



High Level Group on Key enabling Technologies (HLG KET)

Working group on Financial Instruments

Report, May 3rd 2011

1- Summary and recommendations

"Post recession economies need a kick start, and innovation could give them just that", wrote Andrew Wyckoff (OECD) in April 2011. Innovation has been acknowledged as a key driver of economic growth and competitiveness for Europe and will create the highly skilled jobs of the future. As stated in HLG KET interim report, "Europe has fundamental research in the different KET domains at world-class level. However, beyond this foundational innovation creation stage, Europe encounters major difficulties to commercially exploit its ideas, transform them into technologies, subsequently into products and finally produce them competitively at world level" (HLG KET interim report, 9th February 2011).

The EU 2020 Strategy¹ underlines the need for a new environment that should be more favourable to innovation. Recent interventions² and communications³ from Vice-President Commissioner for Enterprise and Industry, Mr. Tajani, Vice-President Commissioner for Digital Agenda, Ms. Kroes, and Commissioner for Research and Innovation, Ms. Geoghegan-Quinn, as well as Commissioner for Regional Policy, Mr. Hahn, have all underlined the major economic and societal role that Key Enabling Technologies can play in major strategic industrial sectors.

A key issue is finance: how can Europe provide the risk capital that Europe's SMEs desperately need to finance innovation and growth? How can Europe ensure that it provides the right incentives to attract international enterprises that are looking for a site to locate their R&D centres and manufacturing facilities? This internal competition within international enterprises across the geographies they operate in is a key consideration. Europe needs to provide the right incentives to compete looking for a site to locate their R&D centres and manufacturing facilities.

Evidence shows that Europe's financial markets do not provide sufficient investment for innovation as Europe is investing five times less in venture capital than the USA. This market failure is due to a higher risk aversion of investors to the asymmetry of information and high transaction costs due to much more fragmented markets, and justifies that public policies actively support the flow of venture capital to Europe's innovative and high growth SMEs.

We also know that Europe needs to significantly increase private sector investment in innovation to remain internationally competitive. It is clear that our global competitors are investing heavily in innovation activities, particularly in China, India, Singapore and the USA at a time when Europe is finding it difficult to maintain current investment levels.. Each industry optimises the production process by locating its activities in the optimal site. Only a few years ago, almost only manufacturing activities were relocated outside Europe. But now increasingly large multi-national companies are relocating R&D activities as well as manufacturing facilities outside of Europe¹. The share of R&D undertaken abroad by multinationals, according to OECD, increased significantly from 2008 to 2011.

¹ *Communication from the Commission "Europe 2020: A strategy for smart, sustainable and inclusive growth", Brussels, 3.03.2011*

² HLG KET interim meeting, Brussels, Berlaymont, 9th of February 2011

³ *EU smart, sustainable and inclusive growth: the European 2020 strategy*, Brussels, 3.3.2010 , COM(2010) 2020
An Integrated Industrial Policy for the Globalisation Era, Putting Competitiveness and Sustainability at Centre Stage, Brussels, COM(2010) 614
A Digital Agenda for Europe, Brussels, 26.8.2010, COM(2010) 245 final/2
Europe 2020 Flagship Initiative, Innovation Union, Brussels, 6.10.2010, COM(2010) 546 final
Regional Policy contributing to smart growth in Europe 2020, Brussels 6.10.2010, COM (2010) 553 final

Emerging economies, especially India and China, have become very attractive for innovation investments. In other words, competition has extended to the entire value chain.

During the HLG KET Expert workshop on Financial Instruments, representatives from industry asked for a more innovation friendly environment in Europe with measures to increase the reward to risk ratio through appropriate funding. Public support, through financial instruments, is massively and successfully used, in other parts of the world, to accelerate innovation through an increase of the reward of innovation risk: China's low interest loans, America's billion dollar grants directly support the development of new products and new manufacturing capabilities. The availability of large resources, through specific financial instruments, mixing public and private funding, certainly is one of the key reasons for of Asia's success, especially with their focus on key enabling technologies.

Of course, public support already exists in Europe. But European public support is primarily focussed on science and research activities, which is only the first step from the innovation chain going from science to market. Although Europe is a world leader in science and research it fails to translate this performance into economic success. Europe must put greater emphasis on translating this academic research into commercial success by focussing more attention and support on "product development" (pillar 2) and globally competitive manufacturing facilities (pillar 3) steps: developing a product requires pilot lines and product deployment activities, and producing this innovative product requires manufacturing facilities. The development of new products and new manufacturing capabilities should be enhanced: whereas Europe has almost as much patents as Asia in the Photovoltaics⁴ or bio ethanol⁵ sectors for instance, its share in manufacturing and value is low. Producing publicly funded science is not enough in itself to achieve optimal economic benefits. A new use of financial instruments should make sure that public policies effectively support innovation, and benefit from the positive effect of co-locating adjacent activities along the value chain.

European research tops the global league tables in many of the leading scientific indicators, but we fail to translate these research strengths into wider commercial benefits. The number of publications per researcher is greater than that of the US and Japan, but does not have an innovation ecosystem that actively promotes innovation with the net effect that much of Europe's research excellence tends to be lost or is transferred to the United States where there is much friendlier innovation environment. This not only means that the US benefits from Europe's investment, but there is a migration of highly skilled jobs and workers to the US. The financing of KET's Innovation must be made at European level, as well as at Member State level to ensure optimal levels of investment and coherence and to grow hubs of innovation that can compete at global level for the entire spectrum of KETs: a European coordination and a specialisation per site (smart specialisation) is therefore necessary.

The following 5 proposals are meant to reach the two following objectives:

- make Europe a more attractive site to innovative investments on product development activities (pilot lines and product deployment) and on globally competitive manufacturing facilities ;
 - increase the amount of risk capital available to SMEs ;
- 1- Provide targeted and increased support to KETs from EU community budget and EIB/EIF.
This could be achieved through the following measures:
- Increase the European public support available on KETs Technological Research and product development activities (pillar 1 and pillar 2) through future CSFRI (Common Strategic Framework on Research and Innovation) and through a dedicated KETs reporting line.

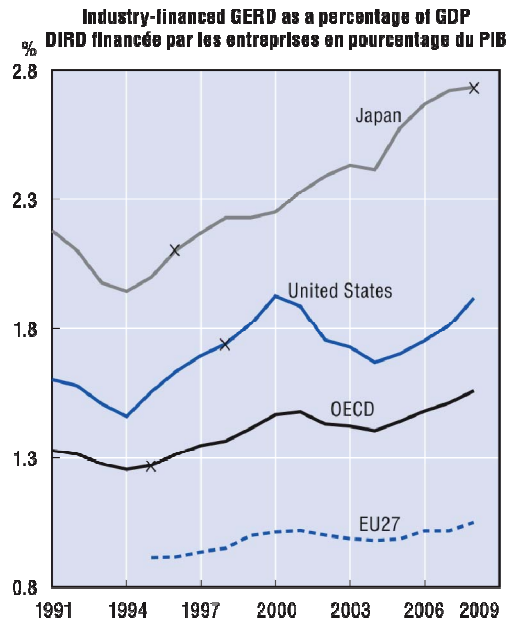
⁴ Source: Photon International Mars 2010, European Competitiveness Report 2010, European Competitiveness in Key Enabling Technologies (TNO/ZEW) « JP Morgan, PV News, Oliver Wyman Analysis”

⁵ Source: European Biomass Industry Association, European Biofuels Technology Platform (EBTP), European Competitiveness Report 2010, European Competitiveness in Key Enabling Technologies (TNO/ZEW)

- Increase the attractiveness for the private sector to invest in Europe on KETs product development activities (pilot lines and product deployment) and on globally competitive manufacturing facilities, through providing a suite of financial instruments to cover different company sizes and structures, eg loans, guarantees, grants, tax incentives.
 - That the proposed EU VC Fund of Funds has a specific focus to invest in Key Enabling Technologies as part of its investment mandate.
 - Improve the support available for KETs from EIB (pillar 3) through large loans at attractive terms, with rapid decision making processes allowing rapid site location decision for Industrials.
- 2- Create a distinct reporting line for KETs, including indicators of results and funding activity.
- Set an objective of 100 pilot lines, 20 globally competitive manufacturing units to be built with European support over the next 6 years
 - Measure the implementation of this objective: Commission will report annually on investment in KETs, from all EU budget items, and should assess the number of jobs created as well estimate their impact on growth
- 3- Introduce a Tripartite financing approach: Industry, Commission, National authorities (Member States and local government) for KETs projects
- The outcome should be defined in common
 - The commitment to fund should be made simultaneously by all partners
 - Industry should commit to create and sustain
 - jobs and implement manufacturing unit or pilot lines in Europe
 - Public support costs (from the tax payer's point of view) should be compared with the economic return
- 4- Allow a more flexible use of a broad range of financial instruments to promote innovation
- Equity and loan financing tools could be enhanced through appropriate national measures. The Commission should identify the most effective national initiatives (best practices) and the rules that prevent different kind of funding to be used simultaneously should become more flexible (such as the impossibility to benefit from structural funds and other European funding simultaneously on the same project)
 - The EIB should continue the rapid implementation of RSFF and introduce new financial instruments as necessary to ensure successful implementation of the Common Strategic Framework funding programmes.
 - In future, it could be studied whether EU funding programmes should consider national tax credit programmes as eligible co-financing, where these will directly leverage private sector investment for KET-related projects
- 5- Speed up the decision making, both with regard to investment decision and state aid issues
- The Commission, Member States and the EIB and EIF should ordinarily give an 'in principle' decision whether the investment project will be supported and can proceed within three months and in line with commercial practice.

2- Detailed report

As the following chart shows, Europe public policies lack leverage effect on private investment. European funding of R&D should be increasingly linked with product development by industrialists.



Source : OECD, 2011.

1. Increased quality of European spending by a KET distinct initiative:

- Worldwide evolution of public support on KETs:

A first observation is that in the area of industrial competitiveness, Europe risks to be left behind by its major competitors who have all recently engaged major pro-active subsidies measures in the area of product development and competitive manufacturing of KETs.

Over the past two years, the United-States (US) has indeed made the following commitments:

- In the area of the "advanced materials" KETs, a 1.5 B\$ subsidy action to produce batteries and their components ;
- In the area of Industrial Biotechnologies, 800 M\$ to support Biomass initiatives come from the ARRA recovery plan;
- In the area of 'Photonics' KETs, 2.3 B\$ subsidies and grants of 150 M€ awarded by the Department of Defence (DoD) to develop and produce PV and lighting products;
- In the area of Nanotechnologies KETs, over 1B\$ of financing jointly by the DoD, Department of Energy (DoE), and the National Science Foundation (NSF) for the fabrication and commercialisation of nanotechnologies;
- Within the Nanoelectronics KET, 1.4 B\$ subsidies for the 22nm Global Foundries, Advanced Manufacturing facility at Saratoga (NY state), 500 M\$ subsidies for the industrialisation of components for electrical vehicles.

These examples, amongst others, bring to 7.5 B\$ investment over the last two years on KETs by the US.

In the area of semi-conductor where the comparison is worthy, the levels of public investment required for the installation of advanced manufacturing units (addressing the "globally competitive manufacturing" criteria from HLG KET) show that Europe is less supportive in terms of public fundings:

- first Fab AMD in Dresden (global project 1,9 B\$) : 30% public support (this public support was granted 10 years ago, but new state aid rules do not allow such help any more)
- ST Crolles II (global project 3,5 b€) : 15% public support
- New Global foundry fab in Saratoga (global project 4,2 B\$) : 33 % public funding (the proposal of Dresden for the same GF fab reached only 19% of public funding)
- China offers now attractive conditions for western companies who want to build a new fab, roughly 33% of public funding

Concerning European public support, it does not yet target enough initiatives on KETs industrial development with high industrial and societal return.

- The lack of distinct KET line in the European budget for Research and Innovation:

Previous observations show that in the area of financing, there is no distinct box for KETs in Europe in which to re-allocate the resources available in the EU budget. For instance, there is neither a distinct budgetary line for KETs, nor spending objectives as a percentage of European R&D budget. The current discussions and negotiations on future potential "Common Strategic Framework on Research and Innovation Funding" have not yet allowed to deliver such measures.

The 7th Framework Programme on Research and Development (FP7) allocates a global budget of 1B€ per year over the period 2007-2013 on thematics addressing KETs, which constitutes a solid existing base. However, this current frame is not sufficiently targeted and is most likely under funded as its scope excludes for the present time product development and demonstration activities (pilot lines), which are indispensable to cross the KETs "valley of death", from knowledge to the market place. A first estimate of the budgetary line necessary to achieve this, based on preliminary work of HLG KET, is 3B€ per year. This estimate is of the order of magnitude of the US effort, on one hand, but also corresponds to a first approximation to twenty "Globally competitive manufacturing facilities" and a hundred pilot lines and pilot deployment.

Over 7 years, it could be necessary to reallocate approximately 20B€ for KETs, including 20 globally competitive sites (3 B€ per site of which 16% would be funded by European institutions and focused on R&D aspects, if we use the reference of Joint Technological Initiatives, the industrial contribution would be 66% with the remaining percentage covered by both regional and national governments) and a hundred pilot lines (approximately 600M€ per site equally with European public support of one sixth of the total project).

However, the financing of KETs R&D should be made at European level: Member States do not have the means necessary to grow centers of excellence at world level for the entire spectrum of KETs: a European coordination and a specialisation per site (smart specialization) is therefore indispensable.

- Worldwide increase of guaranteed loans for KETs

A comparison of the levels of guaranteed loans between Europe and its principal competitors shows that this financial instrument is massively used in the KETs domain by both China and US.

- The US DoE "non market loan program", dedicated to "clean energy projects", mobilised 20B\$ for only 12 projects between 2009 and 2010; 25% of this sum was focused on KETs, 2.3 B\$ on photonics and 2.6B\$ on advanced materials and components for electric vehicle.
- One of the competitive advantages of Chinese companies is explained by the important volume of low cost capital available to them: at the end of 2010, Chinese companies in this sector received more than 30 B\$ of non market loans from public Chinese banks.

This loan tool is not adapted to Pillar 2 (Product development): the development of pilot lines does not present a sufficiently guaranteed return on investment. It is more adapted to pillar 3 (Globally competitive manufacturing facilities) since such projects would include a large production capacity

component, which allows better risk visibility, despite the inherent risks in innovative industrial activities, and related future cash flows.

EIB support to KET

Because of the efficient use of large funds the EIB is well placed to support to KETs. It should nevertheless rely on a systematic use of innovative financing solutions. The scope for product development could be significant and extended from a selective modulation of financing terms of conventional, senior loans, to the use of equity-type instruments. "Contingent loans", where the level or timing of debt service payments is made dependent on the achievement of agreed benchmarks, could be examples of innovative risk sharing arrangements between the EIB and innovative companies. A more dedicated use of the RSFF funds for KET companies should be explored since the RSFF can fund companies of all sizes and come in the form of senior, subordinated, funded or unfunded (guarantees), hence offering the necessary flexibility to structure the funding to meet the requirement and debt capacity of the borrower. Fostering the Risk-Sharing Finance Facility (RSFF), to improve access to loan finance is essential, as it can have a leverage factor of 10 for public funding resources for eligible research, development and innovation activities. Likewise mezzanine finance, which combines elements of debt financing and equity participations, opens a wide spectrum of risk allocation which can be configured individually according to specific financing requirements. Framework type facilities based on the links, also through corporate venturing, of industrial leaders with their (small or medium sized) component suppliers or R&D and technology service providers can support both the creation of collaborative "hubs" and the development of agglomeration of excellence. Financing of KETs should involve the full range of EIB financing modes, including investment loans and guarantees, risk sharing (framework) facilities (intermediated financing of small and medium sized projects and promoters), investment funds (eg. funding of sector portfolios) and loan substitutes (eg. asset backed securities or structured credit risk).

The EIB should continue the rapid implementation of RSFF and introduce new financial instruments as necessary to ensure successful implementation of the Common Strategic Framework funding programmes.

Consistent with the EU priority to increase the innovation expenditure of the private sector large corporates, which account for some 80% of private sector R&D in the leading EU economies, should retain their presence in the Bank's innovation lending portfolio. Large corporates play a principal role in KETs. Their role as technology "hubs", linking SMEs in their supply chains and by out- and in-sourcing R&D and technology services is well recognised. Additionally, through the development of internal business and organisational processes and by integrating R&D with downstream manufacturing and distribution, large corporates help define standards for technological development, within their own and also in related industries, and by their size are able to lead international competition, creating jobs and wealth.

- Venture capitalists: increasing risk taking by investors in KETs.

A number of Member States have put in place fiscal incentives in order to facilitate risk taking: lower employment levies for innovative start-ups ("Young innovative companies" type programmes), tax reduction on capital revenues, etc. One idea would consist to put in place guidelines promoting more favourable and targeted measures on KETs at a European level, the Commission would evaluate the relevance of targeted tax incentives, on the type of the most promising industrial innovation in terms of growth and high added value employments. The objective will be to rapidly increase the degree of risk taking by financial institutions and investors on technological projects, up to date very limited, as shown by OECD statistics.

The creation of a pan European venture capital fund could be an answer to the low private investment level in Europe:

· Following the Innovation Union proposal to increase the flow of venture capital to high-growth, innovative companies, the European Council Conclusions of 4 February 2011 called on the European Commission to present in 2011 proposals for putting in place an EU-wide venture capital scheme building on the EIF and other relevant financial institutions, and in cooperation with national operators. This has developed from the need for increased operations within the EU to create more opportunities for venture capital (VC) investment into innovative companies.

This report proposes to put in place an EU-wide venture capital scheme building on the EIF and other relevant financial institutions, and in cooperation with national operators, while ensuring through

discussions with EIF that any fund of funds would be complementary to existing EIF activity (ongoing). We welcome efforts to improve cross-border access to finance by small and medium-sized companies supported by venture capital funds, and will engage with the Commission on this issue and any proposals it brings forward.

Background

Market failures for innovative SMEs seeking to raise capital are well documented and longstanding. These mainly relate to information asymmetries or imperfect information, which leads to a sub-optimal provision of growth capital. These market failures make smaller investment deals less attractive than larger deals as the transaction costs remain similar for the different sizes of investment. There is also a misalignment between the returns of investors and wider benefits to society.

We also know that the supply of venture capital has reduced dramatically across Europe as a result of the economic downturn. Research by the BVCA suggested that 2009 was the worst year on record for fund raising by VC fund managers which meant that resources were being focussed on shepherding existing portfolio companies rather than new investments or follow on funding. Coupled with an almost closure of the IPO markets a number of viable innovative businesses are finding it difficult to secure the external funding they need to grow.

2. Increased efficiency of European budget spending by flexible financial instruments:

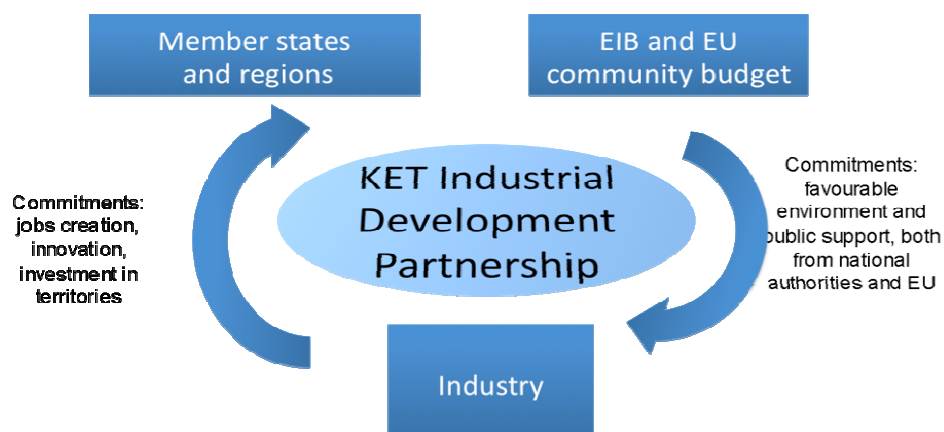
The objective is to put in place flexible procedures, adapted to the co-financing of major projects (from several hundreds of M€ to several B€) by industrials, and public authorities at regional, national and European levels.

- The need for simultaneous engagements and a faster decision making process by European and national authorities:

In the domain of major projects on product development and competitive manufacturing of KETs, the world competition between sites requires stakeholders to take decisions in a very short time. For instance, the joint commitment from industrial and public partners from the Crolles II and Crolles III projects in Grenoble have respectively been taken in 12 and 8 weeks, in the semi conductor area, and 10 weeks for the installation of Toyota in Valenciennes.

In comparison, it takes from 12 to 18 months to negotiate, formalize and finalise a European grant agreement with the European Commission. In particular, the only European tri-partite tool available, the Joint Technological Initiatives (JTIs), requires a preliminary engagement from Member States (rule of "top up"), the launching and closing of the call for proposal, selection of projects, confirmation from public support, then a negotiation phase, which in the end extends the overall process from 12 to 18 months, like for most of other European programmes.

It is therefore essential to put in place procedures allowing stakeholders to take rapid decisions along with clear commitments by each of them. This will only be possible if it is based on mutual and simultaneous commitments from industrials, regional, national and European authorities.



The monitoring of mutual commitments through quantitative indicators (investments, spending in Europe, direct and indirect jobs creation⁶) has been successfully carried out for several projects of KETs pilot lines installation, in the last few years, in Dublin, Grenoble and Dresden.

These cases show that the commitments taken through a specific contract have been successfully met by various partners. In particular, they show that the industrials having globally competitive manufacturing facilities respectively spent 500 M€, 500 M\$, and near to 1 bn€ per year to acquire equipments and materials from European companies and SMEs, which resulted in the creation of several ten thousands of jobs in Europe. It is also worth pointing out that in addition to the employment created for the specific contract in question, there is also the spin-off creation of further employment in the wider European economy that a specific contract would bring about.

- The need for simultaneous financial contributions

The objective is to put in place a procedure allowing simultaneous disbursements from the various contributors. This aspect is essential to ensure, in the practice, the continuity of technical and industrial actions, and avoid any unilateral breach of contract from a partner that would jeopardize the whole project.

The condition of simultaneous contributions must be included in the initial engagements, along with the amount of disbursements, mutual commitments concerning disbursements, and dates of disbursements.

It would be highly desirable that an integrated management of these financial operations would be carried out by one of the public partners, that would act as "coordinator" of these initiatives.

- A tripartite approach: the 'KETs Industrial development Partnerships'

A tripartite approach, facilitating the combining of private investments national and –when appropriated- regional support, and European support, is proposed for setting up "KETs Industrial Development Partnerships". Such partnerships will coordinate the actions within the "pilot lines" projects (stand alone or embedded in "globally competitive manufacturing facilities") and / or the "pilot deployment" projects.

Thought in a logic of smart specialisation related to KETs (« identifying an original and economically profitable niche for each region in term of KETs and facilitating the emergence of pan European areas of specialisation which are competitive at a global level⁷), the tripartite approach of 'KETS industrial development partnership' is largely inspired by the procedure implemented for the Structural Funds.

The European Commission (e.g proposal n° 2) would define a distinct budgetary line and allocate a fixed percentage of its budget to KETs, according to the following procedure:

The « KETs industrial development Partnership » initiative would be tri-partite:

- The proposal comes from the industrial leader,
- The proposal includes the confirmed intention of funding by the Member States (and Regions if appropriated).
- The procedure is covered within European mechanism

This procedure implies:

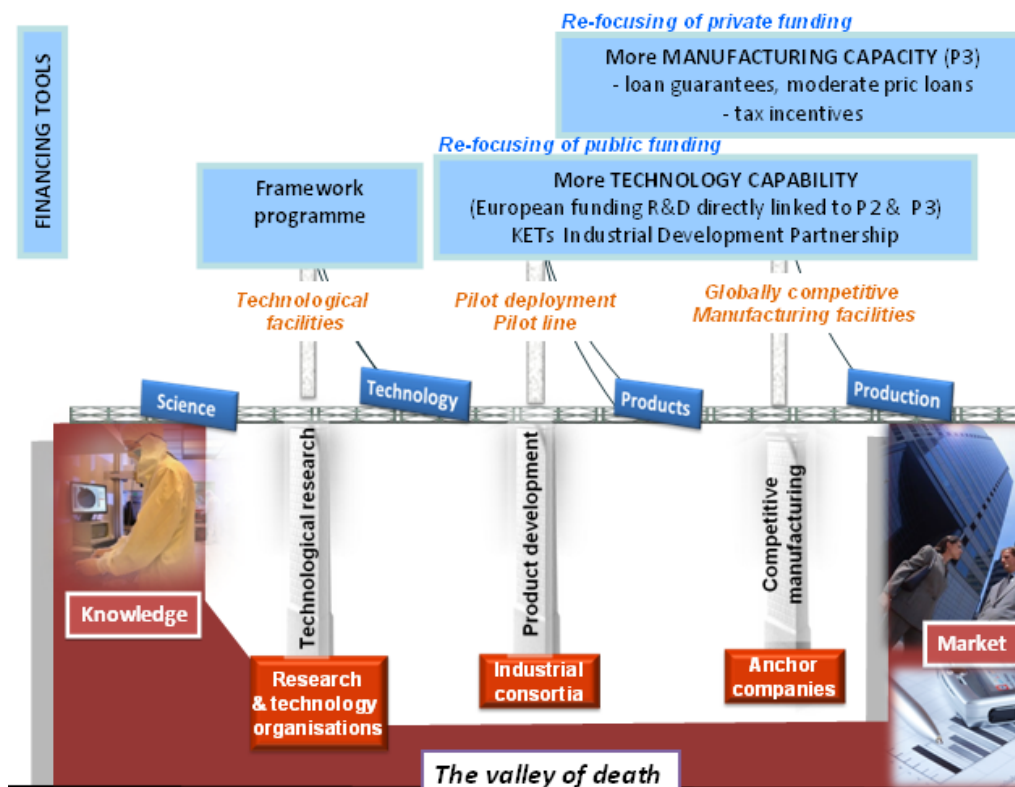
⁶ The factor of multiplication of indirect employments is 5 to 8.

⁷ Commissioner Hahn, Communication on « Regional policy contributing to smart growth in Europe 2020 », Brussels 6.10.2011.

- *Extension of the perimeter of European RDI funding programmes to pilot line and pilot deployment projects*
 - *A European Commission call for detailed specifications;*
 - *A selection procedure not relying on a simple ranking, but on a joint analysis, project by project, from the industrial leader, regional, national and European authorities ("objective based" criteria).*
 - *A contractualisation procedure based on the following principles: mutual and simultaneous commitments from Industrials, regional, national and European Authorities, simultaneous disbursement, annual monitoring of engagements through quantitative indicators.*
- Crossing of the "Valley of Death":

The HLG highlighted that two roads would simultaneously lead to the increase of the industrial competitiveness of Europe:

- **'Improving technology capability'**, which consists in accompanying each generation of new technology is public driven. KETs industrial Development partnerships are concerned. Projects of KETs development on pilot lines (embedded or not in globally competitive manufacturing facilities) and KETs pilot deployment would be concerned.
- **'Increasing Manufacturing capacity'** is public driven. Guarantees, equity, subsidised loans and fiscal measures are concerned.



Appendices : minutes of the HLG KET Expert workshop on Financial Instruments

DG ENTR, Brussels, 23 March 2011

Participants

▪ **WG Members:**

H. Gruber (Chairman of the working group, EIB), G. Crean (chairman of the Sherpa Group), R. Pelly (HLG Member, President EIF), G. Klotz (Cefic), S. Fennelly (Intel Ireland), G. Peggie (BIS, UK), W. Crasemann (German Ministry for Economics), L. Sarvantara (VTT), P. Mijlemans (Umicore), A. Hoffman (Infineon), M. Gordana (Thyia), C. Gegout (Rapporteur of the working group, CEA).

▪ **Experts:**

Giuseppe Notarnicola (ST), Donal Murtagh (Department of Finances, Ireland), Olivier Brice (Soitec, CFO), Marc Schublin (Head of Mandate Management and Product Development, EIF), Jean-David Malo (Head of Unit Financial Engineering, DG RTD, EC), Shiva Dostar (EIB), Tim Haines (Abingworth), David Frodsham (CF, CEO), Andrea Renda (CEPS), Vesa Vanhanen (DG ENTR, EC), Gerassimos Thomas (Director, DG ECFIN, EC), Uli Fricke (Triangle Venture Capital and EVCA).

▪ **EC participants:**

S. Mueller (Project Manager, DG ENTR), Helmut Ennen (DG INFISO), Nathalie Van-Neck (DG RTD).

▪ **Apologizes for absence:**

F. Geerts (Cecimo), E. Villa (ST), M. Wilkens (VDI), L. Zekian (Ministry for Industry, France), D. Carrez (Europabio).

Outcomes of the meeting:

- **SESSION 1: Demand side for financial instruments: Case studies from European Industry stakeholders on future technology and manufacturing investments scenarios.**
Chair: Grant Peggy (BIS, UK)

This first session was dedicated to the industrial perspectives. Beyond the variety of industrial sectors represented (Soitec, Umicore, ST, Intel, Bayer, Infineon), discussions enabled to raise several key issues along with potential solutions to face the bottlenecks of current EU funding mechanisms:

▪ **Context: the global competition for industrial location:**

Industry is confronted to the global competition from other locations presenting attractive conditions in other regions of the world (Asia and US mainly). Europe must therefore promote attractive financial conditions enabling to:

- attract companies in Europe: this is the case for Intel where the European site located in Ireland is in competition with other regions of the world, such as Israel, US, China, etc.
- maintain globally competitive companies in Europe: this is the case for ST in the semiconductor sector.

▪ **Solutions for a more attractive Europe:**

1. The need to extend the scope of Research, Development and Innovation (RDI) activities within the EU financial funding programmes:

European funding programmes in principle fully cover pillar 1 (technological research). However, a more active interventionist approach to finance pillar 2 (product development) and pillar 3 (manufacturing) activities is required, in order to face current challenges of global competition for location.

2. The need to enhance a "risk reward mitigation" approach:

The question raised by Industry is how to ensure local return such as job creation for instance, to the public money invested in RDI and industrialisation projects. Finally, Industry raised the importance to evolve from a "return on investment" model to a "risk reward" model. In the US for example, public support implies in return to hire and invest in the US, in order to capture the maximum of added value locally. Both the US and China have prioritised not to share risk but to reward risk on innovation costs, artificially by attractive subsidies and subsidised loans / grants. Their strategy is to expect political and societal return in the long run. Industry calls for the implementation of such measures and such a model in Europe.

3. Towards efficient funding mechanisms:

According to Industry, solutions for a successful European funding scheme should address various topics directly related to the debate on the definition of the future Common Strategic Framework for Research and Innovation Funding (CSF):

- Better accessibility to, and visibility of funds: idea of "one stop shop";
- Simultaneous EU, region and Member States disbursements: the objective would be to put in place a procedure allowing simultaneous disbursements from the various contributors. This aspect is essential to ensure, in practice, the continuity of technical and industrial actions, and avoid any unilateral breach of contract from a partner that would jeopardize the whole project.
- Compatibility of funding rules between EU, regions and Member States. For example, the Commission (DG RTD, M. Malo) has confirmed that DG RTD are currently negotiating with DG Regio, in order to replace the current rule forbidding double funding from Structural Funds and other EU sources on the same project (while allowing co-funding).
- The need for faster decision making processes. Industry strongly calls for the implementation of faster decision making processes when addressing pilot lines and globally competitive manufacturing facilities. Currently large projects in Europe must go through a sequence which includes decision from Member States, EU notification process on State Aids, alignment between the various public authorities, which collectively can take more than one year to get the final decision. Asia is far more rapid and competitive in this domain. Likewise, as shown by the example of State Aids rules, under the current notification rules, the decision making process with DG Competition (COMP) takes more than a year.
- The need for subsidised loans with an attractive pricing.
- The need to create mechanisms allowing stopping of investments / projects not delivering.
- The importance of a value chain approach: Innovation must be considered as a value chain.

4. The "anchor company" and "SMEs" approach:

As shown by globally competitive innovation ecosystems in Europe, anchor companies are the drivers of technological and socio-economic developments, as they are fundamental to support the development of a network of SMEs and suppliers. Public support schemes must therefore target both types of organisations.

➤ SESSION 2: Supply side for financial instruments: Statements from supply side stakeholders on potential funding mechanisms for KETs initiatives on product development and globally competitive manufacturing facilities

Chair: Marc Schublin (Head of Mandate Management and Product Development, EIF)

This session was dedicated to the supply side stakeholders. It was more focused on pillar 3 (manufacturing facilities), namely on the *non subsidised* part of future potential EU financial instruments for a KET initiative. The following key elements were raised during the discussions:

▪ **Context: scarce European resources**

KETs can represent a clear case for a wider use of financial instruments that provide leverage and multiply the EU budget's input, in order to overcome a situation of scarce European resources.

▪ **The proposal of raising the efficiency of EU funding schemes and re-allocating appropriate percentage of the EU budget to KET initiatives were discussed.**

1. Adapting EU financial tools:

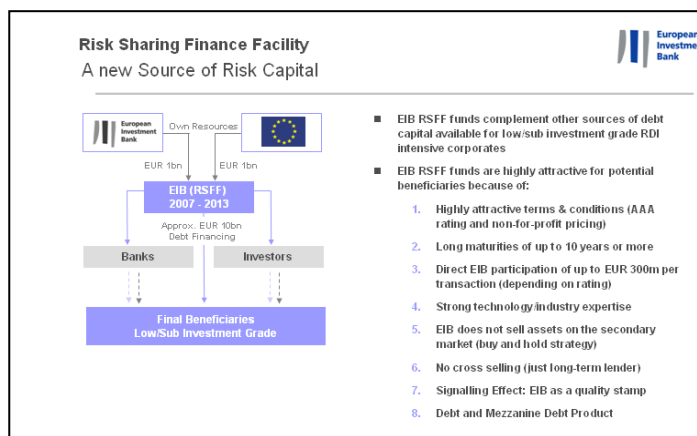
a) The EIB Risk Sharing Finance Facility.

This financial tool covers RDI financing where the Bank and the Commission share project risk, improving thereby the financing conditions for certain projects and promoters (without any grant element).

Under the current rules, the support for Innovation in the EU was allowed by the CIP, but not by the 7th Framework Programme (FP7). The current discussion on future Common Strategic Framework raises two possible options:

- A demand driven Facility addressing the demand market;
- A policy driven Facility, addressing the needs of specific sectors and societal challenges. In the context of the EU 2020, future RSFF will be more policy driven.

In the near future, the EIB and the Commission will explore the ways to diversify risks, in order to both cover more risks and support lower risk. RSFF currently targets key sectors such as ICT, energy, life sciences, RDI infrastructures, Automotive, etc. . This also includes KETs, but at the moment they can be only financed mostly by the "EIB window". The possibility of creating an explicit KET target for future RSFF, including the "Commission" window was discussed.



The future orientation of RSFF (2011-2013) will provide:

- The second tranche of the 1bn€ facility approved by the Commission, Council and European Parliament.
- Broadening the window of current activities and develop a portfolio based on financial arrangements to facilitate an increase of RDI intensive SMEs (projects < 7.5 M€)

Future RSFF (2014-2020) is expected to provide:

- A significant increase of the facility (to 5B€):
- Expansion of RSFF based on orientation 2011-2013

- Expansion of eligibility rules to cover also Innovation in the use for debt instruments.
- The Commission is also considering an increase in the risk profile
- Conversion of RSFF into a revolving fund so that reflows from investment will be added to EC contribution.
- Financing the EU 2020 challenges including the SET Plan, Digital Agenda, Innovation Union and Regional Cohesion.
- Financial volume: an average EIB financial leverage of approximately 5/6 times the level of capital provision.

b) The role of Structural Funds:

Another financial tool to finance manufacturing facilities could be to better explore the opportunities offered by Structural Funds in the financing of industrial plants (case of Umicore, M. Mijlemans) and manufacturing facilities (pillar 3). Indeed, Structural Funds have raised significant opportunities in Eastern Europe countries, through tax exemptions.

2. Re-allocating and focusing EU funding on key stages of the innovation process:

The weaknesses of Europe in financing early stage technological developments were mentioned by several speakers.

In the biotechnology sector for example, where Industry is very capital intensive and geographically concentrated, Europe is confronted with a gap in funding of early technological development stage. Significant public money is provided to support R&D, but not the early stages of commercialisation where support is needed. Germany has a good model based on the sharing of risk, UK has put in place good practices based on tax credit rates for entrepreneurs. The VC model in Europe is almost broken at the early stage. Could public private partnerships provide solution to early stage developments financial needs? Concerning guarantees, they have a role to play for capital intensive companies.

Another example of early stage funding for SMEs was given by Vesa Vanhanen (EC, DG ENTR). The EU funding scheme provided by the CIP (see presentation) focuses on early stage funding (1.1B€ for 7 years, e.g. 160M€ per year). Public funds have limited tools to cover the same spectrum:

- Loan guarantees
- VCs

In any case, there is no sectorial focus, these instruments are market driven.

3. The need for matching mechanisms:

Matching mechanisms facilitate commercial decisions, and by doing so, deployment of KETs.

- **SESSION 3: Financial Instruments solutions to implement a KET initiative in context of the European Commission's next financial perspectives**
Chair: Richard Pelly (HLG Member, President EIF)

This session was dedicated to a reflection on potential financial instruments / solutions to implement a KET initiative in context of the European Commission's next financial perspectives. The following key issues were raised:

- **Context: the need for simplification:**

1. Current state of EU financial instruments:

European Institutions currently work on future Financial Perspectives covering the post 2013 period. The draft legislation will be prepared by the end of 2011. The current EU financial instruments landscape has the following key characteristics:

- Grants remain the most important component of EU funding programmes. Less than 1% of EU funding is in the form of financial instruments such as guarantees and risk capital.
- The EU is planning to significantly increase the share of financial instruments such as loans, equity, guarantees. These instruments will be elaborated to leverage on EU resources, and raise the total volume of financing. For instance, RSFF and equity instruments to finance RDI could enhance debt financing of entities performing RDI intensive activities (companies, universities, RTOs), and cover the implementation of specific policies (such as SET Plan, Digital Agenda, etc.).

2. The need for simplification:

The objective of future Financial Perspectives is to promote a financial framework capable to:

- Avoid multiplication: with a limited number of tools, have maximum impact, with visibility across several policy areas;
- Reduce the administrative burden;
- Increase the visibility for all potential beneficiaries;

▪ Potential financial solutions to implement a KET initiative:

1. KETs should become a priority:

KETs constitute a very important pillar for EU 2020, indispensable to address the grand societal challenges. To maximise their benefit, Europe needs to provide financial support for KETs by re-allocating EU budget to KETs and recognising that KETs are a priority for Europe.

2. The EU added value: the case of Structural Funds

- For national-level instruments, ways may be sought to incentivise Member States to set up and participate in innovative financial instruments.
- To avoid competition between instruments at EU and regional level, the national/regional instruments should not offer better terms than the EU ones.
- Today, the allocation of Structural Funds is decided by Member States, which results in the financing of various activities (from innovative SMEs, to training, or road building, etc.).
- In the context of the EU 2020 strategy, the Commission intends to align the Structural Funds with the objectives of the EU 2020, and to develop a smart specialisation strategy. This would entail for the Commission to negotiate the priorities with regions in the framework of a contract. By doing so, Member States would therefore be obliged to pursue the EU 2020 objectives. They would also have the possibility to create in each Member State national level instruments financed by Structural Funds, such as VC scheme. However, this proposal will have to overcome the refusal from some Member States considering that regional and national authorities are in a better position to identify the appropriate projects and activities to be financed in regions.

3. Challenges for European VC industry:

Governments should attract more private capital. The challenges of private capital depend on the type of RDI projects:

- For large pilot lines, large investments capacities are required;
- For smaller undertakings funding, the VC industry is confronted to a challenge of scale. According to EVCA, only a third of financial needs is funded by VC in Europe.

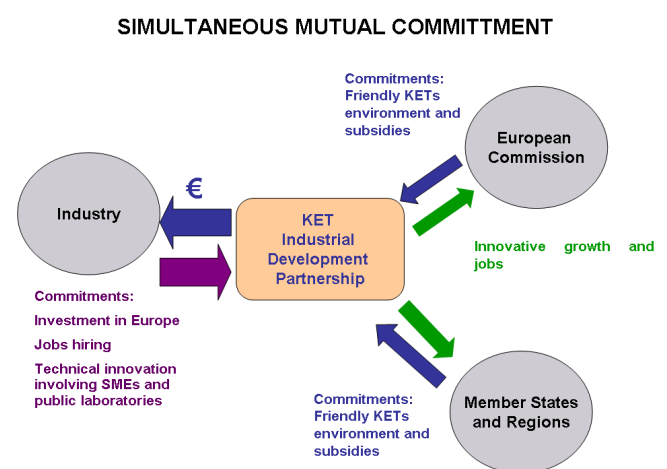
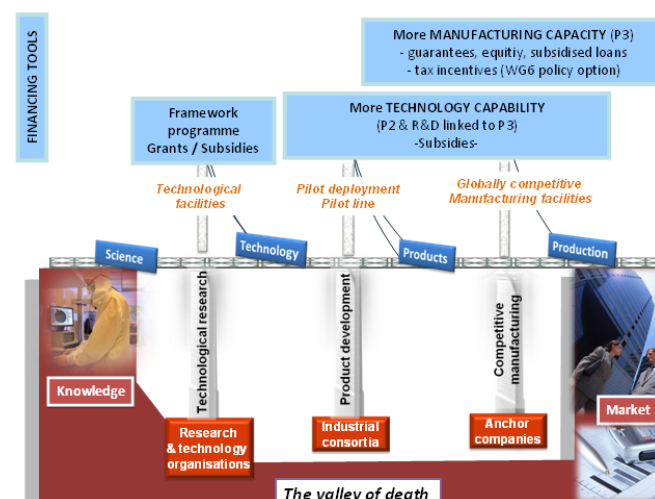
4. Tax credit schemes:

The working group members decided to transfer the responsibility of this topic to the working group on Policy Option (WG6, chaired by Fergus Harrandence).

➤ Wrap up and closing remarks

This final session was devoted to seek consensus on the key following proposals:

1. Towards dedicated financial instruments:



KETs Industrial Development Partnerships

2. Towards new funding mechanisms

1- Selection of KETs for a new initiative allowing to **increase the quality** of European public spending budget.

2- Re-allocation of some resources available in the EU budget for a KET initiative acknowledging the priority of KETs for future EU policies to address the EU 2020 challenges through:

- The creation of a distinct box for KETs through an easy and rapid procedure
- The definition of a target as a fixed percentage of the European R&D budget.

3- A new financial scheme using a tri-partite financing tool, the "KETs Industrial Development Partnerships", extending the scope of RDI subsidies to "pillar 2" (pilot lines) and "R&D in pillar 3" issues (embedded pilot lines), based on the following principles:

- Call for proposals with detailed specification type;

b) Mutual commitments between Industry, region (s), Member State (s) and European Union

c) Use of objective based indicators with special attention to results (market share, jobs creation) and value chain criteria for the evaluation of the projects.

4- Tax incentives and subsidized loans to address “pillar 3” issues.

Selected participants have agreed to provide additional elements to the proposals by written contributions on

- venture capital,
 - comparisons between US and EU financial support to KETs,
 - track record of EIB funding for KETs ,
 - harmonisation of regional and national funding conditions, including simplification of state aid rules.
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