



SPIRE 2050

Climate Neutral and Circular Industry

Àngels Orduña
Executive Director
A.SPIRE

FISSAC – Final Conference
Brussels, 29 January 2020

SPIRE in the Value Chain of Partnerships

Raw Materials



EIT Raw Materials
EIT Inno Energy
Water4All
Clean H2

Process Industry

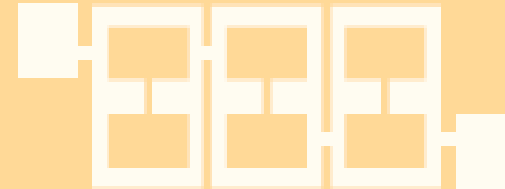
Transforming materials for Citizens

From raw & secondary resources to
materials with new properties and
functionalities



Clean Steel
BBI

Downstream Manufacturing:



Built Environment & Construction
Made in Europe
Batteries
EIT Manufacturing

Society



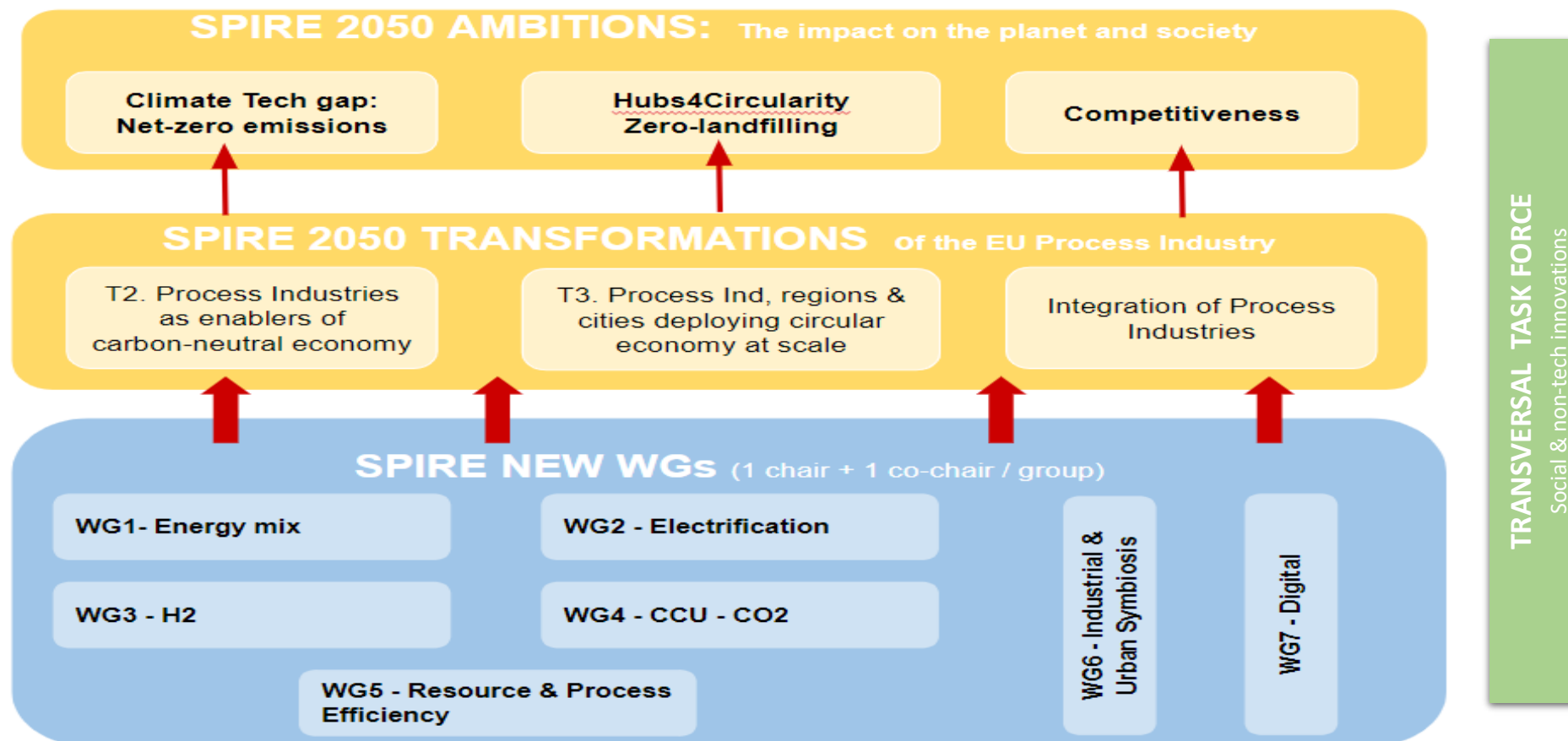
Digital Partnerships (AI, Data, HPC...) / Climate KIC / SET PLAN #6 / Clean Energy Co-fund

SPIRE ADDED VALUE: The European Process Industry at the forefront of innovation



SPIRE 2050 ROADMAP – NEW WGs

BE PART OF IT: JOIN US TO DEFINE THE NEXT DECADES OF R&I



SPIRE's impact in the four year period up to 2018

SPIRE-CCNI will be building on the experience, achievements and lessons learnt from its predecessor. Despite its relatively short existence, SPIRE cPPP has already managed to deliver high impact:

PRIVATE LEVERAGE

- **8.5 average leverage factor** (*Target: 5 to 10*)
- INVESTED by COMPANIES: 4.52 bn €

ENVIRONMENTAL KPIs

- 29% reduction of emissions (*Target: 40%*)
- 38% less dependency on fossil energy (*Target: 30%*)
- 31% less dependency of non-renewable, primary resources (*Target: 20%*)
- 43% reduction of waste (*no initial target established*)

JOBS

- 100 new jobs being/to be created, directly related to projects
- 1523 new jobs being/to be created, directly related to SPIRE companies

SIGNIFICANT INNOVATIONS

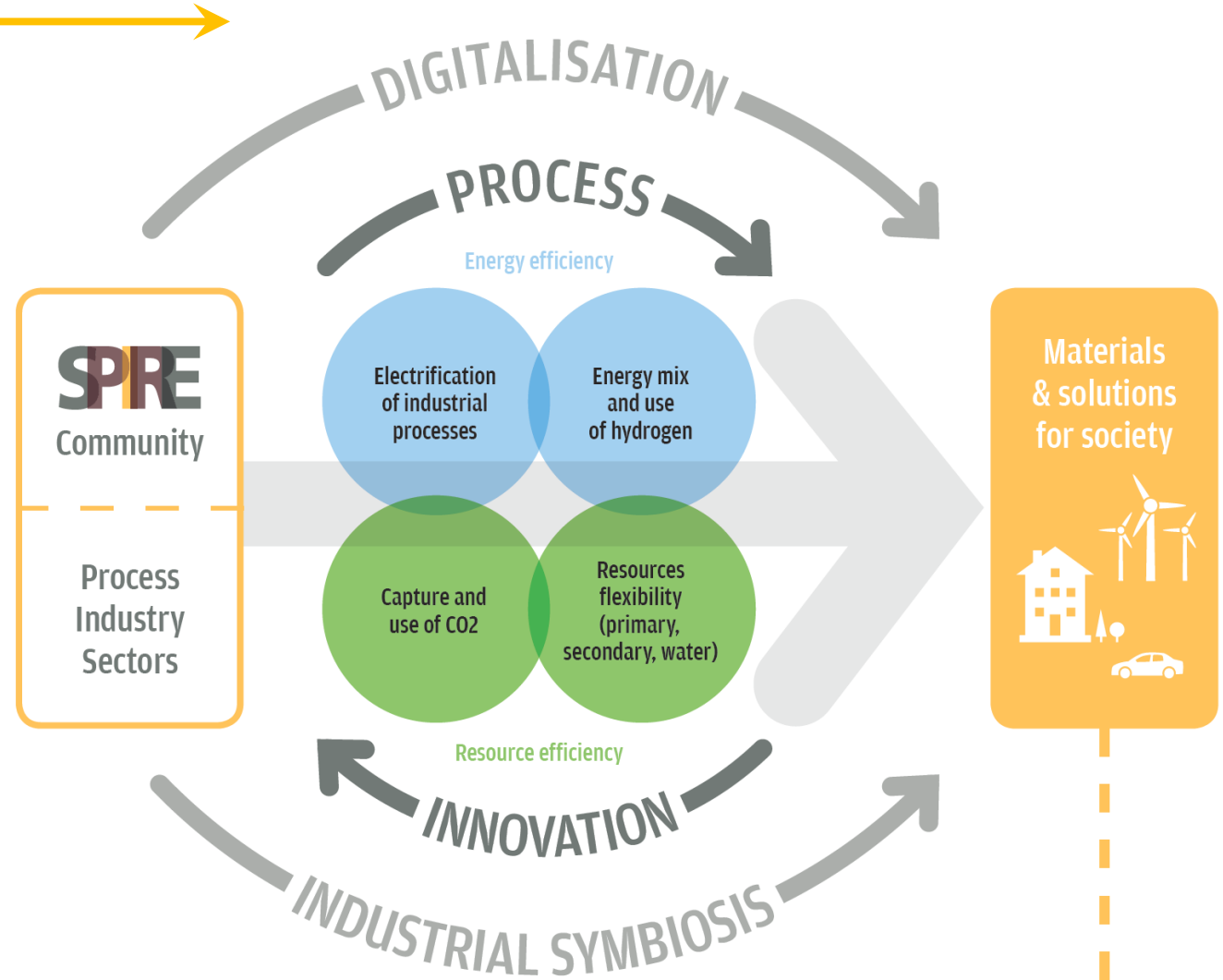
- 264 developed or being developed (of which 86 major innovations) (*Target: 40*)
- 68% of projects planning to patent / commercialise / deploy

SPIRE SMEs

- 7 new employees / SME (*higher than EU average = 2*)
- 40% growth in turnover (*double than EU average*)
- 27% of SMEs won new business through SPIRE contacts

SPIRE Vision 2050

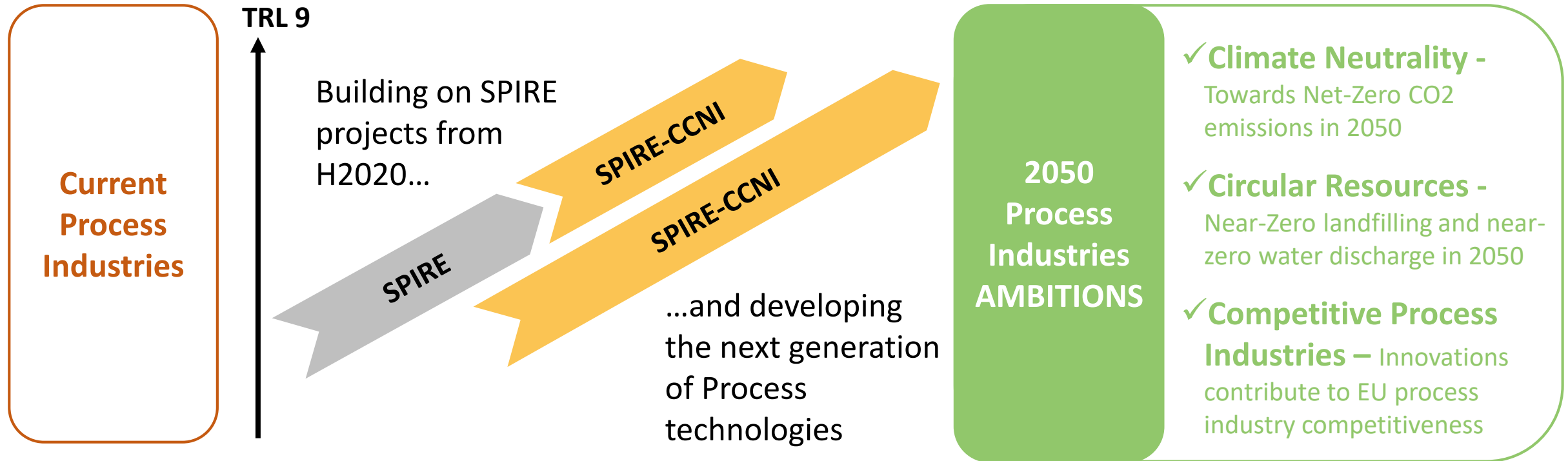
An **integrated** and **digital**
European process industry
fostering a “**well-below 2°C**”
scenario
and a fully **circular** economy.



More information:

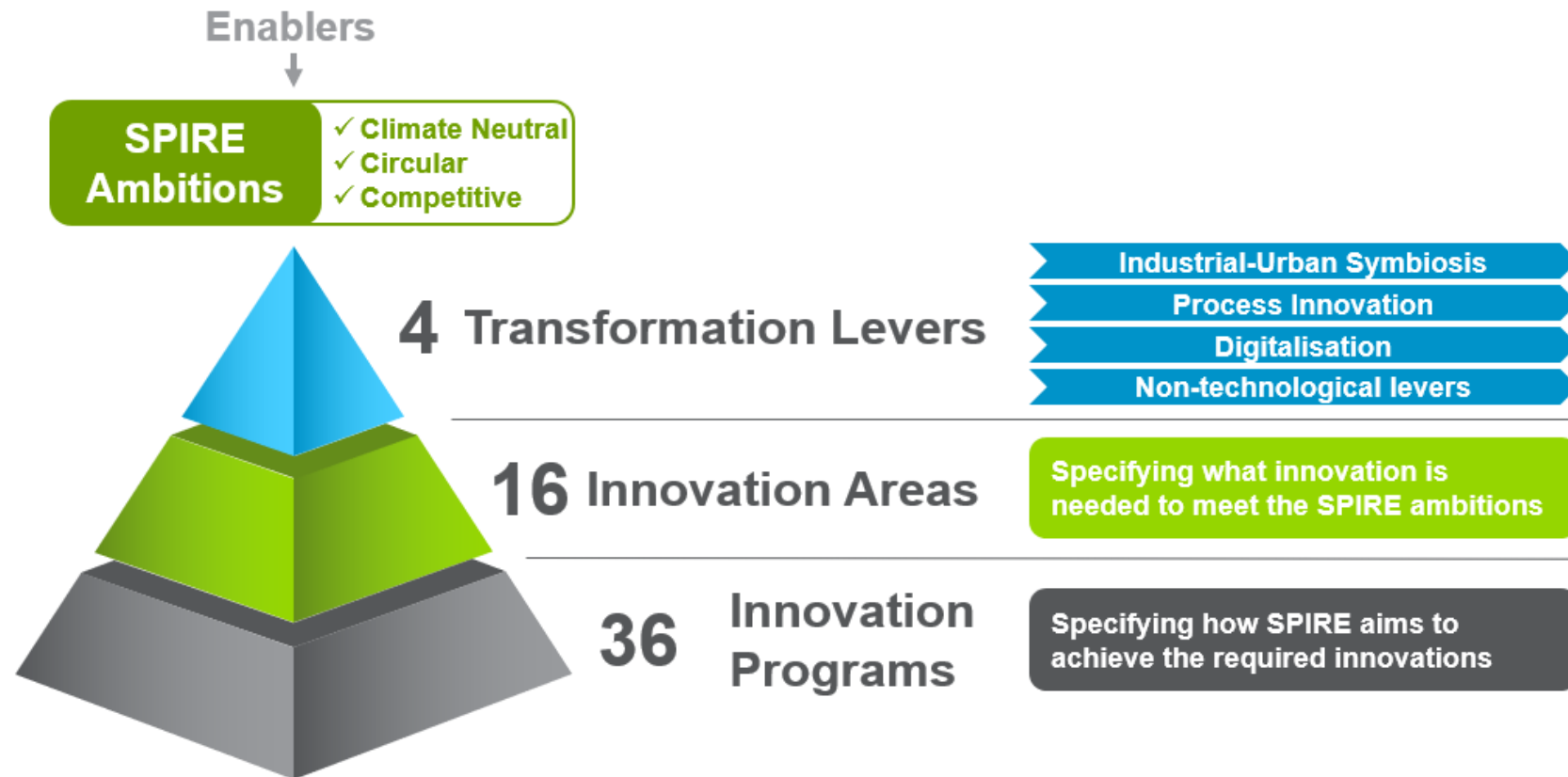
<https://www.spire2030.eu/news/new/spire-2050-vision>

SPIRE 2050 Roadmap: Map of the innovations to meet the 2050 AMBITIONS



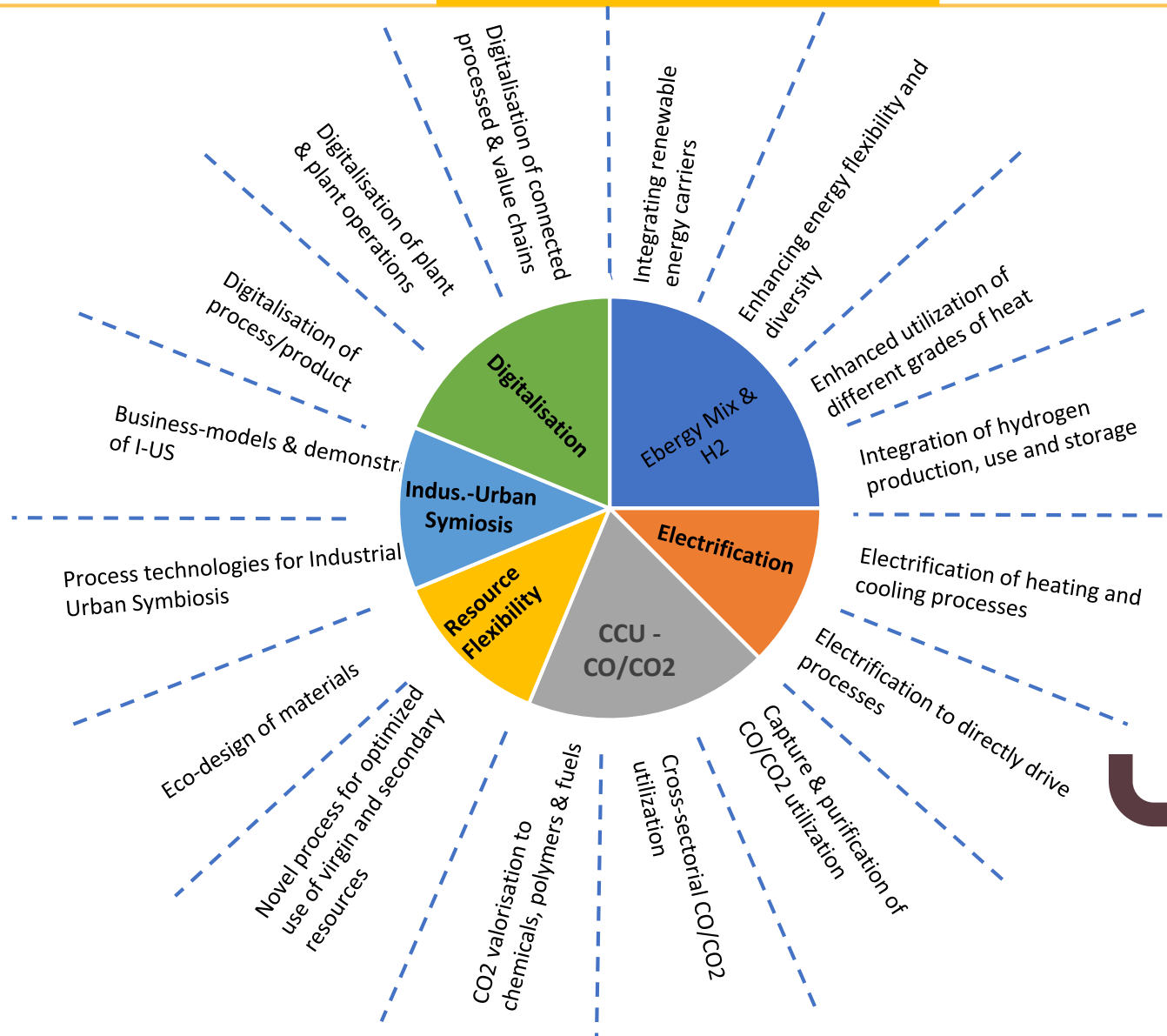
SPIRE Roadmap 2050 to achieve transformation in Process Industry

Transformation levers and tools that will enable SPIRE-CCNI to achieve its ambitions:



SPIRE-CCNI strives for positive change at local, regional, national and European levels, delivering a positive triple bottom-line value creation - **for business, planet and society** - that can be exported outside Europe.

14 Innovation Areas



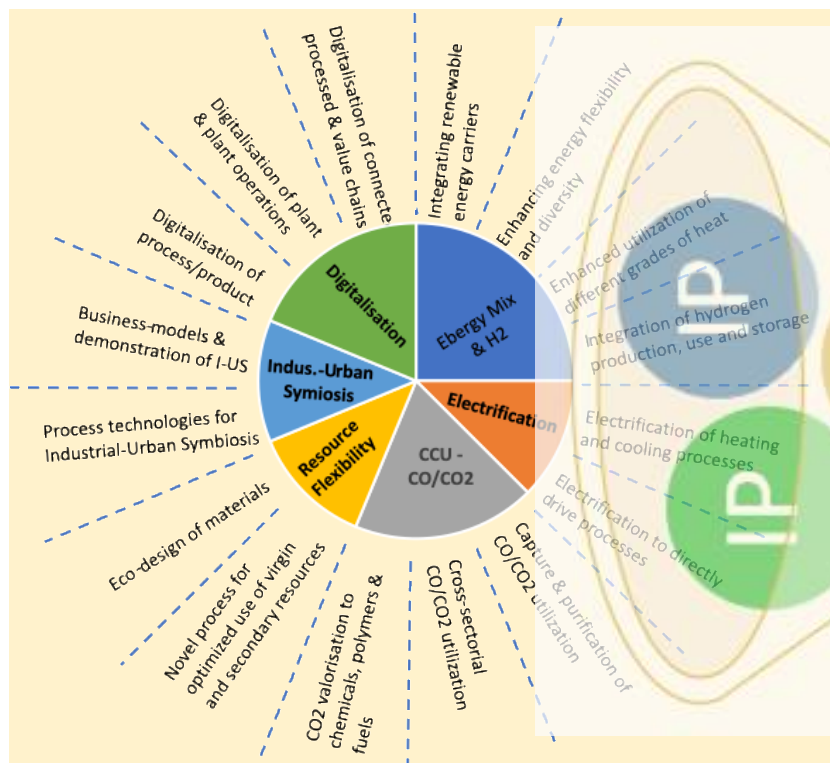
Innovation Programs

- IP.5.a. Electrochemical conversion of CO2 to bulk materials
- IP.5.b. Direct electrolysis of raw materials
- IP.5.c. Selective production of high-value molecules using electrochemistry
- IP.5.d. Electrically-driven separation

SPIRE 2050 FUNNEL towards first-deployment

36 Innovation Programmes

The “Marbles”



- Large-scale demonstrators, pilot or first-of-a-kind plants
- proof the feasibility of highly ambitious CO2 abatement plants
- acting as Hubs of bulk amounts of resources from industry and the municipalities.

PRIVATE INVESTMENTS

- Industry commitment
- When technical and economic feasibility is proved
- Public support needed to de-risk

Hubs for Circularity

essential tool to deliver the transformation

Regional demands

- Societal needs
- Customer needs
- Stakeholder demands



Knowledge sharing through Community of Practice



Regional community



- RTOs
- SMEs
- Civil society
- Across sectors
- Process industry
- Financial institutions
- Public sector

Sustainable business model



- Business-to-territory plan
- Co-investments model

Disruptive innovation



- Social innovation
- Business models
- Technology
- Processes

Regional benefits




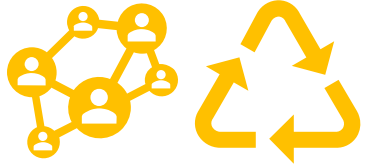
- Industrial-Urban Symbiosis
- Economic growth
- Understanding regional demands



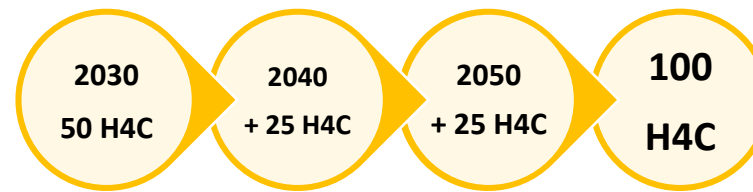
Exporting innovations



Different maturity levels of Hubs for Circularity

Starting Hubs	Intermediate Hubs	Advanced Hubs	Mature Hubs
			
<p>Starting hubs create the structure, agenda and business plan. In this phase they:</p> <ul style="list-style-type: none"> ▪ Set up governance structure ▪ Develop initial value proposition and B2T plan as in SME instrument ▪ Analyse the reality of the H4C, including relevant actors and agree on needs and demands 	<p>Intermediate hubs have a good inventory of problems and opportunities. Partners have engaged actively and adhere to a common vision for the hub. In this phase they:</p> <ul style="list-style-type: none"> ▪ Advance B2T with a well-defined co-investment plan ▪ Define transition to create hub-culture modus operandi 	<p>Advanced hubs have a plan that they are implementing to accelerate the development of solutions. In this phase they:</p> <ul style="list-style-type: none"> ▪ Focus on boosting synergies and maximising impact ▪ Have adequate metrics and progress measurements ▪ Show benefits on climate, waste and competitiveness. 	<p>All hubs should aim to reach this level. Mature hubs can be even more ambitious and expand their impact within and beyond their H4C. They:</p> <ul style="list-style-type: none"> ▪ Foster continuous improvement ▪ Act as a lighthouse to inspire others ▪ Convince other regions to adopt the H4C model

MILESTONES



SPIRE Roadmap 2050 in the context of Horizon Europe

SPIRE is transitioning into the **Climate Neutral and Circular Industry** (title to be confirmed) Partnership as one of the co-programming partnerships in Horizon Europe

SPIRE-CCNI's core vision relates to:

- **Broad range of Intervention Areas under:**
 - **cluster 4 'Digital, Industry and Space'**
 - **cluster 5 'Climate, Energy and Mobility' of the Horizon Europe's Pillar 2.**
- **Some Intervention Areas within cluster 6 'Food and Natural Resources' (lesser extent)**
- **To a couple of the first Missions in HEU:**
 - **Adaptation to Climate change**
 - **Climate-Neutral & Smart Cities**

Teaming up to address the challenges of Climate Change, Circular Economy and Competitiveness together

LARGER INDUSTRIES:

- Continuous dialogue on R&I across SPIRE sectors and beyond
- Channel to raise your voice on R&I for HEU & other programmes
- Access to a pool of knowledge & talent (in Universities, research centres....)
- Direct access to SME providers
- Collaboration with the innovation ecosystem and value chain
- Access to developments by other projects, SMEs, universities...
- Protection of intellectual property
- Dialogue with the EC, MS, regions, MePs & other stakeholders



Further benefits to other members

SMEs:

- Direct Access to growth opportunities
- Direct Access to new markets
- Direct Access to large industry customers



RTOs, NGOs Innovation agencies et al.:

- Direct Access to applied innovation
- Link to deliver impact to society and regions
- Collaboration for disruptive innovations



Connected across borders and sectors and to citizens

CONTACT US:

info@spire2030.eu

www.spire2030.eu

