

Key enabling technologies

New impulses for competitiveness and innovation?

ESF-ESA “Forward Look” Techbreak
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« ICT for Competitiveness and Industrial Innovation »



European Commission
Enterprise and Industry

The KETs Initiative

The KETs Communication

- Despite good R&D capacities in KETs, the EU is less successful in **capitalising** on these results.
- A more **strategic approach** is required to deploy these technologies in the EU.

Communication on Key Enabling Technologies – Sept 2009

- Identifies the KETs that strengthen the EU's industrial and innovation capacity to address the societal challenges ahead
- Proposes a set of policy measures to improve the related framework conditions.

Importance of KETs on the EU policy agenda

Europe 2020 and its flagship initiatives



Key Enabling Technologies



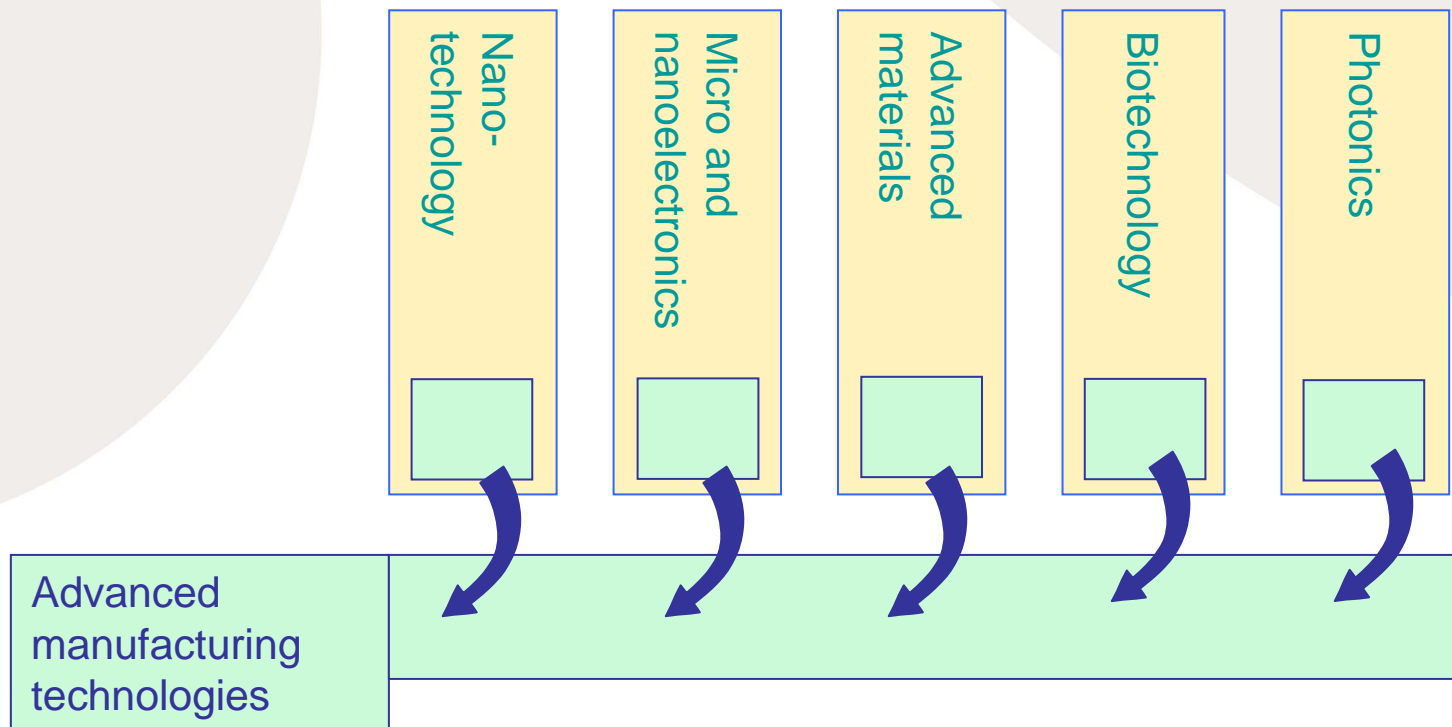
Digital Agenda
1001100101011101110000100 2010-2020
for Europe

- Nanotechnology
- Micro- & Nano-electronics
- Photonics
- Advanced Materials
- Biotechnology
- Advanced Manufacturing Systems

An Industrial Policy for the Globalisation Era

Selecting Europe's Key Enabling Technologies

Five Key Enabling Technologies + 1



Performance Indicators to select KETs

Initial selection

Screening of the common high-tech areas at Member State-level

Economic criteria

Economic Potential

- GDP contribution
- Employment
- Market Growth
- Systemic relevance

Value adding enabling Role

- General Purpose Technology
- Innovation driver
- Productivity driver
- Spill-over effects

Technology-Intensity

- R&D-Intensity
- Innovation cycles
- Know-how intensity
- IPR/ Patenting
- High-skill ratio

Capital Intensity

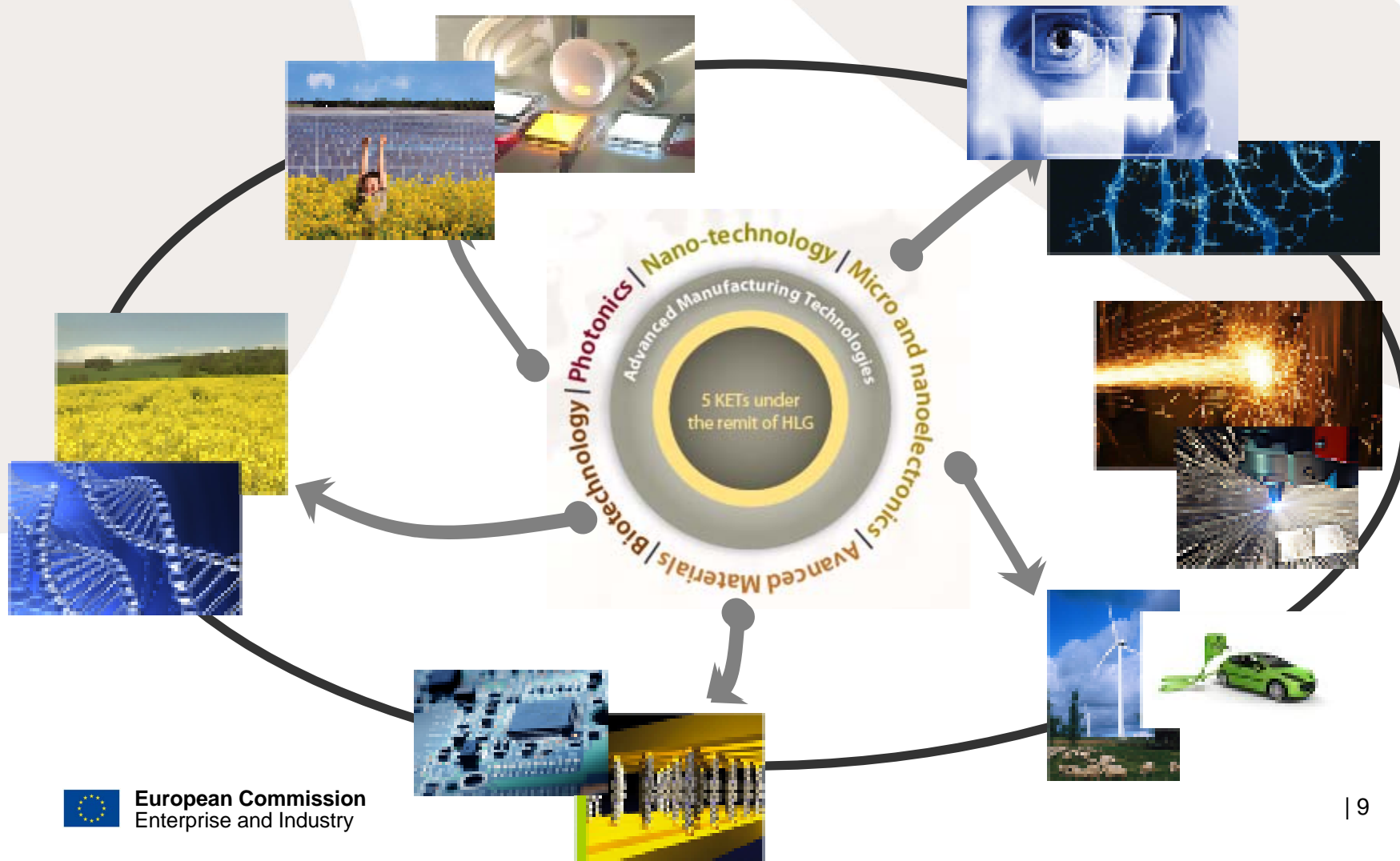
- Initial investments
- Capital expenditure/ Production costs
- Amortisation rates
- Investment per employee

Based on this assessment, five key enabling technologies +1 were selected

KETs and Innovation

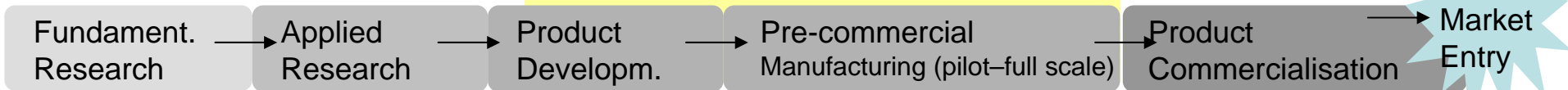
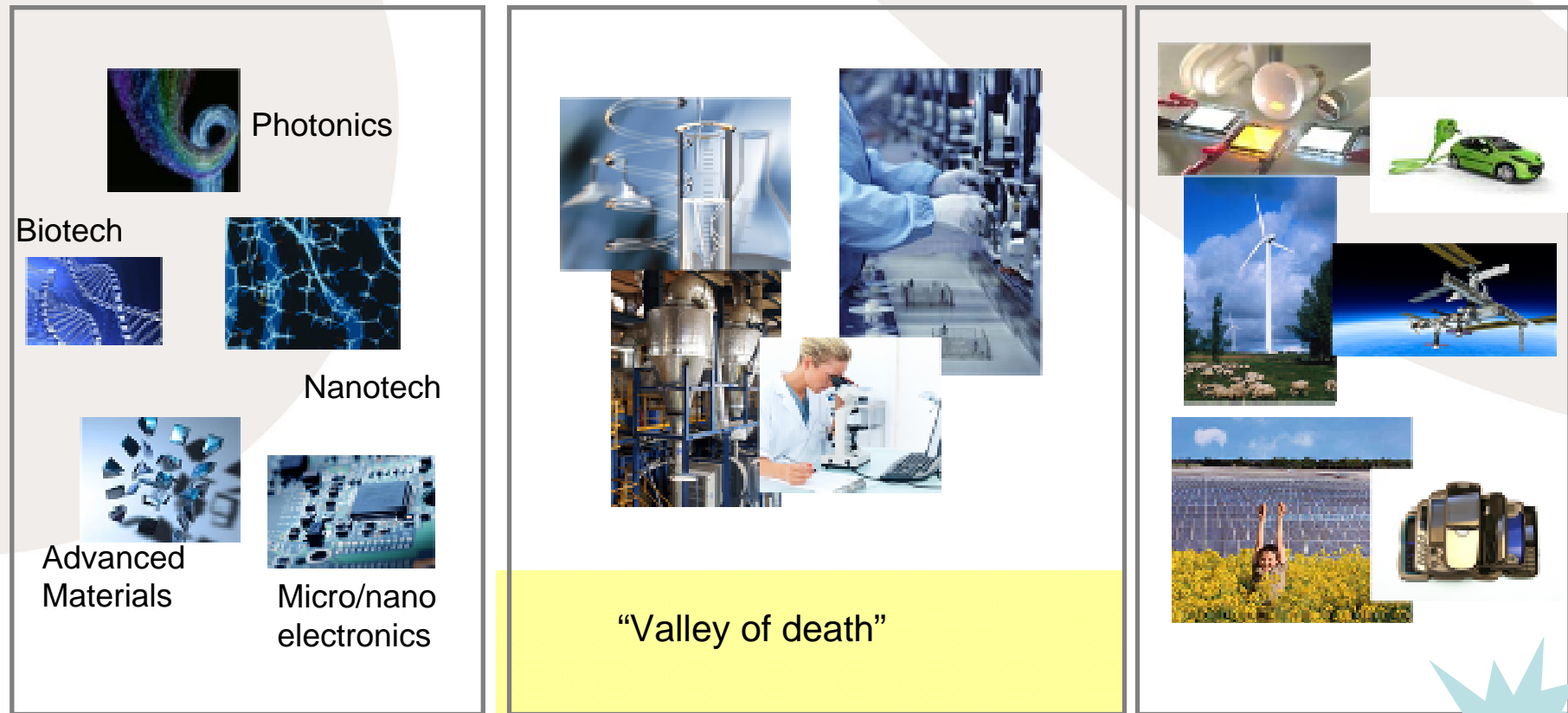
Key Enabling Technologies

The basis for product solutions to address societal challenges



Promoting the industrial deployment of KETs

From invention to the market: the innovation value chain



The High-Level Expert Group on KETs

High Level Expert Group on KETs

27 High Level Group members
+ Sherpa Group
+ Technology-specific Working Groups

Mission of the KETs HLG

1. To assess the competitive situation of the relevant technologies in the EU with a particular focus on **industrial deployment** and their contribution to address **major societal challenges**;
2. To analyse in depth the available **public and private R&D capacities for KETs** in the EU;
3. To propose **specific policy recommendations** for a more effective industrial deployment of KETs in the EU.



The HLG's composition

27 members nominated in a personal capacity
with the following composition:

President

Industry

Research

Member States

Others

- 14 representatives of the relevant European industries (5 KET areas; carbon capture and storage; advanced manufacturing systems)
- 3 representatives of downstream industries.

- 4 representatives of the applied research community (RTOs)

- 3 representatives of Member States, which have strong R&D and industrial capacities in KETs.

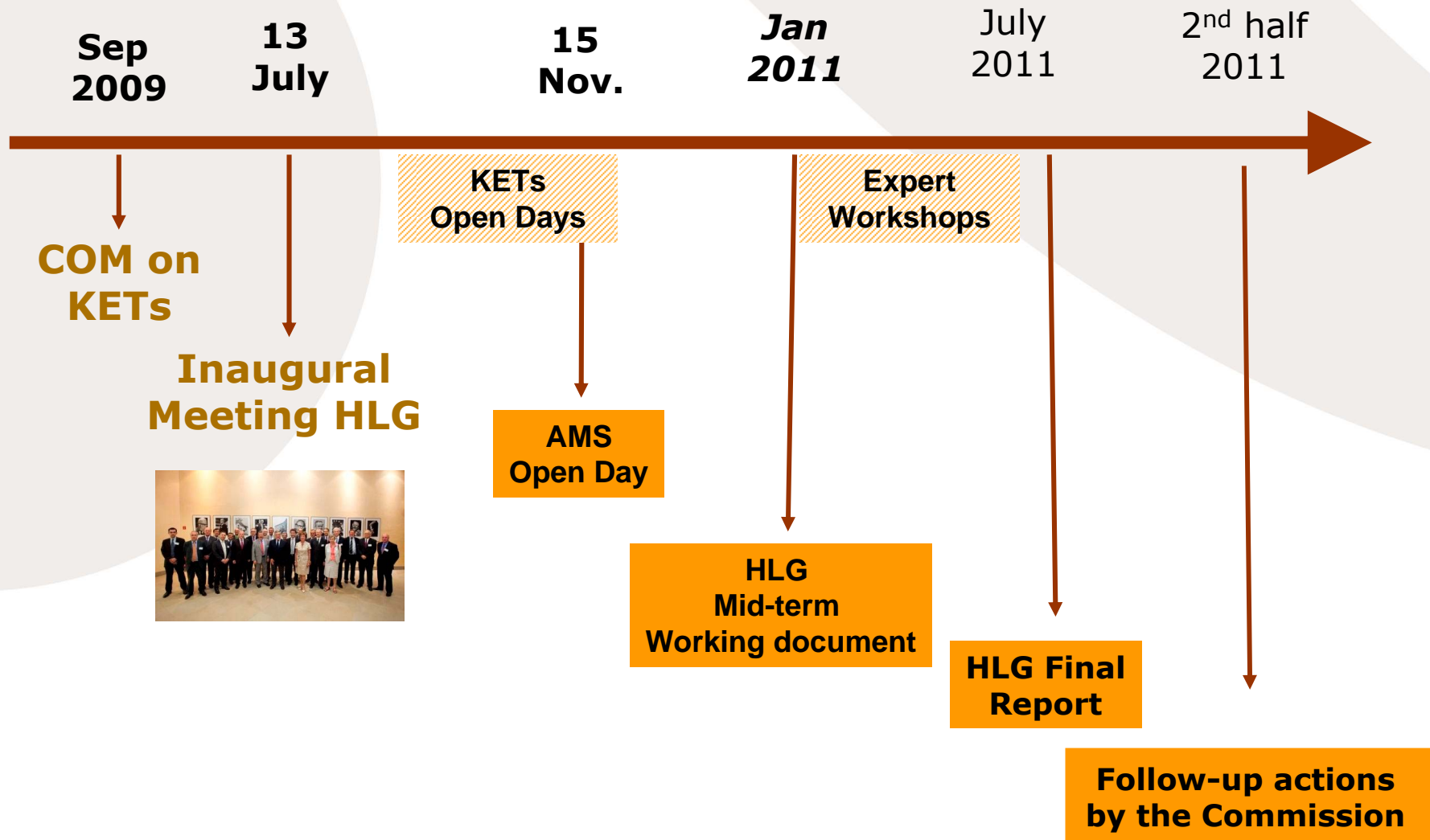
- 1 representative of the EIB with experience in venture capital.
- 1 representative of SMEs

Focusing on policies for an effective industrial deployment of KETs

	Nano-technology	Micro and nanoelectronics	Advanced materials	Biotechnology	Photonics	Advanced Manu- facturing Systems
Policy framework conditions						
<i>Publicly supported innovation programmes</i>						
<i>Technology transfer and supply chains</i>						
<i>Lead Market initiative</i>						
<i>Deployment of KETs and Climate change</i>						
<i>Joint strategic programming</i>						
<i>State aid policies</i>						
<i>Public procurement</i>						
<i>IPR and Industrial property</i>						
Promising pilot and demonstration projects						
<i>Demonstration projects</i>						
Financing instruments						
<i>Financing and Venture capital</i>						
Skills, higher education and training						
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Co-operation outside EU						
<i>Enhanced international cooperation</i>						
<i>Trade policy</i>						

Policy Areas

What's next



State of play: *KETs Open Days & mid-term document*

KETs OPEN DAYS
- Micro/Nanoelectronics-
October 18, 2010

KETS OPEN DAYS ON
Advanced Materials
25 October 2010
European Commission, Madoou Tower, Place Madoou, 1, 1210 - Brussels
HIGH LEVEL GROUP ON KEY ENABLING TECHNOLOGIES — OPEN DAYS

« The development of NANOTECHNOLOGIES in and from Europe for more societal benefits »
27 October 2010 — Charlemagne Conference Center, Brussels

KETS OPEN DAYS
BIOTECHNOLOGIES
5 November 2010
"Mastering Innovation & shaping Europe's future"
Borschette Center, Rue Froissart, 36, 1040 Brussels

KETs Open Day
- Photonics
10 November 2010

KETS OPEN DAYS ON
Advanced Manufacturing Systems
15 November 2010



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