Horizon 2020 dedicated Expert Advisory Group on Innovation in SMEs

Consultation on the EU Strategic Work Programme 2016-17

Final Report to the European Commission

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Contents

Executive Summary

Small and medium enterprises (SMEs) are vital to the European economy and a key focus for innovation support. In the past decade, the European Union's support for innovation in SMEs has risen. Budgets are up, programmes are growing, and the variety of initiatives is expanding – now embracing equity, debt, procurement, networking, training and many other forms of support beyond conventional grants. Despite the heightened interest, SME involvement in EU innovation programmes to date has had limited impact compared to what was intended. In part to address the financing obstacles to SME growth and innovation, and reach the 20% target for SME participation, the EU has pledged some €9.5 billion in Horizon 2020 and related support measures for small business grants, debt and equity financing.

SMEs are highly diverse in terms of size, capabilities and the way they do business. In this Consultation Paper on the next EU Strategic Work Programme 2016-2017, the Expert Advisory Group (EAG) on Innovation in SMEs focuses on **innovation-driven SMEs in all sectors**. This includes not just 'hi-tech' sectors involved in developing new products and processes, but also service and other sectors involved in organisational and market innovation (e.g. new business models).

The Innovation Environment is Changing and SMEs Must Adapt

SMEs' ability to respond to global challenges and shorter-term market trends is influenced by factors affecting the wider innovation environment. These include:

- **Internationalisation of innovation**, with large companies organising their innovation activities on a global basis and fierce competition for the best talent and resources. New technologies and business models mean that even micro businesses are able to operate effectively in international markets without the scale and infrastructure needed in the past.
- **Increasingly competitive business environment**, driven by technological advances, shorter innovation cycles and globalisation. EU initiatives have to reflect these conditions and offer greater flexibility for SMEs.
- **Open innovation** offers major opportunities for SMEs, but they face particular issues and challenges in adapting to the new models**.**
- The emergence of **new patterns of competition and collaboration** based on more open and customer-centric approaches.

Innovation-driven SMEs engage in innovation-related projects of different types and for many different reasons. We distinguish, in particular, between:

1) **Strengthening the knowledge and technology base** in Europe including the individual knowledge base of an SME. Here traditional technology- and knowledge-based "call" themes apply.
2) **Commercializing academic R&D-results**, where existing SMEs may be a valuable commercialization channel. Opportunities to improve the innovation environment here are addressed in our recommendations below.
3) **Business renewal in SMEs** taking risky business ideas based on novel business models, technology-based inventions, service models, organizational innovations, etc. This is an area addressed by the new SME Instrument; again relevant recommendations are made.

Key Messages and Recommendations

1) **Ensure the strategic evolution of the SME Instrument**: The launch of the SME Instrument is a highly significant development in the way Europe supports and nurtures its innovation-driven SMEs. At present, however, certain aspects regarding the scope and future ambition remain unclear. With around €3 billion set to be channelled through this mechanism over the next seven years, it is imperative that the Commission puts in place a coherent plan for its future development.

   Phase 2 funding under the SME Instrument raises important, as yet unresolved, issues for both SME applicants (who may face major liquidity constraints), and investors (who have to bear the high transaction costs associated with relatively small deals), which demand urgent attention. In addition, we highlight the key role of communications in attracting the right kind of applicants and evaluators, and safeguarding the programme's reputation for excellence.

   In summary, our recommendations here are (see main text for full wording):

   a. Better communicate **the risk reduction potential of the SME Instrument** as a key benefit to prospective applicants and their financial backers. (Rec 4.1)
   b. Incentivise **private funding sources to provide financing facilities** to overcome the liquidity gap constraints likely to be experienced by applicants receiving Phase 2 funding. (Rec 4.2)
   c. Introduce measures to **make co-financing projects less costly for investors**. Potential measures include: setting up a pool of independent due diligence experts; deploying Phase 1 coaches to support the due diligence process; and/or new support actions to screen investor-ready applications. (Rec 4.3)
   d. Implement a **rigorous programme of high-value business coaching and mentoring**, backed up by a quality assured European Coaching Hub. (Rec 4.4)
   e. Ensure **continuous learning and adaptation in the evaluation process**. A variety of measures are proposed including: revised procedures; a communications campaign; and a special expert panel to oversee the process. (Rec 4.5)
   f. **Develop and implement a communications strategy and professionalized communications campaign** for the SME Instrument that enhances the programme's reputation for quality. (Rec 4.6)
   g. Engage and **collaborate with national innovation agencies or equivalent** so as to improve the quality of applications. (Rec 4.7)
   h. Develop the **performance monitoring** necessary to assess the implementation and impact of this flagship SME initiative. (Rec 4.8)

2) **Address the full innovation chain so as to secure better exploitation of innovative solutions**: Innovation is a systemic process requiring much more than one-off support. Many of the initiatives and approaches designed to address this systemic aspect of innovation over recent years have still to feed through to the mainstream. Despite protracted efforts, public

procurement has yet to become an effective channel in bringing innovative solutions to market. Innovation networks, clusters and other linkages are 'orthodoxy' in policy circles, but have yet to gain traction 'on the ground'. IP management has an increasing role in SMEs, in view of the increasing importance of intangibles and the value of knowledge assets. At the same time, there is greater recognition of the importance of 'soft' issues, such as design, creativity, and service innovation, in addressing innovation as an end-to-end process. Altogether, there is ample scope under Horizon 2020 (and other EU programmes) to further deepen and widen the range of support available to innovation-driven SMEs and so secure better exploitation of results.

In brief, our recommendations here focus on:

a. Measures to stimulate and promote **innovative public procurement**, including promoting innovative procurement by Member State agencies. (Rec 5.1)
b. Experimenting with **European Sandboxes** – novel value chain-based approaches that provide innovation-driven SMEs with opportunities to experiment with new solutions at European scale in a controlled manner. (Rec 5.2)
c. Supporting **novel approaches to innovation ecosystems for innovation-driven SMEs**, such as networks, clusters and virtual organisations, and promoting exchange of best practices, including through other EU programmes.. (Rec 5.3)
d. Focused support for **business incubation and acceleration programmes**, including for commercializing innovation in the international context. (Rec 5.4)
e. Experimenting with **new IP management practices** tailored to the specific needs and circumstances of innovation-driven SMEs and startups. (Rec 5.5)
f. Ensuring appropriate attention to **'soft' innovation issues**, such as design, creativity and service innovation, as part of Innovation in SMEs activities. (Rec 5.6)
g. Developing **new indicators and metrics on innovation performance in SMEs** so as to measure impact and value creation in the new innovation contexts. This should be backed-up by efforts to consolidate the existing information base on the innovative SME community sector by sector and how it does, or could, interact with EU programmes. (Rec 5.7)

3) **Ensure greater flexibility in SME support under H2020**: In the collaborative programmes, experience under FP7 shows that certain areas (and countries) are much better in eliciting SME interest than others. Despite the efforts made over recent years, certain areas of H2020 are still 'off limits' as far as innovation-driven SMEs are concerned – or at least their participation is not actively encouraged. Moreover, theme- or technology-based approaches have limitations in programmes – such as the SME Instrument – focused on innovating around market needs rather than exploiting technology pools derived from research.

To address these shortcomings, our recommendations focus on:

a. In collaboration programmes, **prioritise areas with clear SME interest and potential**, such as nano, healthcare and ICT; and **target marketing and communications efforts** to draw them into collaborative Horizon 2020 projects. (Rec 6.1)
b. Pursuing **a more bottom-up approach to calls under the SME Instrument** and apply a combination of business-oriented and technology-based theme topics to structure the SME Instrument evaluation process. (Rec 6.2)
c. **Opening new territories to participation by innovation-driven SMEs** in areas of Horizon 2020 where they are currently under-represented (such as the Joint Technology Initiatives and the Marie Skłowdowska Curie initiative). (Rec 6.3)
d. Working more closely with the Member States to **coordinate and orchestrate policy learning and exchange on innovation in SMEs**, building on existing platforms. (Rec 6.5)

4) **Tailor communications and procedures to the needs of SMEs**. Despite the efforts made to simplify access and procedures, SMEs continue to find participation in EU funded projects complicated and bureaucratic. At the application stage, information is confusing and insufficiently targeted; and when it does receive a grant, the EU payment principles are not tailored to meet the SME's needs. Business is about managing risk and we have to speak to firms in a language they understand.

   The communication and 'marketing' of H2020 innovation support measures targeting the SME sector should be tailored to the needs and special business environment of SMEs. As a general message, such actions should include better communicating the risk reduction potential of EU grants to prospective applicants and their financial backers. In addition, we highlight specifically:

   a. Consolidating into one administrative unit – for instance EASME – the **leadership for practical programme communications for all Horizon 2020 opportunities for SMEs** and allocating the budget necessary to implement this 'one-stop-shop' approach effectively. (Rec 6.4)

1. Introduction

Small and medium enterprises (SMEs) are vital to the European economy and a key focus for innovation support. In the past decade, the European Union's support for innovation in SMEs has risen. Budgets are up, programmes are growing, and the variety of initiatives is expanding – now embracing equity, debt, procurement, networking, training and many other forms of support beyond conventional grants. Despite the heightened interest, however, to date SME involvement in EU innovation programmes has had limited impact compared to what was intended. Alongside this, there is a general concern that Europe lacks the world-class entrepreneurs and high-growth SMEs needed to compete in global markets.

The Horizon 2020 Programme for Research & Innovation places a high priority on the needs of SMEs: 20% of the budget under Pillar 2 (Industrial Leadership) and Pillar 3 (Societal Challenges) is allocated for SME-focused measures, together with a new dedicated SME instrument designed to help SMEs bring new ideas to market. In addition to Horizon 2020, a broad range of support measures is available under other EU funding programmes. The key measures are summarised in Table 1.

The Baseline: Recent Experience in SME Support

Experience under FP7 shows there is a huge mountain to climb in terms of increasing SMEs' participation in EU research and innovation programmes. As of June 2013, the typical SME participation in a Cooperation programme – the counterpart to H2020's themes – looked something like this[1]:

- Out of 11 partners in the typical Cooperation project, two were SMEs.
- SMEs received 16.9% of the Cooperation budget overall, but the rate varied by theme. Measured by euros received, ICT companies had the highest budget (€943 million), followed by healthcare and nanomaterials/production technologies. Measured by SME concentration per theme, SMEs received the biggest share of the available funding in nanomaterials (23.1%), security and energy.
- SMEs coordinated 11% of the projects. In many cases these companies were added to the project after the lead partners – often an RTO – had already formulated the objectives.
- For most SMEs, the results were somewhat vague – with "increased competitiveness" rather than higher sales or profit cited as the economic impact.

So the picture that emerges from FP7 is of SMEs as passengers in somebody else's car, happy for the ride but not having a lot of fun along the way. This situation must be improved.

SMEs are, of course, not a homogeneous breed. On the contrary: they are highly diverse and variegated in terms of size, capabilities and the way they do business, and indeed this diversity constitutes one of their key strengths for the European economy. Our focus in this report is on **innovation-driven and growth-oriented SMEs in all sectors:** this includes not just those in 'hi-tech'

[1] "SME Participation in FP7." European Commission Report June 2013. http://ec.europa.eu/research/sme-techweb/pdf/sme_participaton_in_fp7_june_2013.pdf#view=fit&pagemode=none

sectors involved in developing new products and processes but also those in service and other sectors involved in organisational and market innovation (e.g. new business models). 'Traditional SMEs' (i.e. low- to medium-growth) are also catered for under Horizon 2020 to some extent.

Table 1: EU Support Programmes for Innovative SMEs

EU Funding Programme	What is on Offer	EU Budget
H2020 - Collaborative Projects	Support for collaborative research and innovation efforts across Europe through transnational consortia consisting of minimum of three different partners from EU or associated states. Will account for 20% of total budget under 'Societal Challenges' (Pillar 3) and the specific objective 'Leadership in Enabling & Industrial Technologies' (LEIT) (in Pillar 2)	Around €6.0bn until 2020.
H2020 – SME Instrument	A novel approach to support SMEs' innovation activities through a dedicated SME instrument. Aims to address the financing needs of internationally oriented SMEs, in implementing high-risk and high-potential innovation ideas. The SME Instrument consists of three separate phases and a coaching and mentoring service for beneficiaries. There are rolling calls with assessments every 3 months.	7% of the combined budgets (Around €3bn until 2020). Topics and budgets are allocated within each of the specific challenges.
H2020 – Eurostars	Support to transnational collaborative research projects, with partners from at least 2 Eureka Member States, and a duration of maximum 3 years. There are no thematic restrictions (calls are 'bottom-up').	EU will contribute a maximum of €287m, to a total budget of €574-1148m. Participating consortia contribute at least 50% of overall project cost.
H2020 – Access to Risk Finance	The Risk Sharing Instrument (RSI), part of the Access to Risk Finance specific objective, provides a guarantee facility to innovative SMEs and mid-caps via intermediary banks and institutions. Guarantees are generally between €25k-€7.5m	At least €900m (~1/3 of the ARF budget) is reserved for RDI-driven SMEs and small midcaps (up to 499 employees)
	EU equity is available via risk capital funds that have signed an agreement with the European Investment Fund (EIF). It consists of venture capital and quasi-equity investment that have been earmarked to support innovative SMEs & small midcaps.	
European Regional Development Fund	ERDF funding can be used in complement with funds from Horizon 2020 and COSME to promote socio-economic development and cohesion, close the innovation divide and broaden participation in EU programmes.	Set under the Operational Programmes of the Member States
European Social Fund	The ESF supports policies and priorities related to employment, education and training, and social inclusion. This may include human resources development activities that enhance SME competitiveness.	Set under the Operational Programmes of the Member States
H2020 - Marie Skłodowska Curie Actions	Via the RISE scheme, part of the Marie Skłodowska Curie Actions, SMEs may benefit from international and inter-sector collaboration through researchand innovation staff exchanges.	
COSME – Access to Finance	Finance facilities under the Competitiveness of Enterprises and Small & Medium Enterprises programme	€1.4bn until 2020
ESIF-COSME-H2020 – SME Finance Initiative	In certain Member States, a new initiative will channel ESIF funding to the SMEs & Small Midcaps R&I Loan Service	€180m earmarked from H2020, plus €180 from COSME
Enterprise Europe Network	With 600 member organisations, the Enterprise Europe Network helps small business to make the most of the European marketplace, including innovation support and access to finance and EU funding	€336m earmarked from COSME

All budget figures in current prices

For innovation-driven, growth-oriented SMEs[2], high expectations are being placed on the SME Instrument as a new approach in prioritising innovation. The scheme aims to offer seamless business innovation support from idea to market, covering the three stages of the innovation cycle. Participants can either apply to Phase 1 (Feasibility studies, max. €50k for 6 months) with a view to applying to Phase 2 (Innovation Projects) at a later date, or apply directly to Phase 2. In addition, a coaching and mentoring scheme is being put in place exclusively for beneficiaries of the instrument in order to accelerate the impact from the funding provided. Around €2.8 billion of funding is available under this Instrument between 2014 and 2020, implemented centrally through the new Executive Agency for SMEs (EASME). In essence, the SME Instrument is an intelligent new EU co-funding scheme of business excellence and a feeding channel for growth via risk financing.

Our Consultation Paper

The Expert Advisory Group ('EAG') on Innovation in SMEs is one of a series of advisory groups set-up by the European Commission to advise on priorities for Horizon 2020. The EAG comprises 19 independent experts drawn from the public and private sectors and civil society (see list of EAG members in Annex 1).

As part of its remit, the Commission invited the Group to comment on the preparations for the next Strategic Programme covering the period 2016-17. This consultation was based on eight priority questions set by the Commission (see Box 1). Members of the EAG discussed these questions at their meeting in Brussels on 19 June 2014, as well as in several bilateral meetings and discussions.

In the report that follows we offer observations and recommendations aimed at addressing programme relevance to stimulate the growth of an innovative, vibrant and competitive small business sector. Sections 2 & 3 set the scene, briefly reviewing the challenges and trends for innovation-driven SMEs and the gaps and bottlenecks they face in managing innovation. Drawing on this analysis, Section 4 discusses the SME Instrument – the EU's new flagship initiative for innovation in SMEs. Section 5 considers the wider policy landscape and Section 6 addresses innovation priorities and how best to achieve synergies in SME support. Our observations are supported by concrete and actionable recommendations which we believe can be implemented within the next Strategic Programme and/or other policies within the 2016-17 timeframe.

While the content is backed by citations and references where possible, the main thrust comes from the EAG's own knowledge and experience as practitioners working in and with SMEs on a day-to-day basis.

[2] Referred to in the remainder of the report as 'innovation-driven SMEs'.

Box 1: Questions Framing the Consultation on the Next EU Strategic Work Programme

Our emphasis in bold

Question 1: What is the **biggest challenge** for innovation driven SMEs which requires **immediate action** under the next Work Programme (2016-2017)?

Question 2: What are the **key trends** shaping the environment for innovation driven SMEs?

Question 3: Looking to this business environment, which are the **bottlenecks** preventing SMEs to anticipate on or to play into these trends? What are the **inherent risks and uncertainties** for SMEs with the ambition to set new trends?

Question 4: Which **gaps** (access to finance, skills, trade networks, market regulation, policy) and **potential game changers**, including the role of the public sector in accelerating changes, need to be taken into account for innovation in SMEs to happen? What would be the **added value of EU level intervention**?

Question 5: What types of **policy actions** are likely to best suit the needs of innovation driven SMEs over the next few years? What would **success look like** for the H2020 policy field 'Innovation in SMEs' in 2020? What could be **the impact**, both in terms of growth and competitiveness and in terms of transnational cooperation and value creation?

Question 6: In which **sectors** is the strongest potential to leverage the EU knowledge base for innovation and, in particular, ensure the participation of industry and SMEs?

Question 7: What is the **best balance** between bottom-up activities and support to key industrial roadmaps?

Question 8: Where do you see the most **potential for SMEs to innovate** through cross-fertilisation when looking at the H2020 Work Programme structure, in particular at innovation activities that can be conducted under 'Societal Challenges', 'Leading and Enabling Technologies' (LEITs) and/or in relation with 'Cross-cutting issues' (Social sciences and humanities, responsible R&I including gender aspects and climate and sustainable development)?

2. Challenges and Trends for Innovation-Driven SMEs

The innovation environment for SMEs is shaped by both long-term global challenges and shorter-term market trends affecting how business is done. The global challenges are well known and well documented, and are not commented in detail here. They include:

- **The current wave of digitalisation will continue**. Just about everything we interact with will become a smart entity, embodied with intelligence and the ability to communicate with people and with other machines (the so-called 'Web of Things'). Other developments such as augmented reality (combining real world and digital information), Big Data, and service robotics will expose consumers to a whole variety of new digital services in their daily lives. The market opportunities for SMEs are huge. For instance, General Electric forecasts that embedding Internet technologies into machines could add $10-$15 trillion in economic growth worldwide over the next 20 years.[3]

- **The quest for resource efficiency will become an increasingly important driver**, as we seek to balance the finite availability of natural resources against escalating human demand. Solutions that aim at the gradual uncoupling of economic growth from resource consumption are essential for the sustainability of entire economies.

- **Climate change will drive innovation across the economy and society**. With climate change becoming more and more a reality for Europe and the world, innovative solutions and approaches will be required to mitigate and adapt to its effects. This creates opportunities far beyond the obvious sectors, such as energy, transport and smart cities, and will affect every citizen and business.

- **Growing global demand for healthcare / elder care**. Despite the economic crisis, healthcare budgets around the world continue to increase, driven by escalating demand, new clinical practices, and advances in medical and bio-technologies. At the same time, the growing number of older citizens is creating a demand for new technologies, services and business models to support independent living and active ageing. Small businesses will play an important role in the future of healthcare and elder care, both as service providers and technology enablers.

- **Ensuring products and services are inclusive and efficient**. Inclusive innovation is related to growth that is inclusive and impactful. It addresses real needs in new markets (such as active ageing and climate change) while favouring employment and social inclusion at the same time. Technological and economic growth must be inclusive and accessible to those who need it. This concept is strongly recognised in the H2020 subtheme on Inclusive, Innovative and Reflective Societies but so far has not been considered an important factor in the SME support programmes. One important aspect of inclusiveness, of course, is gender balance. While this is not explicitly an objective of the Horizon 2020 programmes, it is now such an accepted part of overall EU policy that the Commission should be building gender awareness into its SME programmes, especially in monitoring of results.

[3] Evans, Peter C., and Marco Annunziata. "Industrial Internet: Pushing the Boundaries of Minds and Machines." November 2012. http://files.gereports.com/wp-content/uploads/2012/11/ge-industrial-internet-vision-paper.pdf

All of these global challenges present major new business opportunities for SMEs, building on their flexibility, creativity and customer interaction.

The scale of the opportunity is not in doubt: SMEs' ability to respond to these challenges, however, is influenced by factors much closer to home. A number of trends are apparent in the way innovation is organised, thus shaping the wider innovation environment.

Innovation is Internationalizing

Innovation has long been an international phenomenon and now is becoming a global one. Multi-national corporations (MNCs) – traditionally the most important players in the R&D scene – are relocating their research activities to countries and regions that provide access to the best talent and resources. Emerging economies, such as India and China, are moving up the value chain and becoming major innovation players in their own right. Market structures in these new innovation power houses require new ways of innovation in order to provide affordable solutions to the mass of new customers (e.g. solutions that are 10-100 times cheaper, still with high quality)[4]. Meanwhile, new technologies and business models mean that even micro businesses are able to operate effectively in international markets without the scale and infrastructure needed in the past.

Business-to-business sectors are becoming more international, while also creating opportunities within Europe. In business-to-business (B2B) sectors, increased international competition means firms have to address global markets and not just local ones to generate added value. On the one hand, the migration of many production and manufacturing activities to lower-cost economies shifts the emphasis towards developing intangible assets and licensing them to international players; this is already a developing practice in various sectors ranging from semiconductor (fabless IP business models), to biotech, to telecommunication and software industries. This is challenging for SMEs as it requires access to international networks further beyond Europe and very specialized skills (e.g. on IP management & licensing execution) while raising specific issues associated with the knowledge economy (e.g. it is easier to transfer intangible assets, including know-how, cross-border than to transfer a full factory). On the other hand, the growth of niche and additive manufacturing is creating opportunities for manufacturing SMEs and suppliers within European markets – and for investors. For instance, three of the top ten technology projects on Kickstarter are 3D printers from Formlabs, Printrbot, and RoBo3D. According to one forecast[5], additive manufacturing – meaning the process of joining materials to make objects from 3D model data, usually layer upon layer (as in 3D printing) – is set to become a high growth area of manufacturing.

Business-to-consumer markets will require development and experimentation to be centred around users under local market conditions. On the business-to-consumer (B2C) side, it is even more important to prove concept in the local market where the innovation will be applied. Addressing the needs of the ageing population, for example, requires a different paradigm in Europe to the huge new markets appearing among the middle classes in emerging countries. Innovation-driven SMEs need the safety and security of being able to experiment within 'sandbox' markets

[4] India, for example, is developing game-changing healthcare services and energy solutions that will be difficult to meet with approaches used in US/EU.

[5] Wohlers & Caffrey, 2013. http://wohlersassociates.com

rather than just following the global trends. Global corporate and finance players are likely to be more reactive and faster to invest in such markets than the public sector.

SMEs Need Flexibility in a Fast-Moving World

The business environment for SMEs is becoming ever more competitive. The ability to manoeuvre in a fast-changing world presents a major challenge for SMEs. Technology is advancing at an ever quicker pace; innovation and product cycles are becoming shorter; manufacturing and fabrication costs are falling (thus lowering barriers to entry); information flows are easier. In short, the friction in the ability to do business is reducing, making the business environment more competitive and increasing risk.

EU initiatives have to reflect these conditions and offer greater flexibility. Even though the time from application to contract has diminished, market and technology changes often necessitate changes in the workplan, including new partners, excluding other partners and getting support from knowledge partners. These changes can also occur during execution of an approved workplan. Although it is possible to amend contract terms (within certain limits), the administrative requirements are a big burden. Payments may be delayed, creating problems for SMEs who often have limited liquidity. This lack of flexibility may encourage 'project hopping' – firms jumping from one project to another simply to collect the grant; or it may deter them from applying at all.

SMEs Have Yet to Exploit the Full Potential of Open Innovation

Open innovation is becoming the dominant innovation paradigm. The 'waterfall' model of innovation, which held that new products trickle down in a linear manner (from research, to development, to prototype, before finally being introduced to the market), predominantly from corporate R&D labs, is no longer valid. The scope of innovation is widening, to encompass not just products and processes but also services, organizational structures and business models. No company, large or small, can possess the knowledge, talent and resources needed to innovate successfully in the new market context. Successful innovation requires that companies open their innovation processes and work together with their customers and partners to co-create novel and useful value.

Open innovation reflects the fact that innovation happens across boundaries. We live and work in a complex and interdisciplinary world. Increasingly, innovation develops at the boundaries of organisations and disciplines, from science to ICT to the social sciences. The circulation of knowledge allows interactions and exchanges with obvious positive effects on the development of innovative solutions.

Open innovation offers major opportunities for SMEs. Open innovation is becoming an important tool in innovation development for SMEs, who must and will rely on external sources for technology and knowledge, and not force themselves to (re)invent R&D results. For research-intensive SMEs, open innovation processes provide new opportunities to license IPR instead of having to develop them into own products and services. For innovation-driven SMEs, open source and co-creation are

the basis for the development and exchange of knowledge. Increasingly, production is becoming a process of co-creation of value and consumers and producers are not so far apart as in the past. Consumers, in particular, tend to attribute value to a product for which they have been involved in the design or development.

SMEs face particular issues and challenges in adapting to open innovation. To date, open innovation has been embraced mainly by larger firms and needs to be better adapted to the specific circumstances of SMEs[6]. Finding the time and resources to assess innovations from elsewhere, and large companies 'stealing' their IPR are key concerns.

New Patterns of Competition and Collaboration are Emerging

The ability to understand customers and markets, and turn those insights into effective business models and attractive value propositions are key to success. Today the market is no longer supply driven. Every customer is exposed to an abundance of products and services coming from all parts of the world. Competition is now global. Areas of previous competitive strength (low-cost distribution, production efficiency, effective marketing, etc.), which relied on efficient usage of internal resources, are no longer sufficient for success. Successful SMEs are able to understand customers and markets, know how to exploit niche markets and specialisation, and turn those insights into effective business models and attractive value propositions.

In this new environment, the ability to import and absorb new technologies is as important to innovation as the ability to commercialize academic research. Too often innovation policy has assumed that SMEs need to undertake research themselves for them to grow and become more competitive. Consequently, increasing SMEs' internal R&D capabilities becomes the policy objective. In many cases, however, it is more important for the innovation-driven SME to develop its capabilities and skills to 'import' new knowledge and technology from elsewhere, and turn those into customer values and new businesses, rather than performing research in-house.

Hence, production of new knowledge and technology need to be balanced with initiatives to stimulate the import and commercial utilization of research results regardless of where in the world they are produced. Such initiatives could address, for example, improvement of absorption capacities of SMEs and availability of innovation services that facilitate the utilization of new knowledge and technology.

[6] A notable exception is ICT, where the open source software model has been pioneered and promoted by small software suppliers and independent developers. The reasons for this appear to be rooted in the intangible nature of software and the difficulties in protecting software innovations.

3. Gaps and Bottlenecks in SME Management of Innovation

The strength of SMEs lies in their agility, imagination and customer interaction. They are principal agents in translating technology to new sectors, industries and markets. Although large EU firms are more research intensive, smaller companies have been shown to be particularly successful in innovation based on interaction with customers, value chain partners and research partners: in other words in innovation based predominantly on market-pull.

SMEs require a relentless focus on value creation to realise their potential. It is well known that the biggest challenge facing SMEs, in innovation or any other area of the business, is generally the lack of time, talent and money. Even innovation-driven SMEs, who have the strategic focus on growth by implementing innovation, often fail in achieving their ambitions because they lack these three vital resources. Removing the funding obstacle alone is not sufficient. Similarly, having an innovation strategy is no guarantee for growth or sustainable business success, in particular if it is not closely linked to a solid implementation and funding strategy, and a focused sales and marketing strategy. Only through a strict and sustained orientation towards value creation based on these new insights will companies be able to turn new knowledge into financial returns.

Innovation-driven SMEs face particular challenges. SMEs' abilities to improve their innovation potential will be determined by the extent to which they are able to overcome the bottlenecks they face. Some bottlenecks, such as lack of financing, regulatory complexity, lack of skills and time are well recognized, whereas others are less obvious. We highlight, in particular, the following bottlenecks as being of significance for innovation-driven SMEs:

- **Limited absorptive capacity:** Absorptive capacity is the capability of a company to profit from external knowledge, e.g. through RTD or business cooperation. This concept of absorptive capacity is important in terms of improving the ways in which knowledge is translated into value in the form of products, processes and service innovation. The 'wealth from knowledge' problem is not simply one which requires more investment on the supply side of knowledge creation; there is also much to be gained from working to enhance the demand side. By increasing their absorptive capacity firms will be able to draw in, assimilate and deploy new knowledge more effectively.

- **Information asymmetry:** SMEs often have fewer resources allocated to 'horizon scanning' activities than their large company counterparts. This especially affects SMEs that have limited resources for innovation. This information asymmetry may lead to some degrees of market failure, as it affects how individuals and companies assess the quality of newly developed goods and services. Acknowledgement of asymmetric information however, also encourages entrepreneurs to search for new business opportunities, leading them to an ever more detailed picture of demand and supply. Therefore, information asymmetry plays a dual role as it both generates market failures and gives birth to entrepreneurial opportunities.

- **High costs of adaptation:** Some innovations that are technologically superior fail to break through because a large number of potential users have already chosen inferior alternatives, thus making the adaptation costs too high. Economists call this 'path dependence' or hysteresis. The classical example is the DVORAK keyboard, which is considered superior to

the standard QWERTY system, but has not broken through because all keyboards in the world would have to be replaced and everybody would have to learn to type again.

Access to risk finance is a vitally important issue underpinning the whole innovation in SMEs agenda. Access to finance remains a key bottleneck, even for many of the most innovative SMEs. The EAG's work here overlaps with that of the Advisory Group on Access to Risk Finance. The EAG has had the opportunity to discuss relevant issues with them and shares their analysis and views on key points. Thus, our comments here are confined to two specific instances: firstly, at a conceptual level (the role of risk finance in bridging the liquidity gap); and secondly a specific practical issue (the importance of risk finance in the success of the SME Instrument).

EU Funding as a Means of Reducing Risk and Addressing the Liquidity Gap

For SMEs, one of the main benefits of EU (and national) grants is as a risk reduction measure rather than the direct funding support/cost reduction offered.

A grant can reduce the total cost of an innovation, but it does not solve the short-term liquidity problem for an SME. Despite pre-payments, grant conditions often put liquidity pressure on SMEs. Substantial costs have to be paid upfront and it can be many months before these are reimbursed. For large companies and public funded research institutions 'cost reduction' is the most important benefit from a grant; liquidity is of limited concern. For an SME, cost reduction is nice but the liquidity challenge remains a stumbling block.

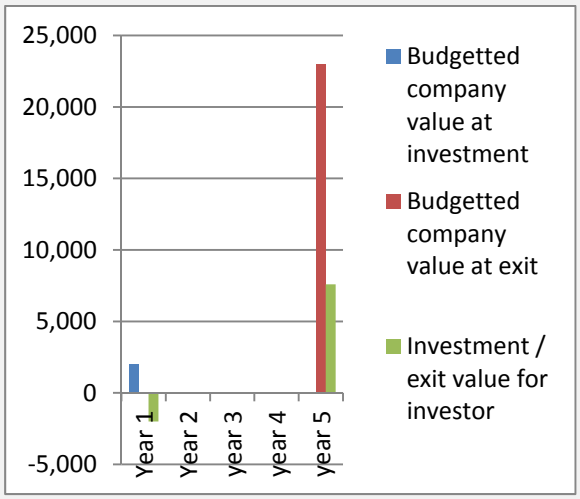
However, potential investors and loan providers for such grant-supported innovation projects will see their risk exposure reduced, partly by the reduction in funding requirement, and partly by the 'blue stamp' from the quality selection process. Overall, their risk-adjusted financial business case is improved. Hence, an EU grant-supported innovation project will have better possibilities to attract funding to cover both (i) that part of the budget not covered by the grant, and (ii) the liquidity gap caused by the payment schedule connected to most EU grants. If appropriate, the introduction of different payment criteria, more closely connected to 'output based financing', could be considered.

The potential impact of public funding on an investment case is illustrated in Box 2. It shows that business cases which were impossible to fund suddenly become attractive investment opportunities. This offers a win-win situation for all involved: investors see their risk reduced and their 'upside' increased; the entrepreneur ends up giving away less equity to attract investors' attention; and the EU taxpayer realises tangible socio-economic benefits from their support for the project. We return to this issue in Section 4 with particular reference to the funding conditions under the H2020 SME Instrument.

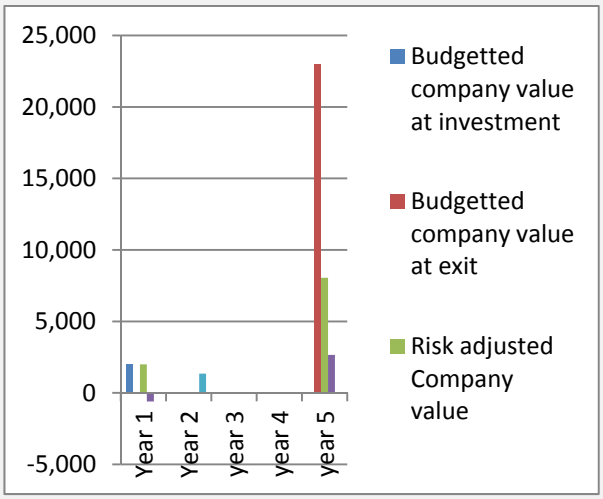
Box 2: Bridging the Liquidity Gap

In our example the capital requirement for the new project is €2.000 K, which is sought from an investor against a 33% stake in the company. The budgeted value of the company in year 5 is €23.000K. If the investor exits in year 5, his IRR will be 40%, which is a nice deal – on paper!

Investment case company value 'as budgeted'



Investment case company value 'risk adjusted'



However, budgets are often more dreams than reality. Hence the investor, based on previous experience makes a 'risk adjusted' calculation of his expected return, using a risk ration of 65%. This changes the expected IRR from 40% to 7%. Now it is no longer a nice deal.

If the company, in contrast, receives a H2020 SME grant to cover 70% of total cost of the project, the entrepreneur can invite the investor to join the venture at the same 33% ownership conditions and only request an investment of €600 K. Now the investor will be smiling! Even if he maintains his risk assessment of 65%, his IRR calculation now shows 45%.

	Expected Investor IRR
Private investment € 2.000K, Budgetted exit value realized	40%
Private investment € 2.000K, Risk adjuste IRR if project risk is 65 %	7%
H2020 grant € 1.400 K Private investment € 600K, Budgetted exit value realized	89%
H2020 grant € 1.400 K Private investment € 600K, Risk adjusted IRR if project risk is 65 %	45%

However, if life turns out as budgeted, the investor will get the jackpot - an IRR of 89%.

This scenario creates a good bargaining position for the entrepreneur to require ratchets and similar refined instruments introduced in the shareholders' agreement, in order to make a fairer distribution of the exit value.

4. Evolution of the SME Instrument

As the flagship SME initiative under H2020, it is essential to consider how the SME Instrument should evolve in future years. The introduction of the SME Instrument has brought high expectations. As noted in the Introduction, it is intended as a means of supporting highly innovative and/or ground-breaking ideas with clear market potential and with added value at the EU level. The first calls for proposals have been made, and the early results suggest – as expected – very strong interest in the SME community. As of 19 June, 2,666 applications had been filed, implying a maximum possible acceptance rate of 6%.

Much more analysis will be needed to draw any programmatic conclusions from the data, but it is already clear to us that some changes will be necessary. The comments that follow are intended to form a broad strategy that addresses what this new instrument might, and needs to, achieve and how it should develop in the future. As such, they are **framed in a strategic rather than an operational context**.

- **Actively emphasize the risk reduction potential of the SME Instrument:** Firstly, in terms of the overall message, the SME Instrument is being marketed primarily as 'yet another' grant scheme, offering funding support on a project basis. A key benefit of this new instrument – **its potential to reduce risk** (as described in Section 3) – is not addressed, or at least is not brought to the fore.

  Uniquely among EU actions, the SME Instrument is aimed at reducing the risk and bridging the funding gap (the 'valley of death') between research grants and private investments in order to strengthen European competitiveness. By decreasing the risks associated with early stage innovations, the SME Instrument (together with other H2020 grant and support programmes where relevant) could become the cradle for new high growth companies. Investors would recognise promising opportunities and flock around the companies concerned. This risk reduction aspects needs to be communicated much more clearly. Whether as an investor or as an SME owner/manager, business is about managing risk and the initiative must speak to firms in a language they understand.

  Recommendation 4.1: Better communicate the risk reduction potential of the SME Instrument as a key benefit to prospective applicants and their financial backers.

- **Phase 2 funding under the SME Instrument raises major liquidity issues which demand urgent attention**. An SME benefiting from a H2020 SME Phase 2 funding faces two major financial challenges: i) finding the funding to cover the 30% not funded by the Phase 2 grant; and ii) funding the liquidity gap caused by EU payment principles (small pre-payment, majority of payment based on cost statements of cost incurred). For a €1 million project with 70% Phase 2 funding the total liquidity requirement can easily be around €500k–600k. Even if an investor contributes the 30% (or €300k) extra, €200k-300k is needed to cover the liquidity gap until final EU payment is received. This could be a fatal draw which, in principle, needs special attention; a partial solution could be to increase the pre-payment percentage substantially. The Innovation EAG & the Access to Risk Finance Group will address this

special issue in their newly formed common working group (although we offer a preliminary recommendation on this issue in the meantime).

Recommendation 4.2: Incentivise private funding sources (business angels/ venture capital funds) to provide financing facilities to overcome the liquidity gap constraints likely to be experienced by applicants receiving Phase 2 funding.

- **Ensure the quality of the deal flow from SME Instrument applications:** Investment fund managers tend to favour sectors and companies that are seen as being less risky and that offer good short term returns over longer term development opportunities. In order to increase companies' chances of securing external investment, it will be essential to establish a high quality deal flow from the SME Instrument Phase 1 & Phase 2, which demonstrates that the companies coming through represent less risk and have high growth potential. This approach has benefits not just for the investors but also for the companies concerned, allowing the start-up to offer itself as a 'verified business opportunity'. As noted below, this need to attract 'the right kind' of company has implications for both evaluation and how the instrument is marketed to the SME community.

- **Address the high transaction costs associated with small investments:** For the investor community the transaction costs related to due diligence, project monitoring and exit provide a better rationale for larger deals than for small ones. In particular, a quality due diligence assessment is a significant cost barrier for small investments, especially for small funds. A number of possible approaches might be considered here:

    - *Establish a pool of qualified independent due diligence experts to support H2020 Phase 2 funded projects*. Investors would have access to this expert pool when investing in companies. Such a scheme could use the same model as for the project coaching associated with Phases 1 and 2. We note also, however, that such experts are in short supply and will need to be properly rewarded.

    - *Deploy Phase 1 Coaches to support investors.* Coaches for SME requiring funding and benefiting from Phase 1 of the SME Instrument could be selected to support companies in both the funding and the due diligence preparation process.

    - *Establish a system of Key Account Managers.* Beneficiaries of Phase 1 grants could be allocated their own 'account manager' who would be responsible for connecting them to a range of support services (e.g. IP, fund raising, due diligence preparation).

    - *Investor support actions and instruments.* New support actions or other instruments could be setup specifically to make screened and qualified investment opportunities visible and easy accessible for the investment community. Current and previous examples of EU-funded projects aligned with this intention include ProRett, ProNano, Innowater, Biochem, LightJump, INNEON and others.

  Further work will be necessary to identify the most appropriate and cost-effective solution, or mix of solutions. In addition, we note that these operational measures should supplement

efforts to better communicate the risk reduction potential of a Phase 2 grant (as mentioned above) as part of a coherent communications strategy for the SME Instrument.

Recommendation 4.3: Introduce measures to reduce the transaction costs for investors in co-financing SME Instrument Phase 2 projects. Such measures could include: establishing a pool of independent due diligence experts; deploying Phase 1 coaches to support the due diligence preparation process; and/or new support actions to screen investor-ready applications (e.g. via CSA type calls).

- **Implement a rigorous programme of business coaching and mentoring:** Coaching will be a key element in the success of the SME Instrument but key operational details have yet to be defined. Academic research provides pointers on suitable approaches, highlighting, for example, the key role of certification and quality assurance (Box 3).

  In order to be successful, the coaching and mentoring of SMEs to develop and implement high growth strategies requires a very different approach than traditional 'personal development' coaching and mentoring practices. It needs to be based on solid business insight and experience combined with a full understanding of daily challenges facing Europe's SMEs. The same insight and experiences are crucial to find among the evaluators recruited for the H2020 SME Instrument (see below).

  Box 3: New Approaches in Business Coaching and Mentoring

  Analysis[7] on SMEs across Europe shows that even in innovation-oriented SMEs, who have completed a thorough innovation management assessment, the strategic focus on growth by implementing innovation and funding possibilities is rather limited. Having an innovation strategy is no guarantee for growth or a sustainable business success, in particular if it is not closely linked to a solid implementation and funding strategy and a focused sales and marketing strategy.

  In the United States, an entrepreneurial tradition has developed over the last 30 years to engage and rely on mentoring and coaching support, when a growth business strategy is both developed and implemented. The coaching element included in the H2020 SME Instrument strives to create, for the SMEs benefitting from funding, a leading-edge coaching and mentoring support. However, in Europe coaching is often focused on personal, therapeutic intervention rather than to build business-oriented competencies.

  A study by D. Gray et al.[8] shows that coaching and mentoring SMEs to develop and implement successfully high growth strategies needs a very different approach to the current coaching and mentoring practices.

  In line with this new thinking, a new type of rigorous, business performance-oriented coaching and mentoring needs to be put in place. Furthermore, the Commission should consider the creation of a European Hub for Excellence in high-value coaching services and coaching experts. This could be achieved by selecting coaches with strong expertise in

[7] E.g. statistics from the IMProve benchmarking database with 1,693 valid datasets of European SMEs with 250 employees or fewer shows that only 56.8 per cent of the SMEs state that their vision is clearly linked to innovation. Almost thirty per cent of these companies have no innovation strategy (27.9 per cent) in place.

[8] David E. Gray, Yuksel Ekincib and Harshita Goregaokara. *Coaching SME managers: Business development or personal therapy? A mixed methods study*, in: The International Journal of Human Resource Management, Vol. 22, No. 4, February 2011, 863–882

different technologies, and/or in commercialisation of breakthrough innovation. Coaches admitted to the platform would be further trained and certified as accredited members of the European Coaching Hub. National or regional support organisations, such as the European Enterprise Networks (EENs), would create their own coaching pools from this hub, from which individual SMEs would select coaches.

In this connection, the EEN could also play a more central role in bridging national and EU innovative initiatives and funding schemes. This could also involve support to matchmaking for SMEs' participation in international consortia which are providing products or services to e.g. the public sector around Europe. Often SMEs are disqualified solely "in principle" because of size or lack of concrete references.

Recommendation 4.4: Implement a rigorous programme of high-value business coaching and mentoring, backed up by a quality assured European Coaching Hub.

- **Ensuring a high quality, trusted evaluation process:** Any evaluation is, to some extent, a subjective process. No matter how many rules are introduced or how strict the criteria applied, in the end the process relies on human beings exercising their own judgment. In the ideal case, evaluation results would be clustered into a 'bell shaped' curve with small variance around the mean scoring; however this is not always the case, when the background of evaluators differs.

  Ensuring a transparent, high quality, trusted evaluation process is a duty and not an option. For the launch phase of the SME Instrument the standard – and very well proven – FP7-style approach to evaluation has been adopted, with the notable exception of dropping face-to-face evaluation meetings. However, this may need to be adapted further in the light of experience under the early calls. It has to be taken into account that the SME Instrument represents a significant departure from previous EU experience (i.e. much closer to the market; single company applications; remote evaluation).

  The new type of (single SME) applicants **perception of the evaluation process** is important in the long run to create and maintain a quality deal flow. High growth, highly innovative SMEs with global ambitions and disruptive businesses will not spend €5000 or more in man time or on advisors to write a Phase 1 application, or €10.000 or more to write a Phase 2 application, if they do not have confidence in the evaluation process and its criteria.

  In view of this, we urge **a special focus on how evaluators for the SME Instrument are recruited, selected, trained and supervised**. We believe that, by the time the next Work Programme is adopted, the SME Instrument should have:

  - *A targeted communications campaign for skilled evaluators with a relevant business background*: It should appeal to evaluators' desire to help build a better Europe while at the same time building their own networks and reputations. For instance, an annual conference/mixer of all evaluators should be held. The aim: to appeal to a mix of selfish and altruistic motivation so as to get the best evaluation talent possible.

- *The Commission is advised to consider if there could be a need for an expert panel of 'super-evaluators'*: These 'gurus' in entrepreneurship and investing could help the Commission vet prospective evaluators, monitor their performance, and act as ambassadors to potential evaluators. The scheme is modelled on how the European Research Council successfully uses its Scientific Council to vet evaluators.

As discussed in Section 6, the segmentation of applications into themes also has implications for the evaluation process.

Recommendation 4.5: Ensure continuous learning and adaptation in the evaluation process for the SME Instrument. This should include, in time for the next Work Programme: procedures for vetting, training and monitoring of evaluators; a coherent communications campaign to attract the right kind of evaluators; and a special expert panel to oversee the process.

- **Managing expectations: acceptance as a badge of success**. Around 10-15k applications per annum are eventually expected under Phases 1 & 2, and success rates are likely to be 5-10%. With such high application levels, there is a risk that submission under the SME Instrument becomes seen as something of a lottery, with little to distinguish between successful and unsuccessful applicants. Instead, acceptance under the scheme should be seen as a true qualifier of success. Far from being a problem, tough competition suggests that only the excellent can win. That is good for the winners, as it provides them a badge of honour; it is also good for the losers, as it gives them something to aspire to in later rounds.

  The Commission will need to work actively to manage expectations:

  - *Act now to ensure the programme's initial results are seen in a positive light*. The release of the results of the first round of applications is likely to attract significant media interest and is an opportunity to demonstrate what has been achieved. The Commission should plan a positive, high-profile event for autumn 2014 showcasing some of the first successful applicants, and trumpeting the excellence on display. These aspects should also be reflected in the basic communications literature.

  - *Develop a communications strategy, and act on it*. Looking to the longer term, there is a need for a concerted communications campaign focused on attracting the desired, high-growth companies. Generally speaking, we believe the Commission needs more resources for this purpose. The current communications budget allocated specifically to EASME (around €200k in 2014) is inadequate for the kind of market segmentation, channel research, message planning and professional execution required for a major public initiative of this kind. Established innovation agencies across Europe provide relevant benchmarks here: Vinnova in Sweden, Tekes in Finland, the Technology Strategy Board in the UK. All spend significantly more on communications than EASME, as a proportion of their total grants.

Recommendation 4.6: Develop and implement a communications strategy and professionalized communications campaign for the SME Instrument that addresses the

needs of applicants, the media, the Member States and other stakeholders. The campaign should, in particular, target the right kind of innovation-driven SMEs so as to enhance the programme's reputation for quality.

- **Collaboration with Member States so as to improve the quality of applications**: One means of ensuring the quality of the deal flow and a light touch in terms of application procedures would be through collaboration with national innovation agencies. National contests could be held, e.g. the Venture Cup, and the EU could collaborate with national schemes and deliberately encourage the best proposals to file applications. This, of course, requires that national schemes are harmonized with the EU scheme which in itself would create EU harmonization and an EU added value for the support system. For example, a 'Label of Excellence' could be introduced, whereby national/regional authorities accept the format of EU proposals and evaluation results under their own innovation support programmes.

Recommendation 4.7: Engage and collaborate with national innovation agencies or equivalent so as to improve the quality of applications under the SME Instrument.

- **Develop performance monitoring and metrics:** The SME Instrument has a central role in the specific policy field Innovation in SMEs. To be considered a success, it must meet and surpass the objectives behind its establishment, namely:
  - Increased participation of SMEs across all specific objectives;
  - High growth rate and high survival rate of the supported companies;
  - Increased private investments, also private equity financing;
  - Reduced time from idea to market; and
  - Increased participation of first-time applicants in Horizon 2020.

  In order to assess implementation and measure success it will be necessary to put in place a comprehensive programme of monitoring, including indicators and metrics of the type listed above.

Recommendation 4.8: Develop the performance monitoring necessary to assess the implementation and impact of the SME Instrument.

In conclusion, the EAG considers the launch of the SME Instrument to be a highly significant development in the way Europe supports and nurtures its innovation-driven SMEs. It is, we are sure, set to grow into a very important and influential initiative. **With around €3 billion set to be channelled through this mechanism over the next seven years, it is imperative that the instrument develops according to a coherent and agreed plan**. At present, certain aspects regarding its scope and future ambition remain unclear: we urgently need a roadmap.

5. Policy Actions to Drive Innovation

Taking into account the challenges and bottlenecks highlighted above, a wide range of policy actions can be envisaged that will contribute to improve the innovation environment in innovation-driven SMEs:

- **Adapt State Aid rules to embrace new forms of innovation**: State aid rules are linked to R&D and a linear model of turning R&D results into revenues: research leads to development efforts which then are industrialized and become subject for marketing and sales. This might be valid for established companies that incrementally improve their products and base their R&D efforts on known customer needs. But it is not applicable for innovation processes that address value creation with genuine uncertainty. For these circumstances, innovation development is a search for scalable business models, and hence requires early, fast and frequent iterations with customers and partners to determine a successful path towards business success and growth. For European SMEs to be competitive and successful, state aid rules need to embrace more modern approaches, as proposed by economists such as Eric Reiss[9], Steve Blake and Bob Dorf[10]. We recognize, however, that such reforms have to be considered as a long term objective.

  A good example is a French government programme, *Jeunes Entreprises Innovantes*, which allows holidays from social charges and other taxes for qualifying, high-growth technology companies.[11] It is viewed as a success in France, but cannot be scaled up to benefit more companies without special exemption from EU state aid rules. We urge the Commission to accelerate discussions internally – between DGs Competition, Internal Markets and Enterprise – to develop new policies in this field.

- **Stimulate and promote innovative public procurement (with emphasis on 'innovative'):** Customer demand is crucial for the success of any business and especially critical for innovations that inherently represent something new and novel for the market. Here public organisations can play an important role as visionary, risk-taking and demanding reference customers. If only a share of the public procurement budgets, representing 16 percent of GDP in the EU, could be used to initiate development and utilization of innovations, a new era of innovation-led growth could be catalyzed. Hence, it is important to balance supply-side measures to push innovation with demand-side measures that drive innovation development by providing market opportunities, especially in areas addressing societal challenges.

  The Commission and European Parliament, for nearly a decade, have been pushing member-states to increase so-called Pre-Commercial Procurement[12], whereby national agencies invite SMEs to bid on public tenders requiring innovations, such as new medical devices or low-energy lighting systems. This kind of procurement is (or should be) a co-creation process

[9] Eric Ries: The Lean Startup, ISBN 9780670921607
[10] Steve Blake, Bob Dorf: The Startup Owner's Manual, ISBN: 978-0-9849993-7-8
[11] http://fr.wikipedia.org/wiki/Jeune_entreprise_innovante
[12] http://ec.europa.eu/digital-agenda/en/pre-commercial-procurement

between customers/users and suppliers. As such, it resembles more open innovation processes (e.g. crowd-sourcing) than traditional closed procurement processes.

Innovation in Procurement: The Danish Experience

To implement innovation procurement successfully governments have to adopt a more open approach. For instance, they could run open competitions, as is often done for architectural projects, seeking innovative ideas and then choosing the best. Such an approach is already being used in a public procurement case in Denmark, where ideas are being sought for an online electricity pricing portal to simulate competition in the electricity market.

The consistent problem, however, has been the reluctance of most procurement officers to invest the time or accept the risks that go with this. The Commission has included in Horizon 2020 funding to accelerate innovative procurement methods of this type. We urge expanded resources for this effort, and a rise in its political priority with the new Commission in order to get the attention of authorities in the Member States.

Recommendation 5.1: The Commission should increase measures under Horizon 2020 to stimulate and promote public procurement, emphasizing the need for innovation in the procurement process itself as well as in the products and services on offer. Promoting innovative procurement by Member State agencies should be made a top priority for the new Commission.

- **Stimulate business value chains**: A key cultural difference between the United States (especially Silicon Valley) and the European Union has been observed in the relationship between large companies and SMEs. In the US, large companies seem to recognize innovative SMEs as an important source of business renewal and therefore intensively scout for the 'next big thing' among young innovative SMEs and enter business relationships with them. In Europe, this is less often the case.

  SMEs themselves are an important source of innovation and business renewal, including for other SMEs. Their agility in developing and adapting new technology and business models puts pressure on more established players (including large companies) to innovate. SMEs need business-oriented environments to thrive, but often the market is too immature to accept innovative solutions, especially in public sector markets where complex regulations may apply. Thus, the innovation-driven SME may struggle to secure a reference customer in a large company or public organisation; or to appreciate how the solution needs to be adapted to suit different European and international markets.

  One approach could be for Horizon 2020 to support European 'sandboxes'[13], where SMEs are able to work with larger companies, users and others within the supply chain to develop and experiment with innovations for the European marketplace. Sandbox environments would allow SMEs to experiment with new solutions (services and products) at a small (yet Europe-wide) scale in the early stages, while recognizing that the market is still immature and therefore risky. This is similar to the Living Labs concept that has successfully brought

[13] The idea comes from the ICT world where sandboxes are used routinely to beta-test software, cybersecurity, etc in strictly controlled environments rather than on live systems.

together suppliers and users to jointly develop innovative research-based solutions, but with a more commercial orientation (i.e. closer to the market). Global and corporate players could be involved in co-funding projects, either directly or through corporate venture funds.

Examples of potential 'sandboxes' in the European context include:

- High quality but cost-effective sustainable manufacturing for longer lasting consumer products, adapted to the European market.
- Personalised medicine and innovative health services (incl. prevention), as well as new solutions and services for the ageing population.
- Innovative 'DIY' products and services around 3D printing and additive manufacturing, including attention to European regulation/standards/risk management.
- Challenges associated with the diverging requirements of regional, national & transnational critical infrastructure security; and manufacturing/distribution traceability with privacy requirements associated with the internet of things.

Recommendation 5.2: Experiment with novel value chain-based approaches – European Sandboxes – that provide innovation-driven SMEs with opportunities to experiment with new solutions at European scale in a controlled manner.

- **Stimulate and promote innovation networks and clusters**: Better conditions for open innovations also include better linkages to innovation enabling contexts:
  - *Access to research institutions*: Although long recognised as a support requirement, the need remains for better linkages between business and research, not only through R&D cooperation but through initiatives that stimulate entrepreneurs and business people to become inspired by R&D results. (This contrasts with the classical view that R&D results are the basis for new innovations and should be "transferred" to industry).
  - *Access to innovation clusters and networks*: SMEs need to be linked to business and innovation networks and clusters which allow them to develop their own businesses in collaboration and competition with other firms in the cluster/network.
  - *Access to business network contracts/virtual organisations*: In certain cases, SMEs may take their collaboration within networks and clusters one stage further, developing agreements with other companies to work together as 'virtual organisations' (VOs)[14]. This innovative collaborative model enables the aggregation of different participants sharing business projects, competencies, best practices, assets, and performing actions and activities that would be very difficult to perform individually. In Italy's Emilia-Romagna Region, for example, the Business Network has been promoted since 2012 as a new tool to aggregate small and micro enterprises in a legal entity for accessing public calls.

[14] A VO, or business network contract, is an agreement between two or more enterprises that share the common goal of improving their potential of innovation and competitiveness while remaining independent.

While the need for such linkages is well accepted in policy circles, experience 'on the ground' shows that barriers still remain: too few research institutions engage with entrepreneurs effectively; too few innovation networks and clusters have good international links; and fluid, viable collaborations between SMEs remain the exception rather than the norm. Experience with existing models needs to be shared and intensified, and innovative approaches to these issues should be investigated. H2020 funding has a particular role here in leveraging support from other programmes, such as Structural Funds, in order to mainstream new approaches.

Recommendation 5.3: Support novel approaches for the engagement of innovation-driven SMEs in relevant innovation ecosystems such as networks, clusters and virtual organisations and promote exchange of best practices, including through other EU programmes.

- **Support for high quality business incubation and acceleration programmes**: Start-up and early-stage companies can often benefit from business assistance services in order to lead them to the competitive marketplace. Only roughly half of new enterprises survive their first five years. Business incubation programmes offered by academic institutions and other support organisations assist companies in managing innovation and growth. Such incubators must be of a recognised quality, however; not simply an employment scheme for second class innovation advisors (as sometimes appears to be the case). Proven business incubation and acceleration programmes and teams should be encouraged and supported in order to multiply their experiences, especially around international opportunities.

Recommendation 5.4: Provide focused support for business incubation and acceleration programmes for startups and innovation-driven SMEs, including on the opportunities and challenges of commercializing innovation in the international context. Measures should also be put in place to ensure the quality assurance of such incubation services.

- **Promote effective IP management practices**: Intellectual property (IP) is a complex field, where the quest to find European-level approaches and solutions has been (and continues to be) problematic. On the one hand, we are not optimistic that the recent history in this area will be turned around. On the other hand, the increasing importance of intangibles, IPR protection and enforcement in the success of economies and individual businesses mean such issues cannot be ignored. We recognize, of course, that the Commission already supports a variety of measures in this area, such as helpdesks and awareness-raising schemes. We direct our comments here to some specific issues which appear to us to be important and actionable in the policy context.

    - *Access to cost-effective IP advice:* SMEs appear to have difficulty in accessing quality IP advisors who are able to address their concerns in an impartial and cost-effective way, especially in the patent-crowded sectors of ICT and biotech. There is a need for enough patent attorneys to properly address these matters; however, the cost of highly specialized legal advice for large, early-stage R&D studies is beyond the reach of many SMEs. Public intervention may be useful here, e.g. by developing practical IP analytics, IP management, IP strategy and IP licensing training for SME advisers, coaches and managers, filling the gap between the elite commercial services and the basic IP training

and support currently on offer. This is especially important for high-tech innovation-driven SMEs, as it has a direct impact on the company valuation in the end. IP management, of course, includes branding/licensing, open source software and copyright maters, not just patents.

- *Development of small entity status fees at the European Patent Office*, similar to the USPTO practice, to make the cost of EU patenting more accessible to SMEs. Action now would be especially timely, as the EPO prepares for the launch of the new EU-wide Unitary Patent. It should include preferential application and renewal rates for SMEs.
- *Development of European branding*: Developing original, outstanding European labels "European quality" and sustainability (non-programmed obsolescence), "European security/privacy" and certification would be a clear differentiator. These could possibly provide traceability from the European SME innovations sourcing to the final products/services (for sectors in which transparency is desirable). Assuming European SMEs can be smart and efficient enough to develop cost-effective innovations for those "higher-value" products and services to be competitive in the overall market, such labels will help publicize them and provide a clear, visible differentiator, also for exports.

Recommendation 5.5: Experiment with new IP management practices tailored to the specific needs and circumstances of innovation-driven SMEs and startups. Potential actions include providing more advanced IP training, a small-company discount for the new EU Unitary Patent, and a new European SME quality mark.

- **Addressing innovation as an end-to-end process**: Innovation is a much broader activity than research. In addition to the activities above regarding access to knowledge and technology, there are aspects that have their root in the market, such as design and creativity. Potential measures here include:
  - *Programmes that bring together product and service innovation SMEs* to explore new niche business models and understand the value of intangible assets (design thinking (see Box 4), creative thinking process, culture of innovation).
  - *Set up new schemes dedicated to design and/or marketing*. Innovation voucher schemes can be particularly effective in allowing SMEs the time and resources to pursue good ideas.

Box 4: Design Thinking

In the design thinking perspective[15] everything is at the service of the individual, whether it is the design and production of objects, environments, management of organizations, or the design and implementation of activities. At the basis of the principle of design thinking is the alignment of the result (product, process, service) with the customer's needs.

The culture of design management allows companies to combine the creative and management skills within the process of the creation of products/services (from concept and design through to product

[15] See, for example, *Design for Growth and Prosperity: Report and Recommendations of the European Design Leadership Board*, European Design Innovation Initiative, DG Enterprise and Industry, 2012. http://ec.europa.eu/enterprise/policies/innovation/files/design/design-for-growth-and-prosperity-report_en.pdf

development, marketing, end-of-life), in order to analyze customer behaviour and to anticipate market trends.

Recommendation 5.6: Ensure Horizon 2020 addresses also 'soft' innovation issues, such as design, creativity and service innovation as part of Innovation in SMEs activities.

- **Continuous monitoring of performance and impact**: The policy measures recommended here will manifest themselves in better framework conditions for innovation across Europe, reduced barriers faced by the potential high growth companies, and enhanced innovation capacity of SMEs. This would be reflected in, for example, the innovation indicator and its components (particularly the share of high growth enterprises) proposed by the Commission, and ultimately in growth and jobs across Europe.

  In addition to these high-level impacts, a concerted effort will be required around new indicators and metrics on innovation performance in SMEs. Alternative measurements of innovation impact and value creation (e.g. knowledge) should be explored and experimented with as a complement to standard GDP growth, employment and competitiveness indicators; for example measuring depth, breadth and speed of innovation spread, in line with on-going related EU works[16] and regional initiatives[17].

  At the same time, we believe that – given the breadth, budget and new features of the Innovation-in-SME support initiatives – the Commission needs a deeper and more comprehensive understanding of the SME community. A host of questions arise: by sector and country, what do innovative SMEs want from the EU? How do they generally find out about EU innovation programmes? How do they join and with what outcome? What communications channels reach them? How, specifically, could the EU help SMEs rise to the challenge of the broad trends described earlier in this report? There have been several sectoral innovation studies of SMEs over recent years, which have highlighted how the innovation environment varies from one sector to another (for example, IPR-driven in pharma/biotech; largely capital-driven in energy). However, the lessons from these studies have yet to be fully digested in terms of how to improve the targeting and effectiveness of the programmes, and permit greater coordination of delivery of support programmes for innovation in SMEs.

Recommendation 5.7: Develop new indicators and metrics on innovation performance in SMEs that provide measures of impact and value creation in the new innovation contexts we see emerging. This should be backed-up by efforts to consolidate the existing information base on the innovation-driven SME community sector by sector and how it does, or could, interact with EU programmes.

[16] http://ec.europa.eu/environment/beyond_gdp/index_en.html
[17] The Assembly of European Regions, www.aer.eu

6. Synergies for SMEs in Horizon 2020

Structural limitations need to be addressed in order for SMEs to realise their full potential within H2020: In theory, the structure of Horizon 2020 ought to be ideal for SMEs. Its seven broad 'Societal Challenges' provide wide-open targets for innovation-driven SMEs to propose blue-sky solutions, and its industrial support programmes offer to support the development of niche players in economically important areas. In practice, however, there are severe limitations on the ability of the typical SME to hit those targets, as discussed in previous sections. Generally speaking, SME participation in the old, FP7 Cooperation programme was patchy: good in places, poor in others, and overall with SMEs usually tagging along as minor partners in the wake of dominant RTOs, universities or multinationals.[18]

A significant budget has been ring-fenced for small companies under the SME Instrument, yet this still represents only a small proportion of Horizon 2020 funding overall. Hence, it is just as important to find ways for SMEs to benefit from other innovation support programmes, such as the EIT, JTIs, Eurostars or any of the other initiatives listed in Table 1. This requires some holistic thinking by the Commission – about themes, programme targeting, communications and internal organisation.

The Problem of Themes

To date, much of the EU's innovation agenda in relation to SMEs has been structured in terms of 'themes': in applying for support applicants are directed/constrained to specific sectors/technology areas set out in the relevant work programme. Both the collaborative programmes and the SME Instrument (Figure 2) are presented in this way.

Figure 2: Themes Under the SME Instrument, 2014-15

In 2014 and 2015 the SME Instrument will sponsor SMEs operating within 13 themes:

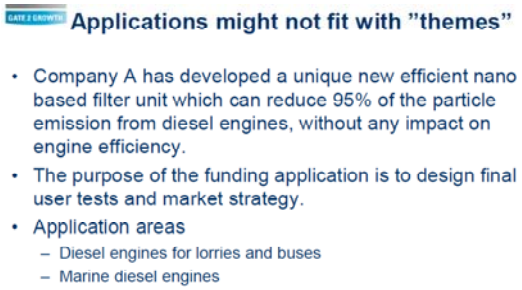
- High risk ICT innovation
- Nanotech, or other advanced tech for manufacturing and materials
- Space research and development
- Clinical research for the validation of diagnostics devices and biomarkers
- Sustainable food production and processing
- Blue growth
- Low carbon energy systems
- Greener and more integrated transport
- Eco-innovation and sustainable raw material supply
- Urban critical infrastructure
- Biotechnology-based industrial processes
- Mobile e-government applications (2015 only)
- SME business model innovation (2015 only)

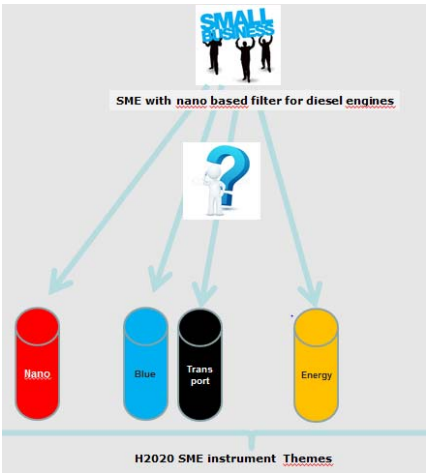
Theme-based approaches have limitations and can be overly prescriptive: Theme-based approaches are valuable in R&D, where the focus is on building new knowledge. Typically, such areas have a substantial knowledge or technology base arising from research initiatives that needs to be commercially exploited. In such circumstances government can initiate interventions that stimulate companies and entrepreneurs to make commercial sense out of the research investments. Business,

[18] European Commission. Performance of SMEs within FP7: An Interim Evaluation of FP7 Components. Volume I Main Report. May 2014. http://ec.europa.eu/research/sme-techweb/pdf/volume_i_smes_in_fp7-may2014.pdf

on the other hand, is based on customer needs, which are not structured according to knowledge or technology fields. Thus, as a means of encouraging innovation theme-based approaches have notable limitations. These include:

- *A narrow theme interpretation is not an adequate yardstick for eligibility assessment*. Many companies find it problematic to define their individual business cases based on the technology applied. Rather they define themselves through the problems solved, the business models used; and through the products and services they provide.
- *Companies are distracted from areas of high potential*: As noted above, most breakthrough business innovation takes place at the crossroads between different technologies: real innovative companies become discouraged by the 'theme fit' requirement. Consider, for example, a company that has developed a nano-based filter for use in diesel engines: it might fit in several themes – nano materials, blue growth, greener transport. The company's chances of success will depend heavily on applying under 'the right' theme for the technology concerned – if it applies at all.





- *Disruptive solutions are not encouraged*: technology-defined calls urge traditional technology optimizers to apply, rather than those companies exploiting disruptive business opportunities.

Thus, in relying on themes/technology-defined structures to the exclusion of other, more open, approaches there is a risk that calls become too prescriptive. Themes should serve as '*inspiration' rather than a 'straight jacket'.*

Innovation Priorities

Build on experience in FP7 in planning future actions, but adapt to the needs of SMEs: In the collaborative programmes, experience under FP7 shows that nano, ICT and health have the best prospects for eliciting SME interest using a theme or technology-defined call structure. Calls through Horizon 2020 should take this into consideration. For instance, the health challenge is obviously an area ripe for even stronger SME participation; development of the 2016-17 Work Programme here should include a specific exercise identifying SME populations, by country and specialty, that could fit most easily into the calls. Besides little biopharma or biotech companies, ICT, nano, personalised services and other sectors are relevant for healthcare projects. For the other challenges, enabling

technologies like ICT can be relevant to all. While not excluding effort in other SME sectors, efforts should be redoubled in those areas where FP7 was already showing some traction. Planning, marketing, communications, help desk, matchmaking events and other services to attract SMEs will all be necessary.

> **Recommendation 6.1:** Prioritise areas in collaboration programmes with clear SME interest and potential, such as nano, healthcare and ICT; and target marketing and communications efforts to draw them into collaborative Horizon 2020 projects.

Pursue a more open, bottom-up approach within the SME Instrument: As far as the SME Instrument is concerned, the current division into 13 themes, which are primarily aligned with existing EU research streams, represents a significant barrier. These neither reflect where innovative companies thrive nor do they fully reflect the innovation requirements associated with societal challenges. A more open 'bottom-up' approach to calls is strongly recommended in order to ensure that the initiative achieves its ambition and objectives. It will also make the marketing effort for the SME Instrument more efficient. Certain areas represent special opportunities because of the need for solutions: it is not recommended to convert these areas into new and narrow 'themes'. However, it could be highlighted in the call text that there would be a special interest for proposals addressing these challenges.

Use theme topics as a means of structuring the evaluation of SME Instrument applications: One aspect where themes *are* of use is in helping the applicant to direct their application to the group of 'theme' evaluators best placed to understand and evaluate the proposal. Experts allocated to each theme should have a professional background and practical experience in the area concerned. They should be business-oriented and not just technology-based. For example, proper evaluation of the diesel filter case above calls for both specialist technical knowledge about nano *and* specialist business knowledge on how to sell diesel filters into the automotive industry. Thus, evaluators may have different specific experiences (venture capitalist, business manager, innovator, etc.) but they will mostly share a background in a certain theme (could be in biotech, health, nanotechnologies, etc). In this context, themes could make a useful contribution.

> **Recommendation 6.2:** Pursue a more bottom-up approach to calls under the SME Instrument and apply a combination of business-oriented and technology-based theme topics to structure the SME Instrument evaluation process.

Better exploit areas with 'explored potential' for involvement of innovative SMEs: Horizon 2020 is a broad and deep programme with very many actions and initiatives. While we accept (indeed complain) that the picture is already confusing for SMEs, nevertheless there are important areas with proven potential that are not yet very accessible for innovating SMEs. The Marie Skłodowska Curie Actions, for example, are a very well accepted means of offering training and career development. SMEs will be able to benefit from the new internship platform for researchers. A scheme should also be put in place to fund 'graduate innovation assistants' in enterprises, recognising that business knowledge is a relevant asset for graduates.

The Joint Technology Initiatives are another 'low hanging fruit'. These large, industry-led consortia are even more important in Horizon 2020 than in FP7. Furthermore, most of them are now well

established and should be able to look at (for them) less-pressing issues like SME participation. Under FP7, SME participation in the JTIs varied significantly[19]: from very high for Clean Skies to, at the other extreme, very low for the Innovative Medicines Initiative. The Commission should lean on all the JTIs to increase their SME participation. This will serve three purposes: (i) inviting new ideas (from innovative SMEs); (ii) raising SME funding; and (iii) avoiding politically unpalatable impressions that big companies are too dominant. The quality of the data should also be improved.

> **Recommendation 6.3:** Open new territories to participation by innovative SMEs in areas of Horizon 2020 where they are currently under-represented. In particular, this means pressing the Joint Technology Initiatives to recruit greater SME participation, and promoting the Marie Skłowdowska Curie initiative for use by SMEs.

Consolidating SME communications: The high priority given to SMEs in EU policies is both a blessing and a curse: SMEs, rightly, receive a high priority under European policies and a large number of programmes and initiatives have been put in place to support them (see, for example, Table 1). For SMEs and their advisors, however, navigating their way through the maze of programmes to identify opportunities and schemes of relevance to their needs presents a major challenge. There is too much overlap and a lack of targeted information. The Commission has made a good effort to consolidate some of its SME communications in the Participants Portal and EASME websites – but the access is still too confusing, in our view. The goal should be for a micro company to be able to search easily online to identify exactly the programme for which it is eligible, and get a quick answer on whether it can get the funding.

For this, there needs to be **one, and only one, portal for practical programmatic communications with SMEs across the EU institutions**. We appreciate that this is 'a tall order'. A good starting point would be to unify – for instance, in EASME – all practical, client-centred communications and marketing for virtually all SME programmes within Horizon 2020. Further, while there has been much progress with simplifying forms and reducing paperwork throughout Horizon 2020, we urge a new review of the application and grants process in the new Work Programme from the point of view of SMEs. These recommendations will become urgent as the Commission starts planning the Fast Track to Innovation, mandated in the legislation.

Our concerns over the budget available for communication activities and the opportunity to benchmark communication efforts against national innovation agencies have already been noted in relation to the SME Instrument and apply also here.

> **Recommendation 6.4:** Consolidate into one administrative unit – for instance EASME – the leadership for practical programme communications for all Horizon 2020 opportunities for SMEs and allocate the budget necessary to implement this 'one-stop-shop' approach effectively.

Highlight areas for coordination/joint development by the Member States based on policy learning & exchange. Whereas research is a European competence, where the EU has its own policy (implemented by an own programme), innovation support is primarily a topic for the Member States and the EU plays mainly a coordinating role. This, together with the fact that innovation can be

[19] See Commission's SME monitoring reports of FP7, http://ec.europa.eu/research/sme-techweb/index_en.cfm?pg=publications

heavily influenced by national/local market conditions, makes it essential that the Member States and regions share their knowledge and experiences. The EU should play a more high profile role in coordinating and orchestrating this policy learning and exchange in relation to SME innovation support. Such activities should be based on observed discrepancies between MS policies, new opportunities or existing blind spots. This would help to define topics for 'Innovation in SMEs'. It might also orient the cluster and industrial value chain calls towards specific areas; and shape the development of the EEN Service. Recent and existing initiatives, such as the INNO Partnering Forum, the ongoing FP7 ERA-Net on Innovation Policy, and 'Peer-learning for Innovation Agencies' (H2020), provide relevant platforms.

At the same time, the Commission should look to its own country-by-country experience to fine-tune the way it sells its programmes to SMEs in different regions. As a percentage of each country's FP7 participation, SMEs were more important in the smaller accession countries than in many older Member States. Hungary, Bulgaria, Cyprus and Slovakia topped the 28 Member States for SME participation; France, Spain, UK, Germany and Poland were laggards (see Figure 3 below). Bearing this in mind, the Commission should preferentially organize thematic events, match-making and promotional activities in the smaller accession countries, where appetite already appears to be significant. This might run counter to a *juste retour* approach to EU funding; but the enabling legislation for Horizon 2020 clearly states an objective of broadening benefits of EU innovation policy to less-developed Member States. As the chart below indicates, SME participation is already gaining traction in those more-needy states, and so success can build on success.

Recommendation 6.5: The Commission should work more closely with the Member States to coordinate and orchestrate policy learning and exchange on innovation in SMEs, building on existing platforms. It should also use its own experience country-by-country to fine-tune the success of its programmes.

Figure 3: SME Participation in FP7 by EU Member State

Table 2.2 SME participation in the FP7 Cooperation Programme, by EU Member State (EU27)

	Share of total SME contribution	EU contribution to SMEs	EU Contribution to all partners	SME as share of all contributions	Variance from
Austria	4%	€ 129 617 944	€ 591 177 969	22%	1%
Belgium	7%	€ 209 678 426	€ 957 798 017	22%	0%
Bulgaria	0%	€ 12 018 427	€ 37 354 243	32%	11%
Cyprus	0%	€ 10 979 353	€ 33 590 070	33%	11%
Czech Republic	1%	€ 31 172 334	€ 130 212 217	24%	3%
Denmark	3%	€ 85 923 562	€ 497 352 047	17%	-4%
Estonia	0%	€ 9 958 680	€ 36 062 873	28%	6%
Finland	2%	€ 59 134 350	€ 488 535 383	12%	-9%
France	12%	€ 375 683 493	€ 2 188 330 164	17%	-4%
Germany	19%	€ 595 231 342	€ 3 698 919 864	16%	-5%
Greece	3%	€ 84 468 891	€ 556 327 868	15%	-6%
Hungary	1%	€ 44 539 823	€ 123 591 536	36%	15%
Ireland	2%	€ 64 532 539	€ 295 849 805	22%	0%
Italy	10%	€ 308 287 804	€ 1 933 152 480	16%	-5%
Latvia	0%	€ 1 979 443	€ 15 190 748	13%	-8%
Lithuania	0%	€ 5 068 033	€ 22 230 999	23%	1%
Luxembourg	0%	€ 5 358 637	€ 28 581 793	19%	-3%
Malta	0%	€ 2 344 783	€ 7 937 003	30%	8%
Netherlands	7%	€ 236 820 447	€ 1 496 073 938	16%	-6%
Poland	1%	€ 33 018 801	€ 198 705 252	17%	-5%
Portugal	2%	€ 67 333 470	€ 265 392 562	25%	4%
Romania	1%	€ 18 157 418	€ 71 597 113	25%	4%
Slovakia	0%	€ 12 785 028	€ 39 712 391	32%	11%
Slovenia	1%	€ 23 430 797	€ 92 825 099	25%	4%
Spain	8%	€ 265 490 626	€ 1 568 256 619	17%	-4%
Sweden	4%	€ 114 881 802	€ 834 381 772	14%	-8%
UK	13%	€ 402 181 630	€ 2 654 215 386	15%	-6%
Total	100%	€ 3 210 077 883	€ 18 863 355 211	17%	

Source: European Commission[20]

[20] Performance of SMEs within FP7: An Interim Evaluation of FP7 Components. Volume I Main Report. May 2014. http://ec.europa.eu/research/sme-techweb/pdf/volume_i_smes_in_fp7-may2014.pdf

Annex 1: Members of the dedicated Expert Advisory Group on Innovation in SMEs

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Mr John Ackerman	NILU
Mr Paulo Andrez	EBAN
Mr Marc-Michael Bergfeld	Courage Partners
Ms Dominique Boudin	Chamber of Commerce and Industry Grand Lille
Ms Angele Giuliano	Across Limits
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