisation, which highlights the importance of agreements and collaboration. Another issue raised in the session is the importance of heterogeneous groups that can be cross-linked to each other. The level of innovation is high in heterogeneous groups, so it is important to invest in projects run by them. The PPP model is an enabler for more heterogeneous groupings, which in turn lead to market-related innovations.

Lagging companies are also an important target group. Many companies are not making use of innovation and digitalisation. This causes them to fall behind in the digital transformation. In

Hungary, a national programme for lagging companies was introduced: participants in this programme can visit factories that are at the forefront of the digital transformation and participate in workshops and training on the digital transformation.

There is no simple solution: it requires commitment to create new solutions and innovations. There is not one model that suits everyone. Instead, the PPP model must be flexible to get the right players to cooperate, depending on the challenge that must be solved. It is important that the actors involved in the project also depend on the project being successful.

The participants finished with a message to the Commission: the PPP model is an important instrument but that it needs to be further developed with stronger commitments and greater impacts. It has so far proved to be a successful model for collaboration between different types of actors and it has made a significant difference for companies' competitiveness.

This session was organised by Teknikföretagen, Produktion2030 and EFFRA.

Session: digitalisation as driver of success – what next?

Digitalisation is one of the key success factors for European companies. In this session, participants discussed how many EU and Member State initiatives are making European companies more competitive by supporting investment in digital transformation. Participants also discussed how several initiatives are also building a framework of European digital values. These initiatives include the General Data Protection Regulation and the ethics guidelines of the Artificial Intelligence High-Level Expert Group.

The panel discussion identified several areas where companies, governments and European institutions could do more to grasp the opportunities and tackle the challenges of digitalisation.

For example, European SMEs are especially strong in manufacturing, and bringing a digital aspect to their products is a great opportunity for transforming their businesses. Some of the challenges faced by SMEs include the building of easy human-machine interfaces and overcoming the fragmentation of European digital markets, which still creates a heavy burden and cost for SMEs.

Session participants agreed that digital innovation hubs are crucial for unlocking digitalisation potential at the local level. Hubs that focus on selected technologies like the internet of things, AI, 5G and cyber security need European funding to support cross-border activities. Funding instruments should be simpler so that they can enable flexible combinations of public and private sources.

The participants in the session said that digital technologies make it possible for companies to create completely new businesses. These technologies also make it possible for Europe to solve huge challenges like climate change and other sustainable development goals. This requires more courage in companies and at the European level to think big. Ambitious actions would certainly attract new investments to Europe.

The participants agreed that European research is cutting-edge in many fields, but said that we have to be better in turning this research into commercial success. Stronger collaboration across geographical borders and business sectors is crucial to develop the testing and experimentation facilities that help transfer research excellence into products and services, especially in new technologies like AI. The participants agreed that projects of common European interest, such as the

recent one in microelectronics, are a good opportunity to create scale and efficiency gains in cutting-edge technologies.

The participants in the session said that the AI ethics guidelines go hand in hand with the competitiveness of European companies. The guidelines will make it easier for companies to develop and deploy AI — and build trust among the users that companies are acting in a trustworthy manner. They should also ensure investors that European companies apply AI in a sustainable way.

Business-research collaboration helps companies to become early adopters of new technologies, but this requires employees to update their skills constantly. The more that digital tools and connectivity are used in a company, the more important it becomes to invest also in cyber security and to protect intellectual property rights and data.

Session: building agile partnerships for the skills of today and tomorrow

This workshop focused on new types of partnerships that can help address the changing needs for skills and the increasing demand for highly skilled workers resulting from technological change.

Participants in the workshop agreed that partnerships for skills typically mean cooperation between employers and those providing training. However, they argued that partnerships can encompass a much wider variety of stakeholders (public authorities, guidance bodies, research institutes, etc.) to make the partnerships more responsive to changes in society and the labour market. These partnerships can: reduce mismatches in skills, make learning more attractive, open up employment prospects, promote skills that are relevant to the labour market, and support work-based learning.

One of the examples of skills partnerships discussed in the session was the Luxembourg Skills Bridge. This is a pilot programme that supports both employees and companies in their response to the digital transformation. The programme is founded on a tripartite governance model and works to anticipate change, providing people with the skills they need to either remain in their current job or make a smooth transition to a new role. The experience has demonstrated the crucial role of unions for workforce skills development. Tthe Polish Family Business Foundation reminded participants of the reality of small businesses, and stressed the care that was needed to select partners. The representative said that an agile partnership for a small business was often about finding the right people — and that this could take time.

Another programme discussed in the session was ‘Grow with Google’, which helps people to get access to training and products to grow their skills, career, or business. It is built on a partnership with governments, city councils, universities, private-sector businesses and non-profits. The experience shows that new learning environments such as platforms and digital workshops can help people to get the training they need.

The final programme discussed by participants in the session was NESTA’s ‘Digital Front Runners’, which is a programme for senior policymakers and other stakeholders in the Benelux and Nordic regions. The programme works to help governments improve the environment for the development of skills, e.g. makes use of job advertisement data and machine-learning algorithms to examine the digital skills required across occupations.

The panellists agreed that engaging with industry to determine the skills needed is an absolute necessity for up-to-date skills intelligence.

Session: investing in the industry of the future

We are currently experiencing a paradigm shift. Until now, the purpose of business was to maximise profits, and social issues were considered as the responsibility of other organisations. This distinction is becoming increasingly blurred. The purpose of the session was to gather insights from different types of investors on how to balance the principles of fairness and competitiveness.

Sustainable investing is not only about green and social issues. It is also about staying focused on the long-term goal of global competitiveness. In this context, the following three aspects of the Commission's approach to financing the shift towards sustainable industry are worth highlighting.

- Social investment: the EU funds industry, infrastructure and SMEs with grants and other financial instruments. The experience of the European Fund for Strategic Investments (EFSI) will be used for the new InvestEU Fund, which will have a dedicated pillar for social investment.
- Screening tools: the Commission is working on tools that can help investors looking for sustainable investments to make informed choices.
- Measurement tools: the ability to measure is key. We need to be able to measure everything we care about, also including well-being, sustainability and our long-term vision, and reflect those issues in public budgeting. The Commission is currently working to address this issue.

Banks finance around 70% of the EU economy, and are also critical in providing companies with ways of financing the transition to a low-carbon, circular economy. A great deal of effort is focused on innovative environmental, social and governance (ESG) products. European banks are leading the process of standard setting for ESG products worldwide. The Commission is also promoting the principle of responsible banking: showing commitment to aligning long-term strategies with the UN's sustainable development goals (SDGs). Clients' engagement in this process is essential. At the same time, we observe the development of new risk-assessment methodologies, integrating climate-related and social risks into banks' investment policies (even if data and measurement are still a challenge). Banks are adopting a holistic strategy on climate change and sustainable development. For example, BBVA announced its Pledge 2025 strategy, built on: financing (mobilising €100 billion by 2025 to fight climate change and drive sustainable development); managing (aligning their strategy with the SDGs and minimising potentially negative impacts); and engaging (involving all stakeholders to increase the financial sector's contribution to sustainable development). Another example is the Dutch central bank, which performs additional climate stress tests. These climate stress tests require better understanding of the climate-related performance of the portfolio companies and their exposure to climate risks and opportunities. Therefore, it is very important to create a level playing field in disclosure requirements for investors.

Moreover, markets would benefit from a clear definition of sustainable investment. This should drive the development of the market and shift more capital towards sustainable solutions. The more transparency on climate risks, the more investment opportunities there will be.

While it is true that the EU is currently witnessing positive economic trends, it is also important to be realistic. Being in a strong global position, we need to assess what investments are needed to maintain it. On infrastructure (in the wider sense, i.e. including social and digital infrastructure), the EU's level of investment is currently 75% of levels before the crisis. Translating this into investment needs, there will be a gap of roughly €100 billion a year until 2030. Moreover, the EU has less crowding-in of private investment in infrastructure than before the crisis. On climate change mitigation, the investment gap is €150 billion a year in the same period, and if we are to meet the

new 2030 targets this gap rises to more than €200 billion a year. On energy efficiency and renewables, the gap is actually widening — the targets are rising and the pace of investment is slowing down. Moreover, 8 out of 10 companies point to skills shortages as an impediment to investment. There is a serious lack of skilled workers.

To close these investment gaps Europe needs to attract private capital and make better use of public capital. This requires a strong banking sector, but also a stronger capital market to facilitate the transfer of private capital towards investments. In addition, it is important to use taxpayers' money more efficiently. The paradigm shift involves a move from grants to other types of financial engineering type of instruments. For example, the EFSI has shown how €33.5 billion guarantee from the European Investment Bank (EIB) can be used to unlock additional investment of at least €500 billion by 2020. This type of funding would work because strong cooperation has been established between the Commission, the EIB, and a network of strong partners such as commercial banks, national promotional banks and capital market institutions. This investment would allow the EIB to accept more risk and attract private investors to projects that are regarded as riskier, such as those involving innovation, infrastructure and digitalisation. A representative from the EIB told the session that, in order to succeed, a combination of public money, public and private banks, and capital market institutions was needed. This work should be continued by the InvestEU Fund.

We also observe a shift of focus from output to impact, which is reflected in the principle of the 'additionality' of any intervention and a greater emphasis on achieving policy objectives. It requires translating SDG objectives into measurable impact objectives, to align public and private interests. Building capacity to develop good and bankable projects (in particular in social and infrastructure undertakings) is also crucial. To maximise impact it is necessary to strengthen advisory capacity for public and private projects. Impact investors make investment decisions not only on the basis of risk and return, but also based on the impact of the portfolio start-ups. The EIB itself is not a disruptor, but it works with potential disruptors. Social and environmental issues create a market of economic opportunities. The SDGs represent business opportunities worth $10,000 billion. In addition, millennials will inherit around $30,000 billion in the coming years, and the vast majority of them say that they will take account of ESG goals in their investment decisions. Impact investing attracts a disproportionately large body of young talent, millennials are interested in meaningful and social businesses and consumers are increasingly willing to pay a price premium for sustainable products. There is also the potential of the market for social impact bonds and performance-based contracts. Both create new investment opportunities and new financing solutions for social issues.

The ESG factors are increasingly present in corporate activities: considered in strategic decisions, and increasingly regarded as business opportunities. Seizing them will drive the competitiveness of EU companies in the global market. To support the whole industry a three-step leadership model can be used. First, focus on a company — how to switch from a traditional to a more sustainable model and integrate ESG into core strategy? The chief financial officer plays an important role in setting this transition. Appropriate financing is crucial for the implementation of a company's ESG strategy. Second, cooperation between companies and engagement along the value chain. A single company cannot change in isolation, the whole sector must gradually implement a sustainability agenda. This way leaders can influence the laggards, and transition roadmaps should make it easier to secure financing for the transformation and identify the ESG factors that are most relevant for a sector. The EIB is currently reflecting on how sectors can draw up such transition roadmaps. The ESG ratings should not be 'one size fits all', but adjusted to highlight areas of particular importance in a sector.

The roadmaps will help to maintain a focus on long-term objectives, social and environmental impact, the skills a company will need, etc. Finally, engagement of all stakeholders, including companies, policymakers and financial institutions, as well as companies' reporting and transparency in the implementation of SDG.

The investors like certainty. They need certainty on climate targets and policies to ensure closer alignment of financial markets with sustainable development objectives. This will bring predictability and stability. Finally, the corporate governance (the relationship between companies and their shareholders) is also key. The composition of a company's board and the extent to which incentives are aligned with the company's strategy set the tone for the whole company.

Session: industry in Europe – what civil society has to say

EU industry is undergoing a transformation based on the ever-increasing role of digitalisation. This session discussed the need for an inclusive digitalisation that focuses on digital skills, the promotion of responsible research, and innovation with a guarantee to uphold ethical principles. The participants in the session agreed that the EU's strategy and legislation on the information society should be more in line with the expectations of European civil society for the benefit of everyone: workers, citizens and companies.

The session participants discussed how individual citizens felt that they do not have much to say about the ongoing process of digitalisation. They agreed that co-design (where citizens are given a greater voice in decision-making) is a step in the right direction to find and implement the best solutions. They also agreed that AI is one of the priorities to be addressed in the transformation of industry. Any AI development must be based on trust. The question of ethics is therefore essential, and companies should have appropriate governance tools to decide on the values that will guide their behaviour.

The discussion then turned to how European industry must respond to the crucial demand for greater resource efficiency and the imperative of promoting a sustainable, circular and low-carbon economy. Participants said that the crucial role of civil society in a just transition to the circular economy should be recognised. They said that the European Circular Economy Stakeholder Platform is a good example of joint efforts and synergies at European level, contributing to a global EU vision on the circular economy. The session participants agreed that, in order to create a real functioning market for secondary raw materials, the next Commission should focus on improving the framework conditions for companies to do business and engage consumers more.

Finally, participants discussed how European standards are crucial to ensure the compatibility and interoperability of components, products and services. They agreed that businesses clearly benefit from having standards that take into account the concerns and priorities of societal stakeholders. This is because: (i) these standards help to ensure that products and services are developed and delivered in line with market expectations; (ii) the health and safety of workers is safeguarded; and (iii) environmental protection is maximised. Together with cross-sectoral participation, consumer behaviour also has a significant influence on the transition to a circular economy.

This session was organised by the European Economic and Social Committee.

Conclusions of the Young Leaders of Industry Forum

The first Young Leaders of Industry Forum was organised to empower and engage young people to contribute to industrial policymaking through innovative discussions on the future of industry in the EU. The 23 participants were selected following an open call for expressions of interest. They were a geographically and gender-balanced group of motivated under-30s from across the EU. The Forum focused on three key themes: digitalisation and innovation; globalisation; and sustainability.

Digitalisation and innovation

Vision: A European Union where citizens are empowered to become what they are capable of becoming, and where business is able to flourish in the fourth industrial revolution.

Mission: For all European Union countries to implement a digital bill of rights by 2025.

Why it matters: There are large discrepancies between EU countries in digital skills, access to digital services, and digital security. A minimum digital standard would give every citizen and industry an equal opportunity to learn, access, and safely use digital technology.

What are the benefits?

An integrated programme should be created, with actions under three headings: learning, access and safe use. The bullet points below expand on these three headings.

Learning

Only 56% of EU citizens are considered digitally literate. The Young Leaders of Industry proposed a range of initiatives for all levels of education to remedy this.

- ***Primary education:*** The Young Leaders of Industry proposed: (i) capacity-building actions for children of primary school age and their teachers, e.g. creating online communities with common digital courses and material; (ii) expanding technological infrastructure; (iii) and support for project-based training that includes teachers from industrial fields.
- ***Higher education:*** 9 out of 10 jobs in the future will require basic digital skills, meaning that Europe could be facing a digital skills gap. The Young Leaders of Industry proposed that at least nine European Credit Transfer and Accumulation System credits of any university degree course focus on the implications of digital technology in that area of studies.
- ***Lifelong education***: The Young Leaders of Industry proposed the creation of online platforms and community digital skills hubs with a physical presence in local communities. They proposed that these platforms and hubs should especially target groups with limited access to technology, including old people, refugees, people at risk of exclusion, etc.

Access

- ***Coverage and quality:*** The Young Leaders of Industry proposed improvements to the quality of broadband coverage so that all EU citizens would have access to high-speed broadband of at least 50 Mbps.
- ***Access to digital services***: The Young Leaders of Industry proposed that citizens should be able to access healthcare, transport, banking, government, and shopping services digitally. This could be

done by making the EU's fragmented markets fit for the digital age, transitioning from individual, national markets to a single integrated market.

- ***Open data.*** The Young Leaders of Industry proposed that a standardised open-data framework should be created. The public research and industrial contributions should be accessible to other research projects or initiatives also funded by the Commission.

Safe use

- ***Privacy index:*** The Young Leaders of Industry proposed that consumers should be able to easily analyse and compare the security of each of the online services they use as part of their personal or work life. They suggested a privacy index that would visualise in a simple, quick manner how secure it is for a consumer to use a product.
- ***Ethical boards in all countries:*** The Young Leaders of Industry proposed that each Member State should establish an ethical board consisting of technical and ethical experts, who have the skills and power to make rapid decisions on new technology use.
- ***Free virtual private networks:*** the safe use of the internet through virtual private networks is currently limited to those able to afford paid services. Everybody should be able to access the internet securely and for free in public places, such as libraries.

The 2019 Young Leaders of Industry's Digitalisation and Innovation Task Force are: Annina Koskiola, Aleksandra Adamowicz-Hesselroth, Benoît Vernay, Philipp Schmalen, Ioanna Papanikolaou, Nathan Rietzler, Mireia Dilmé and James Sancto.

Globalisation

Vision: A world in which workers, both young and old, learn from each other and contribute to the best of their ability**.** A European education policy that supports the citizens of all Member States, leaving nobody behind. A European workforce endowed with the skills needed by the industry of tomorrow.

Mission: By 2030, every Member State must spend 3% of GDP on upskilling.

Why it matters: The accelerating influence of globalisation and the rise of disruptive technologies have significantly impacted every aspect of people's lives (in both the public and private sphere).

Jobs: Despite global unemployment falling slightly to 5.3% in 2018, there are still increasing doubts about the prospects for employment. The world of work faces upheaval. By 2030, 375 million workers (or roughly 14% of the global workforce) may need to switch occupational categories as digitalisation, automation, and advances in AI disrupt the world of work[5].

Mind-set: Information is the most important resource we have. However, some political leaders today believe they need to protect their countries and citizens from globalisation (competition in labour, production, etc.). We are currently standing on the brink of building walls at our nation's borders.

Education: There are still big differences in the quality of education across the EU's Member States. Coupled with this, we now see many of today's young people lacking both skills and confidence. Therefore, it is necessary to support entrepreneurship, and emphasise the importance of lifelong

[5] 'Jobs lost, jobs gained: Workforce transitions in a time of automation', McKinsey Global Institute report.

learning. In other words, education must be a focus from high school (through apprenticeships) to university (through research) and beyond (through re-skilling). This should enable European citizens to not only keep up with a fast-changing environment but also help them to secure a job after they finish schooling.

What are the benefits?

McKinsey conducted a survey on the views of executives of European companies with more than $100 million in annual revenues. The research showed that 94% of these executives believed the answer to the challenges raised by globalisation would either be an equal mix of hiring and retraining or mainly retraining.

Firstly, the Young Leaders of Industry insisted that they wanted to start with equality in the Member States. They therefore believe it is essential to promote these ideas not just in the innovative countries of the EU, but also in countries that lack human capital, investment opportunities and strong growth prospects. Secondly, the Young Leaders of Industry said that they wanted to make use of the characteristics that make the EU strong and unique: Europeans are united in diversity. The EU has a rich history in what the Dutch call the 'polder model': consensus-based decision-making through a pragmatic recognition of diversity and cooperation despite differences. A new age is arriving, and the Young Leaders of Industry said that this long-earned skill can strengthen the position of the EU.

Three domains were highlighted by the Young Leaders of Industry in which they suggested more specific measures. These domains are outlined below.

Entrepreneurial vision

- Mobilise investment in regions: improve access to venture capital for young entrepreneurs from all backgrounds.
- Create an online industry crowdsourcing platform to share jobs, advice and resources.
- Promote broader access to training and development opportunities through grants and initiatives.

Industry and the EU

- Lifelong learning: valuing the current workforce and offering opportunities to people of all ages.
- PPP funding and a collaboration network for industry and universities.
- Emphasise EU-industry partnerships (e.g. UNCTAD-Alibaba eFounders fellowship) that will support entrepreneurs from the EU and developing countries (e.g. African countries).

Education and the EU

- Establish a common apprenticeships framework for all EU Member States.
- Set up a skills conversion scheme for EU industrial workers looking to adapt to modern industrial practices.
- Provide digital-skills training for teachers.
- Set up a global industrial internship programme.

The 2019 Young Leaders of Industry's Globalisation Task Force are: Sabine Kerssens, Lucie Obrtelova, Antoniette Cefai, Ngaio Olsen Stahl, Jonas Søndergaard, Henning Windheim and Rory Daniels.

Sustainability

Mission: 79% of EU citizens believe that fighting climate change can lead to economic growth while creating new jobs. The Sustainability Task Force of the Young Leaders of Industry Forum argued that it was time to carry out substantial changes towards a sustainable economy. For this reason, they proposed to double the life of EU products by 2030, embedding the principles of repair, reuse, and recycle into the design of industrial and consumer products.

Why it matters: 77% of EU citizens would prefer to repair goods rather than buy new ones. But the possibility to reuse, repair, and recycle is limited for most products. The Sustainability Task Force argued that this needs to change. They agreed that this issue could be addressed from three perspectives. Firstly, producers are manufacturing in a way that is not repair-, recycle- and/or reuse-friendly. Secondly, consumers lack the knowledge and the motivation to repair, reuse or recycle the products. Thirdly, the behaviour of producers and consumers fosters exploitation of the environment and its scarce resources. This exploitation of the environment also drives climate change.

Because fighting climate change is one of the primary challenges of the 21st century, the Sustainability Task Force argued that the European Union and Member States should: (i) enforce binding policies aimed at producers; (ii) invest substantial resources; and (iii) develop public awareness on the issue.

What are the benefits?

The Young Leaders of Industry Sustainability Task Force said that this mission of creating longer-lasting products will lead to lower consumption of certain products, paired with a circular life cycle for others. Fewer products mean lower use of energy and resources. EU consumers will save money by making less-frequent, but more informed purchases, improving their quality of life.

The Sustainability Task Force agreed that producers would initially face a decrease in their income from sales. However, it believes that its mission proposition will enable a significant expansion of the service sector followed by job creation in this sector, with the repair business at the forefront. The actual return on investment for these long-term choices will mean an increase in revenues and in the competitiveness of European industry. By further developing the lifecycle of products, the Young Leaders of Industry want to embrace the circular economy. They believe that doing this is in tune with current trends towards a more sustainable economy and an increase in value for the service economy. They believe this is a key opportunity for EU industries to position themselves as global leaders by taking the chance offered by circular business models.

Tools to achieve this mission

The Young Leaders of Industry believe that the mission proposition can be achieved through several pragmatic actions, and the Forum enabled them to propose the following instruments.

- A mandatory five-year warranty for products by 2030, tackling planned obsolescence, increasing product repairability and durability.
- A ‘right to repair’ law, which would require that manufacturers provide the required information and documentation for consumers and repair shops to repair their products.
- Test-beds at a regional level to provide upskilling opportunities and consumer choice for the repair, reuse and recycling of products. Innovation sprints (together with academia and industrial companies) are a way to develop those options.

- Public procurement, with strong emphasis on repair, reuse and recycling of products.
- Creation of an EU label for repairability and reusability to make it clear for consumers if the product can be repaired. Symbols will be added to specify who can repair the product (producing companies, test-beds, or the consumers themselves)
- Tax-breaks for SMEs to support repair, reuse and recycle initiatives.
- Business-to-business compensation mechanisms to support repair and recycling businesses.
- Frameworks to promote good practice and training on repairing products.

The 2019 Young Leaders of Industry's Sustainability Task Force are: Guia Bianchi, Robert Heinecke, Amber Laan, Hugh Manning, Taman Mhoumadi, Flavio Proietti, Lisa-Maria Sommer, and Gerrit Steinfort.

The way forward

Lowri Evans, Director-General for the Internal Market, Industry, Entrepreneurship and SMEs, European Commission

Jean-Eric Paquet, Director-General for Research and Innovation, European Commission

The EU Industry Days 2019 are about European competitiveness and leadership, about how we can all thrive within the boundaries of the planet. The over-arching message that came from these days is one of hope and pride. It was clear that European values can and should be a competitive advantage — under one condition: that they are scalable. In all discussions, people were at the core, and the call from the young generation to focus our efforts on social and environmental sustainability was clear.

As President Juncker said in his opening speech 'industry is at the heart of EU society'. This also means that industry has a responsibility towards society. A successful industrial policy can contribute to equality and fairness. In Europe, no citizen and no region should be left behind in the industrial transition.

This is easier said than done. We see more new jobs created than lost, but the new jobs require different sets of skills. It is essential to have more action to ensure people have the skills needed in the future. That should be the responsibility of governments and businesses alike. Member States need to reform their education systems to provide the skills for future generations. 100 million Europeans in the current labour force will need upskilling. This cannot be delegated to the education system; industry has to take responsibility.

Moreover, we need to continue our leadership on environmental sustainability. Juncker's Commission has embraced sustainability more than its predecessors have, but more can be done. The transition to a carbon-neutral industry is one of the most pressing challenges of our times, but it

is also a huge economic opportunity. Europe is leading this trend and European industry can bring high added value to our society by transforming societal challenges into business opportunities.

Finally, we need to prioritise and accelerate investment in the markets of the future where Europe can be a global leader. Not by being protectionist, but by being innovative and by giving research a mission-driven direction. Europe benefits a lot from open and rules-based trade, and its industries provide an example of successful integration into global value chains. However, we need to consider the links to our strategic autonomy, and we should be careful that the EU does not turn into a subcontractor to others in key areas. We can enhance the level playing field by using the EU's standard-setting power. EU regulatory standards such as the General Data Protection Regulation show that we can shape the global agenda according to our values.

Europe needs to behave as a continent and business and policymakers need to be proactive and agile to lead the transformation.

Experts' sessions

During the EU Industry Days 2019, EU experts discussed with participants the following issues that affect industry:

Public procurement

More information:	https://ec.europa.eu/growth/single-market/public-procurement_en
Contact:	http://ec.europa.eu/growth/single-market/public-procurement/contact_en

Intellectual property

More information:	https://ec.europa.eu/growth/industry/intellectual-property_en https://www.iprhelpdesk.eu/
Contact:	https://www.iprhelpdesk.eu/Contact

Corporate social responsibility

More information:	https://ec.europa.eu/growth/industry/corporate-social-responsibility_en
Contact:	GROW-H2@ec.europa.eu

Blockchain

More information:	https://blogs.ec.europa.eu/eupolicylab/blockchain4eu/
Contact:	JRC-I2@ec.europa.eu

Enterprise Europe Network

More information:	https://een.ec.europa.eu/
Contact:	https://een.ec.europa.eu/about/branches

Erasmus for entrepreneurs

More information:	https://www.erasmus-entrepreneurs.eu/
Contact:	support@erasmus-entrepreneurs.eu

European Innovation Council

More information:	https://ec.europa.eu/research/eic/index.cfm
Contact:	https://ec.europa.eu/info/departments/research-and-innovation_en#contact

Map of local EU Industry Week events

From January to April 2019, local and ‘open door’ events took place across Europe under the brand of EU Industry Week. They focused on discussions around the 2019 topics: industry and sustainability; industry and globalisation; and innovation and digitalisation.

Annex: agenda

EU Industry Days 2019

5-6 of February 2019 (Brussels, The Egg)

DAY 1, Tuesday 5 February 2019

08:30-09:30	***Registration & coffee***				
09:30-09:35	**Welcome** Lowri Evans, Director-General for the Internal Market, Industry, Entrepreneurship and SMEs				
09:35-09:50	**Opening** Jean-Claude Juncker, President of the European Commission				
09:50-10:05	**Keynote speech** Kristalina Georgieva, President of the World Bank				
10:05-10:20	**Setting the scene** Elżbieta Bieńkowska, European Commissioner for Internal Market, Industry, Entrepreneurship and SMEs				
10:20-11:10	**High-level roundtable: Industry and the future of globalisation** Moderator: Jyrki Katainen, European Commission Vice-President for Jobs, Growth, Investment & Competitiveness – Arancha González, Executive Director of the International Trade Centre – Carl-Henric Svanberg, Chairman of the European Round Table of Industrialists, Chairman of Volvo – Li Yong, Director General of the United Nations Industrial Development Organization				
11:10-11:40	**Inspirational Dialogue** Moderator: Lowri Evans, Director-General for the Internal Market, Industry, Entrepreneurship and SMEs – Jussi Herlin, Vice Chairman Board of Directors, Kone – Mate Rimac, founder and CEO of Rimac Automobili				
11:40-12:00	***Coffee & Networking***				
	Parallel sessions				
12:00-13:30	**Industry for people: creating value for society**	**Sustainable industry: circularity and carbon-neutrality**	**Industry & trade: between regionalisation and globalisation**	***Clean Energy Industrial Forum***	
13:30-14:30	***Lunch & Networking***				
	Parallel Stakeholders sessions				
14:30-16:00	**How do industrial cooperatives contribute to circular economy?** CECOP-CICOPA Europe	**Thinking circular – How to make SMEs fit for the Circular Economy** EUROCHAMBRES	**Intangible value creation through design — a key success factor for Europe** Bureau of European Design Associations	***Clean Energy Industrial Forum*** **The European Battery Alliance: how quickly is the European industry eating the 250 b€'s market cake?** EIT InnoEnergy	**Sustainable cross-cluster networking – a game changer for European Industry in a global digital economy** Silicon Europe Alliance
16:00-16:15	***Coffee & Networking***				

16:15-17:45	**We need more Space, how to foster high-tech entrepreneurship** European Space Agency	**Developing sustainable markets: the role of the circular bioeconomy in the EU** European Bioeconomy Alliance	***Clean Energy Industrial Forum*** **Regional Industrial transition in the new EU budget and its role on the European economy** „PRO SILESIA" Association	**Energy Intensive Industries – Innovating for a sustainable future** IFIEC Europe	**Manufacturing as a service: the additive manufacturing promises to the EU economy** I-Form
18:00-19:00	**How the EU supports industrial modernisation: exhibition & cocktail** Julien Guerrier, Director of the Executive Agency for Small and Medium-sized Enterprises				

DAY 2, Wednesday 6 February 2019

08:30-09:00	***Registration coffee***
09:00:09:05	**Welcome & reporting from Day 1** Lowri Evans, Director-General for the Internal Market, Industry, Entrepreneurship and SMEs
09:05-09:20	**Setting the scene** Margrethe Vestager, European Commissioner for Competition
09:20-09:35	**Inspirational speech** Claudia Olsson, Founder and Chair of Stellar Capacity AB, Young Global Leader World Economic Forum
09:35-10:35	**From decarbonisation to Artificial Intelligence – Challenges and opportunities for EU industry towards 2030** Moderator: Ann Mettler, Head of the European Political Strategy Centre, European Commission – Loubna Bouarfa, CEO & Founder OKRA, MIT Innovator Under 35, Member of the High-Level Expert Group on Artificial Intelligence – Ineke Dezentjé Hamming-Bluemink, President of FME, Member of Industry 2030 high level industrial roundtable – Solveigh Hieronimus, Leader of McKinsey Center for Government (MCG), Member of the High-Level Group on the Impact of the Digital Transformation on EU Labour Markets – Antti Vasara, CEO of VTT, Member of Strategic Forum on Important Projects of Common European Interest – Dimitri de Vreeze, Member of Management Board Koninklijke DSM, Board Member of European Chemical Industry Council
10:35-10:50	**Inspirational speech** Antonette Miday, Africa Basque Challenge
10:50-11:20	**Dialogue on Industry & Innovation** Moderator: Ann Mettler, Head of the European Political Strategy Centre, European Commission – Pierre Gattaz, President of BusinessEurope – Jean-Eric Paquet, Director-General for Research and Innovation
11:20-11:40	**Presidency Perspective** – Niculae Bădălău, Romanian Minister of Economy – Mika Lintilä, Finnish Minister of Economic Affairs
11:40-12:00	***Coffee & Networking***

	Parallel Stakeholders sessions				
12:00-13:30	**Industrial Artificial Intelligence – Solutions for Europe's 2030 challenges** ORGALIM	**Manufacturing and 4.0 Skills** CECIMO	**Data in Materials and Manufacturing** Goldbeck Consulting Ltd	***Clean Energy Industrial Forum*** **The deep decarbonisation of energy-intensive industrial sectors: industrial and social impacts and opportunities** industriAll	**A Competitive European Eco-system for R&D, Innovation and digitalization** Teknikföretagen, Produktion2030 and EFFRA
13:30-14:30	***Lunch & Networking***				
	Parallel Sessions				
14:30-16:00	**Digitalisation as driver of success – what next?**	**Building agile partnerships for skills of today and tomorrow**	**Investing in the industry of the future**	**Industry in Europe: What civil society has to say** European Economic and Social Committee	
16:00-16:15	**Results from the Young Leaders of Industry Forum**				
16:15-16:30	**The way forward – official closing & video** Lowri Evans, Director-General for the Internal Market, Industry, Entrepreneurship and SMEs and Jean-Eric Paquet, Director-General for Research and Innovation				
16:30-17:30	**Cocktail & networking**