

HOLISTIC APPROACH TO INNOVATION

DESCRIPTION:

The general term 'holistic approach' means "taking care of or paying attention to something in all aspects". In the context of the HARMONI project, the 'holistic approach to innovation' describes how organizations can achieve a holistic perspective on their barriers to innovation and on solutions available in the market in order to improve their own competitiveness and the competitiveness of their industry.

Type of barrier: PROCEDURAL

Sectors involved: ALL SPIRE SECTORS

Challenges

Throughout **HARMONI**-related research, technical as well as procedural barriers to innovation have been collected. Some of these barriers decrease the potential for transferring innovations between sectors. As a result, these barriers can decrease potential cooperation activities and hamper the transfer of innovative solutions between sectors.

While this document can only provide an overview of challenges ("barriers") detected, a deeper analysis of potential solutions will be conducted in **HARMONI** in 2019. Aspects concerning innovation that will be further discussed are:

- barriers caused by regulatory processes or regulatory output
- challenges caused by other technical or procedural barriers such as funding, financing and further social, environmental and economic aspects that hinder innovation
 - "missed opportunities" such as:
 - a lack of effective information management between regulatory bodies and companies or between standardisation bodies and companies,
 - a lack of communication, ineffective communication,
 - a lack of collaboration across sectors or with research organizations,
 - a lack of skills required for innovation management or to apply new technologies, new tools, etc.
 - the consequent effective application of standardization as strategic tool
 - the ineffective utilization of digital tools

According to **HARMONI** interview and survey participants, some cases illustrate certain lack of transparency and clarity in some regulatory processes.

On the other hand, the cooperation across SPIRE sectors (Cement, Ceramic, Chemicals, Engineering, Non-Ferrous Metals, Minerals, Steel, Water) has also been low so far so that solutions that have been developed in one sector have not been communicated to other sectors facing the same barriers.

We believe that this can be achieved by fostering a holistic thinking and acting within the process industry in the form of cross-sectorial cooperation and an increased interchange of information between industry, regulatory bodies and standardisation bodies.

Potential solutions

Industrial organizations but also regulatory bodies and standardization bodies should try to get as much information as possible and required on the barriers that they are facing in the industry in order to integrate those in a more holistic approach within and across different stakeholders of the process industry (including regulatory and standardisation bodies).

Besides the broader sharing of information and the increased cross-sectorial cooperation, potential solutions include the application of practically proven management tools to achieve a system fit and to identify synergies between organizations; also a bilateral understanding of processes (of other sectors as well as regulatory and standardisation processes) along the value chain of the respective organizations.

Further potential solutions to increase a holistic thinking and acting are annual cross-sectorial events and information platforms, leveraging the role of SPIRE, financial incentives for cross-sectorial cooperation by the regulatory bodies, a stronger and fair integration of industrial representatives during the development of regulatory processes (see standardisation processes as an example) and so on. Communication schemes across SPIRE sectors could also be set up by working groups or multidisciplinary expert teams that cooperate on specific topics that concern more than one sector (e.g. waste, circular economy, emissions) or that identify (new) business models.

We also assume that a stronger involvement of IT experts in projects of the process industry could help to increase the awareness and to identify skills for future technologies, to set up effective data management systems for better information management or to introduce platforms that improve the coordination of the regulation and standardisation approach in order to support market penetration. A STAIR platform could be a solid foundation and a first step towards this ambition. A good interaction of standardisation experts with policy makers is one aspect of a good operating environment for companies.

We believe that investing in a holistic approach will increase the competitive and transient advantages of the European industry, i.e. competitiveness on EU- and global level as a result.

