



Innovation in the chemical industry

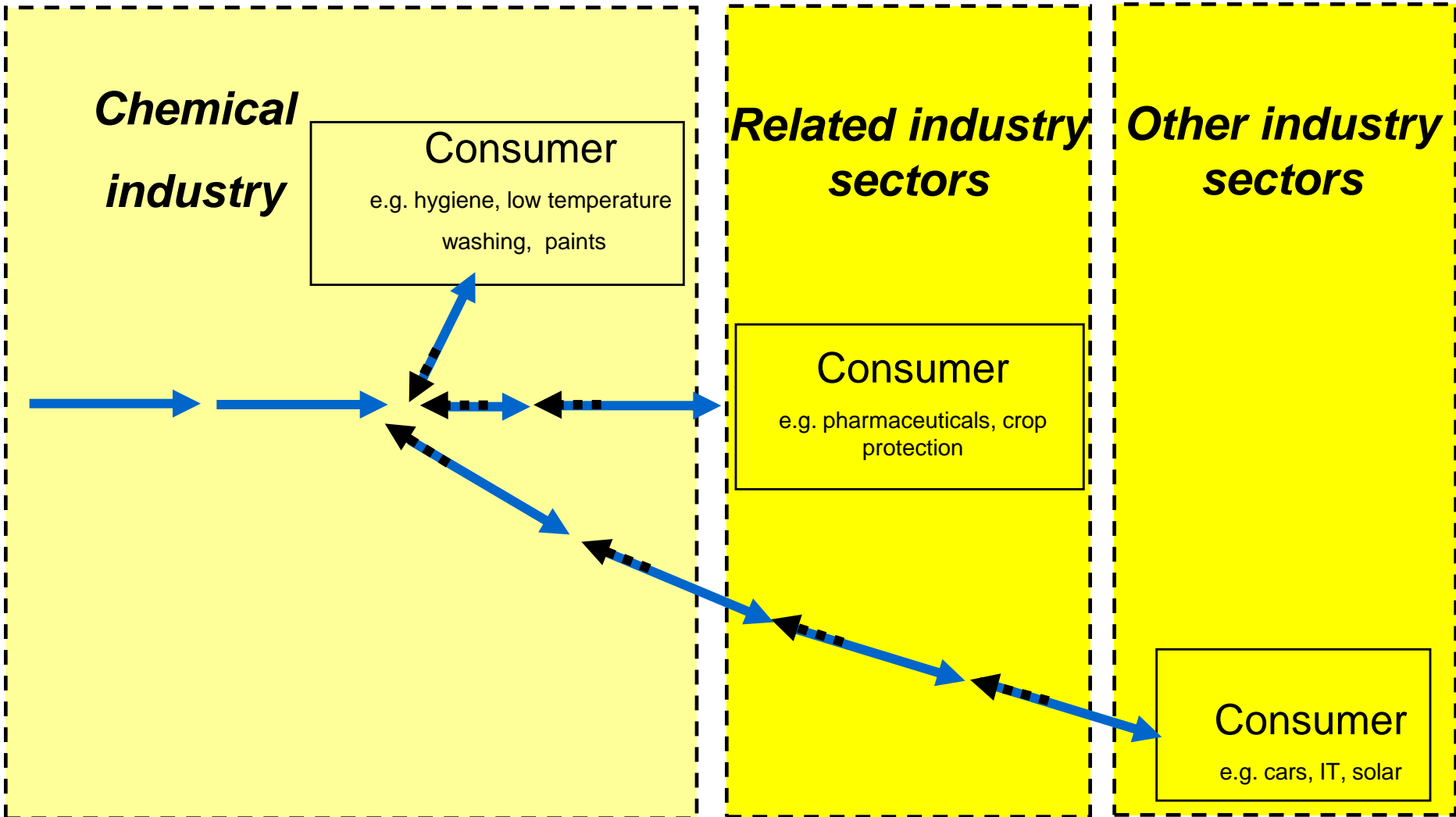
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Who is the Chemical Industry ?



Chemical industry

– innovation characteristics



- **Intense global competition; EU still in lead**
- **High investments (i.e. scale up); longer product cycles**
- **EU strength is network of big and SME`s (i.e. proximity)**
- **Innovation less on chemicals , more on materials and solutions**
- **Innovation both in manufacturing and in products**



What's at stake?



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:
enabler of a sustainable future



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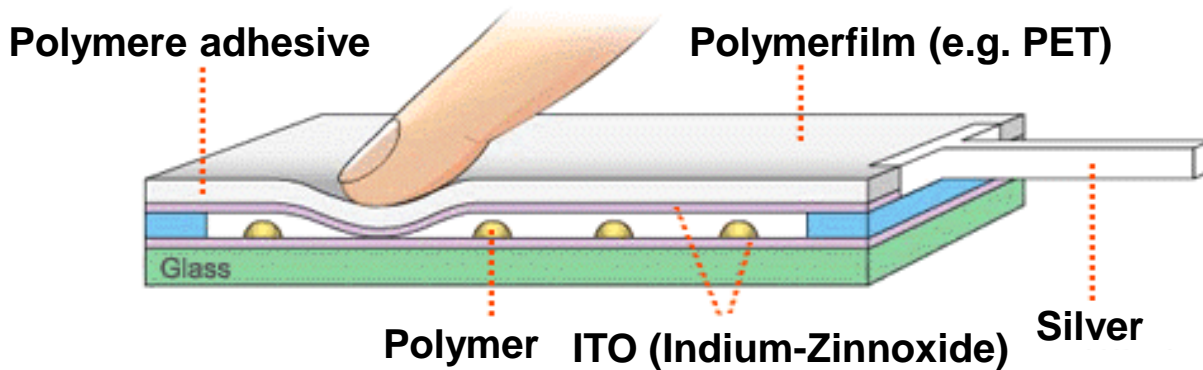


What to do !

Innovation Type 1

Innovation driver and enabler through research

example: touchscreens



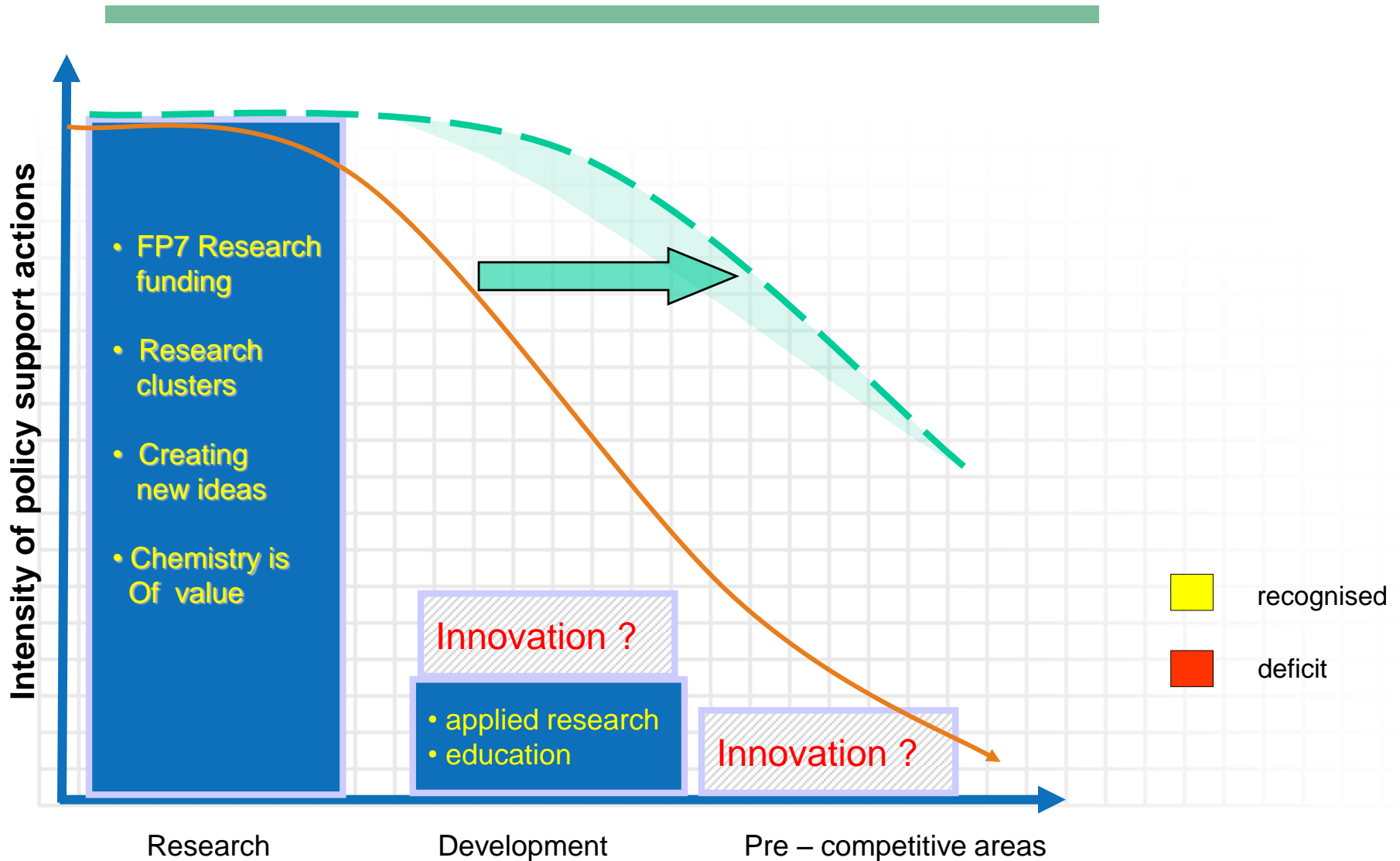
Key message 1



**There are 2 x 2 types of innovation approaches
All crucial for the future of EU society and have
to be part of innovation policies**

- **Research driven** (i.e. nanomaterials)
- **Systems integration** (i.e. use what you have : materials, systems, ICT)
 - **Societal need driven** (i.e. energy, water use)
 - **Technology driven** (i.e. key enabling technologies)

Conclusions of EU High Level Group on the Competitiveness of the European Chemical Industry (2009)

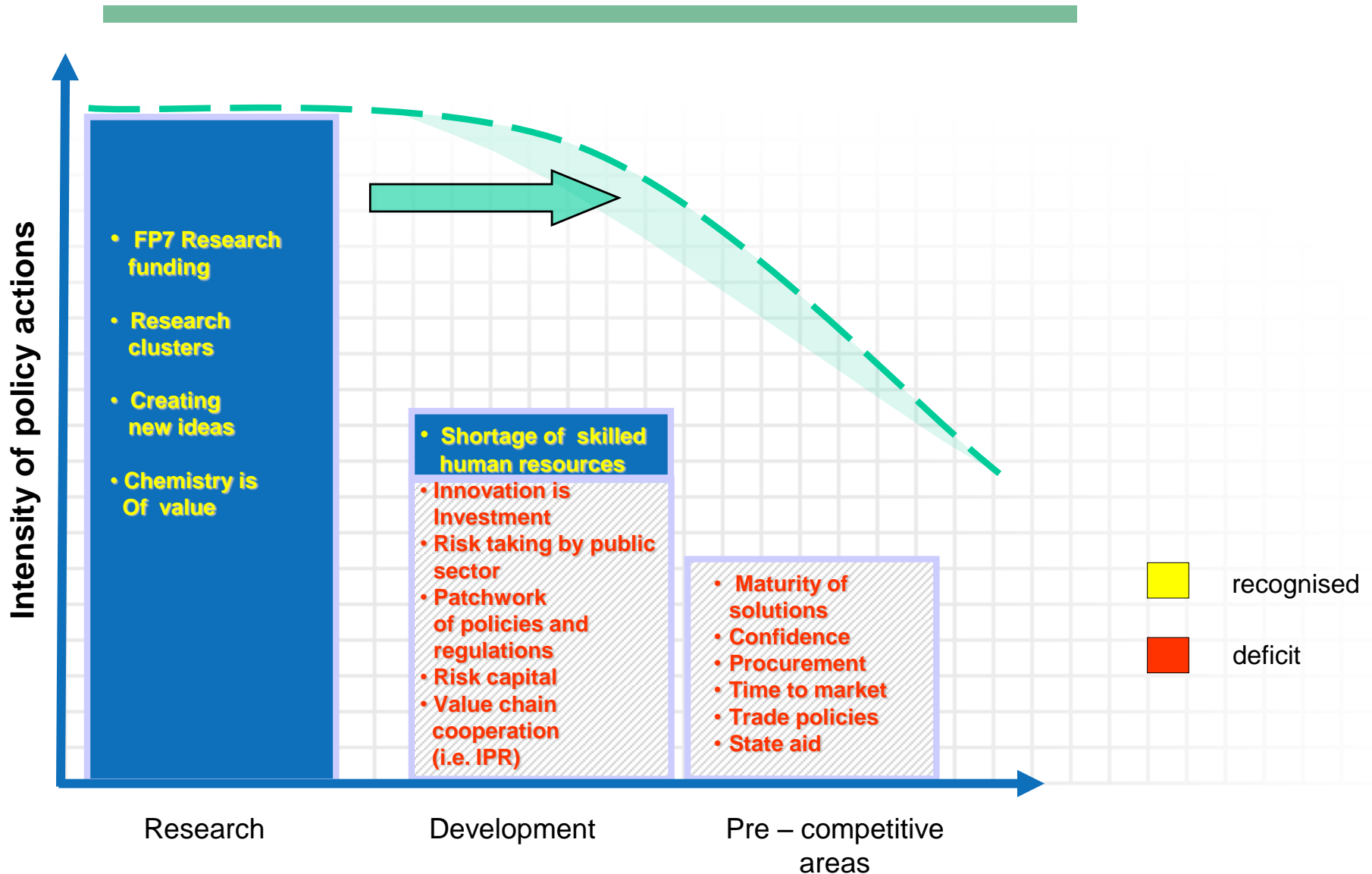


Innovation success + speed to market = Competitiveness for EU society

Conclusions of EU High Level Group on the Competitiveness of the European Chemical Industry (2009)



- new role for public-private partnerships and EU Technology Platforms



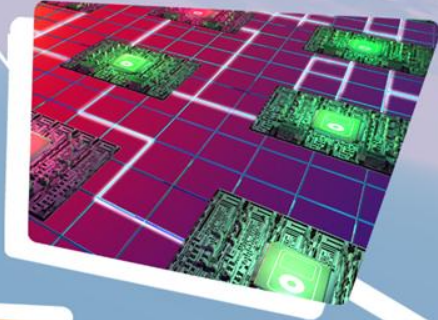
Innovation success + speed to market = Competitiveness for EU society



Examples and learnings !

F3 FACTORY : FUTURE :: FAST :: FLEXIBLE

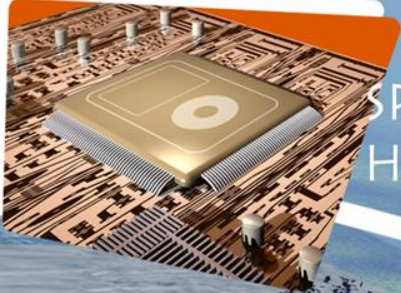
PRODUCTION FACILITIES



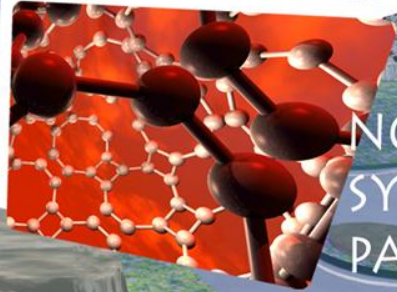
COMPUTER MODELS

SUPPLY CHAIN DESIGN

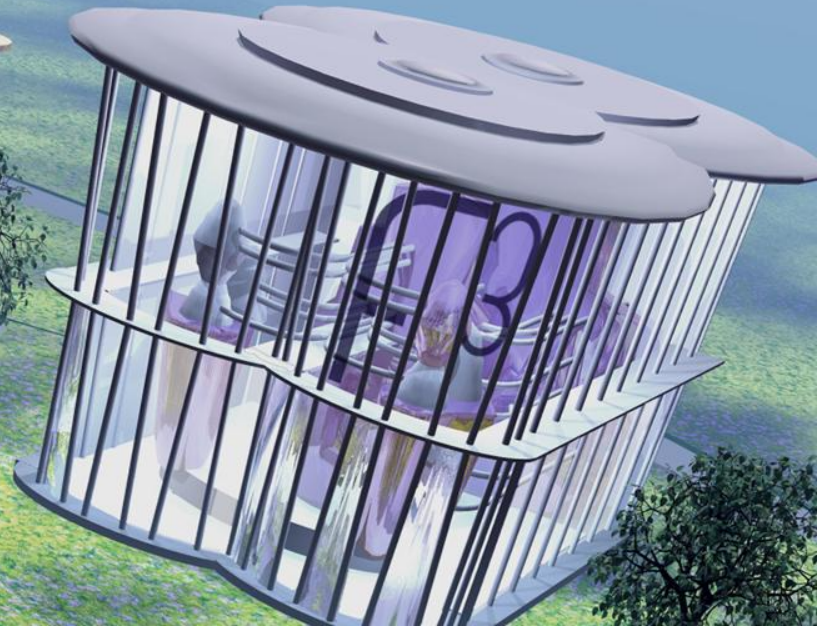
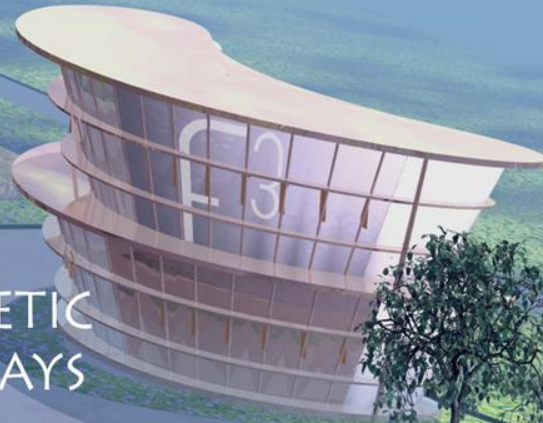
SPECIALIZED HARDWARE



NOVEL SYNTHETIC PATHWAYS



RENEWABLE RESOURCES



25 Partners

Industry

SMEs and academia



Bayer Technology Services



Forschungszentrum Karlsruhe
in der Helmholtz-Gemeinschaft



technische universität
dortmund



Newcastle
University



dépasser les frontières



EHRFELD
Mikrotechnik BTS



ROYAL INSTITUTE
OF TECHNOLOGY



Technische Universiteit
Eindhoven
University of Technology



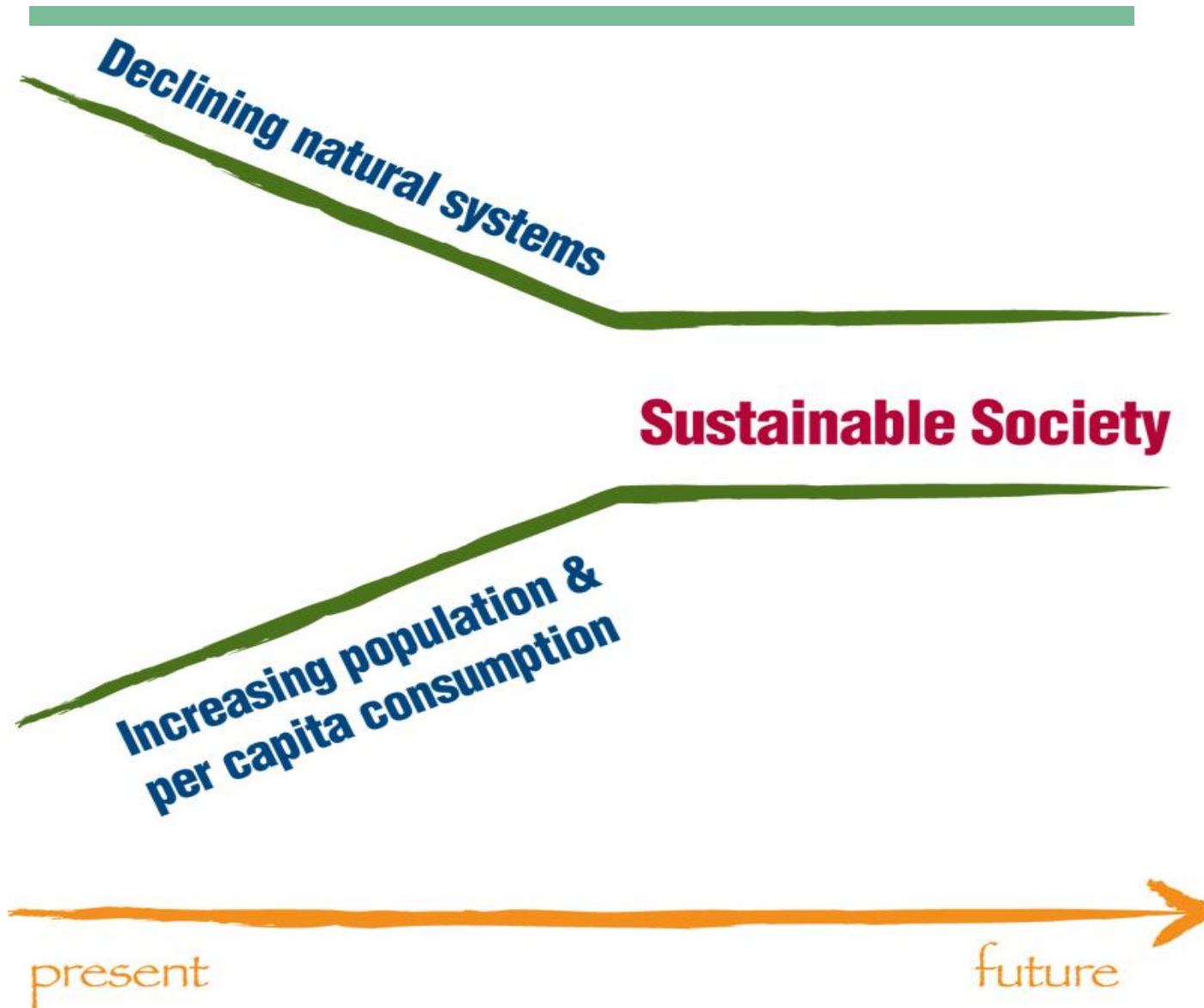
Innovation in and from the Chemical industry

– next steps



- **To stay competitive in Europe 15 % new businesses have to be created**
- **New businesses from in companies and spin off`s**
- **in Europe open innovation and value chain cooperation are competitive necessities**
- **Keep technology driven and improve sustainability driven innovations**
- **Move to higher value added products**

Innovation is about risk, saying “NO” , choices ..



Public engagement needed



- **CLOCK IS TICKING – Solutions or keep status and diverse interests ?**
- Targeted at EU *and* member states
- Coherent and complementary innovation (and other policy) frameworks crucial
- Speed up innovation at various places of the value chain in parallel
- Availability of high skilled labour force
- Innovation is also about failure (one out of 10) – risk taking
- Provide “incentives and glue to innovation”

5 take home messages



Innovation is also about mindset change, new ways of working together (EU Innovation Union; Public-Private partnership; public support)

Innovation policy to support 2+2 approaches to innovation (technology as well as result-driven; i.e. 30% of FP8 for prove of concept)

Innovation needs different (revised and new) instruments than research (i.e. risk of failure, choices, speed, complementarity in EU, attractive to SME's, output parameters, benchmark against US & Asia-Pacific)

Speed up by activating value chain at more than one place (i.e. materials and final product) (task for public and private)

Innovation requires reliable policy and supportive framework



1 final message

Innovation is a chain that is as strong as the weakest link



SusChem stakeholder event - 4th May - Lyon

Value chain collaboration at the core of the upcoming SusChem stakeholder event!

Creating solutions together - The value chain contributions of chemistry

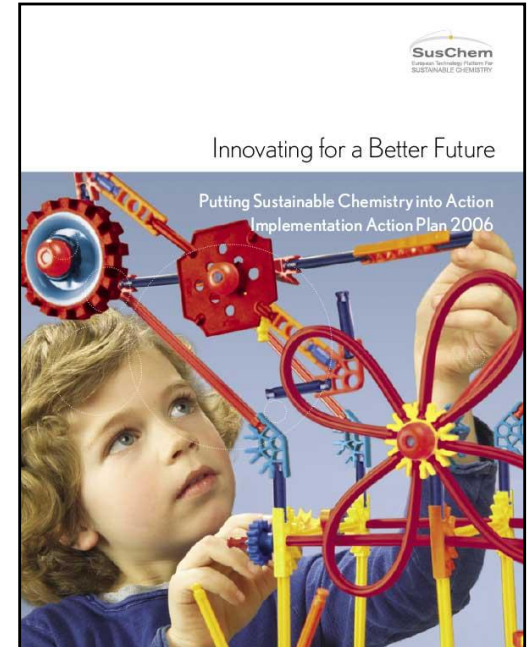
[Download the programme.](#)

Do not miss this important event on May 4th - [register now.](#)

www.suschem.org



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<http://www.cefic.org/en/Research-and-innovation.html>

