



Mapping Technology Infrastructures: promoting the access of SMEs to Innovation

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European Commission**

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What are Key Enabling Technologies?

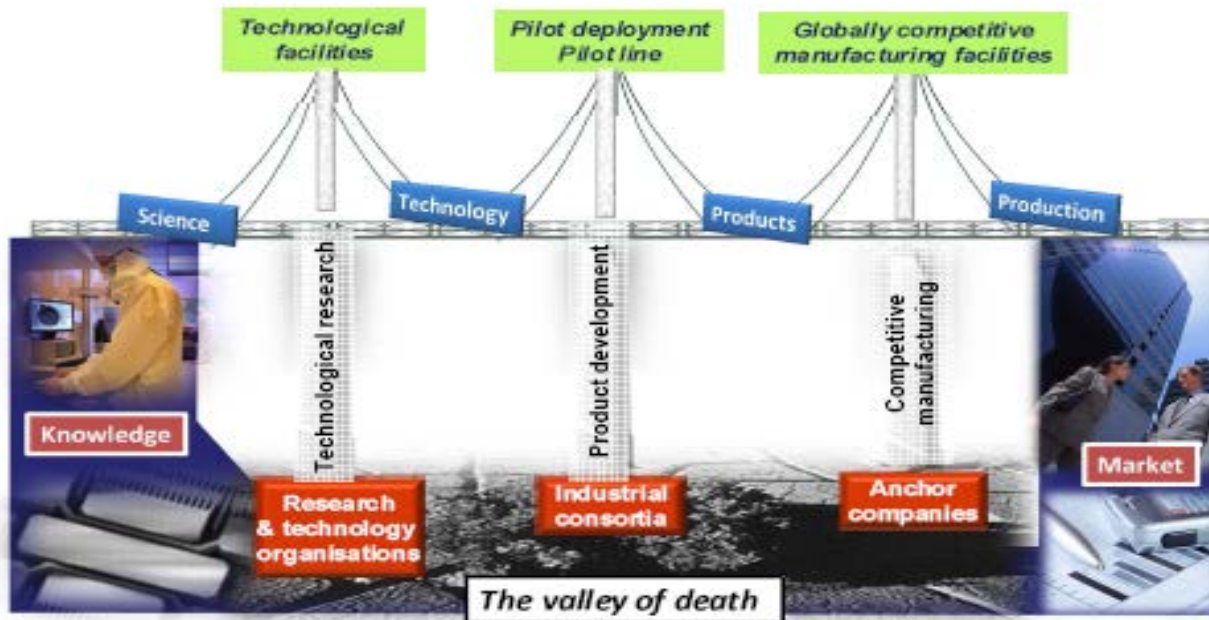


- Innovative technologies
- Driving competitiveness and growth opportunities
- Cut across many sectors
- Contributions to solving societal challenges

- Micro-/nanoelectronics
- Photonics
- Nanotechnologies
- Advanced Materials
- Industrial biotechnology
- Advanced Manufacturing

Problem Analysis: the "Valley of death"

European « three pillars bridge » to pass across the « valley of death »



- ✓ Europe is strong with regard to both ends of the value chain
- ✓ There is a gap between the technology base and the manufacturing base
- ✓ We need to add product development (e.g. demonstrators, pilot lines) and competitive manufacturing to the technologies



Adaptation of EU instruments and policies in support of KETs deployment

- **Horizon 2020:** Allocation of dedicated budget (€ 6 bn) to KETs; rebalancing towards pilot lines and demonstrator projects; promotion of cross-cutting KETs activities (30% of budget); exploitation of results
- **ERDF:** Priority for KETs; financing up till first production (TRL 9); combined financing; KETs integration in regional smart specialisation strategies (60% of regions)
- **European Investment Bank:** MoU agreement with the EIB (+22% EIB loans in 2013/2014)
- Modernisation of **state aid rules** to sustain EU growth (including IPCEI Communication)
- **COSME:** policy support

Coordination of EU and national policies to achieve synergies

- **Synergies with national and regional industrial innovation policies – Member States Group on KETs**

Dedicated governance structure to ensure sound implementation of the KETs strategy

- **External advisory group for KETs - the KETs High-Level Commission Expert Group**

Mobilisation of trade instruments to ensure fair competition and a level international playing field

- The Commission strives to guarantee:**
- Level playing field
 - A market free from distortions
 - Reciprocal agreements
 - Compliance with WTO and EU laws

Remaining challenges

- **Further implementation and consolidation of current policy measures**
- **Facilitating the access of SMEs to KETs technology platforms**
Triggering innovation of SMEs and strengthening European technological infrastructure
- **Elaboration of Important Projects of Common European Interest**
Strengthening the EU competitiveness of industry against non-European competitors and re-industrialising the EU.
Clarification of eligibility and compatibility criteria for notification under Art 107.3.b TFEU (IPCEI Communication by the Commission): potential tool for the implementation of projects of European interest requiring public support.
- **Skills for KETs**
Promoting multidisciplinary skills for KETs (technical and non-technical skills)
- **Use of trade instruments to ensure a level playing field for KETs**
Addressing the imbalance in transfer of technology.
Using the EU trade policy to level the playing field (beyond defensive instruments)

KETS HLG:

Recommendations of special
interest for industrial policy



- Launch four multi-KET pilot line initiatives on strategic industrial areas (smart structures, embedded energy, high-performance production and innovative industrial bio-processes) with support of Commission, Member States and regions (recommendation n° 2)
- **Pro-actively support specific actions to promote and enable pan-European access for SMEs to European KETs technology platforms** (recommendation n° 5)
- Develop KETs skills, including in particular the launch of the KIC on Advanced KETs-enabled Manufacturing in 2014 and including an increase of the share of ERC budget dedicated to technological research excellence (recommendation n° 7)

Specific target for SME's



Problem statement

KETs offer huge opportunities to SMEs.

- **However, SMEs have difficulties in accessing organisations/platforms which provide technological services to industries due to limited human resources, financial capacities or lack of awareness**
- **The existing offer from EU technology platforms can be fragmented and sometimes insufficient to cover all needs.**

Specific actions to promote and enable pan-European access for SMEs to European KETs technology platforms

Demand Side (SME)

SME instrument (Horizon 2020) can cover costs related to pan-European access for SMEs to technology platforms

⇒ Phase 2: Demonstration activities

(prototyping, piloting innovative processes, products and services)

Supply Side (KETs technology platforms)

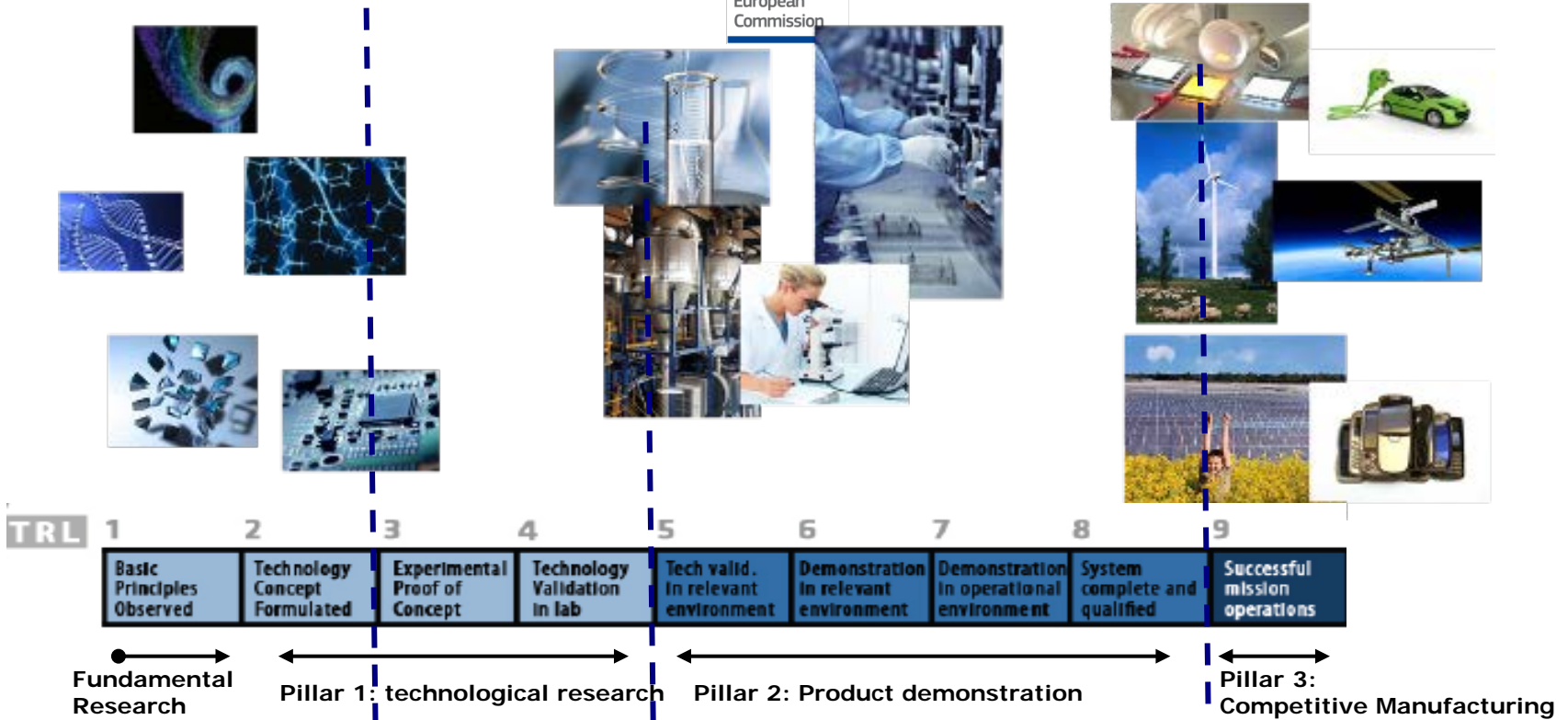
- Analyse state of play on KETs Technology Platforms offer (via COSME):
 - Inventory of European KETs technology platforms
 - Web portal on KETs technology platforms for SMEs
 - State of play of cooperation
 - Recommendations on streamlining the offer to the needs of SMEs
 - Follow-up via COSME and Horizon 2020 being explored



Promoting the Pan-European access of SMEs to KETs Technology Platforms

In January 2014 DG ENTR has launched a new initiative aiming to promote the Pan-European access of SMEs to KETs Technology Platforms notably by:

- I) Establishing an inventory of European KETs Technology Platforms, which provide to industry (and especially to SMEs) expertise and technological services.
- II) Analyzing the state of play of cooperation :
 - between KETs Technology Platforms
 - between KETs Technology Platforms and SMEs



1 → **KETs TP are active in these TRLs**

2 → **KETs TP provide services in**
 - at least one of these TRLs -
 to industry, incl. SMEs

3 → **- in a KET**



I) Inventory of European KETs Technology Platforms

Objectives:

- **Promote the access of SMEs to the services and infrastructures** of European KETs Technology Platforms by raising awareness of SMEs about EU's existing facilities
- **Foster collaboration between KETs Technology Platforms** by providing them with a detailed insight of the European KETs TPs landscape.

The inventory will be published through a web portal in the first half of 2015.

I) Inventory of European KETs Technology Platforms

Draft website





I) Inventory of European KETs Technology Platforms

Example:

BIORUUKKI Pilot plants for bioeconomy, circular economy and cleantech

General

Upper Organisation

VTT and Aalto University

Type

Research Center

Main Competences

Comprehensive pilot scale R&D infrastructure for bio, process and forest technology with 9 pilot facilities for the whole value chain of bioeconomy, circular economy and cleantech. The pilot facilities include Fermentation and bioprocesses, Food processing, Biomass processing and fractionation, Textile fibre spinning, Biomass gasification and fast pyrolysis, Process chemistry, Plastics processing, Fibre and foam web production, and Roll-to-Roll coating. The pilot plants have profiled as leading integrated facilities to refine biomass-based raw materials to value added products. Pilot plants offer development, scale-up and custom manufacturing services for many types of customers, from large international corporates to emerging domestic SMEs. The latest development of VTT pilot plants is the new Bioruukki Pilot Centre with focus to utilise biomass processing, thermochemical and green chemistry platforms to produce bio- and recycling based fuels, chemicals and materials.

Technology Readiness Levels



Market Sectors

- Chemical industry
- Consumer goods/products
- Energy
- Environment
- Food
- Production technology (machinery / equipment / automation)
- Textile
- Construction & building sector
- Measurement

I) Inventory of European KETs Technology Platforms

KETs

Key Enabling Technologies

- Nanotechnology
- Advanced materials
- Advanced manufacturing technologies
- Industrial biotechnology

Location

Address

Biologinkuja 7
02150 Espoo
Finland

 [view in Google maps](#)

<http://www.vttresearch.com/>

Services

Weblink of Services

<http://www.vttresearch.com/services/bioeconomy>

Description of Services

- Scientific & technological
- Study / initial design / Simulation
- Proof of concept / Lab testing of basic experimental set-up/ Characterisation
- Component/ breadboard / process development & testing
- Prototyping (integrated system/ sub-system) development & testing
- Pilot line / demonstration line / preseries
- Product validation / certification

I) Inventory of European KETs Technology Platforms

Infrastructure

Weblink of Infrastructure

<http://www.vttresearch.com/services/business-essentials/pilot-plants-and-r-d-infra>

Description of Infrastructure

The pilot facilities include Fermentation and bioprocesses, Food processing, Biomass processing and fractionation, Textile fibre spinning, Biomass gasification and fast pyrolysis, Process chemistry, Plastics processing, Fibre and foam web production and Roll-to-Roll coating.

Trainings

Trainings available

no

Contact

Weblink of SME Contact

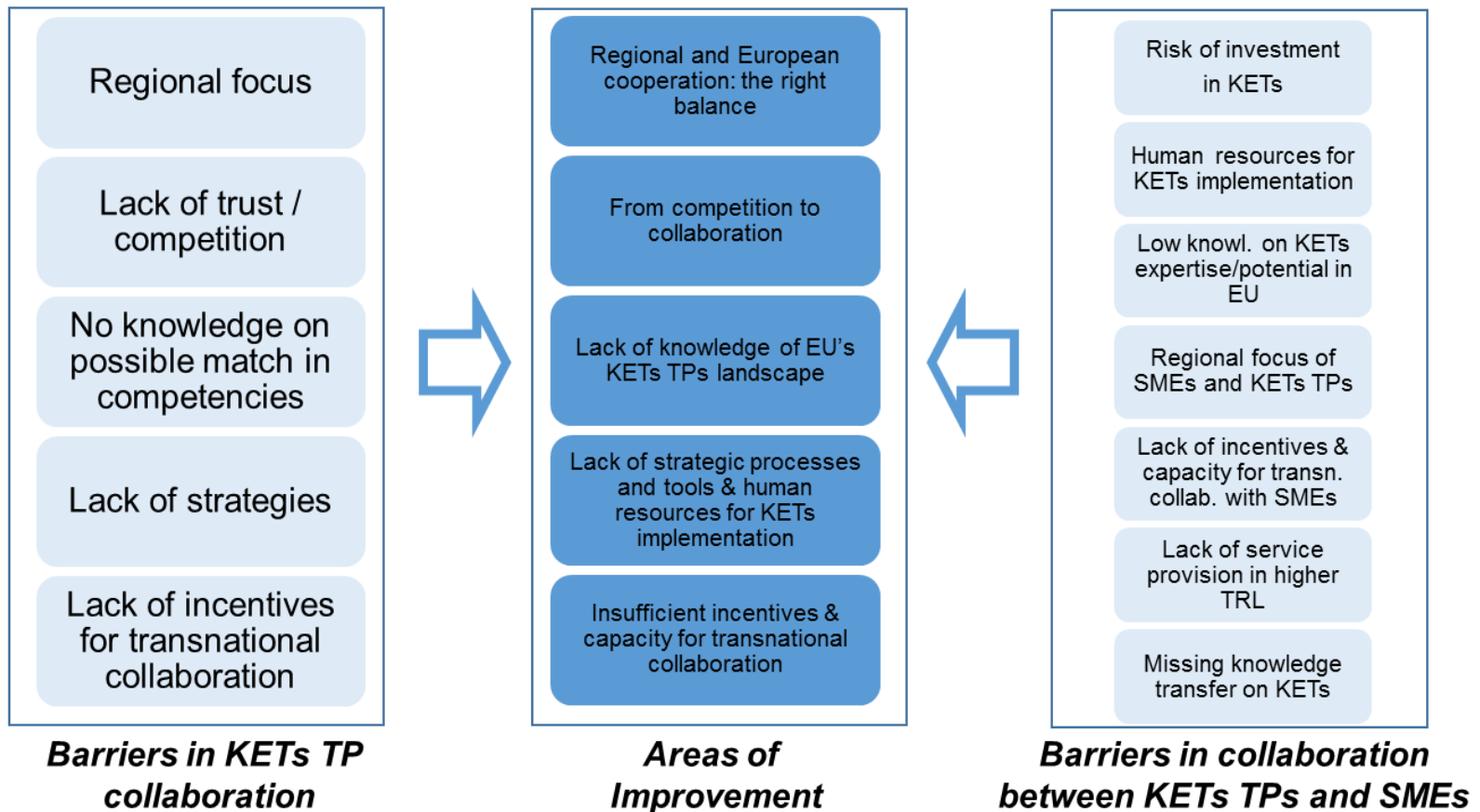
<http://www.vttresearch.com/services/business-essentials/pilot-plants-and-r-d-infra>

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This is the BNE ombud person

II) State of play of cooperation between KETs Technology Platforms and SMEs





Next step: a possible conceptual approach to stimulate the multi-KETs innovation capacity of SMEs

Implementation through COSME and /or Horizon 2020:
good practices and gap analysis in innovation support activities with a view to **tailoring one-stop-shop actions to SMEs:**

- Create KETs "one-stop shops" gathering several TPs (e.g by KET and/or application area)
 - > Networking of European KETs technology platforms
 - > Focus on technology and organizational support



Further info:

http://ec.europa.eu/growth/industry/key-enabling-technologies/index_en.htm

Thank you

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