

# Standardizing the Digital Twin

Manufacturing-X with Energy Use-case

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# Energy Management / Smart grid

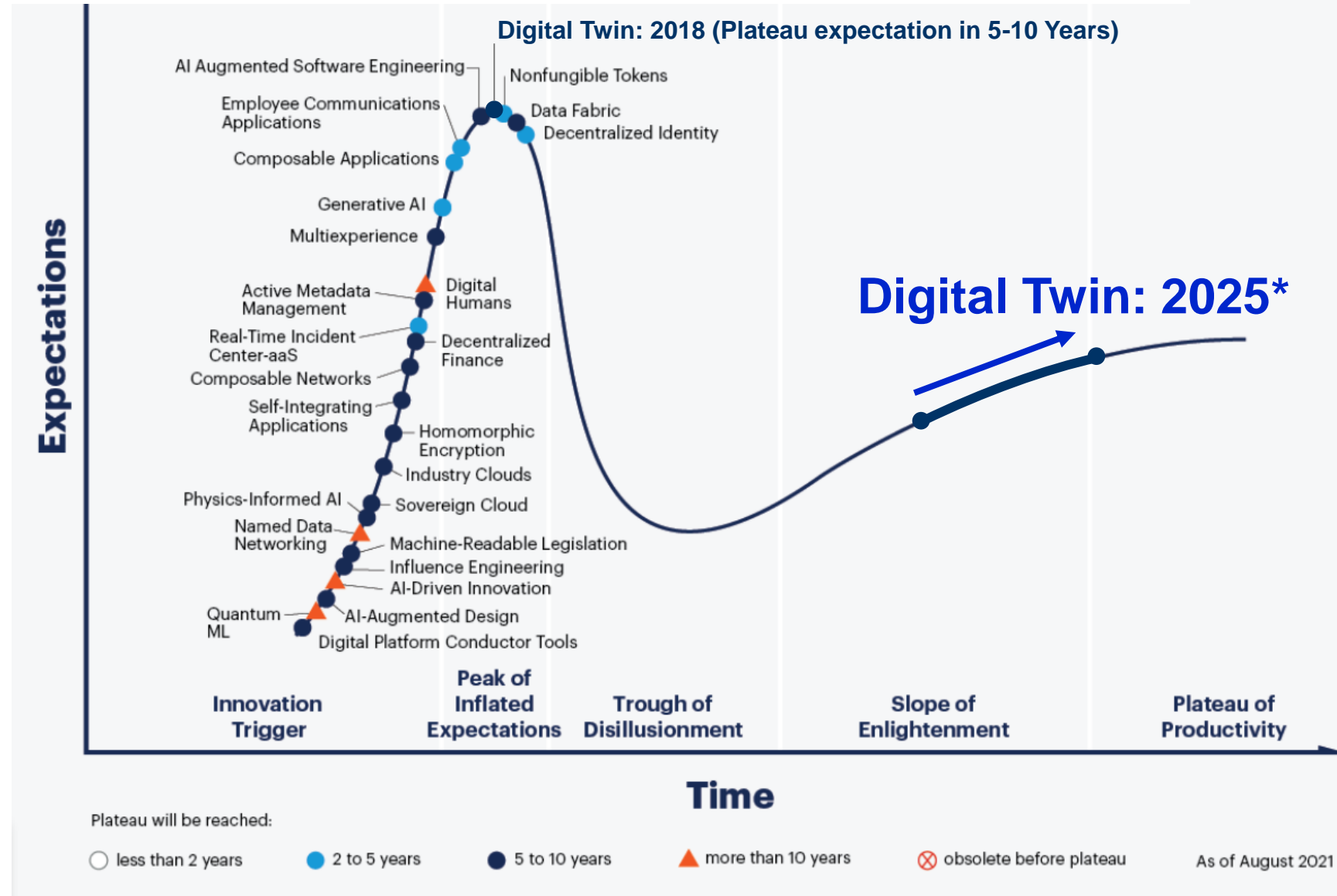
- More
  - Renewables
  - Decentralization
  - Prosumers
- New
  - Complexity
  - Dynamics
  - Business models
- Need for:
  - Transparency
  - Efficient Asset Management
  - Life-cycle Management
  - Optimization with AI



Introduction of a standardized Digital Twin = AAS (Asset Administration Shell)



# Gartner: Hype Cycle for Emerging Technologies



# Our Mission: deploy the first standardized digital twin



Human

## **Building a global network**

Creating an international standard for the Industrial Digital Twin

Scaling

## **Open access to standards, implementations and information models**

Making the digital twin available for all industries

Technology

## **Collaboration along the value chain**

Bringing companies together, creating use cases, developing to consortial standards

# Open Source, Standards, Collaboration



Collaboration: MOU's

## Asset Administration Shell

Digital Twin

Planning & Development

Construction

(Virtual) Commissioning



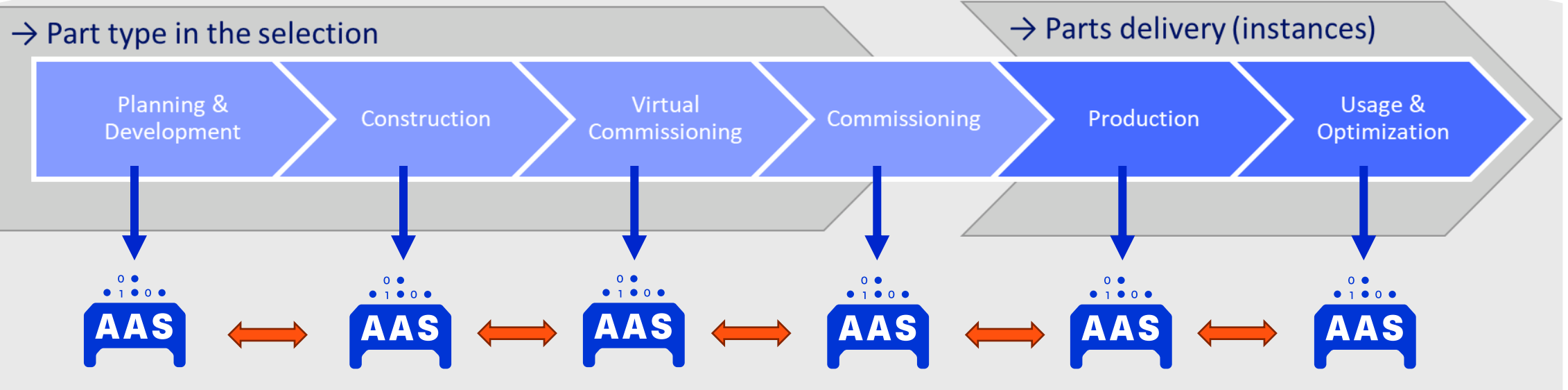
Recycling  
Maintenance & Optimisation  
Intelligent Production

Standards: OPC UA , Automation ML, etc.



- Standardization & open source
- Efficient scaling
- Complete life cycle

## Supplier part





# The Digital Product Passport for Industrie 4.0

The DPP4.0 is an industry-ready tool for capturing and providing product information in a human- and machine-readable format for various parties, such as companies, authorities and users.



<https://dpp40.eu/>

# MEMBERS: SUPPLIERS – USERS | OT – IT

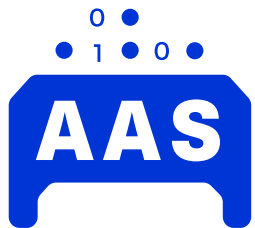


**120** Members from **18** nations



## A modern ecosystem for data exchange.

Digitalisation of our power supply is one major key for the energy transition and climate neutrality. Our goal is to promote a carbon free future by creating a shared data space for innovative, data-driven business models as well as standardised, efficient data exchange. Within energy data-x we aim to build a future-proof data ecosystem connecting all market players digitally. By applying the European Gaia-X standards we guarantee security and sovereignty of data exchange.





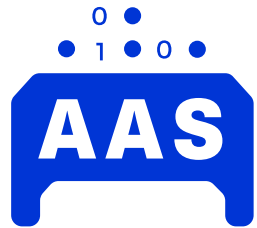



## Industry Foundation Classes (IFC)

[Home](#) » [Standards](#) » [bSI Standards](#) » [Industry Foundation Classes \(IFC\)](#)

At its core, buildingSMART enables the entire built asset industry to improve the sharing of information throughout the lifecycle of project or asset. By breaking down the silos of information, end users can better collaborate and cooperate regardless of which software application they are using. buildingSMART's technical core is based around Industry Foundation Classes (IFC) which was ISO certified in 2013.

IFC is a standardized, digital description of the built asset industry. It is an open, international standard (ISO 16739-1:2024) and promotes vendor-neutral, or agnostic, and usable capabilities across a wide range of hardware devices, software platforms, and interfaces for many different use cases. More about IFC, its uses and adoption may be found [here](#).



### Strategic Advisory Council



