



DNV

DIGITAL TRUST by DNV

WHEN TRUST MATTERS



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Senior Principle Digital Trust – 30th January 2025



Challenges for our customers

- Handling the constant change
- Trusting the digital twin and AI
- Compliance with regulations and standards
- Protecting Intellectual Property (IP) and operational data
- Return on Investment

A global assurance and risk management company

161
years

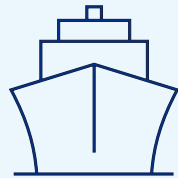
~17,000
employees

~100,000
customers

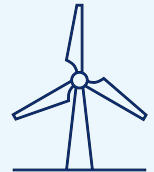
100+
countries

5%+
of revenue in R&D

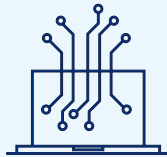
Ship and offshore
classification and advisory



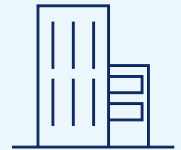
Energy advisory, certification,
verification, inspection and
monitoring



Software, cyber security,
platforms and
digital solutions



Management system
certification, supply chain and
product assurance



We enable our customers and their stakeholders to manage risk and complexity with confidence



Certify, verify, test and assess maturity

against standards, specifications and regulatory requirements



Qualify and assure

new technologies, digitalization, systems, data, platforms, supply- and value chains



Give expert advice

on safety, technology and commercial risk, digital investment & services and operational performance



Co-create and share

new rules, standards, software, tools and recommended practices

✓ Assurance

➤ grounds for justified confidence that requirements or claims have been or will be achieved

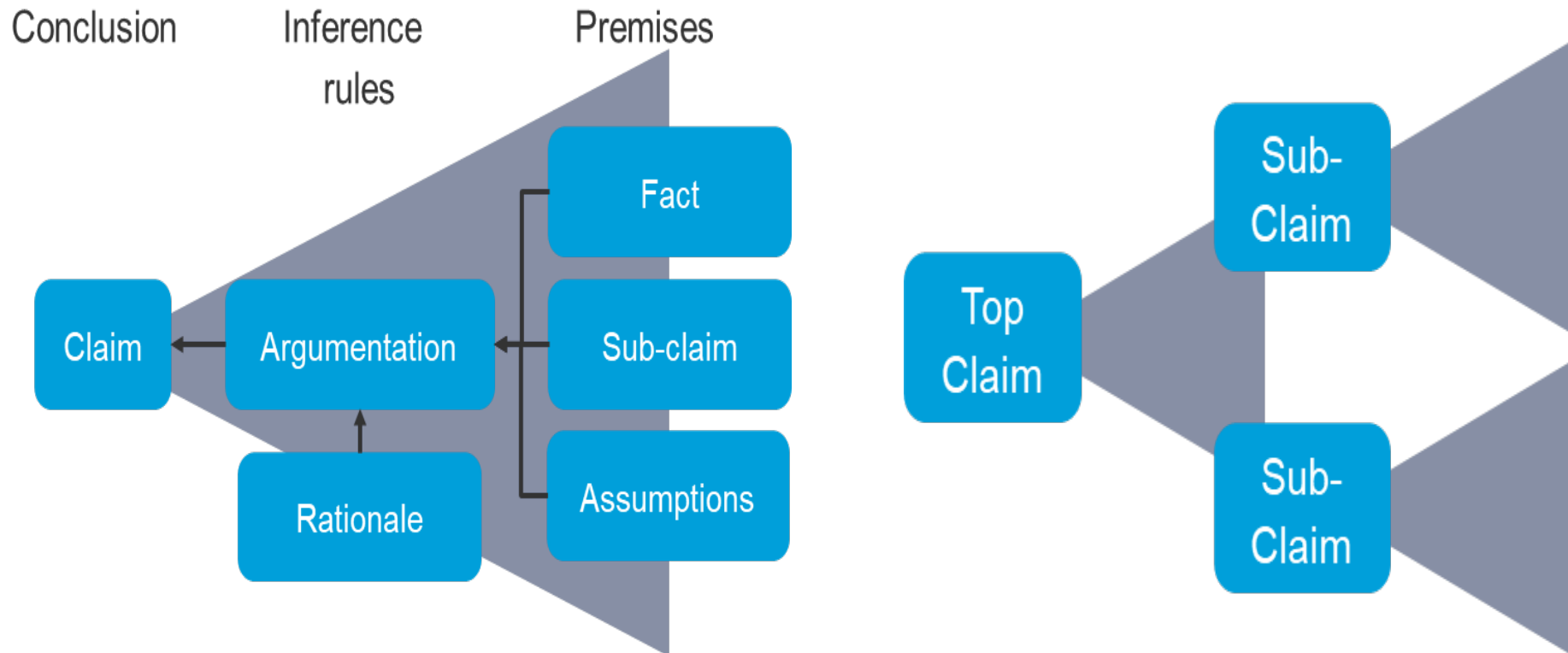
✓ Continuous Assurance

➤ grounds for justified confidence that requirements or claims have been or will be achieved and are valid over time

Verification and **Validation** are two key components of assurance

Claims-based approach by reasoning

- **Requirement:** a formal verifiable statement, expressing a need and associated conditions
- **Claim:** a relevant statement that can be objectively proven true or false





Continuous Assurance of digital twins

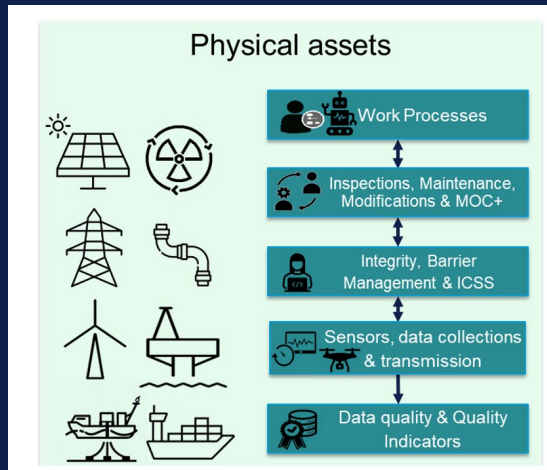
A process to confirm that digital twin solutions **capabilities** remain valid over time

- Assurance methodology is based on claims and evidence
- Processes to assess and verify Quality Indicators and Trustworthiness
- Monitor, assess and manage relevant changes
- Implement processes and tools for Management of Change+

We enable our customers and their stakeholders to manage risk and complexity with confidence and establishing **TRUST**

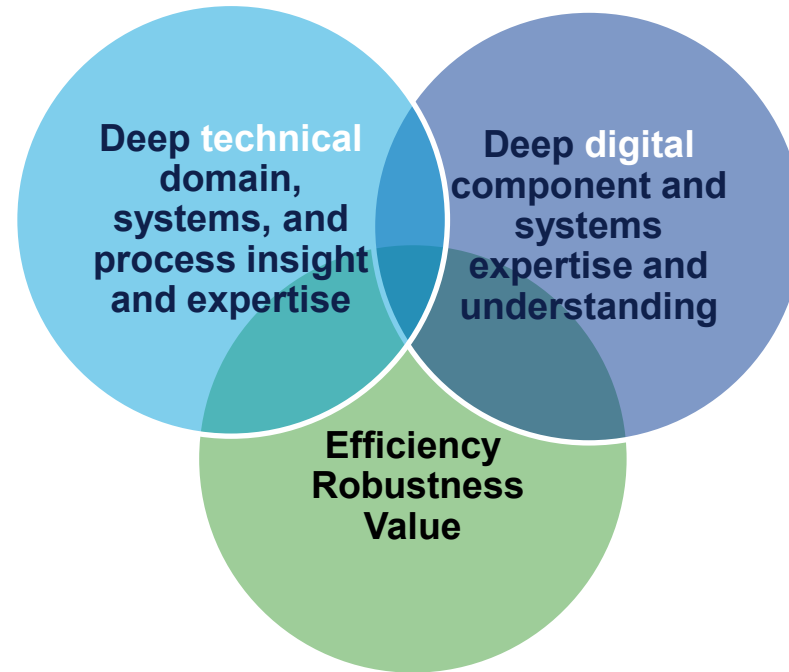
Technical

- DNV have for many years been doing assurance of physical assets and processes.
- We understand the context and have the domain knowledge & subject matter experts.
- We possess good understand of regulations and standards and we have proven methodologies.



Certify, verify, test and assess maturity

Qualify and assure

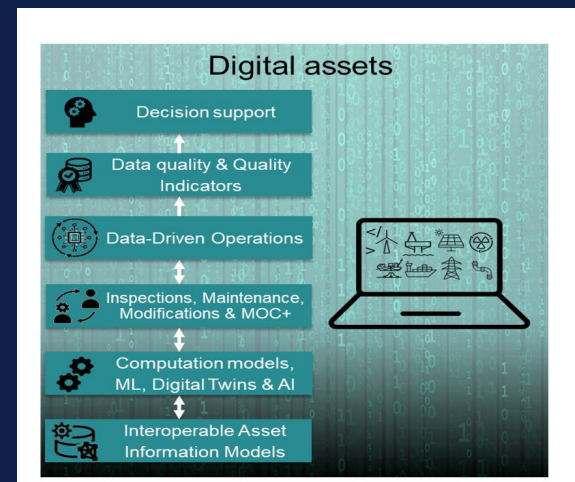


Give expert advice

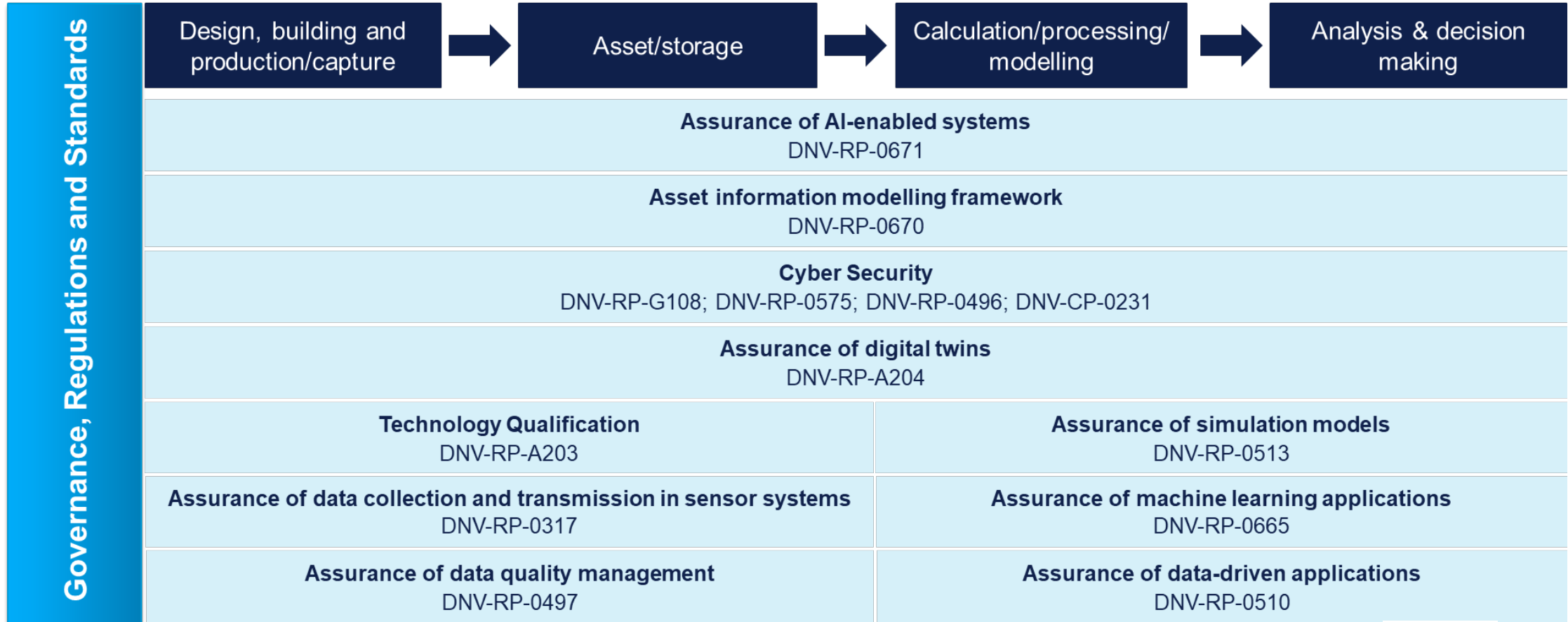
Co-Create and share

Digital

- DNV see that not only assurance of physical assets will be done digitally, but also the digital assets by themselves.
- This includes asset information models, AI, algorithms, data quality, sensor systems, data transmission, digital twin solutions, machine learning and new processes.
- DNV presents digital transformation and Digital Trust, based on proven methodologies.

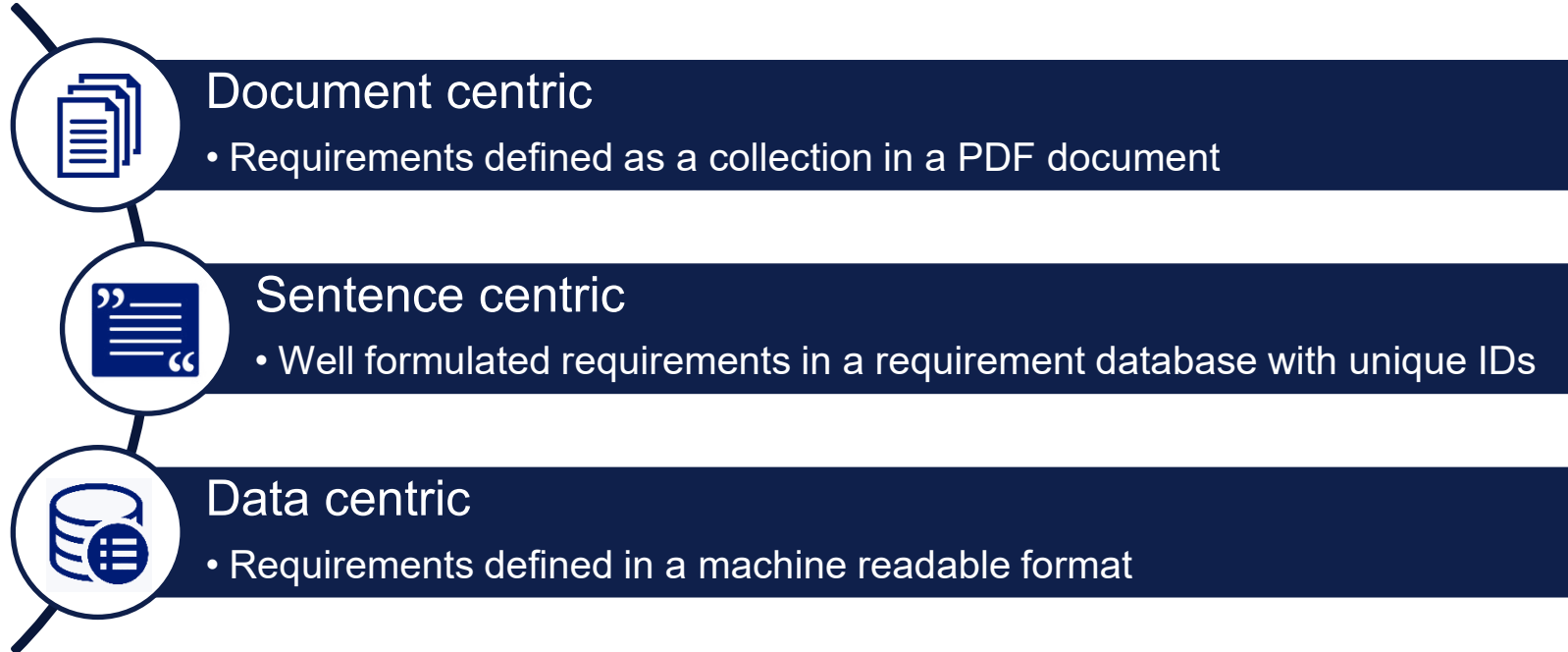


Digital Trust and efficiency based on proven methodologies



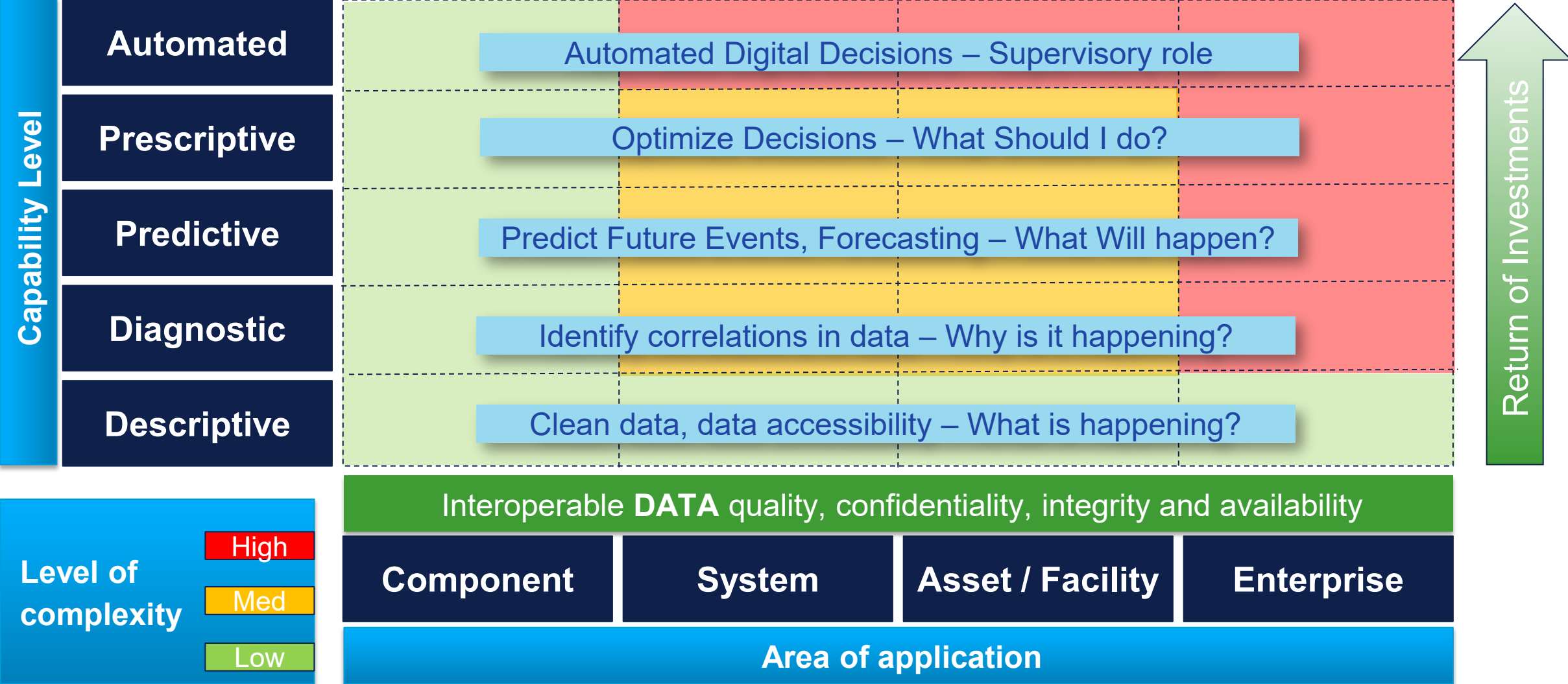
Digitalization of Requirements

- Three methods for specifying requirements:



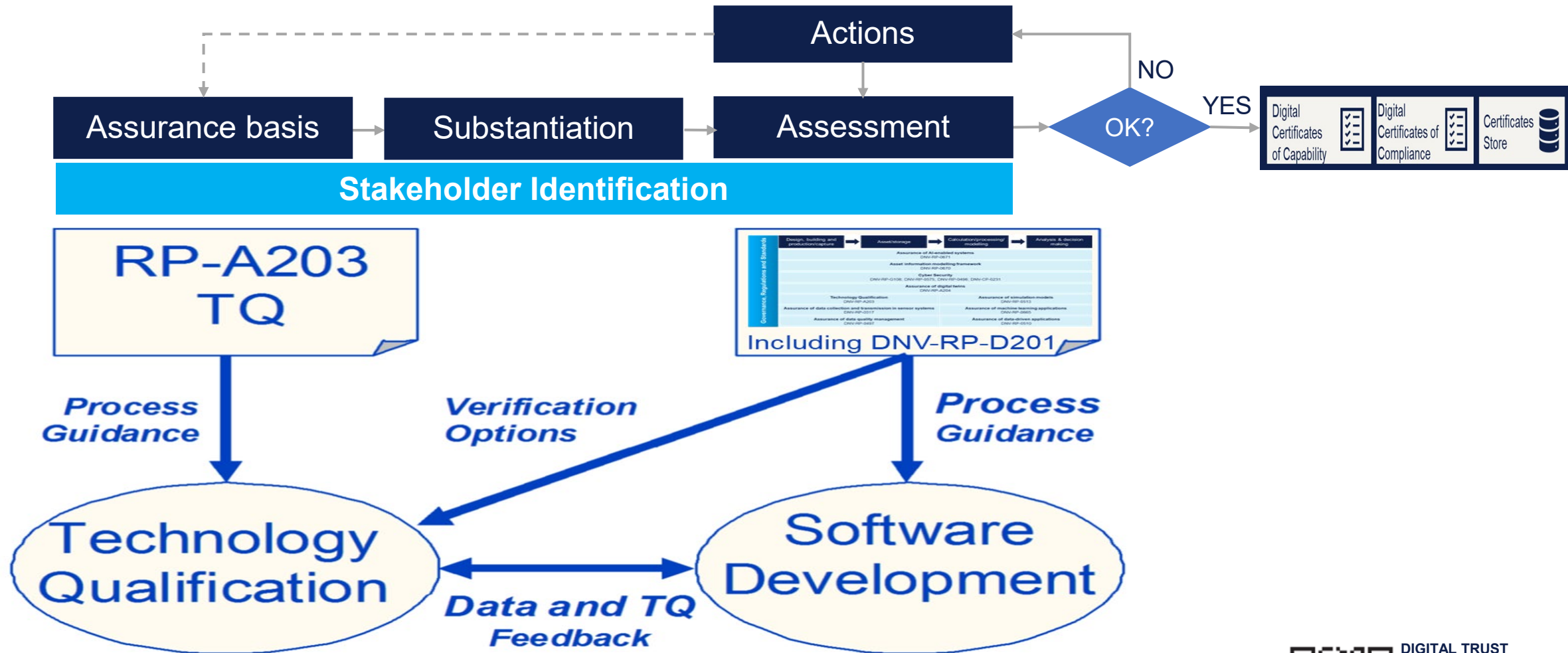
[Digitalisation of technical requirements position paper \(ref. IOGP\)](#)

The Need and Drivers, for Digital Twin Capabilities, with Business Value



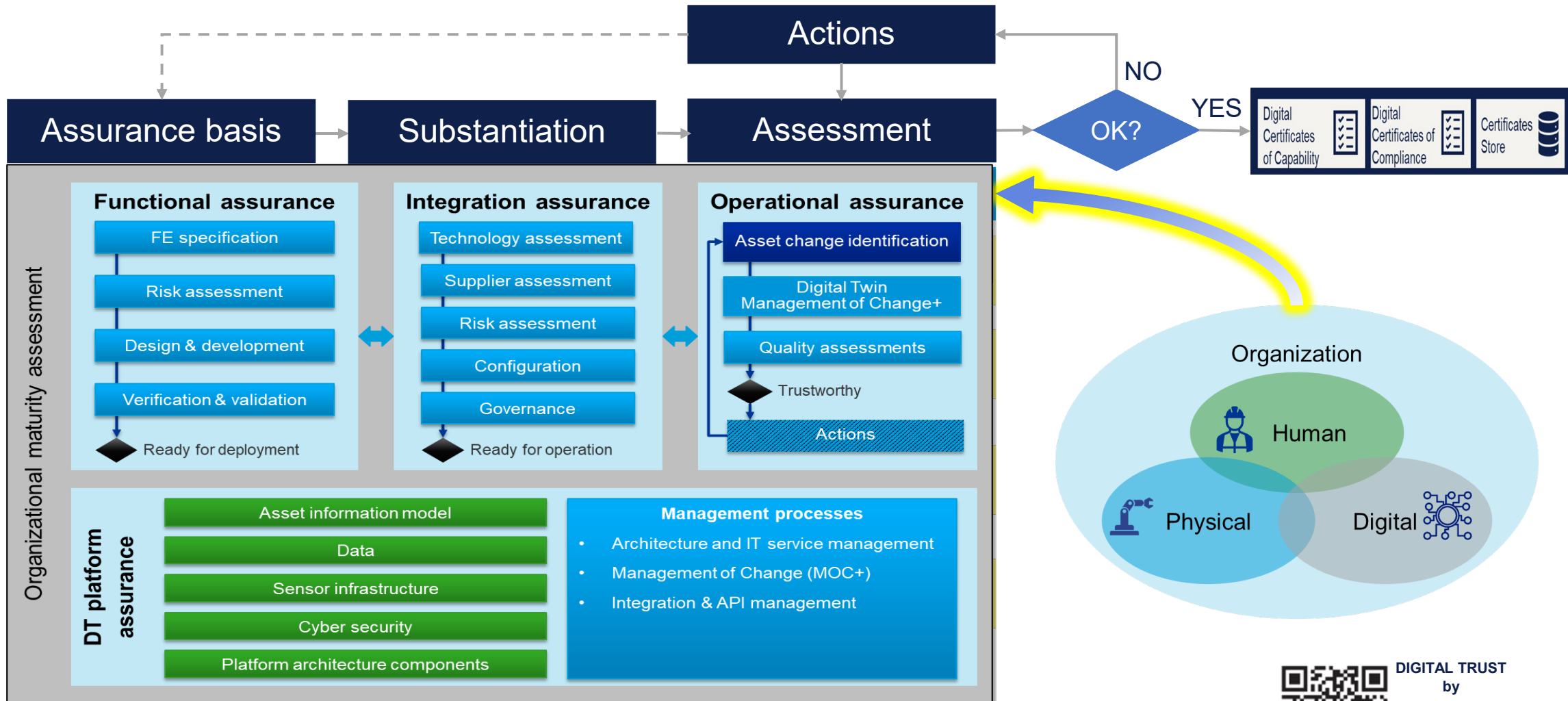
Establishing Digital Trust

The qualification and assurance process of the digital twins



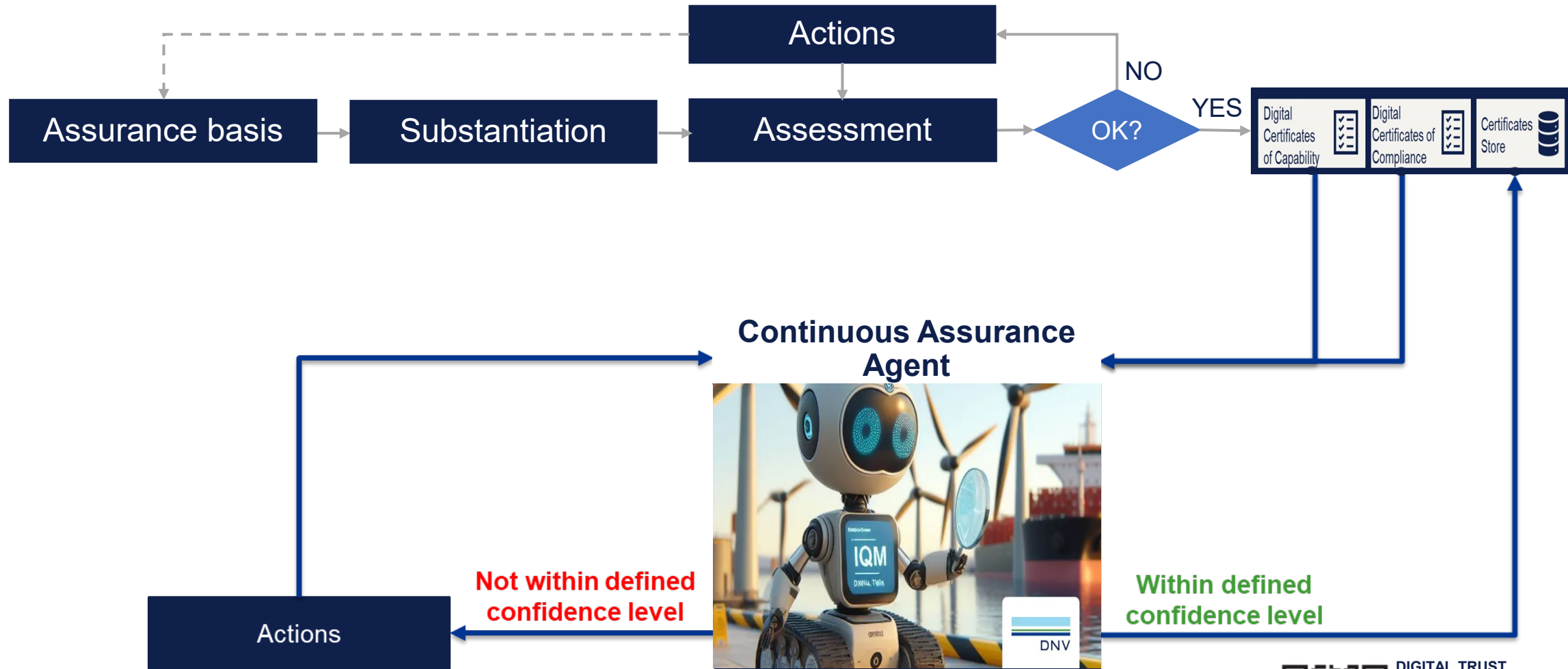
Establishing Digital Trust

The qualification and assurance process of the digital twins

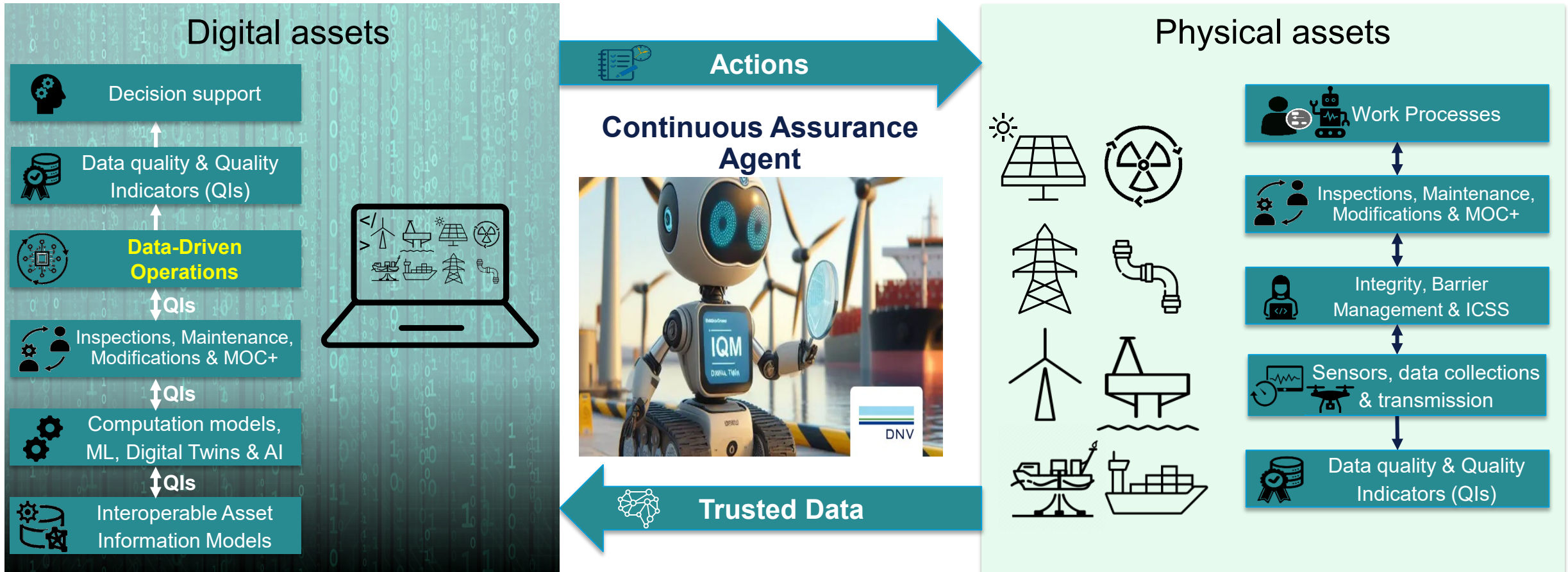


Establish Continuous Digital Trust

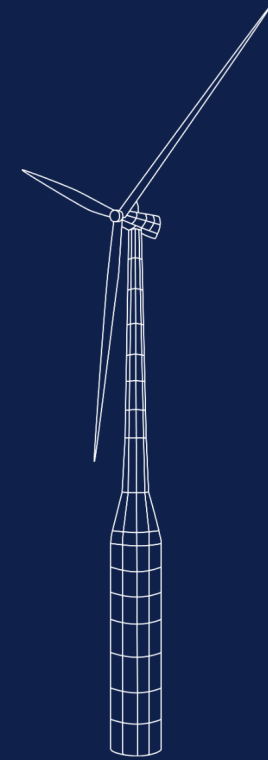
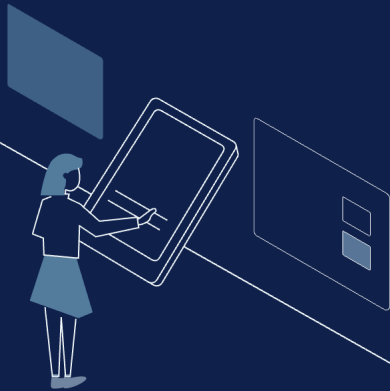
The qualification and assurance process of the digital twins



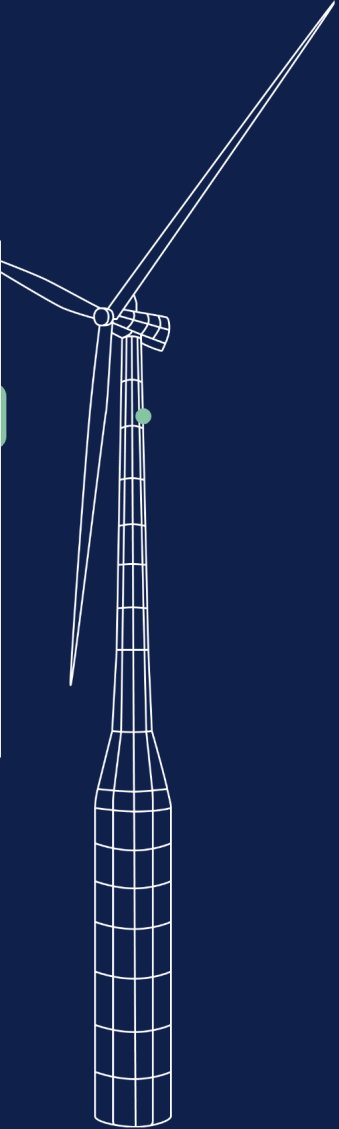
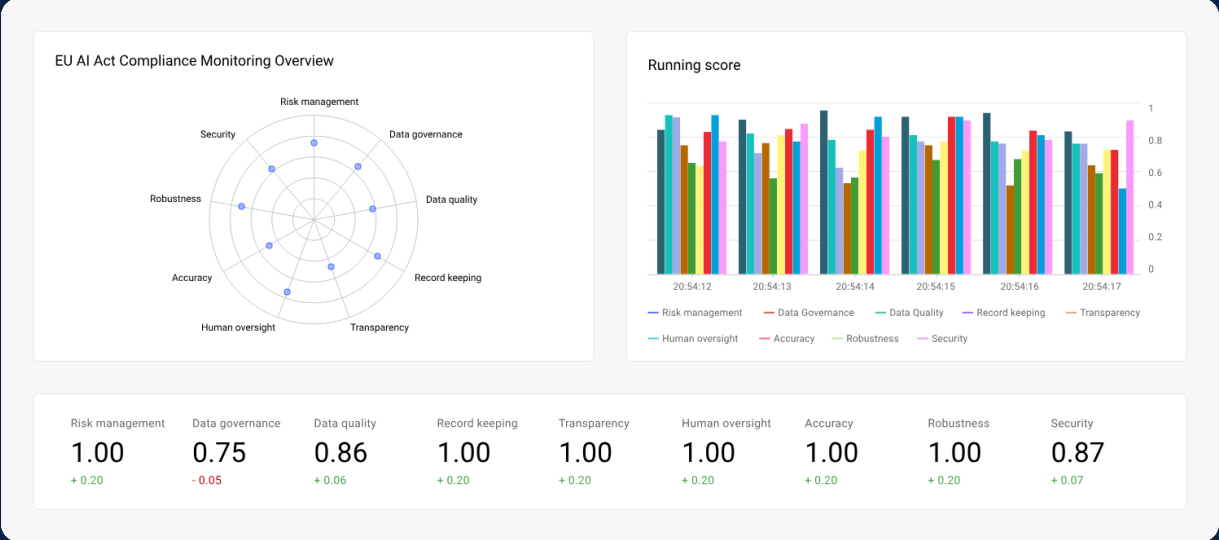
A trustworthy digital asset that remains valid over time

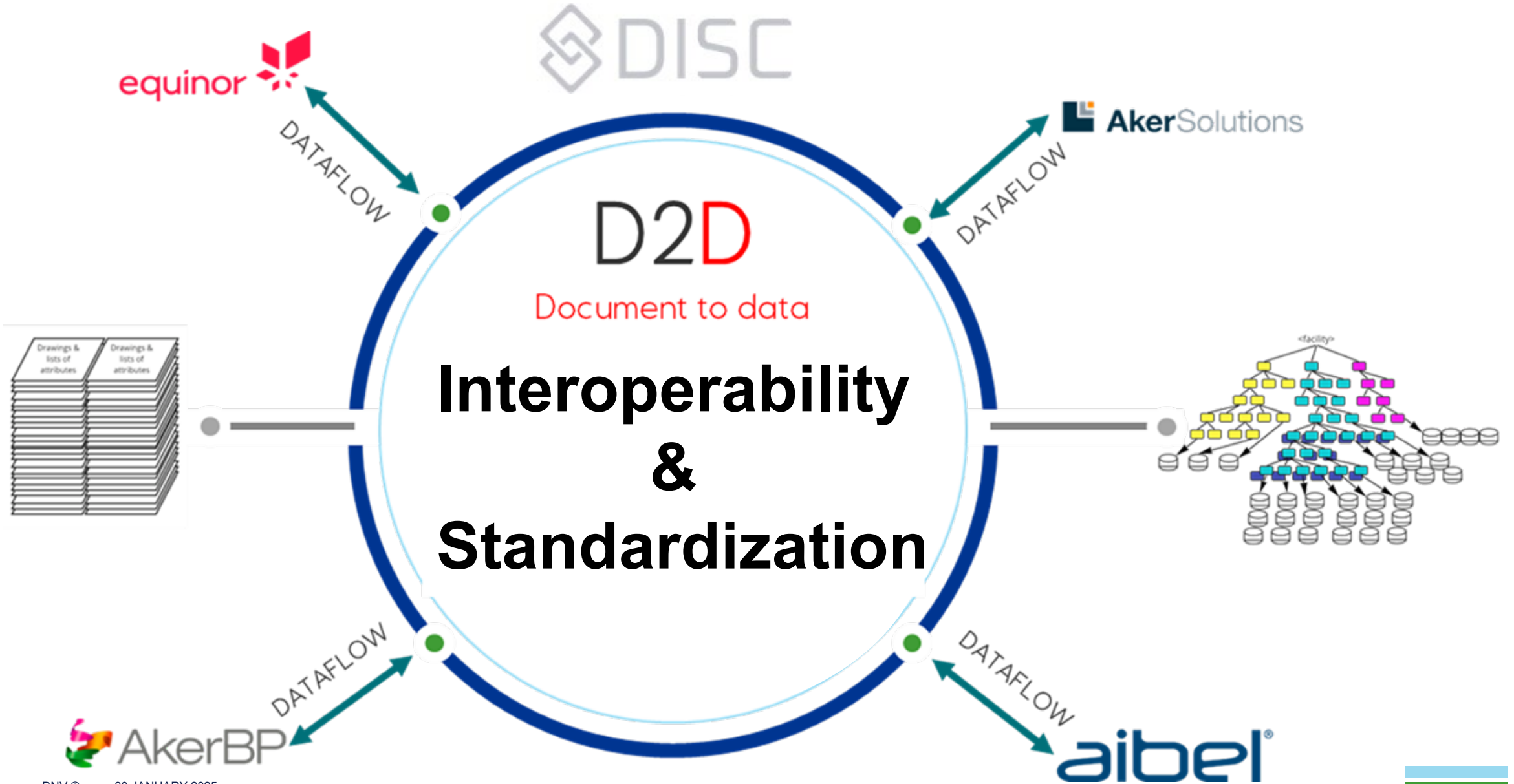


A digital Independent Quality Monitoring (IQM) agent in different industries and their stakeholders to manage digital risk and complexity with confidence



Delivering a wide range of insights, the stakeholders are enabled to trust the digital representation of their real world assets

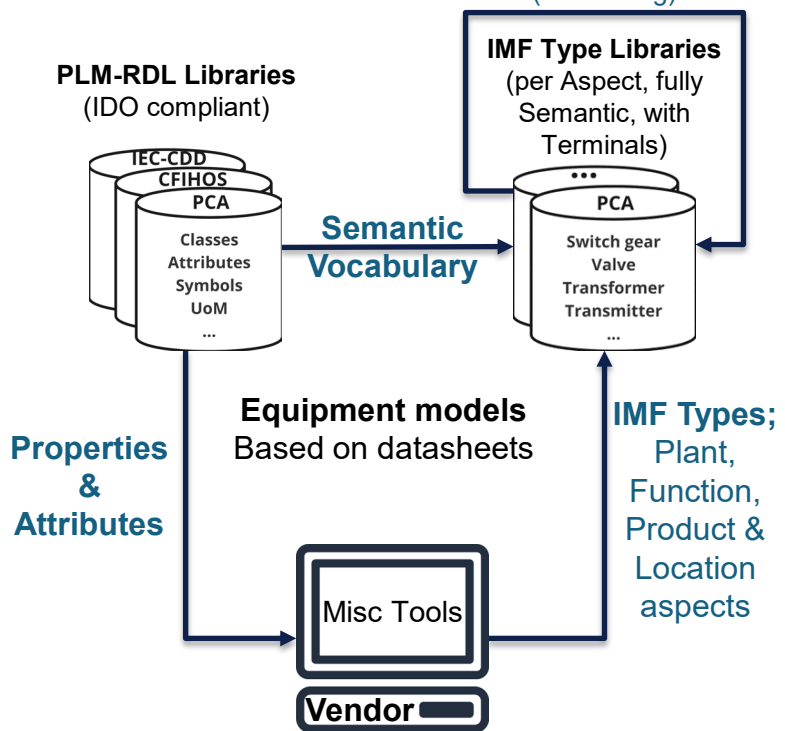




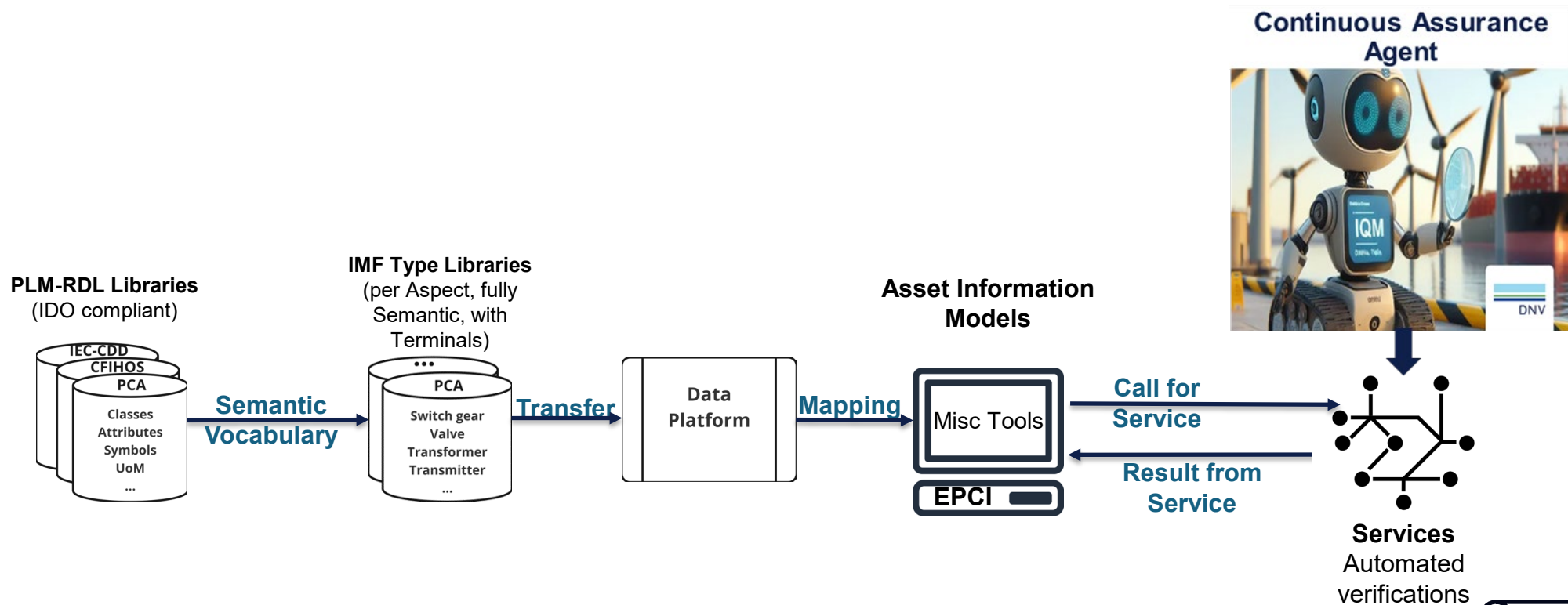
Continuous Assurance Agent



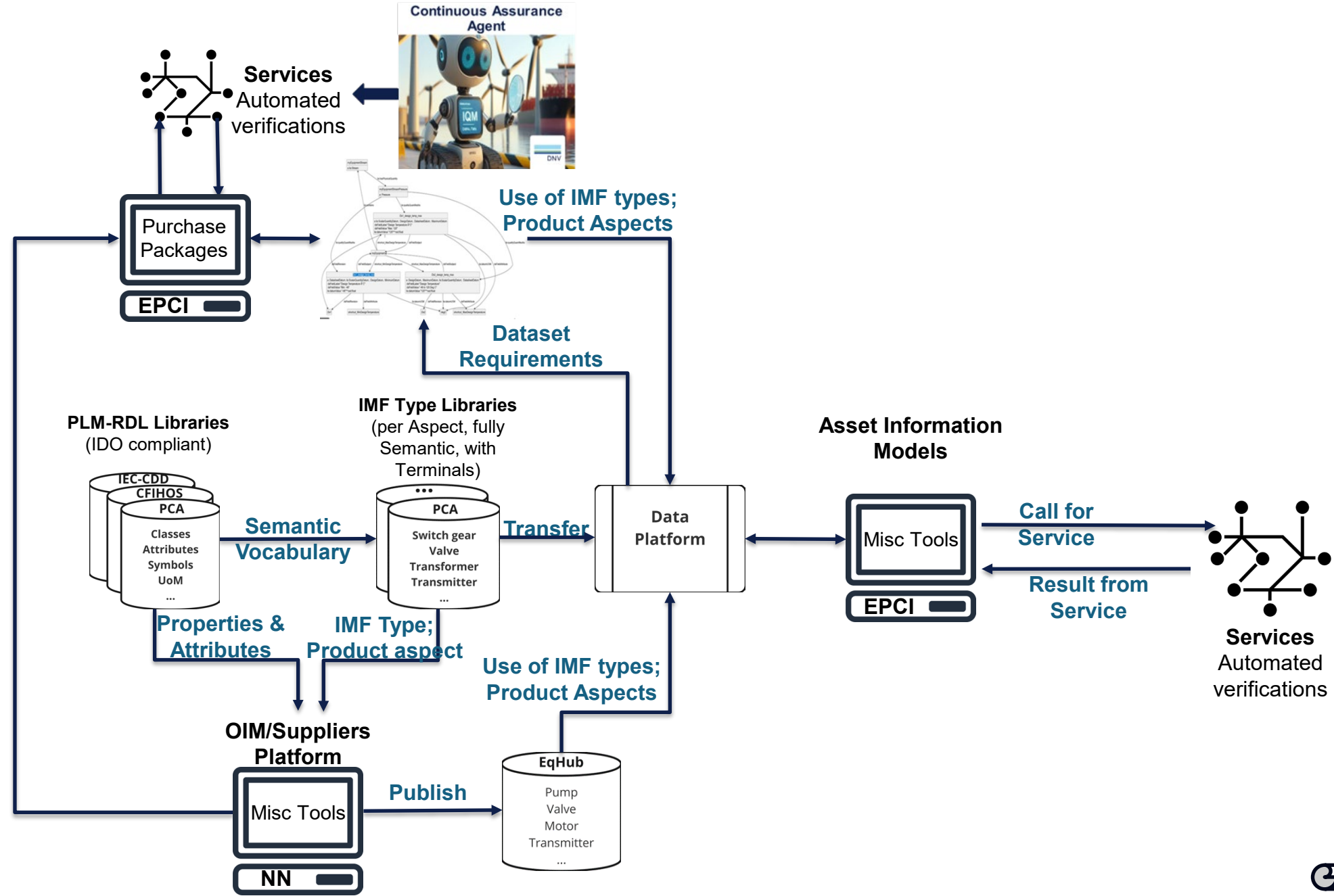
Quality Assurance and Check
(Reasoning)



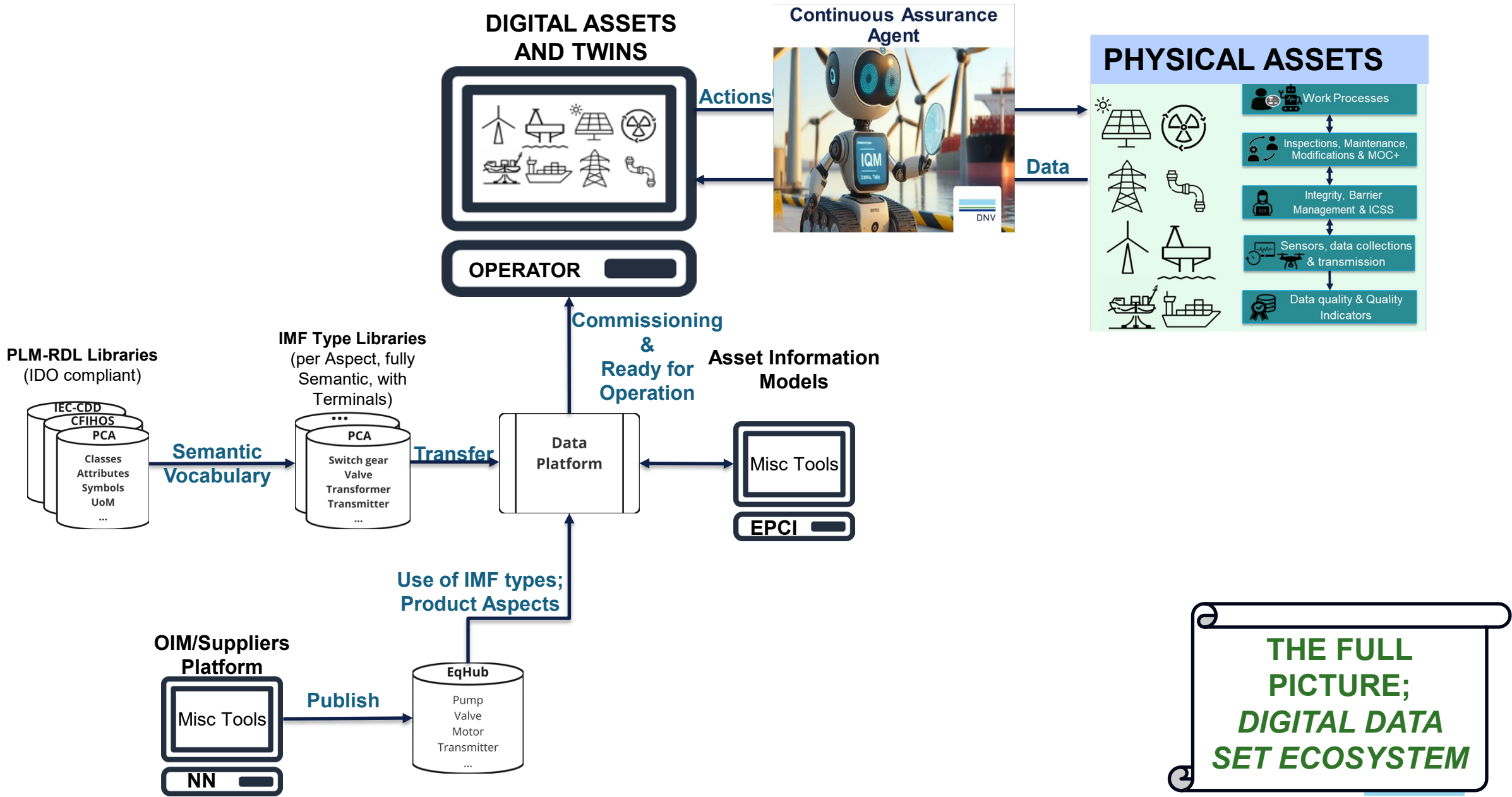
THE FULL PICTURE; *DIGITAL DATA SET ECOSYSTEM*



**THE FULL
PICTURE; *DIGITAL
DATA SET
ECOSYSTEM***



THE FULL PICTURE; DIGITAL DATA SET ECOSYSTEM



**THE FULL PICTURE;
DIGITAL DATA SET ECOSYSTEM**

The KEY elements of Digital Trust

- What is the **Business need**?
- How are **Business value** affected?
- Which **Solution** will solve the need and have business value?



WHEN TRUST MATTERS



Thank you for your kind attention.

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