



Horizonte 2020

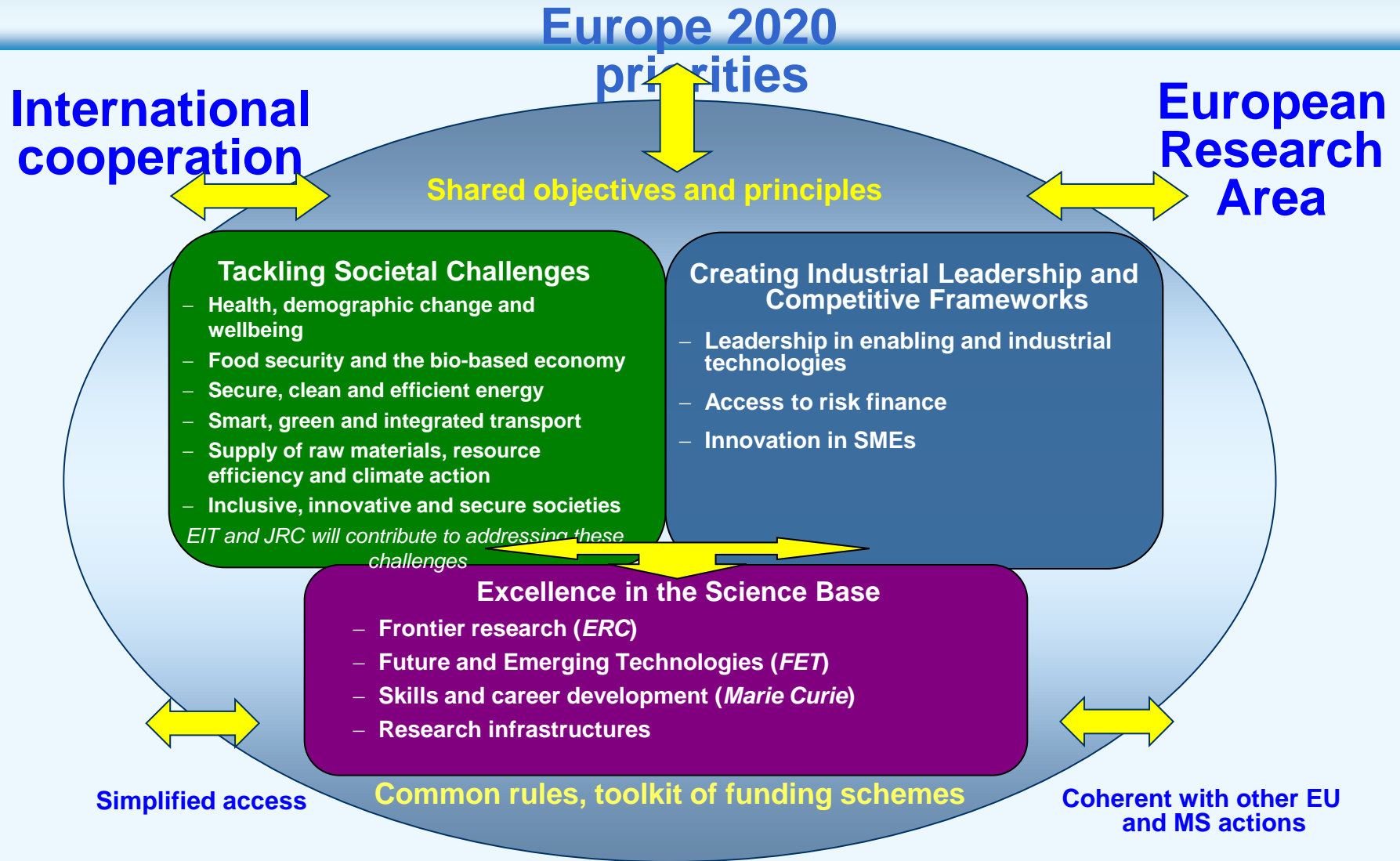
Programa Marco de Investigación e Innovación (2014-2020)

Key Enabling Technologies (KET)

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Objectives and structure



Liderazgo Industrial en H2020 20.280 M€

Liderazgo en Tecnologías Facilitadoras Industriales

15.580 M€ (de los cuales 500 para el EIT)

Tecnologías de la Información y la Comunicación

Nanotecnologías

Materiales Avanzados

Fabricación y Procesos Avanzados

Biotechnología **575 M€**

Espacio **1.737 M€**

8.975 M€

4.293 M€

*** 6.663 M€
KETs**

Acceso a financiación de riesgo 4.000 M€

Innovación en las PYME 700 M€

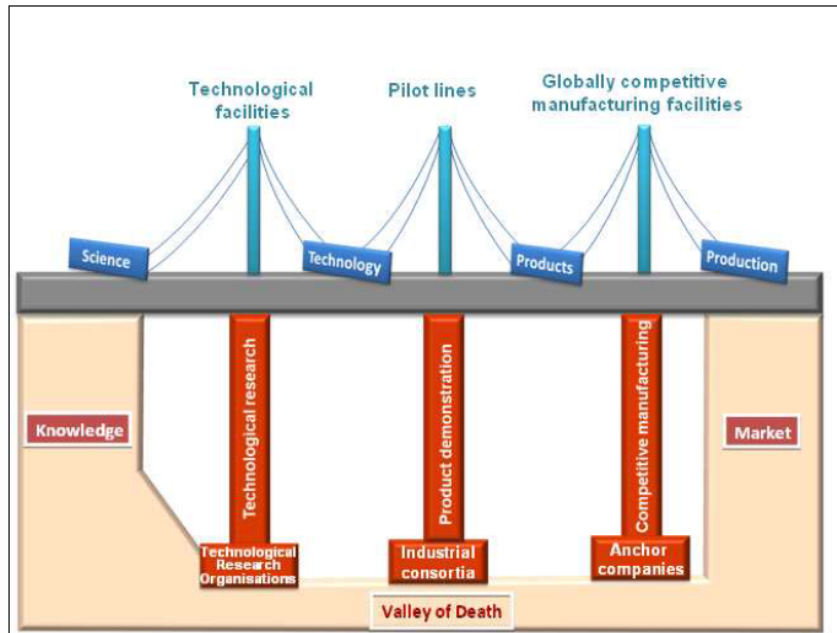


Figure 8: A European integrated initiative to pass through the KETs valley of death

The HLG has identified the major difficulties EU has in translating its ideas into marketable products as a "valley of death".

To cross this valley, it recommends a strategy comprising three pillars:

- A pillar focused on technological research
- A product demonstration pillar focused on product development.
- A production pillar focused on world-class, advanced manufacturing.

By focusing on these key stages of the innovation chain, the HLG proposals can **trigger a virtuous cycle**, from knowledge generation to market flow with feedback from the market to knowledge generation support, thereby **strengthening economic development in Europe**.

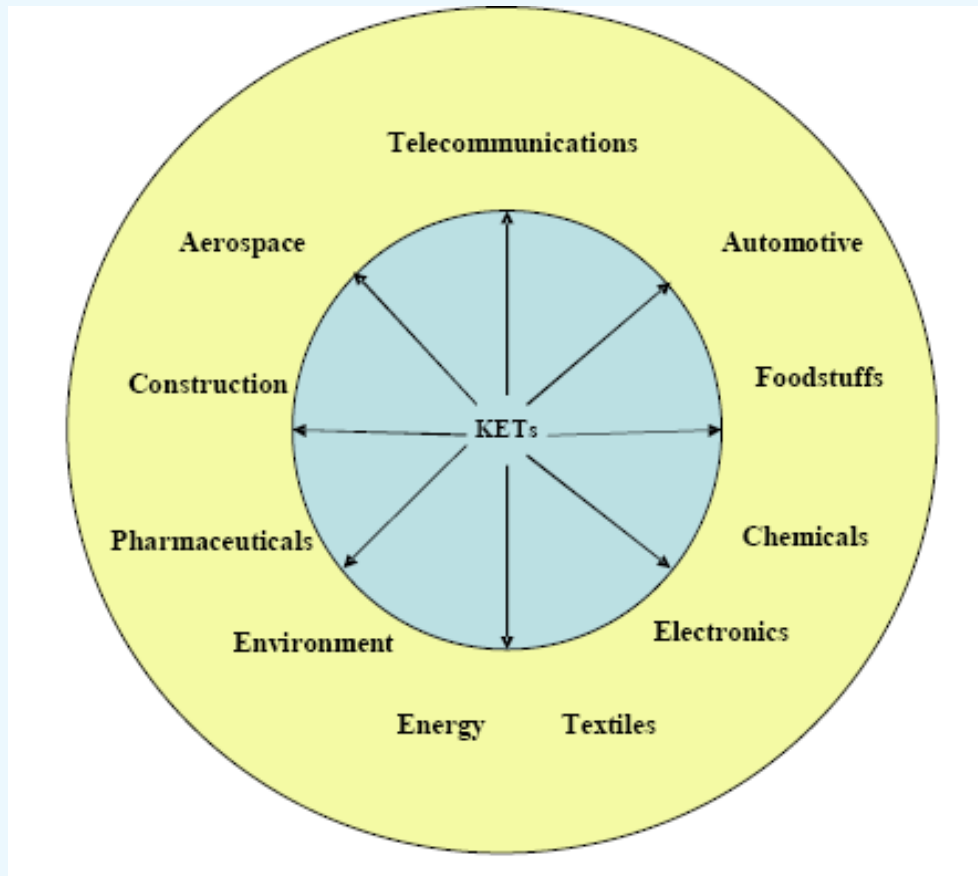
- Characteristics:
 - Knowledge-intensive
 - Associated with high R&D intensity
 - Rapid innovation cycles
 - High capital expenditure
 - Highly skilled workforce
- KETs enable process, goods and service innovation across the economy and are of systemic relevance
- KETs are multidisciplinary
- KETs can assist technology leaders in other fields

- KETs enable producers to use labour, capital, energy and other inputs more efficiently → increase productivity
- Open up new markets
- Scale of the effects on productivity from a KET will depend on
 - The speed and breadth of its diffusion across sectors and users
 - To what extent its use give rise to network effects
 - How mature it is (technological applications, innovative solutions)

Competitiveness in 6 technologies:

- Nanotechnology
- Micro and nanoelectronics
- Industrial biotechnology
- Photonics
- Advanced materials
- Advanced manufacturing technologies

It is the applications of KETs that will create jobs, growth and wealth



EU approach to KETs: a long-term research policy and supply of skills

- Patents do not automatically lead to applications – KETs need to be applied in order to have impact
- Each KET needs a competitive manufacturing base in Europe
- Integrated, coordinated approach to KETs needed, linking actors from various policy domains at local, regional, national and international levels
- Interaction between research and development, manufacture and application is needed, combined with policies promoting KET skills by means of cross-disciplinary higher education and training.



Muchas Gracias por su atención

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