

Innovation Summit

K4I SPIRE dinner

UNLOCKING THE CLIMATE TECHNOLOGY GAP

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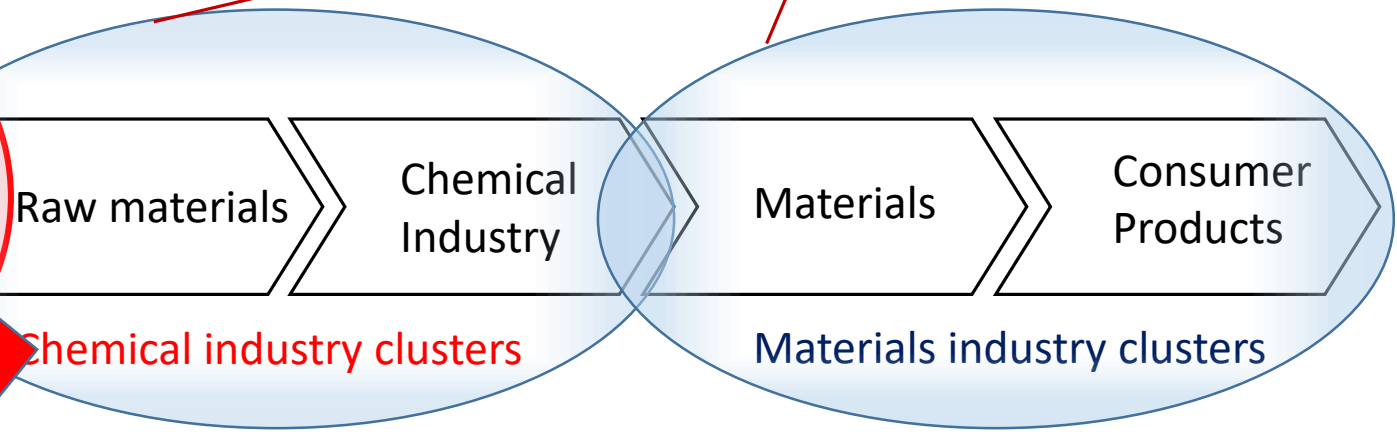
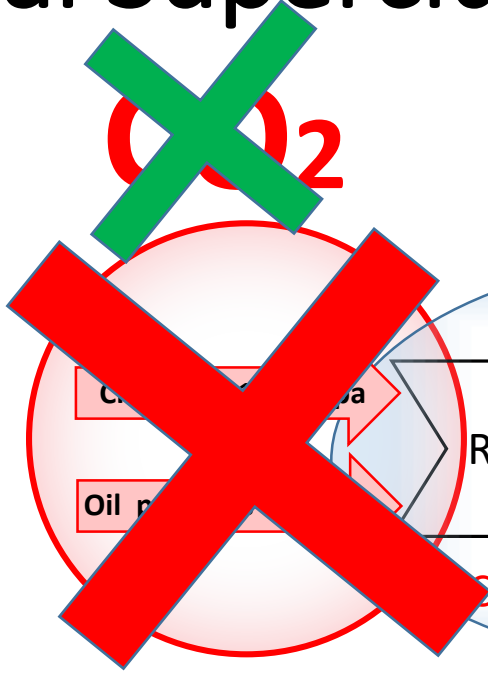
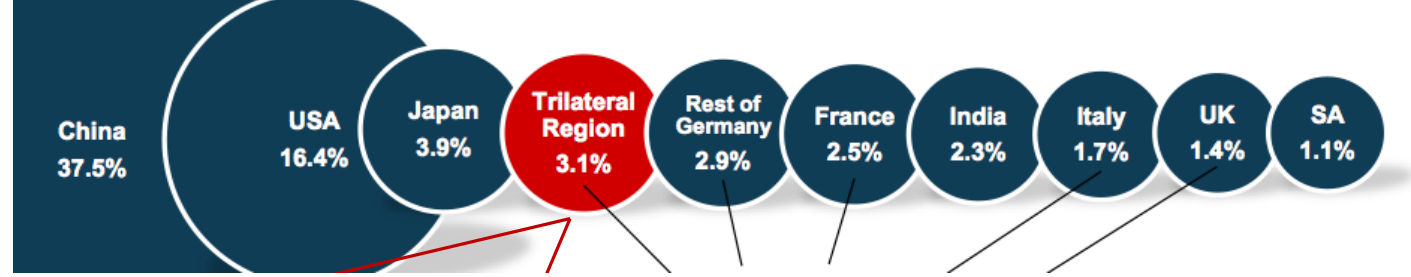
Trilateral Region Largest Chemical Cluster in the World!



Innovation Table Trilateral Strategy
chaired by Brightlands Chemelot Campus



Trilateral Supercluster



180 B€ turnover
350 000 direct jobs
Sales per capita € 3600
China 1300, EU 1500, USA 2400



HOW

Trilateral Innovation

Workshops April 13th 2018

Given company and national programs:

Identify potential trilateral collaborations

Accelerating innovation by creating critical mass

Outcome

- Ca. 80 participants
- Highly interactive workshops
- Industry driven
- Clusters of shared interest identified

Unique Value Proposition

Trilateral Regions Cross-border cooperation

Trilateral Agenda Innovation Themes

Trilateral Region Agenda Themes	ENABLING TOPICS
1. CO ₂ as a feedstock source (CCU)	
2. Electrification in high-T cracking	Start-ups & Scale ups
3. Electrochemical conversion	Demo- and pilot plants
4. Carbon circularity in products	Funding & Innovation Hurdles
5. Hydrogen of the future	
6. Biomass as a feedstock	
7. Industry 4.0 for digital transformation	



Industry in the lead - cluster participation - bottom-up approach

Process Innovation – Site Innovation – Regional Innovation – Cross border Innovation

Co-Invest Program		2030 – 2050	2019-2020 Annual	CAPEX indication Annual
Electric Cracking	<i>Electric heating – feasibility, piloting, demo Plasma-assisted – explorative</i>		30 Million - Shared Technology Center - HR - Large scale up project - Pilots & demo's	300 Million - Shared Technology Center - Large Scale up project - Large scale up infra
Green Hydrogen	<i>Plasma decarbonisator: pilot 2019, demo > 2022 Molten metal: explorative, pilot 2021</i>			
Plastic Reuse and Recycling	<i>Biomass, municipal, plastic: comparative merit assessment; pretreatment, standard development</i>			
Waste Gasification	<i>Biomass, municipal, plastic: comparative merit assessment; pretreatment, standard development</i>			
Digital Transformation	<i>Process safety /Ind. 4.0 /system flexibilization Demand side mgmt / energy storage</i>			
Design for sustainability	<i>Light materials, construction materials</i>			
CCU / PtX	<i>Power to Methanol (and vice versa)</i>			

➔ Intelligence ➔ Startups and Scaleups

➔ pilots and demos

➔ innovating funding and innovation

Next Steps

- Pushing interregional cooperation in new cross-border value-chains
- Linking Industrial stakeholders to the innovation themes agenda and become the first movers (consortia building)
- Exploitation of KETs to the benefit of the chemical sustainability transition to stimulate competitiveness, growth & jobs
- Generation & scale-up of joint closer-to-market projects (pilot- demo)

What do we ask from the EU?

- Help with Early-phase feasibility assessment and search for co-investment opportunities in closer-to-market pilots and demonstrators;
- Help with Policy- and legislation hurdles

