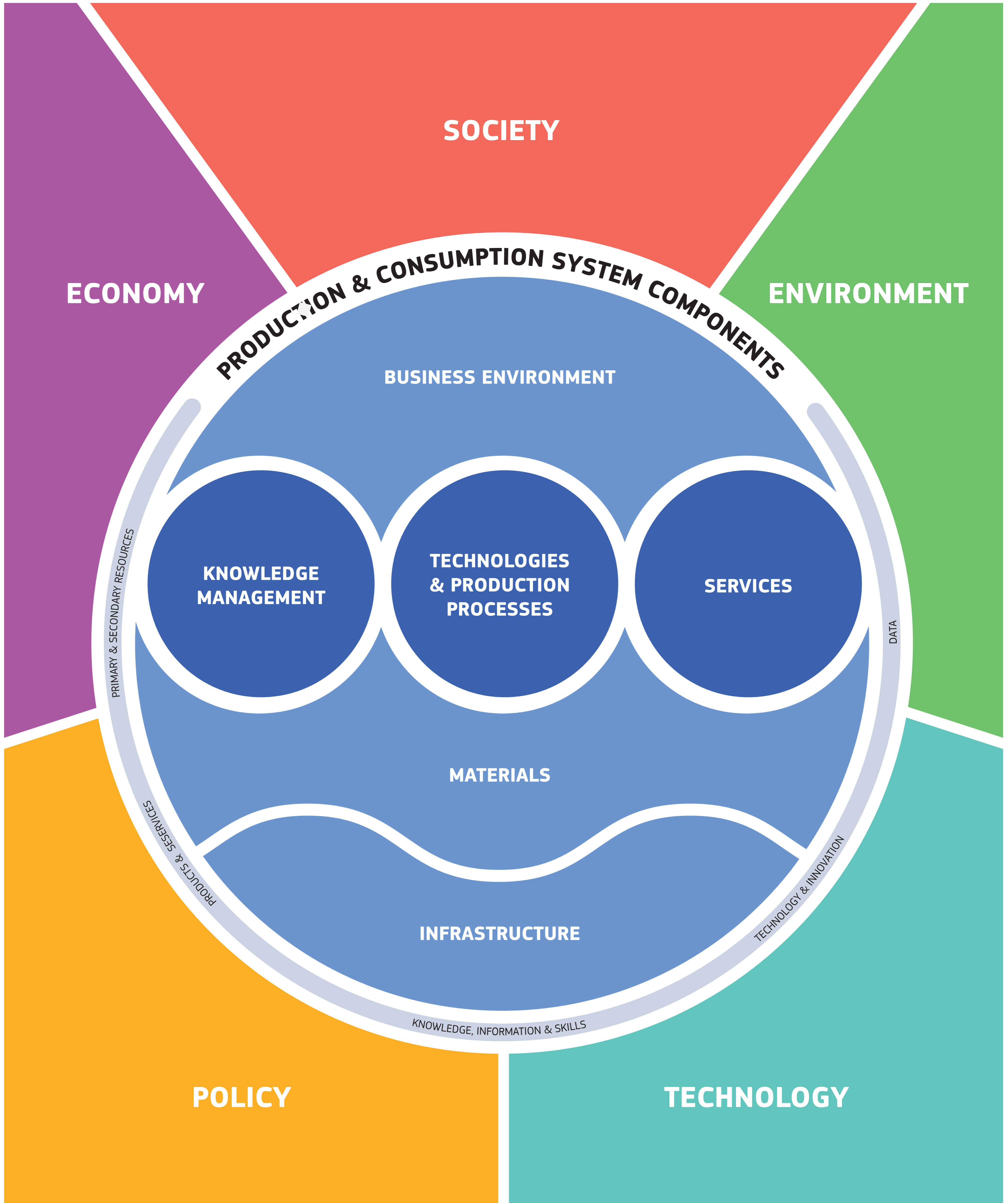


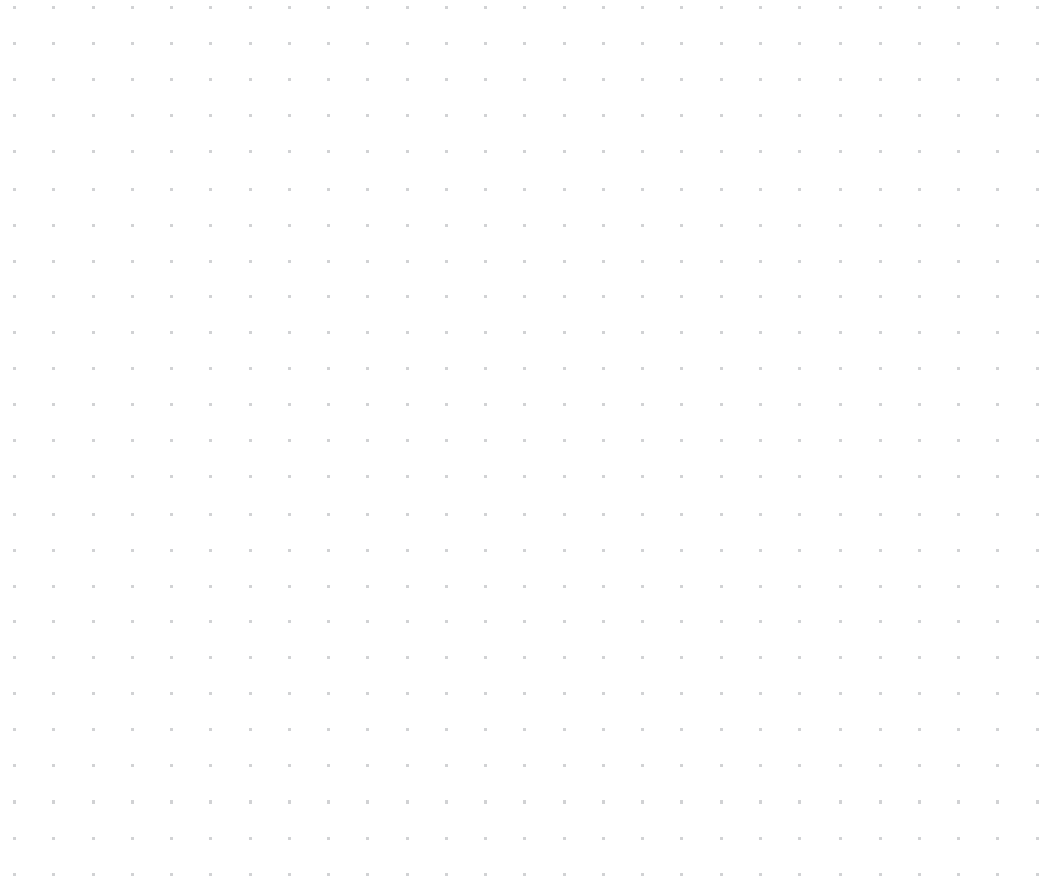
# INDUSTRIAL LANDSCAPE GENERATOR



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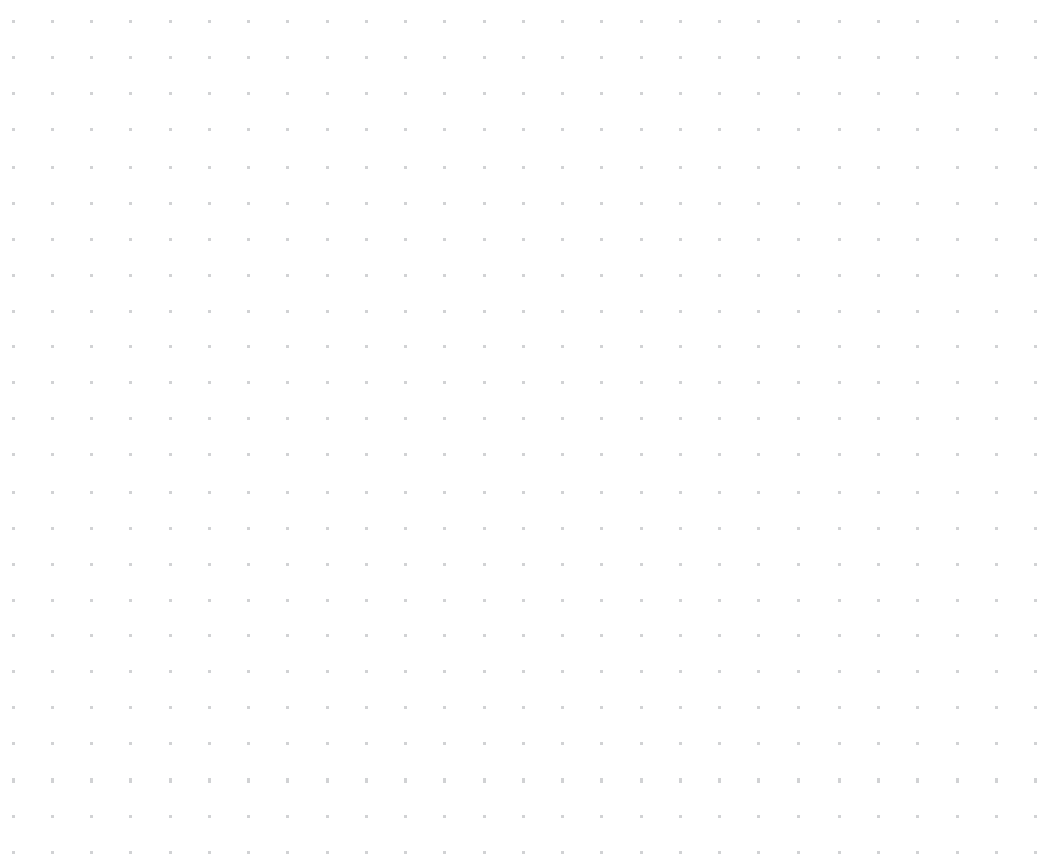


# MATERIALS SCIENCE

NFConstruct is a relatively old company that has gone through various transitions over the decades. For many years, high added value metallic profiles for the construction industry have formed a large part of NFConstruct's sales. Suddenly, in view of new policies to tackle greenhouse gases emissions and improve recyclability, building standards change. New composite materials based on carbon fibres and polymers from renewable sources become an alternative that offers practical advantages for a minor cost increase. Ongoing R&D performed by NFConstruct's competitors promises to quickly bring down the cost of these new products. Research efforts have also started to make them recyclable.

# MAT

## How is this relevant to non-ferrous metals manufacturing in Europe at the selected time horizon?



# COMPETITION WITH NEW MATERIALS

## What the vision statement says:

By 2050, the European non-ferrous metals industry will be [...] delivering sustainable and innovative non-ferrous metals-based solutions globally. It will be a key player in enabling society to close resources loops (material, water, energy) by means of the products and services it provides. [...] It will act as a key driver and actor behind advanced and dynamic value chains through technological excellence. [...] It will achieve this by improving the performance of non-ferrous metals in a circular economy perspective, shifting to renewable sources of energy, investing in research and innovation [...].

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## What could NFConstruct and other stakeholders do to respond to this challenge?

A large grid of small dots, intended for writing a response to the challenge.

# ENABLERS AND CONSTRAINTS

## **People and Societal Values**

People, their demography, their attitudes and their expectations will set the societal norms within which the industrial landscape will develop, and for which industry will develop its future markets and products.

## **Employment and Skills**

The availability of workers with the adequate skills will define the ability of industry to develop new technologies, production processes, services and markets. The regions of the world able to attract the workers with the right skills at the right cost will have competitive advantage.

## **Regulation**

The regulatory framework in which industry will develop is crucial. A regulatory framework can either provide industry with clear guidelines and encouragement, enabling industry to develop well considered markets and products. Conversely a regulatory framework can block the development of industry, closing potential markets and reducing industrial competitiveness.

## **Financial System**

Financial regulation, crowd funding, future banking systems and the evolution of the monetary systems are elements that will affect the financial capacity of the production industry. The availability and price of money will continue to be a determinant for the manufacturing business for investing in new plant facilities, new processes, research and development. Volatility in the financial system will also impact the ability of the production industry to develop value and compete.

## **Science, Research and Technology**

The direction and rate at which scientific knowledge is generated, innovation occurs, and new technology is developed is a key determinant in defining the extent of opportunities for developing new markets, processes and products. Countries and regions able to optimise investment in sciences, research and technology, and assure the transfer of the knowledge to industry will have competitive advantage.

## **Environment, Resources and Energy**

The availability of materials and energy at a reasonable cost is a fundamental requirement of industry. The production and use of these resources in an environmentally sustainable manner is a fundamental requirement of today's society. Failure to achieve both these needs will result in industrial decline and environmental damage.

## **Markets, Competition and Consumers**

Markets for products constantly shift and change, in order to adjust to consumer behaviour. These shifts and changes happen within one geographical area, as well as between global regions. The ability of industry to agilely adapt their business models to these changes defines their potential to maintain or develop competitive advantage.

# DRAFT VISION STATEMENT

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# KNOWLEDGE MANAGEMENT



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# **KTECHNOLOGIES & PRODUCTION PROCESSES**

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