



Sustainable Process Industry through
Resource and Energy Efficiency



6th SPIRE PPP BROKERAGE EVENT

SPIRE 2050 Vision

***Towards the next generation of EU
Process industry***

**14 June 2018, Frankfurt
Daniel Gauthier, A.SPIRE Chairman**



***“An integrated and digital
European process industry
fostering a “well-below 2°C”
and a fully circular future
for our planet and society.”***

**SPIRE 2050
Our Value Proposition**

Integrated

Innovative “industrial ecology” models
Building physical and digital bridges
across sectors and countries

Digital

Boosting process efficiency
Generating new business models

Well-below 2 degrees

Process industries as enablers for
a carbon-neutral economy

Circular

Process industries = “Hubs for Circularity”
of energy and resources in Europe
Circularity at scale

The transformation will enhance the competitiveness of entire EU value chains
delivering **growth** and **jobs** in Europe

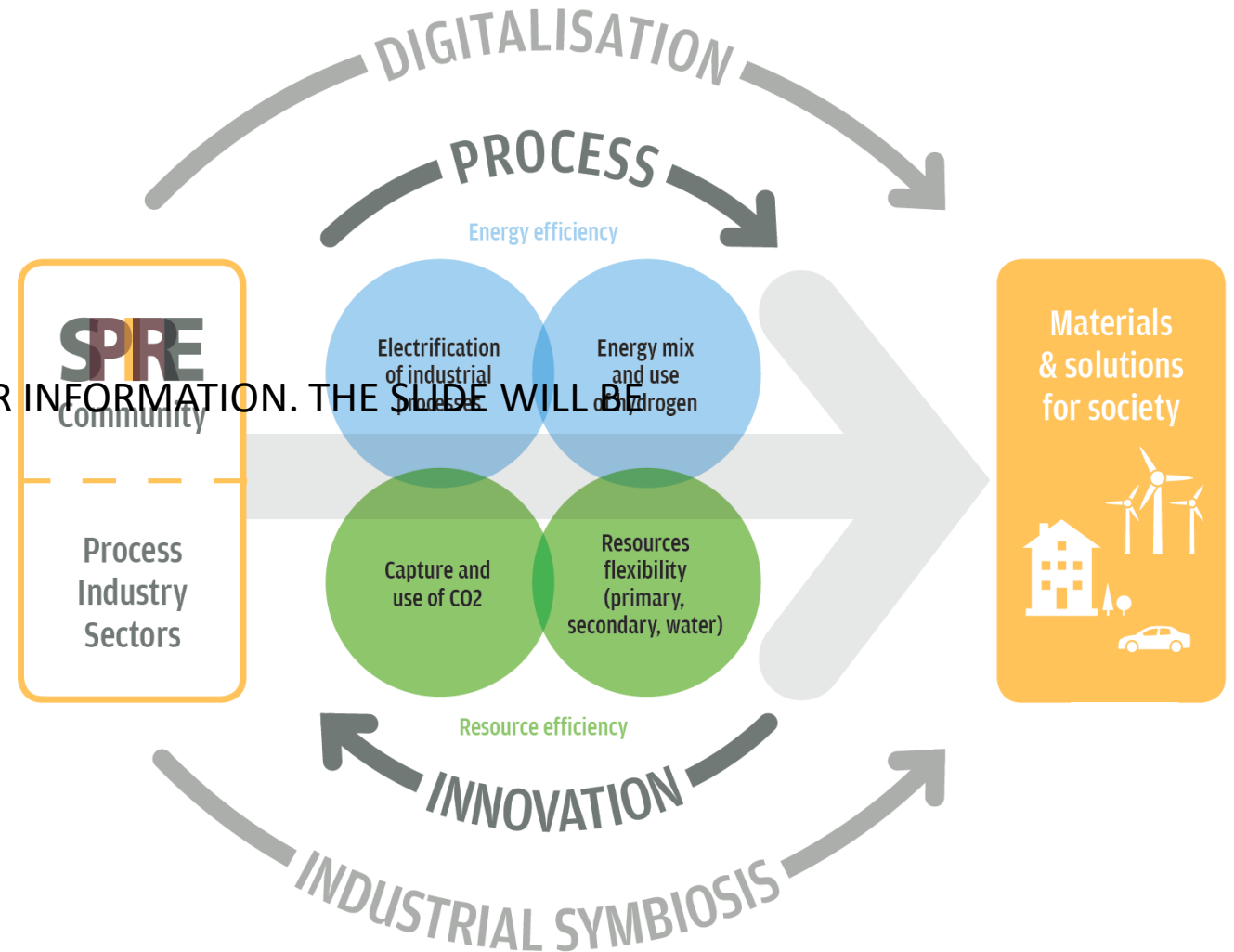
SPiRE strives for positive change at **local, regional, Member States and European levels.**

4 technological drivers

Electrification
Energy mix and H₂
Capture and Use of CO₂
Resources flexibility

2 transversal topics

Digitalisation
Industrial symbiosis



Pathway towards decarbonisation:
adaptation of industrial processes to the switch
towards renewable electricity (e.g.
electrochemistry, electric furnaces or kilns, plasma,
microwave).

Technologies to help balance supply
and demand on the electricity grid

Renewable electricity, low carbon fuels,
bio-based fuels, waste-derived fuels
Use of mixed energy sources, minimizing waste
heat and addressing fluctuation of supply.

Use of Hydrogen as energy vector and
feedstock

Electrification
of industrial
processes

Energy mix
and use
of hydrogen

Capture and
use of CO₂

Resources
flexibility
(primary,
secondary, water)

Intelligent carbon management,

aiming at fuels or chemicals production or at
mineralisation in (building) materials

Higher yields from complex and
fluctuating raw material feeds
Full re-use, recycling or recovery of waste

Zero water discharge
Traceability of value chains

Examples of projects

Chemical conversion of plastics waste

Electrification of all
process industry sectors

New comminution (crushing and grinding)
technologies in process industries

CO₂/CO from steel and cement industry as
feedstock for chemicals
and alternative fuels

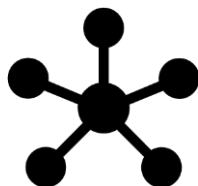
Unlocking the full potential for use of
secondary materials in process
industries

Our ambitions



Closing the climate technological gap

Development of the required solutions to fully contribute to the EU Climate Policy targets



Process industries as Hubs for circularity

Development of required solutions to move towards zero-waste-to-landfill and create Hubs for circularity across Europe

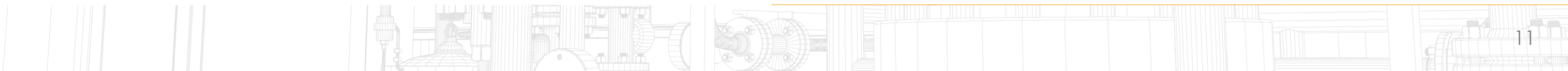


Global competitiveness

Development of technologies which create new investment opportunities for globally competitive EU Process Industries

Next steps

- **July 2018, Open consultation** to A.SPIRE members on SPIRE 2050 Vision
(Discussions with SPIRE projects could also help us enhance the vision)
- **2nd October 2018, SPIRE 2050 Vision workshop**
(Back to back to SPIRE 3rd Thematic workshop on 1st October)
- **November 2018: New WGs structure Workshop**, with A.SPIRE members
(to be defined according to the new Vision)
- **From June 2018: SPIRE as Future European Partnership** in Horizon Europe
(Active participation of SPIRE and our members)
- **From 2019: SPIRE 2050 roadmap** or R&I Agenda to be developed



Thanks for your attention

HAPPY TO ANSWER YOUR

