



The main topic of this INSPIRE newsletter is an insight in the preliminary findings in relation to the potential of selected business model archetypes on increasing spatial flexibility, aiming to make European process industry more competitive and subsequently relocalize high-value added activities in the medium term. Furthermore, the newsletter contains more INSPIRE related news and events.

The INSPIRE Project



The INSPIRE project brings together the process industry and discrete manufacturing to support in understanding how these two industries can cooperate in order to shape new customer-driven, efficient and sustainable business models by:

- ✓ Developing new innovative business models for more flexible and sustainable manufacturing value chains
- ✓ Providing at the same time a guideline to measure the performance of this novel models under different scenarios.
- ✓ Developing new business model types that currently do not exist and for which further investigation with stakeholders in the European arena is required.

Influences of selected business model archetypes on increasing spatial flexibility

“Flexibility and ability to supply” emerges as one of the top reasons for companies to maintain/bring back high-value added activities in/to Europe based on the INSPIRE research on the major drivers for delocalization/relocalization. This newsletter discusses how the selected business model archetypes facilitate the process of reversing the delocalization trend and embedding sustainability in a dynamic fashion, through increased spatial flexibility. Based on desk research and business cases from process industry, INSPIRE identifies the challenges/opportunities these business model archetypes would have in increasing spatial flexibility, and the potential impact on medium and long term industry-wide objectives.

European process industry is facing competitive pressure, more so for commodities (energy and feedstock), but also for pharmaceutical or chemical industry. In fact, even though the sales have almost doubled in 20 years, the European market share in the global chemical industry



almost halved during this period¹. INSPIRE research on the drivers of delocalization shows that companies in Europe offshore certain activities due to several reasons, chief among which are labor costs, raw material costs, capacity bottlenecks, market expansion, being closer to suppliers/customers, as well as taxes/subsidies. Flexibility, defined as the ability to efficiently and quickly respond to changes in the business environment, emerges as a key element for reshoring back to Europe for not only the chemical industry, but other manufacturing sectors as well².

Business model Archetypes	Impact based on flexibility type				
	Capacity	Product	Location	Innovative	Feedstock
Decentralized/ Modular	Medium	Medium	High	Medium	High
Mass customization	Medium	High	High	High	Medium
PSS/ Servitization	Medium	Medium	Low	Medium	High
Reuse	Medium	Low	Low	Medium	High

Table: Impact based on flexibility type

The table above, based on the desk research and real life business cases, is a preliminary version of the final decision support tool INSPIRE will develop at the end of the project. INSPIRE’s objective is to inform the firms in process industry about the potential of business model archetypes (or a combination) in developing more flexible value chains. For instance, “Decentralized & Modular, PSS, Reuse” deployed alone seems to have highest potential of increasing the “feedstock flexibility” and “a hybrid of Mass Customization and PSS” has considerable impact on “location flexibility”³. Overall, all business model archetypes seem to have positive contributions to increased flexibility and performance level in most cases (e.g., better service, more product offerings, improved response time, better quality management, lower labor cost, less waste generated, more jobs created), albeit to different extent. However, not all such archetypes can be readily deployed.

INSPIRE identified “Information and Communication Technologies (ICT)” and “collaboration/coordination in value chains” as the two major requirements for successful diffusion of these models. The “Decentralized & Modular, Mass Customization, and Reuse” archetypes require high Technology Readiness Level (TRL) and development of new equipment and materials, potentially delaying the widespread deployment of such models. The deployment of “PSS and Reuse”, which require more collaboration/coordination/trust among different actors in value chains, on the other hand might take longer compared to “Decentralized & Modular and Mass Customization”(as they do not require the same level of collaboration/coordination/trust). In addition to the two major requirements, INSPIRE

¹ The European Chemical Industry, Facts & Figures, CEFIC Report, 2016.

² European Foundation for the Improvement of Living and Working Conditions, ERM Report, 2016

³ For detailed discussion of the five flexibilities, see “Small-Scale Flexible Plants: Towards a More Agile and Competitive EU Chemical Industry”, TNO Report, by Kranenburg et al.



identified other challenges such as protection of intellectual property rights, standardization, high costs of recycling, lack of industrial parks/clusters in some locations, and loss of economies of scale.

Future Steps

In the light of the above, INSPIRE's ultimate goal is to stop or reverse the delocalization trend by proposing novel business models geared towards achieving the following:

- a) make processes less labor-intensive (*e.g., 3D printing for mass customization, process intensification, automation, virtual factory networks enabled by IT platforms*),
- b) foster high-value added activities such as the design of better product & service combinations (*e.g., 3D printing, PSS*),
- c) increase flexibility by enabling the switch to alternative sources of input/production and products to mitigate the risk of highly uncertain input prices/demand for products/capacities (*e.g. through decentralized/modular production*), and
- d) Optimize resource usage (*e.g., reduce dependence on virgin materials through reuse*).

INSPIRE's focus will be on leveraging the competitive advantage of Europe in the field of R&D for high-value added products/services while proposing novel business models creating flexible value chains in the process industry.

The full report on spatial flexibility is available in the [downloads section of the INSPIRE website](#)

Second thematic workshop

On November 23rd, INSPIRE organizes the second thematic workshop, which will have the theme 'business models'. This workshop is co-organized with the SPIRE association. Participating in this event is only possible for SPIRE associates, but if you are interested, you can always ask your contact at the INSPIRE consortium to introduce you during the workshop.

More information about the Business models theme can be found in the [downloads section of the INSPIRE website](#)

Other events

European Cooperation for Industrial Symbiosis – November 30st, Brussels

The European Commission (DG GROW) has selected Technopolis Group, in consortium with UCL, Trinomics, INSPIRE partner TNO and International Synergies to conduct a study on cooperation fostering industrial symbiosis (IS). The aim of the study is to assess the market potential, good practice and potential actions to promote industrial symbiosis across EU, including testing the feasibility of an EU platform for industrial symbiosis.



[Read more](#)

Tech Tour 2017 European Venture Contest Final - December 11 and 12, Düsseldorf

INSPIRE shall be presented at the 11th edition of the European Venture Contest Final (former European Venture Summit) – Europe’s leading network and investment event for high-growth technological start-ups, venture capital investors and technological corporations. The EVC Final will present 100+ innovative companies from all over Europe to an international audience of investors, key corporates and innovation experts.

[Read more](#)

Hannover Messe 2018, 23 - 27 April

The world's leading Trade Fair for industrial Technology. All key technologies and core areas of industry – from research and development, industrial automation, IT, industrial supply, production technologies and services to energy and mobility technologies – can be found in Hannover. Take advantage of all the synergies that HANNOVER MESSE has to offer. Welcome to the industry’s global hotspot!

[Event website](#)

How to get involved in the INSPIRE project

If you want to stay updated about the INSPIRE project and receive more news about INSPIRE or if you want become a member of The Stakeholders Community, please get in touch with [one of the INSPIRE partners](#).

