

# International Manufacturing-X Council

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Why – What – Who – How

Why?

# Challenges and Opportunities for Global Manufacturing Industries

In light of increasing **digitalization** and the resulting requirements, manufacturing throughout the world is facing **unprecedented challenges** and **opportunities**. The **real and virtual world** will continue to **coalesce**. The **entire value chain** will be **integrated and supported by digitalization**, from product, production and process design to on-site customer service and circularity – across locations as well as company and national boundaries.



Deployment needs customization across an infrastructure continuum from cloud to edge, depending on the applications.



Information sharing and data-driven collaboration among manufacturing initiatives across the supply network are becoming more relevant for impactful manufacturing data networks.



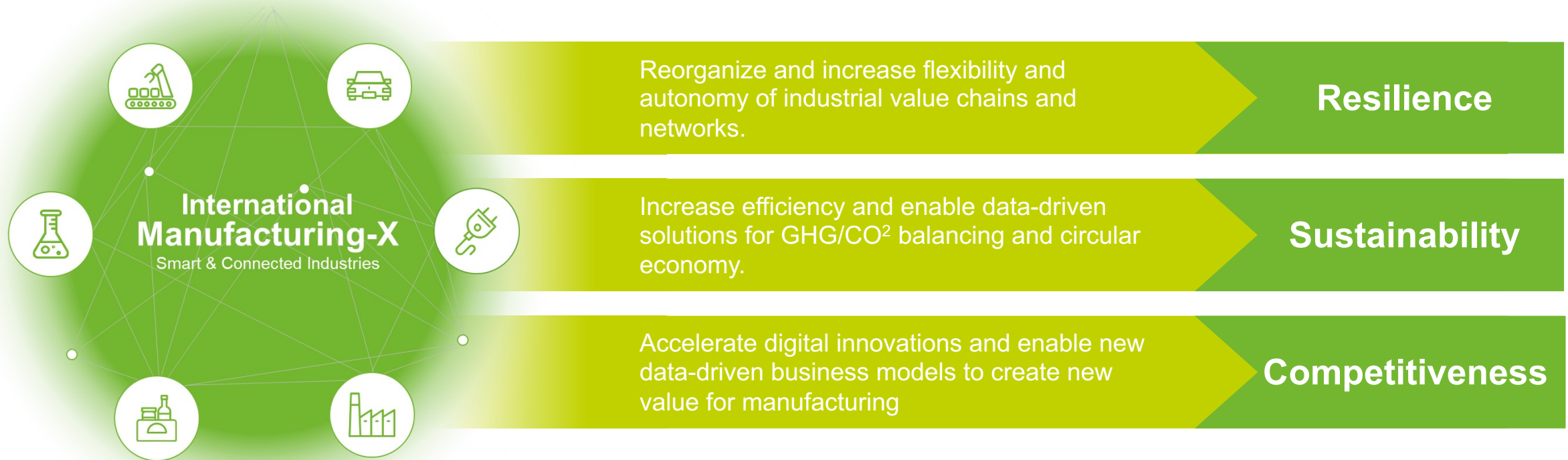
Harmonized standards facilitate business scale-up of data ecosystems, which are becoming essential.

No country, no initiative, no company can achieve this on its own!

Motivation & Big Picture

# International Manufacturing-X (IM-X): Make Data Work

IM-X will implement a federated, decentralized and collaborative data ecosystem for smart manufacturing. Open, global and cross-industry, following FAIR Data Principles.



## Motivation & Big Picture

# Foundational Framework for IM-X

A common guideline for IM-X activities and international stakeholders.

### Strategic Goals

International Manufacturing-X develops the foundations for a resilient and competitive industry in a sustainable society.

Resilience

Sustainability

Competitiveness

### Business Models

International Manufacturing-X enables innovative business models based on a interoperable data-ecosystems

Digital Products and Services

Everything as a Service

### Exemplary Cross-Industry Use Cases

International Manufacturing-X addresses cross-industry use cases based on a collaborative use of data with high economic and ecological impact.

Product Innovation, Collaboration & Product Optimization

Autonomous Factory

Supply Chain, Transparency & resilience

Energy & GHG/CO<sup>2</sup> Management

...

...

...

### Capabilities

International Manufacturing-X enables development and deployment of fundamental services driving the federated data ecosystem.

Shared Services

### Foundation

International Manufacturing-X defines global standards and runs a basic technical infrastructure to guarantee interoperability and sovereignty.

Shared Technological Base Layer

### Requirements

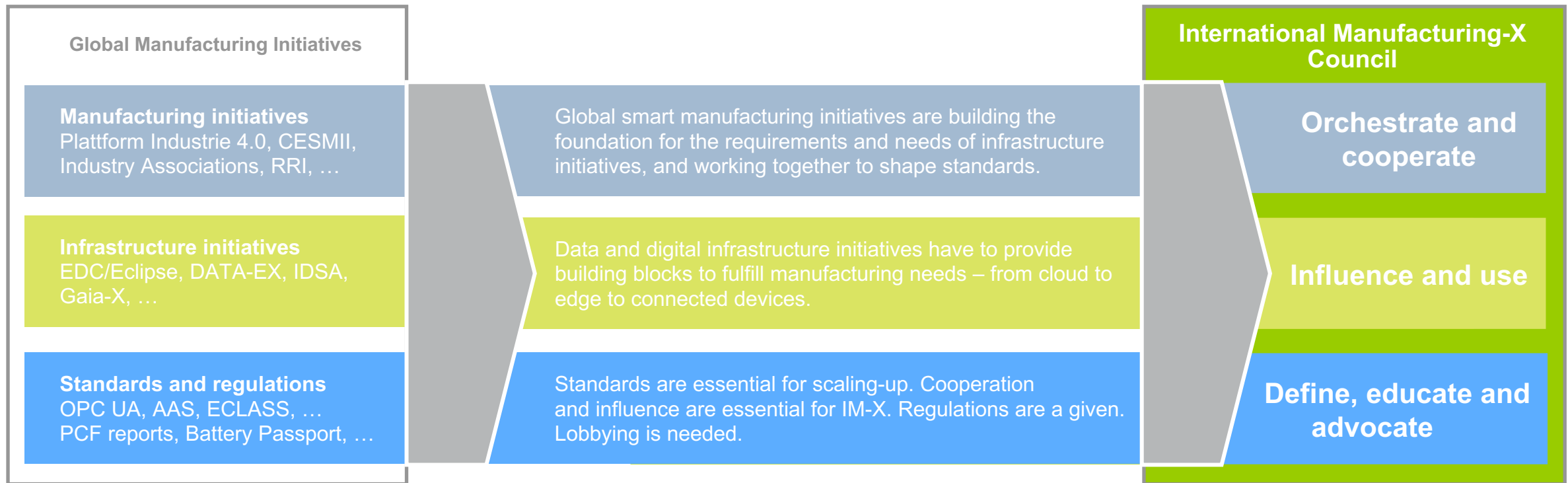
International Manufacturing-X builds on a common technical, organizational and legal framework and contributes to the future development in cooperation with international law.

Regulatory Framework and Standards

Motivation & Big Picture

# Landscape of Initiatives in the Context of global manufacturing

Manufacturing-X is international. Our intention is to foster international R&D, partnerships, cooperation, standardization and deployment with and for customers globally.



Vision

# The Threefold Vision Behind IM-X



1.

Connect value chains and manufacturing data networks across industries and countries.



2.

Implement global foundations for data-driven resilient, sovereign and climate-neutral production covering the full life cycle of production and products.



3.

Enable innovative value creation in an interoperable and sovereign data ecosystem.

## Mission

# The IM-X Mission: Make Data Work at a Global Scale, Across Industries and Stakeholders

IM-X will implement a **federated, decentralized** and **collaborative** data ecosystem for smart manufacturing. It aims to enable **open, global** and **cross-sector** international operation of **cost-effective** data networks.

This can be realized through **3 main lines of activity**:

1. Facilitate use cases on the collaborative use of industrial data for all manufacturing industries.
2. Develop the requirements, influence international standardization and framework development for basic infra-structure to deploy federated data-ecosystems for manufacturing.
3. Provide guidelines to leverage easy-to-use applications and dynamically scale the ecosystems.

How?

# Establishing the International Manufacturing-X Council

**Open collaboration, inclusiveness, transparency and equal treatment of all the partners inside this international Manufacturing-X ecosystem are key!**

The **International Manufacturing-X Council** will determine collectively what is needed, what to do and who is responsible.

**One Country, One Vote**



What?

## The IM-X Council: A Co-Design and Unified Effort Driven by an International Ecosystem

- Develop a joint understanding of data-spaces.
- Connect and cooperate with other initiatives that are relevant to manufacturing (e.g. energy, logistics, mobility, etc.).
- Open exchange of regional initiatives (specific projects, opportunities, etc.).
- Define a joint framework for interoperable IM-X (technology, standards, etc.) that manufacturing product/solution architecture can build upon.
- Drive international harmonization and standardization (consensus based and de-facto based).
- Discussion of use cases and joint projects where appropriate.
- Joint conferences and events.
- ... and other topics

Who?

# Initiatives Involved in Establishing the IM-X Council



... and more to come



## First Concept Ideas

# IM-X Council: Open collaboration, inclusiveness, transparency and equal treatment of all partners are key!

- Countries are represented by council members, selected by their respective industry initiatives, and speaking with one voice.
- One country, one vote. Agreements should be consensus based.
- The Council will have 2 speakers, from 2 different countries and at least one from industry. They are selected every 2 years on a rotating basis.
- Government involvement is highly welcomed (national and regional level).
- Membership in the IM-X Council is open to additional countries!
- The exact structure of the IM-X Council will be further developed together.

Call for participation

# International Manufacturing-X Council: Make Data Work

Hartelijk dank

# Thank you!

*Muito obrigado*

*Merci beaucoup*

ありがとうございました。

Σας ευχαριστώ πολύ

*Tack så mycket*

Dziękuję bardzo

# Grazie mille

Köszönöm szépen

# Vielen Dank!

*Mange tak skal du have*

Ďakujem veľmi pekne

# 감사합니다

# Muchas gracias

Děkuji mnohokrát

Next Steps

# International Manufacturing-X Council

1. Kick-off meeting IM-X Council with all partners. 18/19 January 2024
2. Further define IM-X Council collaboration process
3. Identify collaboration topics

**Call for Participation**  
Interim contacts are:



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