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Transatlantic Research, Technological Development and Innovation (RTDI) Cooperation of Companies

Accelerating EU-US business collaboration in health/e-health Research & Innovation: Opportunities, Barriers and Best Practices

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Technology Innovation Cycle from Basic Research to the Market

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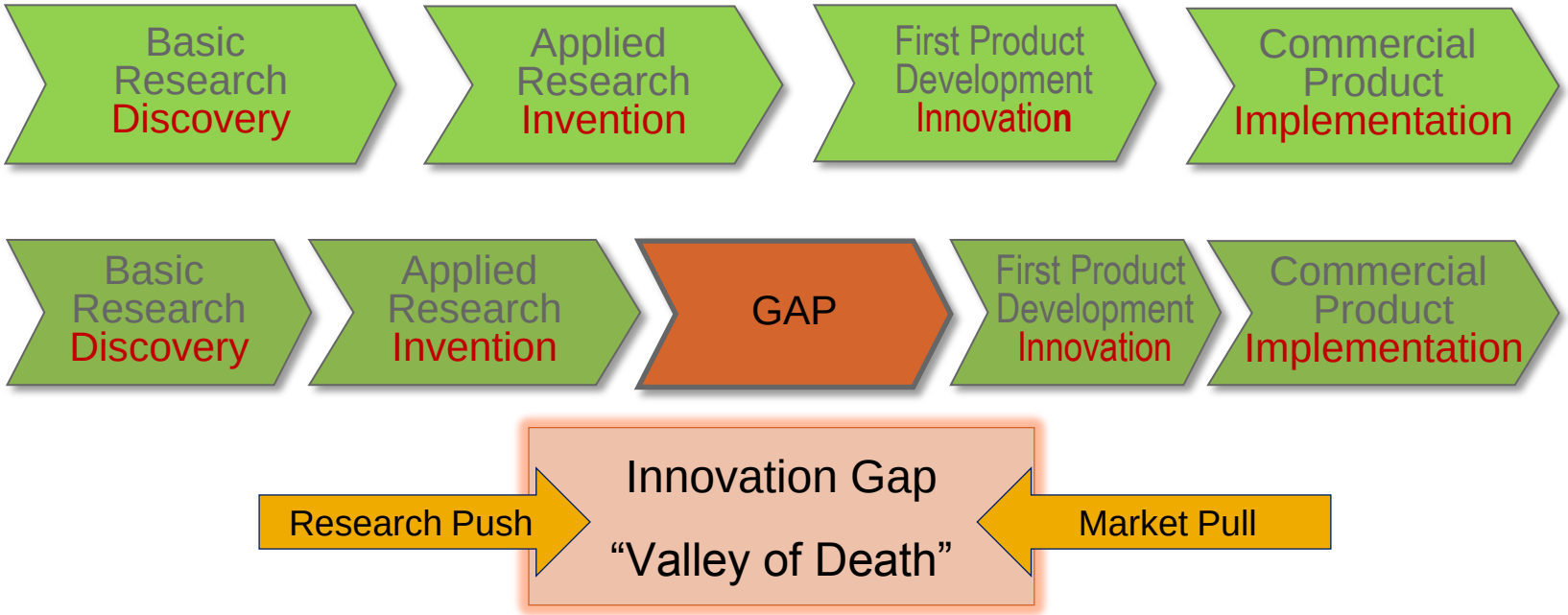
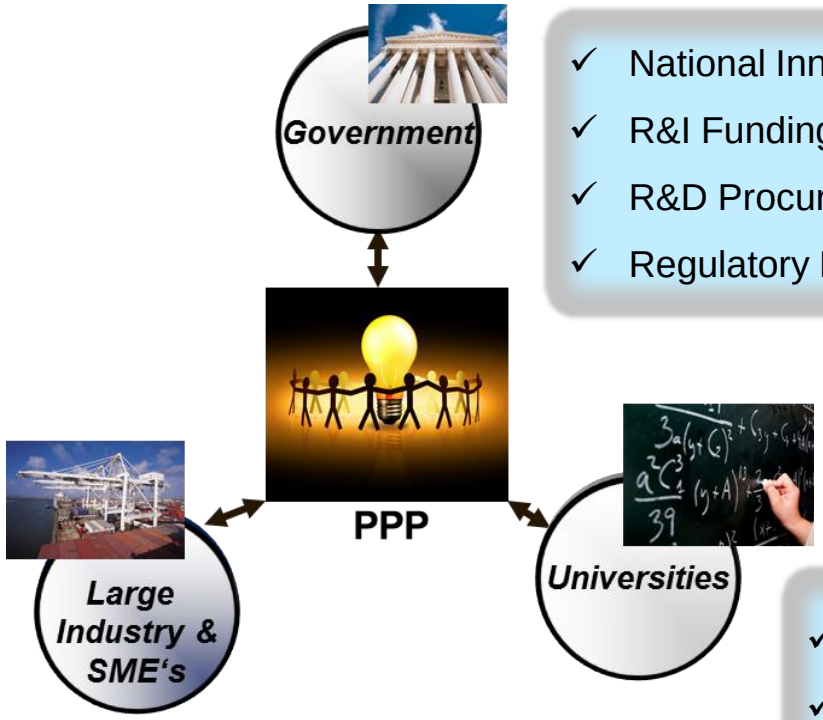


Innovation Happens When Inventions are Transferred to Market

How can **Co-Innovation** Eco-System Enable Successful Transfer of **Research Results** into **Breakthrough Innovations**?

Co-Innovation Public Private Partnerships



- ✓ National Innovation Policy/Agenda
- ✓ R&I Funding
- ✓ R&D Procurement/Infrastructure
- ✓ Regulatory Barriers

- ✓ Basic and Applied Research
- ✓ Develop Intellectual Capital
- ✓ "Ivory Tower"
- ✓ Spinoffs/Tech Transfer

- ✓ Applied R&D
- ✓ Market Development
- ✓ Implementation
- ✓ ***Impact:Economic,Social***

Public Procurement of Innovation

- Public Procurement of Innovation (PPI) is defined as the **purchase of innovative** products, services or processes through public demand with the aim to stimulate commercialization of research
  - improves the **performance** and **functionality** of public services
  - solve important **socio-economic** challenges, job creation, economic development

- In the EU this purchase might need to be preceded by **R&D** in order to accelerate innovation and prepare a future commercial purchase
  - this exploratory phase is called Pre-commercial Procurement **(PCP)** of R&D services

- Example - 2014-2015 Horizon 2020 **(~ € 80B)** budget in support of PCP/PPI: **€ 130-140 million**
  - Nine areas have calls to co-fund PCPs (1 in ***e-Health***, 6 in ICT, 1 in security, 1 in infrastructure)
  - Six areas have calls to co-fund PPIs (1 in ***e-Health***, 3 in ICT, 1 in Transport, 1 in infrastructure)

- Example - U.S. agencies and departments funding R&D procurement projects are also the beneficiaries of the results and they become *early adopter* customers, **($Billions**)
  - **SBIR/STTR**: Stimulate technological innovation, Increase private sector commercialization of federal R&D and Increase small business participation in federally funded R&D (**$2.5B)**
  - Broad Agency Announcements **(BAA):** Department of **Health**, **Defense** (Defense Advanced Research Projects Agency), **Energy** (Advanced Research Projects Agency-Energy), **Homeland Security** (Homeland Security Advanced Research Projects Agency), **Transportation** (Research and Innovative Technology Administration) etc….

Impact of Industrial RTDI Cooperation

The Transatlantic Innovation Economy Enabled By the Industry

- The transatlantic economy accounts for over **50%** of world GDP and **40%** purchasing power
  - The transatlantic economy generates **$5 trillion** in total commercial sales a year and employs up to **15 million workers** in mutually "on-shored" jobs on both sides of the Atlantic

- Bilateral U.S.-EU flows in R&D are the most intense between any two international partners.
  - The U.S. and EU account for **63%** of the top R&D companies; **58%** of all global R&D; and **18** of the top 20 knowledge regions in the world.

- In Europe U.S. affiliates invested **$27.7** billion on R&D, ~ **61%** of total global R&D expenditures by U.S. foreign affiliates of **$45.7** billion in 2011.
  - R&D expenditures by U.S. affiliates were greatest in Germany, the UK, Switzerland, France, the Netherlands, Belgium and Ireland ➔ **86%** of US global spending on R&D in Europe in 2011.

- In the U.S, R&D expenditures by majority-owned foreign affiliates totaled nearly **$45.2** billion in 2011.
  - R&D spending by European affiliates totaled **$33.4** billion, accounting for **75%** of all R&D performed by majority-owned foreign affiliates in the US

Source: THE TRANSATLANTIC ECONOMY 2012 and 2014 Annual Survey of Jobs, Trade and Investment between the United States and Europe DANIEL S. HAMILTON AND JOSEPH P. QUINLAN VOLUME 1: CENTER FOR TRANSATLANTIC RELATIONS JOHNS HOPKINS UNIVERSITY, PAUL H. NITZE SCHOOL OF ADVANCED INTERNATIONAL STUDIES

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Thank You!

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Supporting Documents

Examples in Healthcare

Small projects attracting mainly SMEs

Larger project, but demanding innovation requirements, interests both SMEs+larger vendors

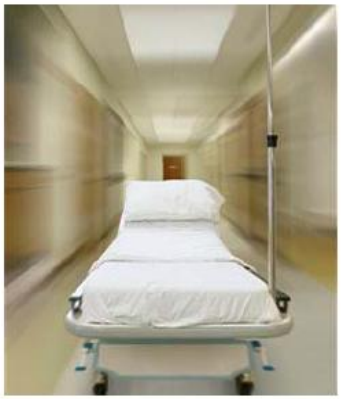
European Commission

Potential £19m p.a. saving

Potential £30m p.a. saving

£4,000 per HCAI avoided

Potential £160m p.a. saving



PCP Niguarda Hospital – Lombardy region

Easy-to-use automated universal system for moving hospital beds, with anti-collision and safety systems, not needing guide lines or tracks even on non rectilinear routes

Potential Value PCP-like projects to NHS in UK:

- Improve the quality of the patient experience and generate significant cost savings (£236m).

Value to the economy:

- A number of innovators/SMEs have attracted significant extra investment (£290m).

Examples EU cofunded PPI (piloted in CIP)

Low carbon healthcare PPI started 2006
Introducing more energy efficient LEDs in network of over 20 hospitals in 8 EU countries

(cross border PPI cooperation funded by EC/DG ENTR)

- 30% energy consumption saving
- 88% maintenance savings

Total cost savings enable take-in of +10% patients

For more info: http://lowcarbon-healthcare.eu/

National brand names for PPI: Forward Commitment Procurement (FCP) in UK, Technology procurement in Nordic countries (e.g. Sweden NUTEK cases), etc

EcoQUIP
Delivering Efficiency, Quality and Sustainability in Healthcare

www.ecoquip.eu

PPI procurement for more efficient and sustainable healthcare solutions

Procurers: Bologna univ. hospital Authority (IT), Erasmus Univ Medical Centre (NL), Nothingham univ hospital & Rotherham NHS trusts (UK), Such Deskidzka hospital (PL)

HAPPI
HEALTHY AGEING

www.happi-project.eu

PPI procurement for healthy ageing solutions

Partners from 12 different EU countries incl. procurers: NHS commercial Solutions (UK), Centrale de Marches Mercure (BE), FHL (Lux), Resah-Idf (FR), FPA (AT), SCR Piemonte (IT)