



# Strategic Roadmapping for North East SMEs

*The European perspective*

Radisson Blu Hotel, Durham

October 6, 2011

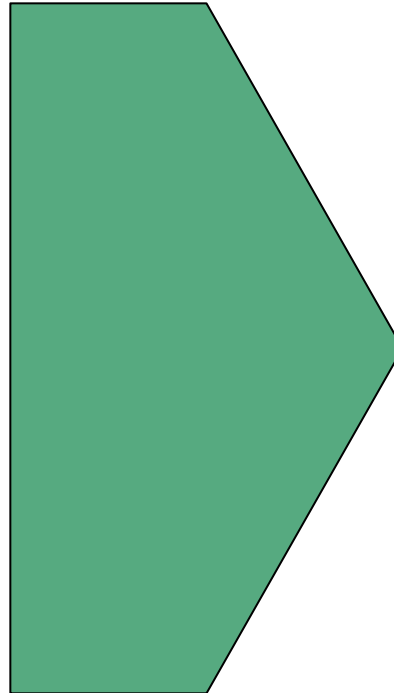


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# Societal challenges



- **Climate change**
- **Health and ageing**
- **Use of natural resources**
- **Energy security**
- **Clean transport**
- **Land use**
- **....**



- **Powerful drivers of change in economy and society**
- **Major global market opportunities**
- **Requiring cooperation along the value chain**
- **From research to solutions**

**New needs → new ideas → new solutions**



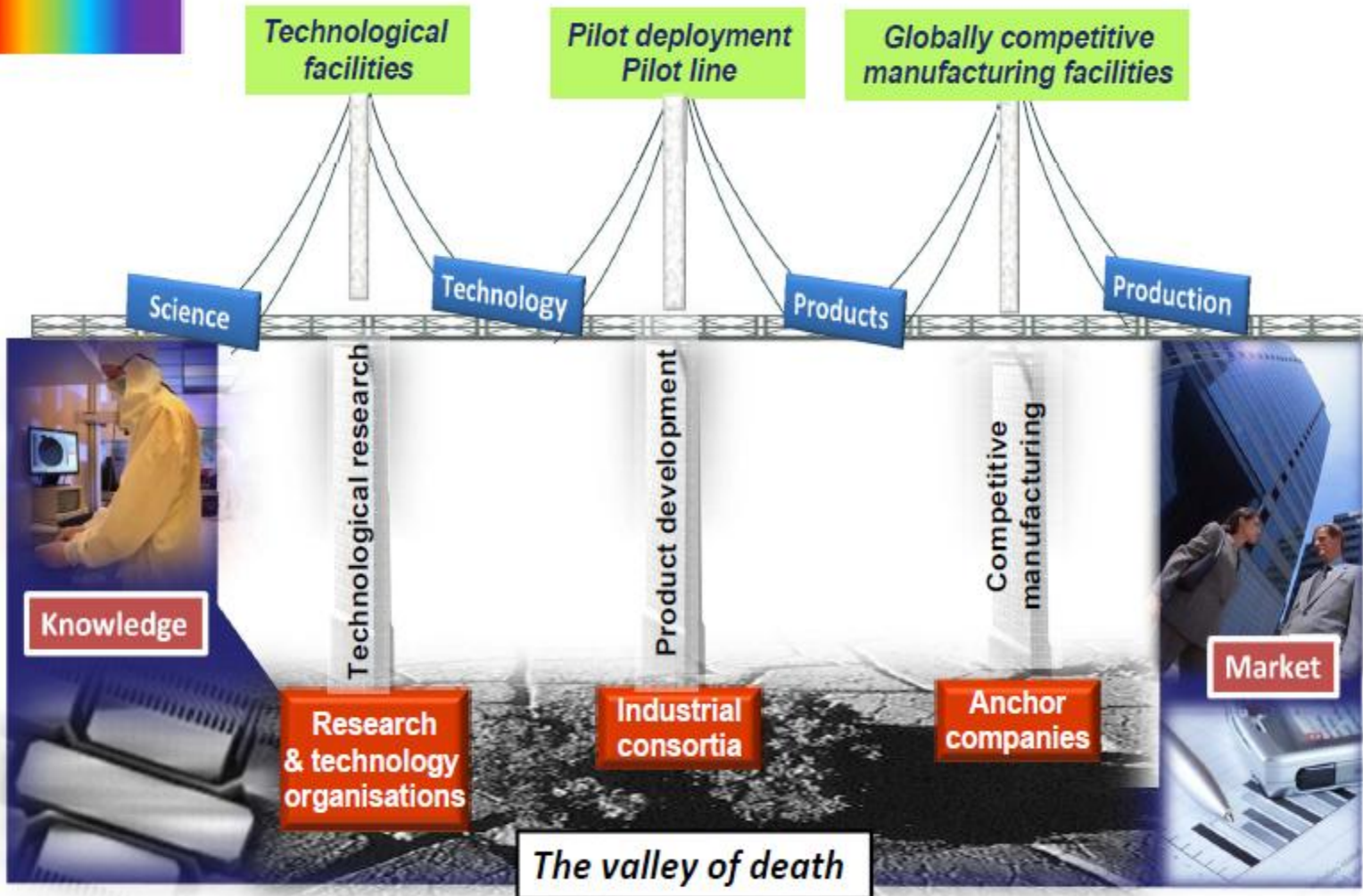
# Innovation essentials

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- **Innovation is much more than R&D (not “Research plus”)**
- **Implementation of ideas into practical value for whole society**
- **Urgency / speed and competitiveness are key drivers**
- **Double money does not produce double innovation**
- **Innovation is a chain that is as strong as the weakest link**
- **Innovation is about change in technology and in mindset**

# Innovation Chain: scale up and demo

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



# Invention-Production-Consumption



**MADE IN « non-EU regions »**



# Strengths of Europe

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- **1<sup>st</sup> class research landscape**
- **Network of big companies and SMEs**
- **Well developed markets (common market)**
- **Proximity of knowledge and industrial value chain**
- **Ability to deal with complexity**

**Need for a well- articulated European innovation model that:**

- **builds on own strengths**
- **keeps / create / bring back value to Europe**
- **in a quite short timeframe**

# New approach – Integration and cooperation



Combining several key enabling technologies for advanced products

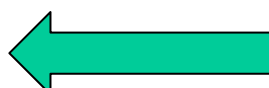
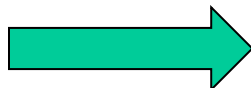
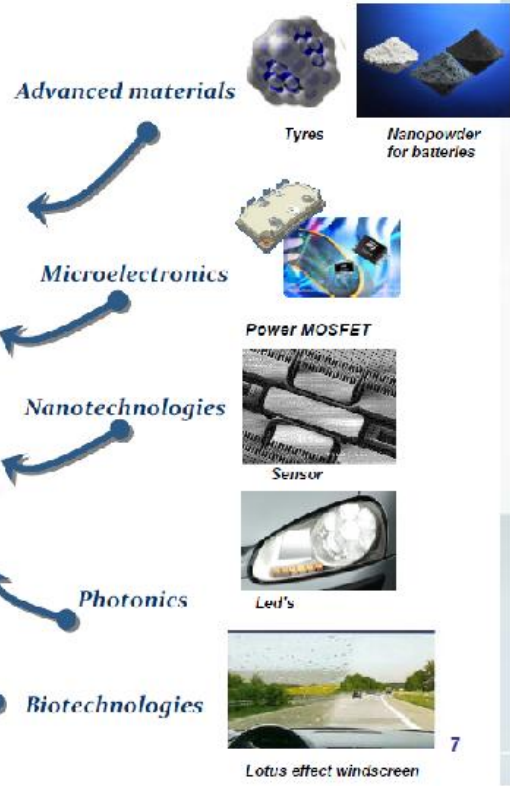
## Energy

Societal Challenge



De-carbonisation of transport

## Electric vehicle



# Value chain approach



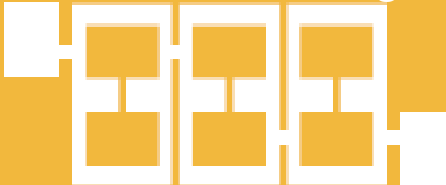
## Raw Materials



## Process Industry:

Chemical, biochemical, and physical transformation and formulation of raw materials using continuous and batch processes into **Materials with new properties and functionalities**

## Discrete Manufacturing:





# EU Chemical industry in future

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- **Recognition of shift from technology support to demonstration of societal value**
- **Mindset shift to more pre-competitive cooperation within sector and open innovation along value chain**
- **Visible leadership of Chemical Industry in Public-Private Partnership on societal challenges – “value chain captain”**
- **Broaden engagement of companies (big + SME 's) in Public Private Partnerships**
- **Change way we do things (i.e. more with less, change to renewables, closed loops, specialisation)**

# Critical mass? - Outreach of EU Technology Platform SusChem



Drive the European synergies/alignment and National strengths and competences

 Czech Republic


 UK

 France

 Netherlands

 Germany

 Italy

 Poland

 Romania

 Slovenia

 Spain

 Belgium – FISCH



Links to Member States  
Support transnational collaborations



# Skills for Innovation

## in the European Chemical Industry

<http://www.cefic.be/Files/Publications/Skills-for-Innovation-in-the-European-Chemical-Industry.pdf>

# Innovation requirements for Public sector

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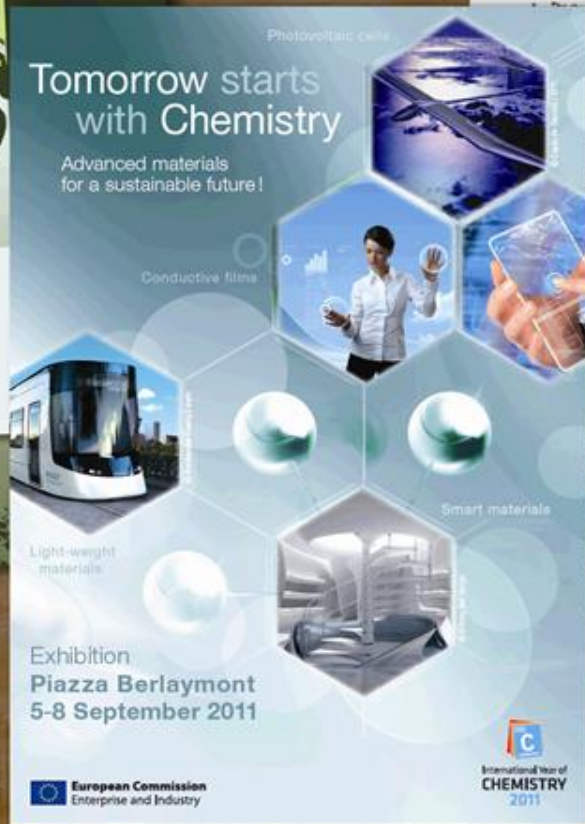


- **Improve “risk taking” as innovation is investment**
- **Review instruments for fitness towards innovation**
- **Reduce sole focus on process, focus on output and improve speed of delivery**
- **Open to innovative ways of cooperation with specified responsibilities on all sides**
- **Use European strengths (“unity in diversity”)**
- **Bring public and private “business models” closer together**



**SPIRE**  
**SUSTAINABLE**  
**PROCESS INDUSTRY**  
 European Industrial Competitiveness  
 through Resource and Energy Efficiency

Logos: ESTEP, ECCC, EUCIP, EUCIP-2, EUCIP-3, EUCIP-4, EUCIP-5, EUCIP-6, EUCIP-7, EUCIP-8, EUCIP-9, EUCIP-10, EUCIP-11, EUCIP-12, EUCIP-13, EUCIP-14, EUCIP-15, EUCIP-16, EUCIP-17, EUCIP-18, EUCIP-19, EUCIP-20, EUCIP-21, EUCIP-22, EUCIP-23, EUCIP-24, EUCIP-25, EUCIP-26, EUCIP-27, EUCIP-28, EUCIP-29, EUCIP-30, EUCIP-31, EUCIP-32, EUCIP-33, EUCIP-34, EUCIP-35, EUCIP-36, EUCIP-37, EUCIP-38, EUCIP-39, EUCIP-40, EUCIP-41, EUCIP-42, EUCIP-43, EUCIP-44, EUCIP-45, EUCIP-46, EUCIP-47, EUCIP-48, EUCIP-49, EUCIP-50, EUCIP-51, EUCIP-52, EUCIP-53, EUCIP-54, EUCIP-55, EUCIP-56, EUCIP-57, EUCIP-58, EUCIP-59, EUCIP-60, EUCIP-61, EUCIP-62, EUCIP-63, EUCIP-64, EUCIP-65, EUCIP-66, EUCIP-67, EUCIP-68, EUCIP-69, EUCIP-70, EUCIP-71, EUCIP-72, EUCIP-73, EUCIP-74, EUCIP-75, EUCIP-76, EUCIP-77, EUCIP-78, EUCIP-79, EUCIP-80, EUCIP-81, EUCIP-82, EUCIP-83, EUCIP-84, EUCIP-85, EUCIP-86, EUCIP-87, EUCIP-88, EUCIP-89, EUCIP-90, EUCIP-91, EUCIP-92, EUCIP-93, EUCIP-94, EUCIP-95, EUCIP-96, EUCIP-97, EUCIP-98, EUCIP-99, EUCIP-100



Photovoltaic cells  
**Tomorrow starts with Chemistry**  
 Advanced materials for a sustainable future!

Conductive films  
 Smart materials  
 Light-weight materials

Exhibition  
**Piazza Berlaymont**  
**5-8 September 2011**

European Commission  
 Enterprise and Industry

International Year of  
**CHEMISTRY**  
 2011



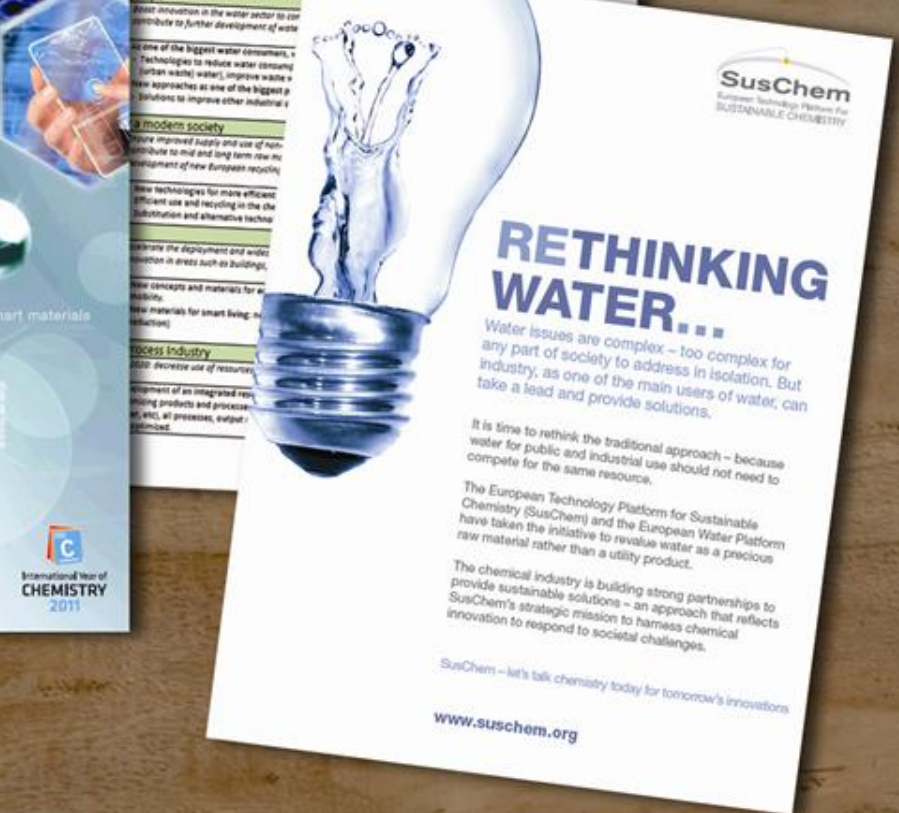
**cefic**

**The chemical industry is committed at the highest level to engage in key partnerships for innovation in Europe**

The chemical industry is the critical basis to the European economy and is essential for smart and sustainable growth across all sectors.

The European Technology Platform for Sustainable Chemistry (SusChem) has a proven track record in innovation through working along the value chains and delivering results.

SusChem needs to start simultaneously at various stages in the value chain:



**SusChem**  
 European Technology Platform for  
 SUSTAINABLE CHEMISTRY

**RETHINKING WATER...**

Water issues are complex – too complex for any part of society to address in isolation. But industry, as one of the main users of water, can take a lead and provide solutions.

It is time to rethink the traditional approach – because water for public and industrial use should not need to compete for the same resource.

The European Technology Platform for Sustainable Chemistry (SusChem) and the European Water Platform have taken the initiative to revalue water as a precious raw material rather than a utility product.

The chemical industry is building strong partnerships to provide sustainable solutions – an approach that reflects SusChem's strategic mission to harness chemical innovation to respond to societal challenges.

SusChem – let's talk chemistry today for tomorrow's innovations

[www.suschem.org](http://www.suschem.org)

QUALITY OF LIFE  
SAFE FOOD SUPPLY  
CLEAN ENVIRONMENT  
LOW CARBON SOCIETY  
ECONOMIC PROSPERITY  
SUSTAINABLE MOBILITY  
HEALTHY CITIZENS

A STURDY INNOVATION TREE  
NEEDS STRONG

**ROOTS**

**SPEEDING UP INNOVATION  
THROUGH PARTNERSHIPS**

The European Chemical Industry: driver of a sustainable future

