EU PROCESS INDUSTRY AND SPIRE: GOOD VALUE FOR A SUSTAINABLE AND COMPETITIVE FUTURE FOR EUROPE

The EU Process Industry is a key player in achieving the EU’s policy goals for Sustainability, the Circular Economy, Climate Action and Competitiveness. The SPIRE cPPP is an essential element in delivering rapid cross-sectorial technological change for the European Process Industry.

Process Industry today: strong impact for the whole EU economy and society

SPIRE (the Sustainable Process Industries for Resource and Energy efficiency) cPPP encompasses research, development, innovation and implementation actors from eight major EU process industry sectors: chemicals, steel, non-ferrous, cement, ceramics, minerals, engineering and water.

These industrial sectors employ large numbers of EU citizens, generate significant revenues and provide directly and indirectly substantial public goods through their actions and taxation streams.

The SPIRE sectors are of major importance for economic development and a sustainable society. They are the largest investors in the EU manufacturing as a whole and combined total an average of EUR 78.8 billion worth of investment. Capital investment is a key factor in securing the future development of SPIRE sectors. Furthermore, capital spending intensity is a key factor affecting competitiveness, as it is both an indicator of the degree of attractiveness, as well as a driver of future competitiveness.

Process Industry enables sustainability for EU citizens, cities and regions

The EU SPIRE sectors strongly reduced their energy consumption by 22% from 1991 to 2016. First analysis based on steel, non-Ferrous Metals, overall chemicals, and non-Metallic Minerals sectors.

Data source: Eurostat and Cefic Analysis. VTT – SPIRE data group.
Between 1991 to 2016 across all SPIRE sectors energy consumption and greenhouse gas emissions have fallen while production has increased - leading to a much-reduced energy intensity across all sectors.

Data from 2008 to 2016 show that SPIRE sectors outperform the EU industrial average in terms of reducing energy use, greenhouse gas emissions (GHG) and improved energy intensity. Total EU industry GHG emissions were reduced by 16% during this time period, as opposed to SPIRE GHG intensity, which fell by 26%.

Some sectors perform better than others, however, SPIRE provides a platform to exchange best practice and develop new disruptive technologies that are applicable across sectors, easing implementation, sharing cost and risk, boosting time to market and therefore competitiveness across a vast range of EU industrial and manufacturing sectors.

SPIRE RDI activities to boost sustainable value creation

SPIRE is:

- Developing new breakthrough process technologies to radically increase energy intensity across the SPIRE sectors and beyond;
- Developing breakthrough process technologies to increase resource efficiency, promote industrial symbiosis and enable the establishment of a sustainable circular economy in Europe and globally;
- Accelerating the development and implementation of digital technologies within the EU process industries as key enabling technologies for resource and energy efficiency, thereby increasing digital intensity, reducing costs and increasing competitiveness;
- Through advanced process technologies SPIRE industries are able to provide the required materials to many industrial value chains (e.g. construction, transportation, energy) enabling higher energy efficiency and lower GHG emissions.

SPIRE represents innovative process industries, 20% of the total European manufacturing sector, and more than 130 industrial and research process stakeholders across Europe. The process industry contributed to more than half (56.4%) of industrial value added in the EU and approximately 10% of all economic activity. The sectors also account for 46% of total industrial employment and 7% of all employment in Europe. SPIRE’s mission is to ensure the development of enabling technologies and best practices along all elements of existing large-scale value chain production that will contribute to a resource efficient process industry. It is important to note that need for digital transformation in the process industry.