Barriers and shortcuts to Circular Economy

Sustainable Chemicals production in the EU regions

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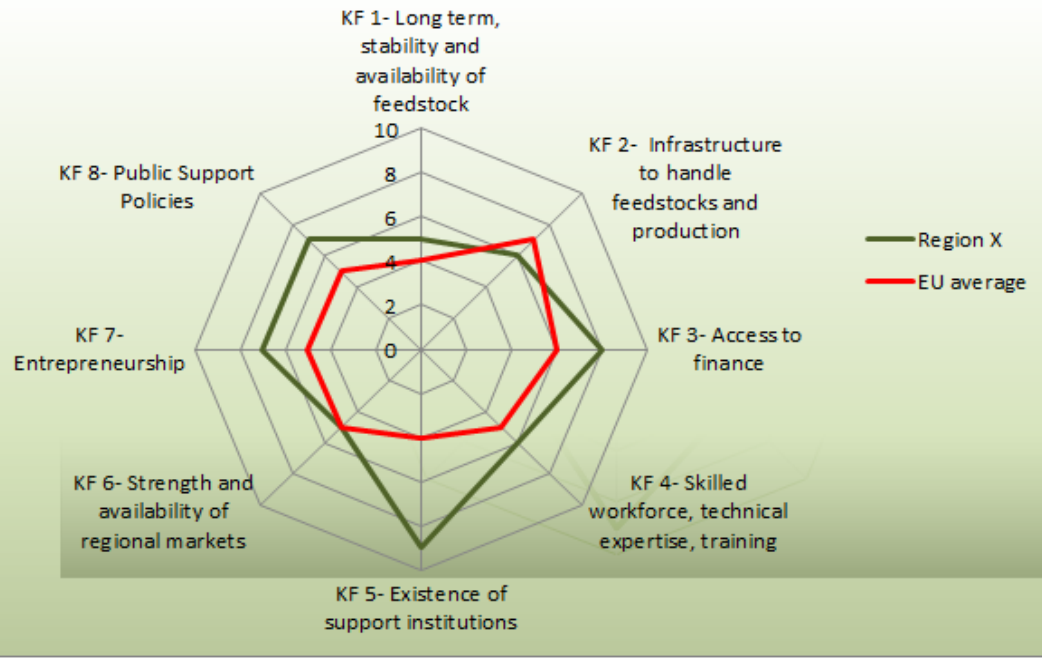
Alternative feedstocks categories

Effluent gases

Waste from farms, municipalities, plastics,...

Biomass from agriculture and forestry



European Commission

Self Assessment Tool

Methodology to perform a first assessment of investment readiness level of a region regarding chemical production → to serve as a starting point for regional discussion on how to design better regional strategies

- Feedstock availability, GIE availability
- Infrastructures
- Skilled workforce, Knowledge base
- Regional markets, GIE usage
- Political support
- Access to finance
- Support institutions
- Entrepreneurship, Thriving business community
- Industrial Symbiosis

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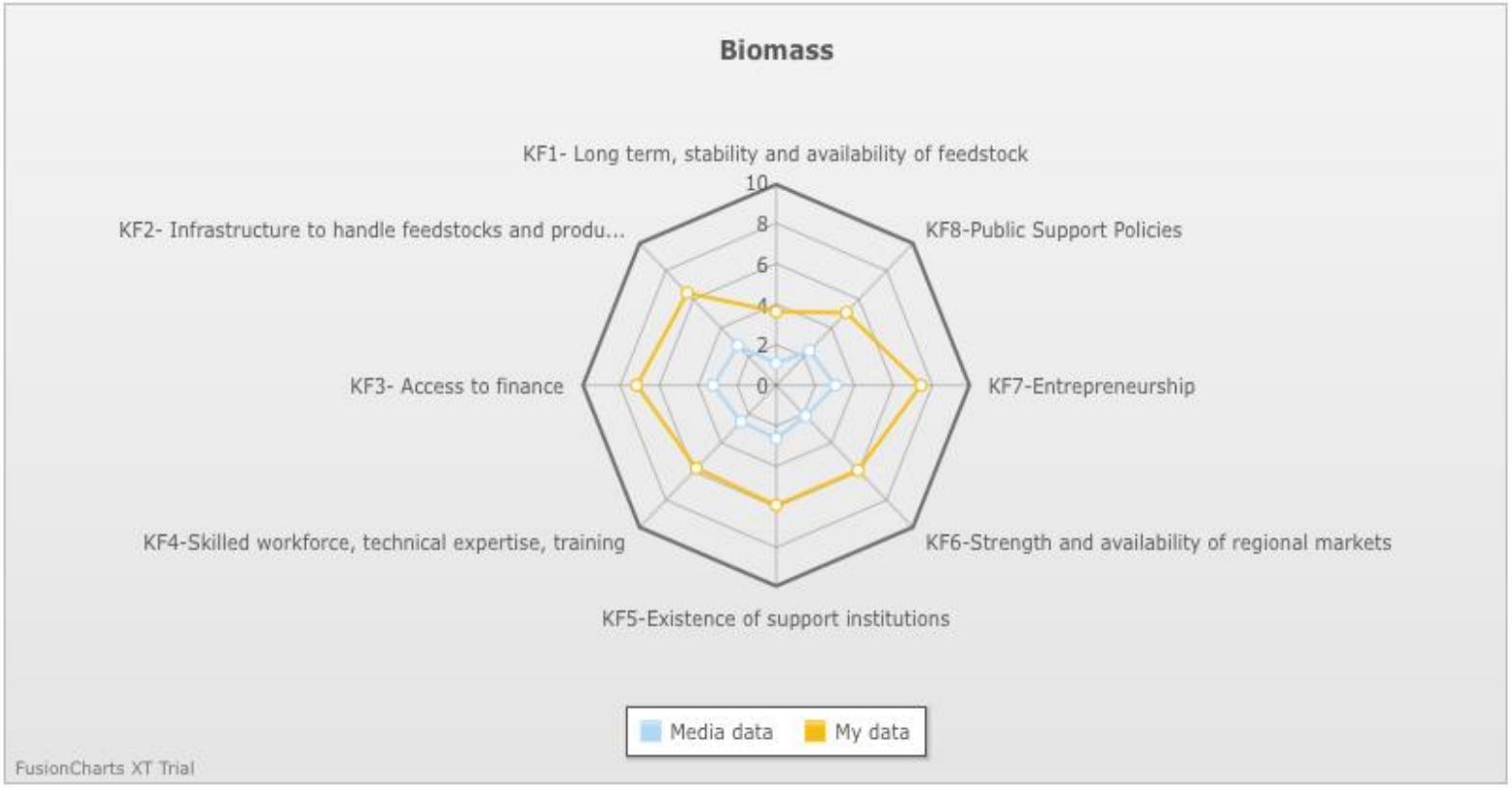
SAT: https://ec.europa.eu/growth/tools-databases/escss



*The average data correspond to 14 replies

Questionnaire | conclusions | back

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Report

Spider diagram

Automated report

Knowledge base

The transition to the effective use of gaseous industrial effluents (GIEs) as alternative raw materials towards a more circular economy in the chemical industry requires a rearrangement not only of value chains but also of society culture and knowledge.

Therefore, rising and spreading knowledge is a major issue that will need for innovative aptitude and attitude, skills and expertise for transition and a multidisciplinary and comprehensive education.

In addition to the in the depth and specific technical knowledge needed, the introduction of new concepts underpinning the use of alternative raw materials in the circular economy, from the general green awareness to the “system thinking” principles and developing skills for multidisciplinary teamwork, must be integrated into education curricula from vocational training to higher education.

The existence of an education and training offer in the field of sustainable chemicals, circular economy and industrial symbiosis is an evidence of the flexible adaptation to the economic trends and productive system and future skills needs.

The seemingly static training and educational system in your region will probably be an important barrier to overcome soon for the take-off and speed-up of the concepts underpinning the transition to the use of alternative raw materials.

On the other hand, to build up this flexible and adapted to the current and future trends education, it is also noteworthy in your region the fact that different stakeholders across the value chain, including industry, take part and bring together practical and different points of view in the design of curricula.

There are also other desirable supporting bodies or structures in the education field such as the so-called Centres of Excellence (CoE). These centres provide leadership, research, support and training that play a strategic role in the development of sustainable chemistry concepts.

On the other hand, to build up this flexible and adapted to the current and future trends education, it is also advisable that different stakeholders across the value chain, including industry, take part and bring together practical and different points of view in the design of curricula.

However, it is usual that many companies in the sector lack adequate information and knowledge about their own products and raw materials. The transition to more circular value chains in the chemical industry by using alternative raw materials is not possible without these foundations. Improving this knowledge is first and foremost responsibility of the business sector, which cannot assess the vulnerability of their own value chains and so are unable to respond to risks and explore alternatives.