AMSTERDAM DECLARATION

CREATING A SMART EUROPE



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Global industrial structures and value chains are facing fundamental changes, driven by accelerated digitisation and new technologies. These changes offer immense opportunities to revitalize European Industry and may very well be the makeor-break factor for companies, regions, countries, or Europe. Europe's strength lies in the development of new industrial technologies and services, such as nanotechnologies, biotechnology, advanced materials, micro- and nano-electronics, photonics and advanced manufacturing. With a high average Gross Domestic Product, Europe is also one of the largest and most affluent markets for companies worldwide. If we, as Europe, succeed in taking advantage of these digital opportunities and in introducing new business models, we could increase Gross Value Added by 1.25 trillion euros by 2025 in manufacturing alone¹. However, this will present its own challenges. Due to its potentially disruptive impact, companies trailing in digitisation are increasingly seeing their returns and productivity dwindle². Meanwhile, global competition is strong. As Europe, we need to approach these challenges in a 'smart' way and join forces. At the start of the Netherlands EU presidency, on 28th January the European Ministers responsible for the Competitiveness Council discussed how to accelerate smart industry in Europe. This was followed up by the European Commission Communication 'Digitising European Industry' in April, which is an important step forward towards a smart industry in Europe. To build on these initiatives we now call upon the European Commission (EC) and Member States (MS) to work with stakeholders to create an actionable strategic European industrial agenda in order to be at the forefront of the 4th industrial revolution. We welcome the clear support from Member States to digital market technologies as expressed in the Council conclusions of 26 May. We consider this a good way forward to deliver on the ambition of the present declaration which would be Conclusions of the Competitiveness Council at its meeting in November 2016. Stakeholders agree to regularly share information on progress. This declaration is endorsed by a broad community of industries, research institutes and scientists in Europe.

A CALL FOR ACTION

In order to seize the opportunities arising from the fourth industrial revolution, an ambitious industrial European agenda is urgently needed, which supports the transformation towards a new digitised industrial landscape. A smart future proof industrial agenda is crucial, which embraces open innovation, open science and is open to the world for connected and sustainable industries. In this vision, the competitive edge of industries does not focus on economies of scale, but will more depend on how well industry is connected in the wider network to provide demand driven, customized propositions. Future factories may be smarter, smaller, closer to customers and more modular. Industries will engage in sustainability while innovating products, manufacturing processes and facilitating new business models. This implies applying advanced industrial technologies, developing smart equipment, and integrating digital technologies in production. It also requires the commitment of real resources by public and private stakeholders. The new paradigm will revolutionize manufacturing industries, increase productivity, foster industrial growth and modify the profile of the workforce. It is expected to change the competitiveness of companies, regions, countries and Europe. In order to make this vision a reality, and to take a leading position, bold political commitment and decisive action is needed.

- 1. Broad public participation in new and advanced industrial technologies is essential to ensure economic and social welfare. Technologies deliver benefits to society and also introduce new risks. Therefore, to create trust, pro-active public engagement and transparency in new industrial technologies is a critical factor for speeding up the process of taking up new innovations and mainstreaming. Prioritising industrial technologies in innovation programmes, raising public awareness and starting an EU wide dialogue is fundamental.
- 2. Europe's innovation divide needs to be bridged and we need to improve scaling up innovative start-ups. To improve coherence in Europe and achieve a more balanced competitive R&D&I eco-system, action is needed. This includes strengthening policies to increase the mobility of (highly skilled) innovators and researchers across the EU, aligning innovation programmes and roadmaps, and sharing best practices in terms of open ecosystems. It is vital to support the emergence of new smart technologies and business opportunities across Europe.
- 3. The societal challenges of today are the markets of tomorrow. Urgent action is needed to facilitate and stimulate this transformation, with jointly defined goals and timelines of stakeholders. A deepened understanding of the potential contributions of new advanced technologies is necessary. Industry, together with other eco-system stakeholders, needs to identify new developments more actively, and mutualise resources for overcoming bottlenecks in value chains. This is particularly important for upscaling of new technologies and new processes. Accurate monitoring of needs and of new technologies is required, including the potential contribution to society alongside safety issues.

- 4. Bringing industrial technologies timely to the market requires research and -innovation friendly framework conditions, including better access to finance. Boosting investors confidence in Europe as a manufacturing site is essential. Industry and public authorities should work together to reduce the technological risks of upscaling, and therefore to render investment less risky and more attractive. It is important to link financing communities in such a way that private investors are confident to finance across the valley of death, and to improve coherence and synergies between funding instruments at regional, national and EU level.
- 5. Empowerment and ownership by the entire society is needed to create a new and open innovation culture. Seizing the opportunities of advanced industrial technologies requires new skills. Advances in technology enable machines to perform complex tasks that, previously, could only be carried out by humans. The accelerated speed of technological advancement requires new skills to translate these advances into jobs and growth. This can be achieved by promoting multidisciplinary knowledge-based skills in STEM³, together with entrepreneurial and other soft skills. In addition, the introduction of 'learning by doing' from primary schools onwards, the development of curricula for new technologies, the exposure of students to real-world innovation experiences, and the development of life long learning mechanisms for the workforce (such as 'learning factories' and 'pilot lines' to familiarise people with new technologies), are vital for creating a smart and attractive Europe for talent and industry.
- 6. New technologies and innovations lead to regulatory issues and involve risk taking. The accelerating pace of technological and digital change does not necessarily match the rate at which legislation is being developed or updated. This may cause delays or hamper investments and innovations in Europe. Regulation should therefore be future proof, innovation friendly and technology neutral. A prominent place for the 'Innovation Principle' will be crucial. In addition, a permanent dialogue and knowledge sharing between innovators and regulators is essential for rapid adjustments to the regulatory system.
- 7. SMART targets are required in policies, and innovation needs to become an integral part of these policies. Industrial policy and public private-effort, based on tangible and agreed social and industrial ambitions, is instrumental. Mutually reinforcing policies and roadmaps should help to facilitate the realisation of these ambitions.
- 8. The connection of EU and regional innovation related policies should be strengthened. There is a need for a more coherent policy framework across Europe. Regional innovation systems need to mature in some regions and there are opportunities to build on Smart Specialisation Strategies. For instance, a fitness check/ mapping of how new regional policies and instruments fit with the existing policies, should be introduced.
- g. There is currently a lack of incentives for overcoming barriers to innovation, in specific incentives for scaling up. Existing and planned high level platforms should be used to offer industry the services they need, to develop new technologies mutualising European, national and regional resources. Standards should be set faster in a harmonized way. Industries should remain actively involved. A Chief Technology Officer at regional level could improve coherence between technology development and public needs (in such areas as Smart Cities). In addition, stakeholders –in cooperation with authorities- should look into new approaches such as 'Innovation Deals', to overcome barriers and accelerate innovative solutions.
- 10. EU and MS innovation programmes need to be able to deal with the challenges posed by the increasingly rapid rate of technological and digital change. The EC and the MS should improve the alignment between innovation programmes on EU, national and regional level (such as Horizon2020, structural funds and national programmes). More attention should be given to 'impact criteria', and the systematic measuring of impact beyond individual project duration.

¹ The digital transformation of industry. How important is it? Who are the winners? What must be done now? A European study by the Federation of German Industries (BDI) and conducted by Roland Berger Strategy Consultants, 2015 https://www.rolandberger.com/media/pdf/Roland_Berger_digital_transformation_of_industry_20150315.pdf

² The Future of Productivity. OECD. July 2015. http://www.oecd.org/eco/growth/The-future-of-productivity-policy-note-July-2015.pdf See figure 2 'Solid growth of the globally most productive firms but spill overs to the other firms have been weak'

³ STEM: Science Technology Engineering and Math



ANNEX

TO THE AMSTERDAM DECLARATION - CREATING A SMART EUROPE REPORT OF THE RESULTS OF THE STAKEHOLDERS' SESSIONS



REPORT OF THE RESULTS OF THE STAKEHOLDERS' SESSIONS

MANAGEMENT SUMMARY

I: Vision

In order to seize the opportunities of the fourth industrial revolution, an ambitious strategic industrial European agenda is urgently needed. A future proof and smart industrial agenda embracing open innovation, open science and being open to the world, will thus be crucial for Europe's global competitive position, the creation of jobs and for tackling societal challenges.

In order to realise this vision action is needed. The ten actions are divided in the following four blocks:

II: A strong and efficient system for Open Innovation

- 1. Broad public participation in new and advanced industrial technologies is essential to ensure economic and social welfare.
- 2. Europe's innovation divide needs to be bridged and we need to improve scaling up innovative start-ups.

III: A conducive business environment for innovation

- 3. The societal challenges of today are the markets of tomorrow. Urgent action is needed to facilitate and stimulate this transformation, with jointly defined goals and timelines of stakeholders.
- 4. Bringing industrial technologies timely to the market requires research and -innovation friendly framework conditions, including better access to finance.

IV: Fostering talent and skills for innovation

5. Empowerment and ownership by the entire society is needed to create a new and open innovation culture. Seizing the opportunities of advanced industrial technologies requires new skills.

V: Effective innovation policies

- 6. New technologies and innovations lead to regulatory issues and involves risk taking.
- 7. SMART targets are required in policies, and innovation needs to become an integral part of these policies.
- 8. The connection of EU and regional innovation related policies should be strengthened.
- There is currently a lack of incentives for overcoming barriers to innovation, in specific incentives for scaling up.
- 10. EU and MS innovation programmes need to be able to deal with the challenges posed by the increasingly rapid rate of technological and digital change.

I. VISION

Global industrial structures and value chains are seeing fundamental changes, driven by digital and industrial technologies, by innovation in business models and organisation. This creates new opportunities as accelerated innovation is needed for Europe to stay with the pack. Europe's strength lies in the development of new industrial technologies and services. Stakeholders need to act now to seize these opportunities. Europe, Member States and Regions should focus on transforming, creating and revitalising its industries based on innovative industrial technologies as well as non-technological innovation. Industry should shift its focus from economies of scale towards 'economies of networking' to outsmart the global competition.

New technologies are seen as the way to make Europe regain competitiveness, quality of life and wealth providing its citizens a sustainable future. Bringing forward connected and personalized products and services, taking advantage of developments in nanotechnologies, advanced materials, biotechnology, additive manufacturing, production technologies and datascience & ICT are the basis to distinctive European business models. These technologies are commonly known as Industrial Technologies.

- European industry can compete globally by valorisation of R&D, smart industrialisation and excellent execution in one ecosystem;
- Distinctive innovation and digitisation allow developing new business models, new markets and productive ways of collaboration with suppliers and customers;
- Competitive industrial technologies must provide solutions to the societal challenges of our time, to create employment, prosperity, to contribute to economic growth and realizing a better connected, more secure and liveable world.

Our ability to create jobs, foster our welfare and tackle societal challenges depends on an ambitious strategic industrial agenda that fits for the future and embraces open innovation, open science and being open to the world. That agenda has to support the transformation towards a new industrial landscape characterized by:

- Networked and connected industries instead of industries focussing on economies of scale;
- An industry that engages in sustainability and a circular economy and is supported by performance based framework conditions;
- The ability to innovate products, services and manufacturing processes and the capacity to enable and facilitate new business models;
- The application and exploitation of advanced industrial technologies including the development and use of smart equipment;
- The integration of ICT in processes and products, including the access and handling of data:
- Engaged private and public stakeholders committing real resources.

It is urgent now as other regions are accelerating too and aiming to become the leading industrial nations. Bold political decisions and decisive actions are needed to embrace the 4th Industrial Revolution and seize the opportunities it offers. European governments have to join forces and need to act fast together to facilitate and accelerate the required transformation. The capabilities are there, we have to demonstrate more eagerness creating new business out of R&D, to have a deeper and more pro-actively involved academic and research community and demonstrate a higher awareness that for future earning power manufacturing and excellent, globally competitive execution are of the utmost importance.

II. A STRONG AND EFFICIENT SYSTEM FOR OPEN INNOVATION

ISSUE 1:

Our society is increasingly depending on technologies together with algorithms and real time data handling. Smartphones, health equipment, domotic services and autonomous cars are just a few examples. These are broadly accepted by the general public, however other new generations of technologies and applications such as connected products, robotics, and nanoenhanced products are approached with some reserve by the general public. Public acceptance of new and advanced industrial technologies is essential to improve impact of technology and innovation on societal changes.

Action 1:

- Give Industrial Technologies high priority in European and Member States Innovation Policies and programmes and improve awareness and acceptance of the impact of technologies and innovations by dedicated direct and indirect communication efforts to policy makers, research and innovation actors and the general public.
- Industry has to showcase compelling storylines that portray well the 4th Industrial Revolution impact, especially the positive effects of industrial technologies for the benefit of society. These have to be shared with politicians who are responsible for industry or technology and who should subsequently relay these stories to support a strategic agenda for future and sustainable prosperity.
- The European Commission with the help of Member States should start an EU wide dialogue on the 4th Industrial Revolution discussing both the positive and negative aspects.

Actionees 1:

Industry, European Commission, Member States

ISSUE 2:

European Member States show different levels of maturity of their Research, Development & Innovation systems and the ability to stimulate the creation of new businesses. The European Innovation Scoreboard shows an innovation divide across Europe.

Companies, such as University spinoff companies, with excellent product ideas for example remain small because they keep producing on lab scale resulting in high price levels. Current initiatives in the area of Smart Specialisation and combination of funds from different sources offer opportunities but are adopted too slowly.

Action 2:

- To ensure a European wide adoption of the 4th industrial revolution and enable EU industry, SME's and young start-ups to seize the opportunities it is essential to increase EU coherence in R&D&I and raise the level of R&D&I knowledge transfer across Europe.
- National governments should exchange best practises of open R&D&I ecosystems where research providers and industry closely collaborate to create new business opportunities.
- Collaboration between Member States across the innovation divide should be stimulated and innovation programming should be aligned further across Europe.
- The universities should become centres of excellent research and cutting edge innovations. Support to developing smart technology platforms supporting SMEs growth and establishing flexible pilot plants would also accelerate growth of university spinoffs that can be instrumental in disseminating innovative business models and creating ecosystem for SMEs.Incentives are needed to support mobility of researchers towards all European countries and talents should be offered up-to-date facilities in Member States, using the possibilities created in the structural funds
- Industry (ETPs and PPPs) should actively involve stakeholders from all Member States in their programming and roadmapping.

Actionees 2:

European Commission, Member States and regional governments in cooperation with research and innovation actors from countries with all levels of innovation performance.

III. A CONDUCIVE BUSINESS ENVIRONMENT FOR INNOVATION

ISSUE 3:

Innovation is the key differentiating factor in Europe in achieving global socio-economic success. It is therefore crucial for Europe to enable industry to innovate and gradually transform from the existing asset base to allow it to act as enabler of sustainable development. Societal demand is also a driver to progress towards a sustainable competitive Europe. The opportunities are there, but European stakeholders are slow in jointly defining goals and timeliness. Currently the EU lacks an innovation strategy that is followed by all stakeholders, both private and public.

Action 3:

- Industry should identify more actively together with the other eco system stakeholders new developments and trends and highlight the bottlenecks in value chains, identify where value is and will be created and together with public authorities make sure the added value is made in Europe. In addition a direct linkage at all levels between societal challenges and industrial technologies should be realised, aiming to develop globally relevant propositions. Therefore industry, research providers, customers and public programme owners should jointly define ambitions and goals as well as instruments for the value chain elements.
- One option to accelerate is governments acting as launching customers addressing societal challenges through their public procurement policies, e.g. fostering the development and implementation of Smart City concept.
- Futhermore national governments and the EU should work together to develop the instrument of Important Projects of Common European Interest (IPCEIs) and identify potential areas. And they should prioritise the development of further public priviate partnerships to ensure that innovative new products and processes reach the European market.
- Industry from its side should commit to coinvest in pre-commercial and closer to the market projects.

Actionee 3:

European institutions, Member States and Industry

ISSUE 4:

Bringing industrial technologies and innovations timely to the market requires an effective European research and innovation environment including access to finance. Investors' confidence is crucial, and so are coherence between policy areas and the definition of clearer targets.

Action 4:

- Europe needs to stimulate investors' confidence in the EU as a manufacturing site and requires urgent action on the cost of energy and feedstock and on smart regulation.
- Europe has to develop strategies how to address the development of attractive business environments. These strategies have to be based on a debate on how the attractiveness of Europe to invest in can be improved and how Europe as a region interacts with a globally active industry.
- The coherence and complementarity of existing instruments and policy areas has to be improved as well as the flexibility of the instruments, e.g. the possibility to support the development of local ecosystems.
- Regarding innovation financing it is important to link financing communities in such a way that private investors are confident to finance inventors across the valley-of-death. Funding instruments at national, EU and regional level, for innovative technologies should be harmonised and simplified in order to improve and accellerate access. Synergies in the various funding/investment instruments should be improved. Financers, both public and private, should address the required continuum of financing needed.

Actionee 4:

EU institutions, Member States and public programme owners at local, regional, national and European level, financers (both public and private).

IV. FOSTERING TALENT AND SKILLS FOR INNOVATION

ISSUE 5:

¹ Science, Technology,

Engineering and

Mathematics

The 4th industrial revolution will require a new type of skills, knowledge and cooperation. Those competitive industrial skills and capabilities must be built up by the upcoming and existing workforce. We have to ensure that all Europeans own basic digital skills and that Europe continues to be attractive to talent. This means excellent multidisciplinary knowledge-based and technical skills in STEM¹, but also new business and innovation skills and soft skills, such as creativity, entrepreneurial and social skills. Mobility is good for high skilled staff as a way of acquiring new skills. Similarly companies need to consider Europe as a good place to do business and provide attractive jobs to the talented people.

Advanced industrial technologies offer many opportunities for start-ups, scale-up of SMEs, development of mid-caps and large companies. In addition, the new ways of collaboration in a connected economy will stimulate local and cross-regional clusters and see the rise of high-tech enterprises. Also the Societal Challenges will offer new opportunities. Empowerment and ownership by the entire society, including women entrepreneurs and customers is required to create a new and open innovation culture. Seizing the opportunities requires new entrepreneurial and multidisciplinary skills.

Action 5:

- "Learning by doing" starting from primary schools, and delivering business, technology transfer, management training to staff in 3rd level institutions on an ongoing basis should be introduced.
- Europe has to make sure talent is kept/returns to Europe by having adequate incentives and incoming programmes, increasing the awareness of the opportunities of innovation and facilitating integration into the workforce, therefore development of life-long multidisciplinary learning mechanisms for skilled workers, professonials and teachers by the use of (a network of) 'Learning Factories' and 'Pilot Lines' and making those facilities available for top talent and SMEs as well is necessary. The European Commission and Member States should jointly facilitate the coordinated creation of a crossborder network of Learning Factories/Pilot lines.
- Promote "business innovation missions" of students in advanced manufacturing educational

- programmes to EU and International business schools
- Promote the favouring of STEM among teaching staff
- Stimulate industry-academia exchange schemes for students and young professionals (currently existing programmes like COST, ERASMUS+ or EIT-KICs).
- Facilitate women's entrepreneurship and motivate women participation in STEM specific programmes.
- Skills progression/careerpath for workers (including digitals skills) by industry and encourage employers to invest in upskilling their personnel should be established.
- Develop within the EU research and Innovation programmes the schemes for developing skills needed for delivering innovations to the market.
- Modular and flexible training should be created, notably online, for workers and professionals to enable them to update their skills and knowledge.
- Schools and universities should provide entrepreneurial skills to students.
- Support open and inclusive networks among established large companies or SMEs, start-ups, universities, research centres, public sector agencies, citizens and consumers.
- Implementation of dual education schemes across Europe and a close colaboration of industry with the educational system will help mitigate short term impact and help prepare EU's work force for the future.
- Education programmes should be integrated with soft skills such as Complex Problem Solving (CPS), creativity, critical thinking, communication, entrepreneurial and social skills. Link the development of skills with policy instuments for research and innovation and create networks of learning hubs across Europe.
- EU research and Innovation programmes and EU cohesion and regional policy instruments should stimultate local and cross-regional clusters, including the involvement of more female candidates.
- The Commission should look into the best practices of the existing programmes.

Actionees 5:

European Commission, Member States, Schools, Universities, higher education institutes, regional and national funding agencies

V. EFFECTIVE INNOVATION POLICIES

ISSUE 6:

New technologies and innovations may lead to regulatory issues as these technologies and innovation may involve risks. This may lead to delays and a lowered attractiveness of Europe for innovations.

Action 6:

- Regulation should be future proof, innovation proof and technological neutral. Therefore a more prominent place for the Innovation Principle in policies and regulation will be crucial. The Innovation Principle entails, when considering, developing or updating EU policy or regulatory measures, taking into account the impact on research and innovation.
- In addition a performance based approach towards regulations and standards has to be implemented to facilitate innovative companies and spinoffs to develop emerging markets in and outside the EU.
- Industry should provide examples of regulatory issues regarding innovation and should make suggestions for improvement at the right level (for example at European or national level).

Actionee 6:

 European Commission, Member States, Industry

ISSUE 7:

There is a need for clearer and more concrete targets in policies and to integrate innovation into them (e.g. Smart Cities, transport, health). The adoption of the 4th Industrial Revolution requires an industrialisation policy and strong joint publicprivate effort based on tangible societal and industrial ambitions taking into account the local industrial environment and traditions. Support for innovation must be integrated into policy making. Policy should be based on sound science and should be coherent and harmonised. A closer interaction is required where policies stimulate and direct the development of roadmaps and vice versa roadmaps help to facilitate and contribute to the realisation of policies. Continuity and predictability have to be improved in order to enable and attract investments with long pay back times.

Action 7:

In Europe we need a policy response to the 4th Industrial Revolution. This policy response needs to include clear and feasible targets agreed by all stakeholders, such as new business creation, a 20% ambition for GNP generated by industryand a value creation ambition for innovative products. For example in 2030, 30% of the turnover is related to innovative products that were not around 5 years before. This would also require the set-up of a tracking system around technology exploitation / innovations.

Actionee 7:

Stakeholders, Member States and Commission

ISSUE 8:

The connection of EU and regional innovation related policies is still weak especially in common priority setting and there are opportunities to build on the Smart Specialisation Strategies (S3). More generally speaking, there is a need for a more coherent policy framework across Europe to tackle fragmentation. Currently the approach needs more coordination, is often sequential and leads to a loss of momentum delaying market introduction of products and negatively impacting Europe's competitiveness.

Action 8:

- Start with a mapping of instruments and policies, e.g. cases how innovation needs and policies fit together. Implement at policy level criteria how new policies are aligned with existing policies, to clarify where a new policy fits
- Start a process for tuning of instruments of the different public stakeholders, such as regions, nations and Commission to ensure innovation friendly regulations.
- Look into new mechanisms such as "Innovation deals" to accelerate innovations.

Actionee 8:

Stakeholders, Member States, Commission

ISSUE 9:

There is currently a lack of incentives to overcome barriers to innovation. (Policy) incentives are needed to scale up. Such incentives should be created at the European Level as well as at the Member State level.

Action 9:

- Promote and implement alignment at high level platforms, where participants have a representative role and have backgrounds in all sectors relevant for the 4th industrial revolution. Platforms should address the full scope of industrial technologies and formulate joint mission and ambitions, as well as KPIs and other monitoring mechanisms.
- Rapid harmonized standards are needed, which do not jeopardise security needs.
- In areas such as Smart cities and transport coherence between technology development and public needs could be improved by creating a position comparable to a Chief Technology Officer (CTO) at urban or regional level: someone that is responsible for innovation at local level
- All stakeholders to agree on supportive regulations and establish structured dialogue to speed up market pull/technology push.

Actionee 9:

Commission, Member States and industry.

ISSUE 10:

EU and Member States innovation programs are tending to have difficulty to cope with the most recent developments and new global requirements. Examples are the fast digitisation of industry and the impact of ICT on services.

Action 10:

- The EC and the MS should improve the alignment between innovation programmes on EU, national and regional level (such as Horizon2020, structural funds and national programmes).
- Systematic cooperation within the H2020 pillars is needed. Member States should consider to create added impact and speed within Horizon2020 by combining market-pull from Societal Challenges with Technology-push from Industrial Leadership.

Use midterm H2020 review by the Commission as opportunity to amend the impact approach in H2020. Impact evaluation should go beyond individual impact of public funded projects and the introduction is needed of a complementary approach on impact criteria for Horizon2020 projects during and beyond project duration (e.g. "opportunity/business plans" in innovation areas; coherent systematic measuring of impact and improve "carrying forward" beyond individual project duration).

Actionees 10:

The Council of the EU and European Commission , input to be provided by Member States

VI. ACKNOWLEDGEMENTS

The following stakeholders have been involved in the discussions and contributed to the realisation of this declaration

AMIRES

APRE – Agenzia per la Promozione della Ricerca Europea

CECIMO

CEFIC

Centre for Social and Psychological Sciences, Slovak Academy of Sciences

Centre of Scientific and Technical Information Slovak Republic

Centric

CNR - National Research Council of Italy

COST - European Cooperation for Science and Technology

Covestro

Czech Invest

DSM

ECTP - European Construction, Built Environment and Energy Efficient Buildings Association

EFFRA

Enterprise Agency of The Netherlands

Enterprise Ireland

The European Technology Platform for the Future of Textiles and Clothing

EuropaBio

European Business and Innovation Centre of Málaga

French Ministry of High Education and Research

FORTH/ ICE-HT and University of Patras

GKL Consulting

ISQ Portugal

MBN Nanomaterialia S.p.A.

Ministry of Economy of the Slovak Republic

Netherlands Ministry of Economic Affairs

Orgalime

Permanent Representation of the Slovak Republic to the EU

Philips

Slovak Academy of Sciences

Spanish Ministry of Economy and Competitiveness

SPIRE

Technical University of Delft

TNO Netherlands

University of Twente





