



gaia-x



# Market Conference & Expo

Vienna Austria

14 - 15 March 2023

In partnership with  gaia-x  
 Hub Austria



# Manufacturing-X

The Open Initiative to Build a  
Cross-Sectorial Data Ecosystem  
for the Industry

Ernst Stöckl-Pukall

Federal Ministry for Economic Affairs and Climate Action

14.03.2023



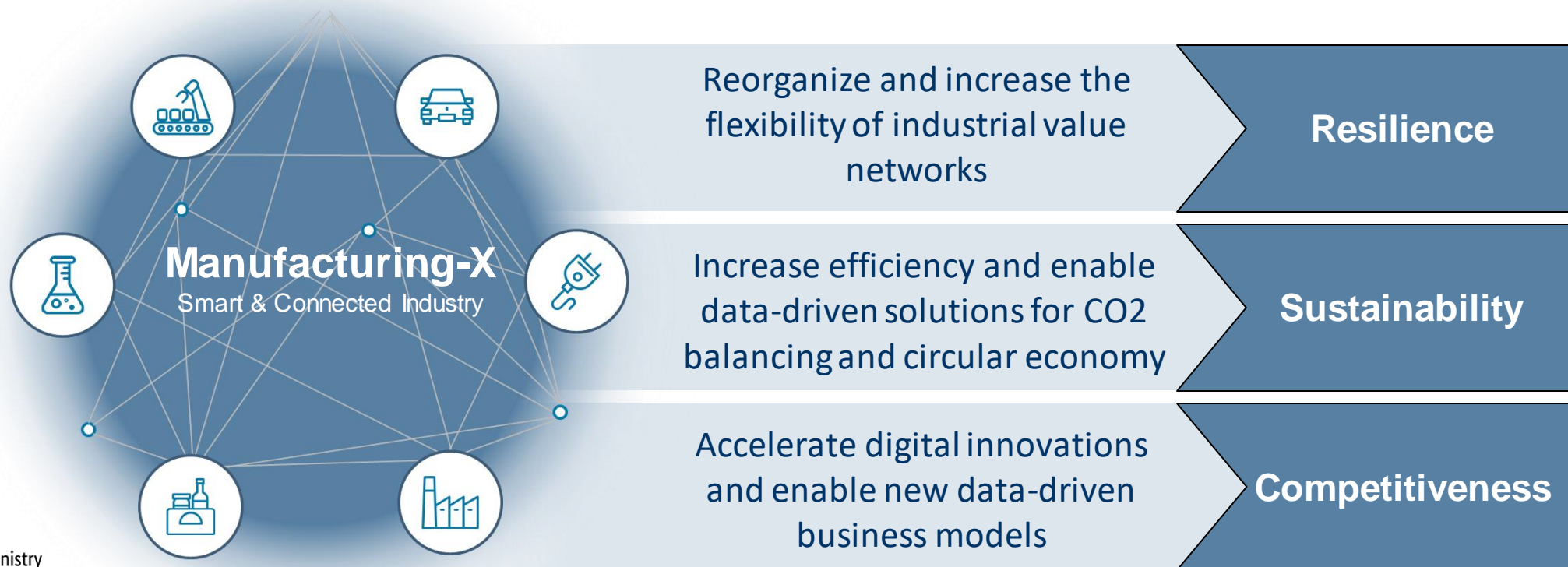
# Agenda

- Mission & Motivation
- Key Elements
- Framework
- Community
- Outlook & Next Steps



# Mission Statement “Manufacturing-X”

Manufacturing-X will implement the open, decentral and collaborative Industrial Data Space for Industry 4.0 across all industrial sectors.



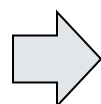
# Why Manufacturing-X?

## Challenges to cross-industrial digital cooperation

Interoperability	Fragmented landscape of data silos and small-scale, incompatible data spaces
Regulatory Framework	Legal uncertainty and lack of proven legal frameworks for multilateral data exchange
Culture and Mindset	Lack of trust between actors in data spaces to share their data
Degree of Digitalization	Low overall digitalization of SMEs and low accessibility of digital solutions

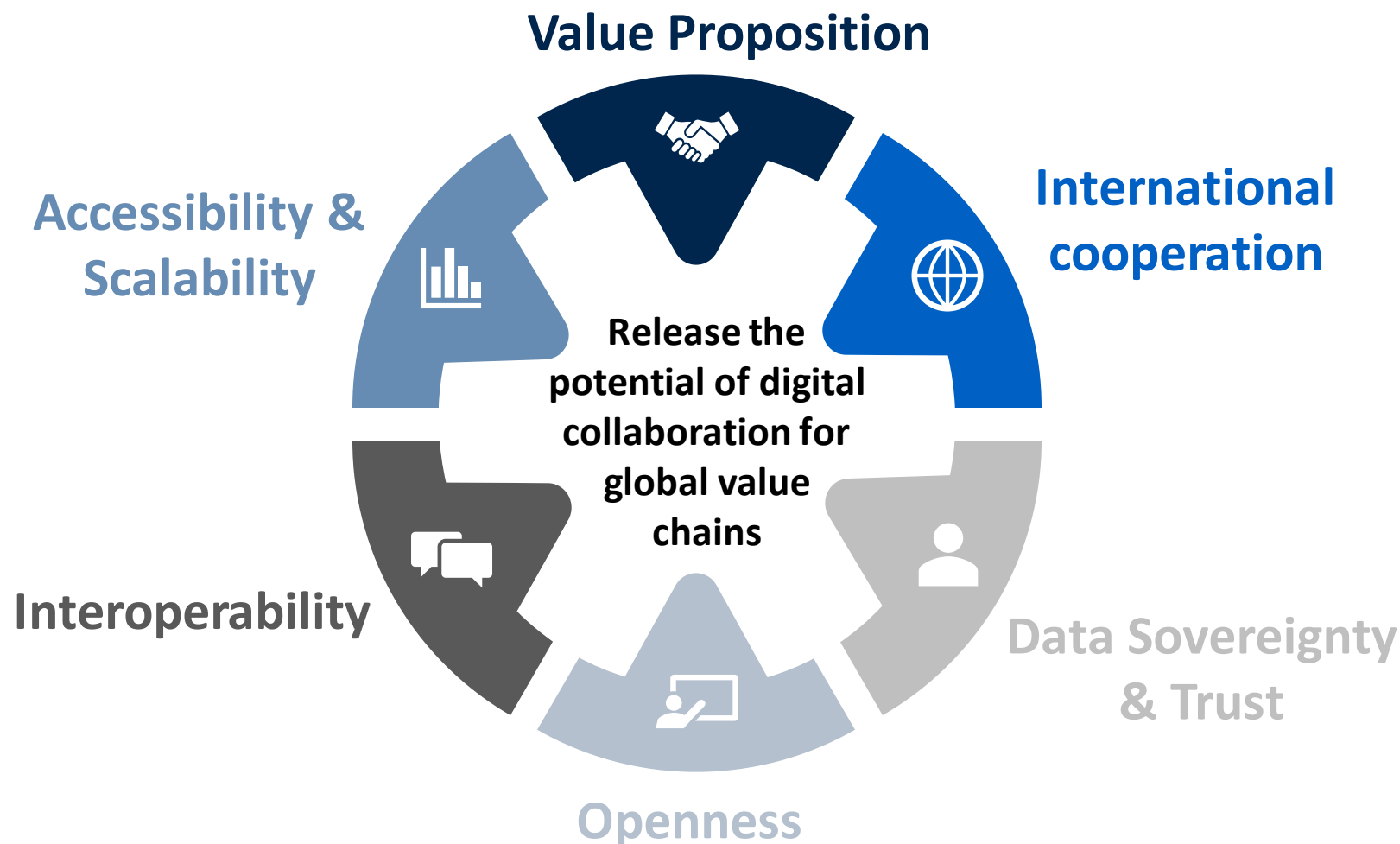
## Need to act – Digital and ecological transformation

Value Creation	Increasing share of data economy in industrial value creation
Industrial Competitiveness	High labor costs, skills shortage, high energy costs,...
Data-Economic-Regulations	Data Act, Data Governance Act, Cyber Resilience Act,...
Geopolitical Context	Increasing importance of supply chain resilience
Environmental context	Rising need to combat climate change and reduce ecological footprints



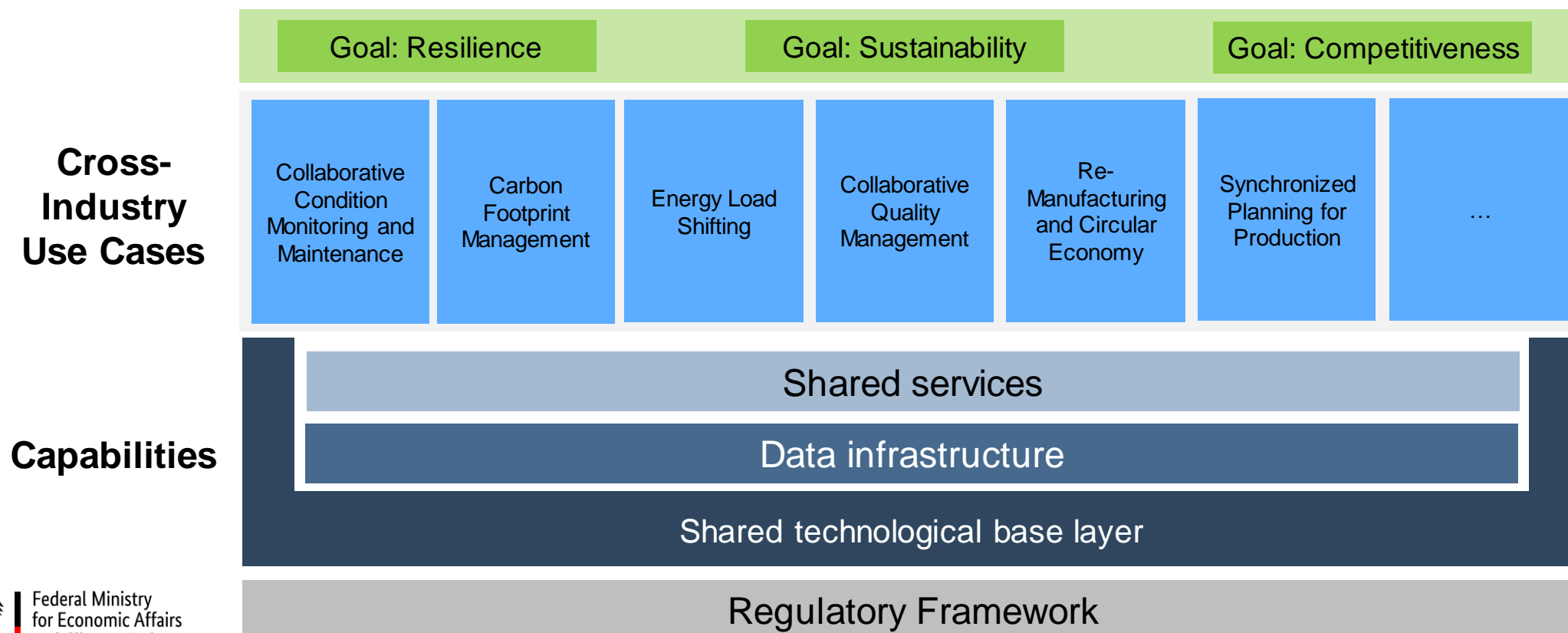
**Solutions to these challenges can only be found together. Manufacturing-X aims to bring the industry together and facilitate cooperation over cross-industrial supply and value chains.**

# Key Success Elements



# Manufacturing-X Framework

Manufacturing-X aims to implement important cross-industrial use cases on a common framework.



# Manufacturing-X and Catena-X

Catena-X is building the first open and collaborative data exchange ecosystem for the Use Case “automotive supply chain”.

## Facts & Figures

- Start R&D project in August 2021, end date July 2024
- R&D project volume of 244M Euro
- 28 members in project consortium
- “Catena-X Association” founded in May 2021, currently 144 members (01.03.23)
- First governing operating company “Confinity-X” appointed in February 2023

**Manufacturing-X** can use the Catena-X Data space and utilize the learnings of Catena-X as a **blueprint** with regard to:

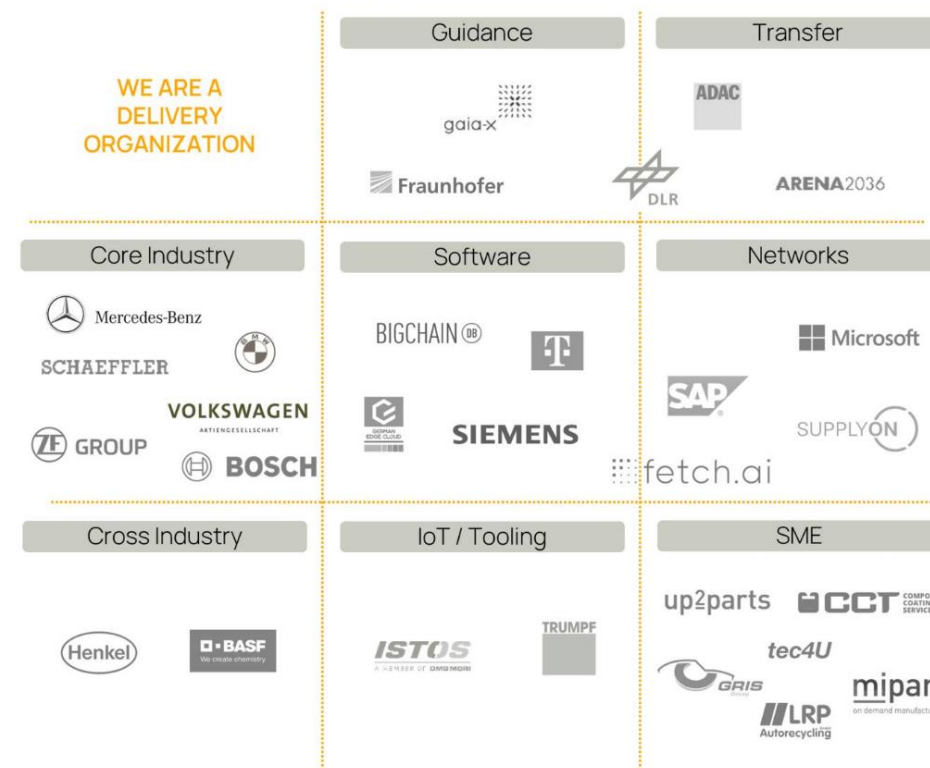
- Project structure and community approach
- Technological building blocks
- Operating models
- Internationalization



Federal Ministry  
for Economic Affairs  
and Climate Action

14.03.2023

Manufacturing-X

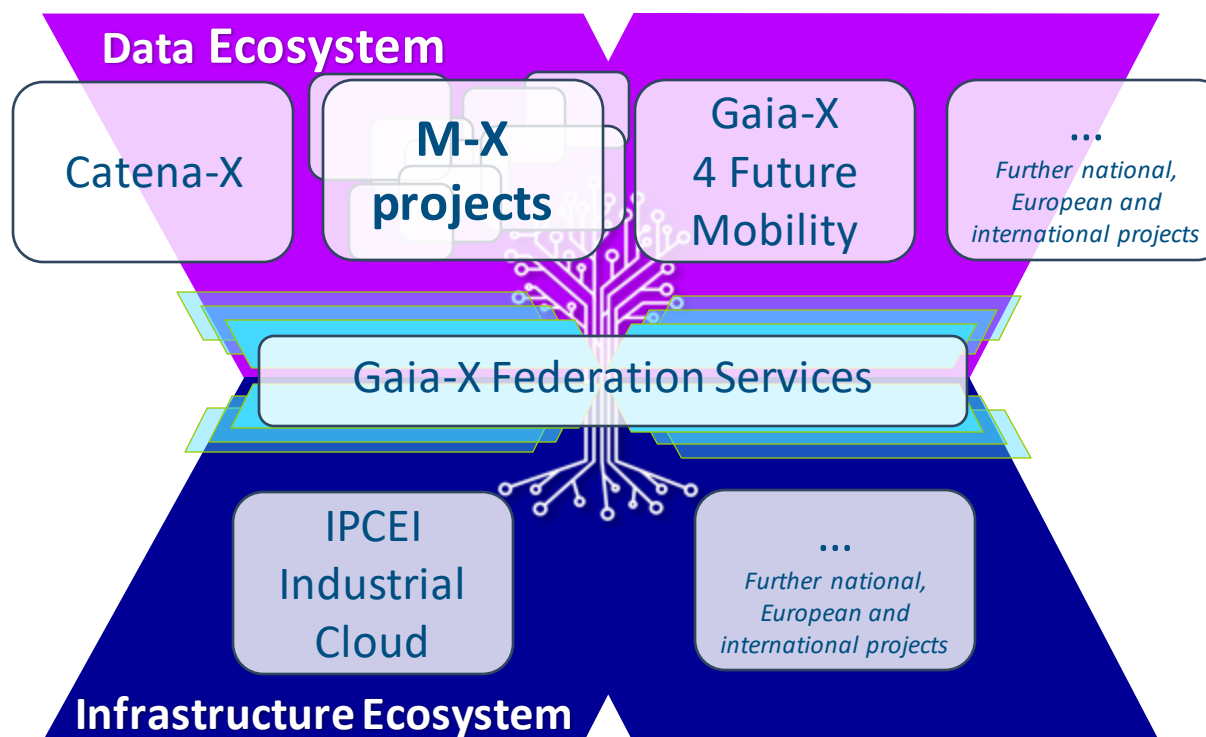


© Catena-X, <https://catena-x.net/en/about-us/development-environment>



# Manufacturing-X and Gaia-X

Manufacturing-X will be the first implementation of a Gaia-X compatible data ecosystem on a cross-industrial scale.



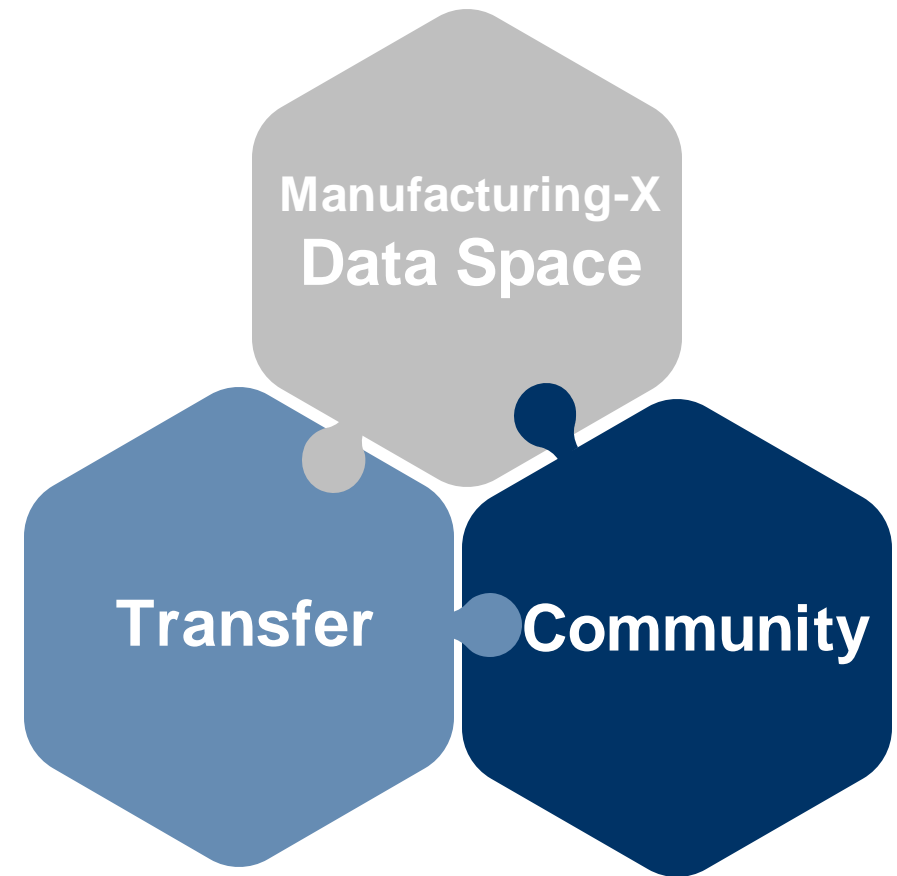
**Excerpt of Gaia-X related funded projects**

# Transfer and SME Participation

The initiative Manufacturing-X not only encompasses the technical implementation of a cross-industry data ecosystem but also efforts to transfer the results and build an (international) Manufacturing-X community.

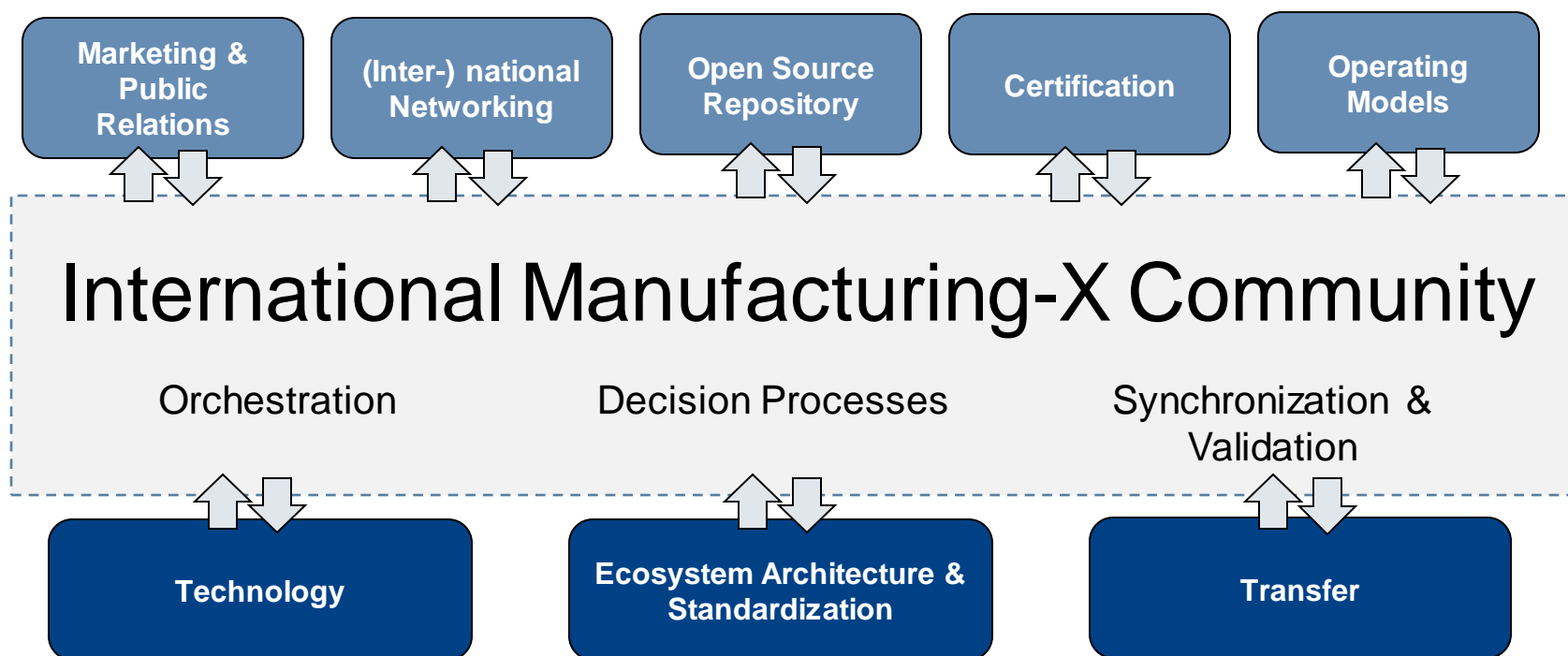
It aims to...

- Facilitate SME participation via needs-oriented applications and “plug & play” solutions
- Build structures to orchestrate R&D activities and coordinate the transfer of solutions from R&D projects to potential users



# Manufacturing-X Community

Manufacturing-X should develop into an open and community-driven initiative that includes European and international partners.



*A possible structure for the Manufacturing-X community as described by Plattform Industrie 4.0 in the "Whitepaper Manufacturing-X"*  
 (see [https://www.plattform-i40.de/IP/Redaktion/DE/Downloads/Publikation/Manufacturing-X\\_lang.pdf?\\_\\_blob=publicationFile&v=6](https://www.plattform-i40.de/IP/Redaktion/DE/Downloads/Publikation/Manufacturing-X_lang.pdf?__blob=publicationFile&v=6))



# Current Status & Next Steps

Key elements of a Manufacturing-X community are currently under development. The first R&D projects should launch in Q4 2023.

**Join us at  
#HMI23!**

**Hall 8, Stand D26**

April 2023  
**Presentation of the initiative  
at Hannover Messe 23**

December 2023  
**Launch of the first funded  
R&D projects**

February 2, 2023  
**Establishment of the Steering  
Committee for Manufacturing-X  
(SC4MX)**

Ongoing  
**Development of a Funding Concept for  
Manufacturing-X at BMWK**

March 28, 2022  
**Resolution of the PI4.0 Steering Group  
for the establishment of the  
Manufacturing-X initiative**



Manufacturing-X

# Thank you!

Ernst Stöckl-Pukall | [Ernst.Stoeckl-Pukall@bmwk.bund.de](mailto:Ernst.Stoeckl-Pukall@bmwk.bund.de)

14.03.2023