



THE INDUSTRIAL DATA SPACE

A PANEUROPEAN ECOSYSTEM APPROACH FOR SHARING DATA

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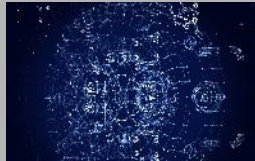
IOT WEEK 2018, 7TH JUNE 2018



IoT Week Bilbao 2018
4-7 JUNE 2018, BILBAO (SPAIN)
EUSKALDUNA CONFERENCE CENTRE

DATA

AN ECONOMIC ASSET



TECHNICAL DRAWINGS



FINANCIAL DATA



MOBILITY DATA



MATERIAL CHARACTERISTICS

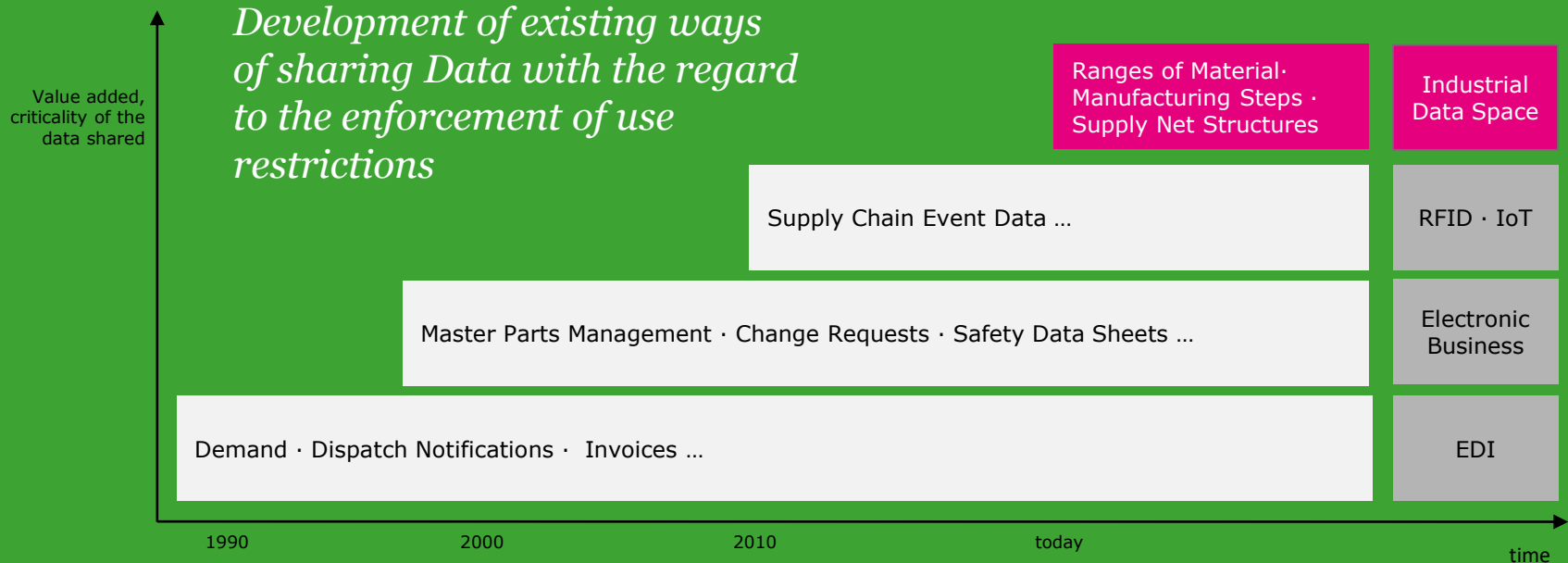


SENSOR DATA

The key focus for a data-driven economy and new business models is in linking data.

DATA

AN ECONOMIC ASSET



An iceberg floating in a blue ocean under a blue sky. The tip of the iceberg is above the water, while the much larger, more complex part is submerged below the surface. The text is overlaid on the image.

UNLEASH THE --- VALUE OF YOUR DATA

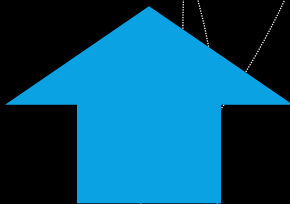
*Enable the access to yet
untouched data treasures in
your company while staying in
control over its flow and usage.*

COMPANIES WANT TO EXCHANGE DATA WITHOUT REGRET



Data Ownership
Data Security
Data Value

Interoperability
Data Exchange
»Sharing Economy«
Data Centric
Services



INDUSTRIAL DATA
SPACE ASSOCIATION



DIGITAL SOVEREIGNTY

is the ability of a natural or legal person to exclusively and sovereignly decide concerning the usage of data as an economic asset.



OBSTACLES CONCERNING EXTENSIVE SHARING OF DATA

Today

57%

worry about revealing
valuable data and
business secrets.

59%

fear the loss of
control over their
data.

55%

feel inconsistent
processes and
systems as a (very)
big obstacle.

32%

fear that platforms do
not reach the critical
mass, so that data
exchange will be
interesting.



**Industrial
Data Space
Approach**



More Data Security



Improvement of
Sovereignty



Optimising Processes
and Cost Structures



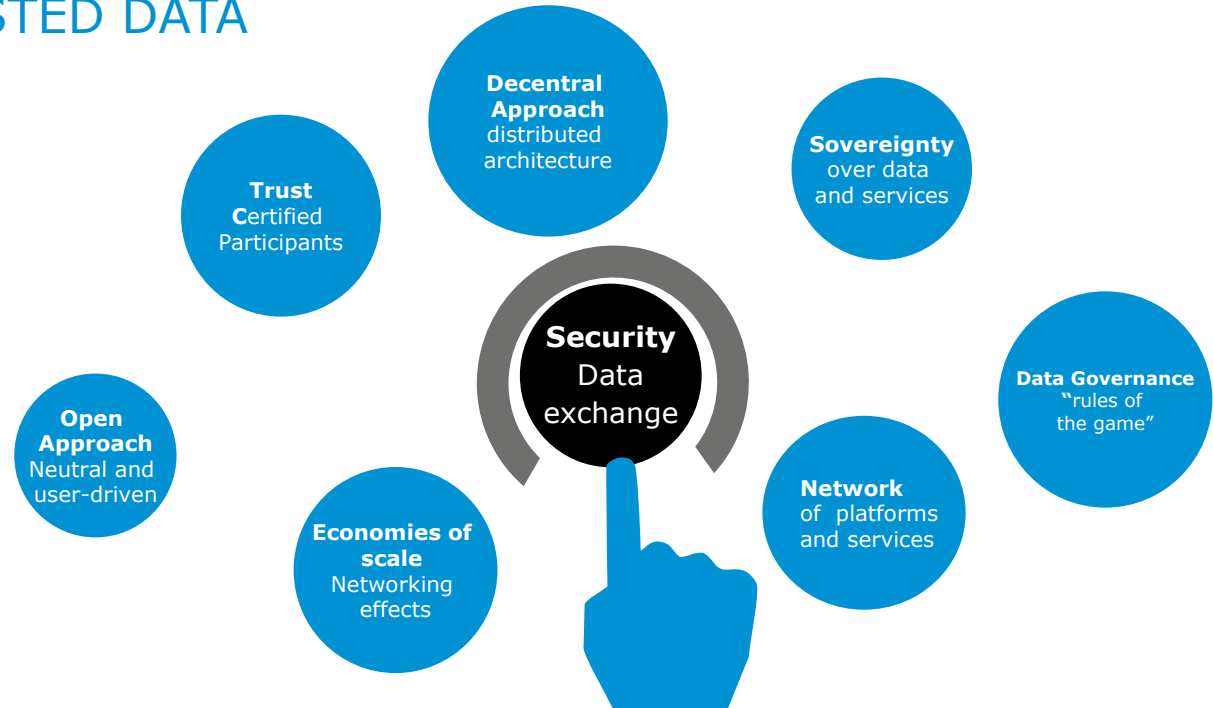
Join us!



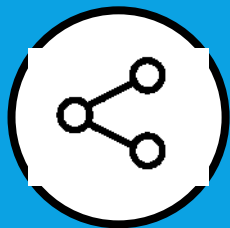
INDUSTRIAL DATA SPACE

P2P NETWORK OF TRUSTED DATA

- All actors oblige themselves to play by the rules of Industrial Data Space
- Actors and technical components are to be certified
- We provide usage control for data and different tailor-made levels of trust



INDUSTRIAL DATA SPACE APPROACH: SELF DETERMINED CONTROL OF DATA FLOWS



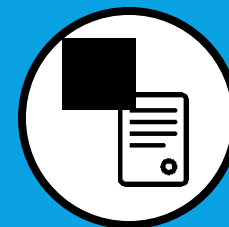
Endless **Connectivity**

standard for data flows between
all kinds of data endpoints



Trust between different security domains

Comprehensive security functions
providing a maximum level of trust



Governance for the data economy

usage control and enforcement
for data flows



TO DO LIST

INDUSTRY 4.0 AND DATA ECONOMY

1

- Identitymanagement
- User-certification

2

- Authentication & Authorisation
- Usage Policies & Usage Enforcement
- Trustworthy Communication
- Security by Design
- Techn. Certification

3

- Data source description
- Brokering
- Vocabulary

4

- Integration of existing vocabularies
- Using different data formats
- Connection of clouds and platforms

5

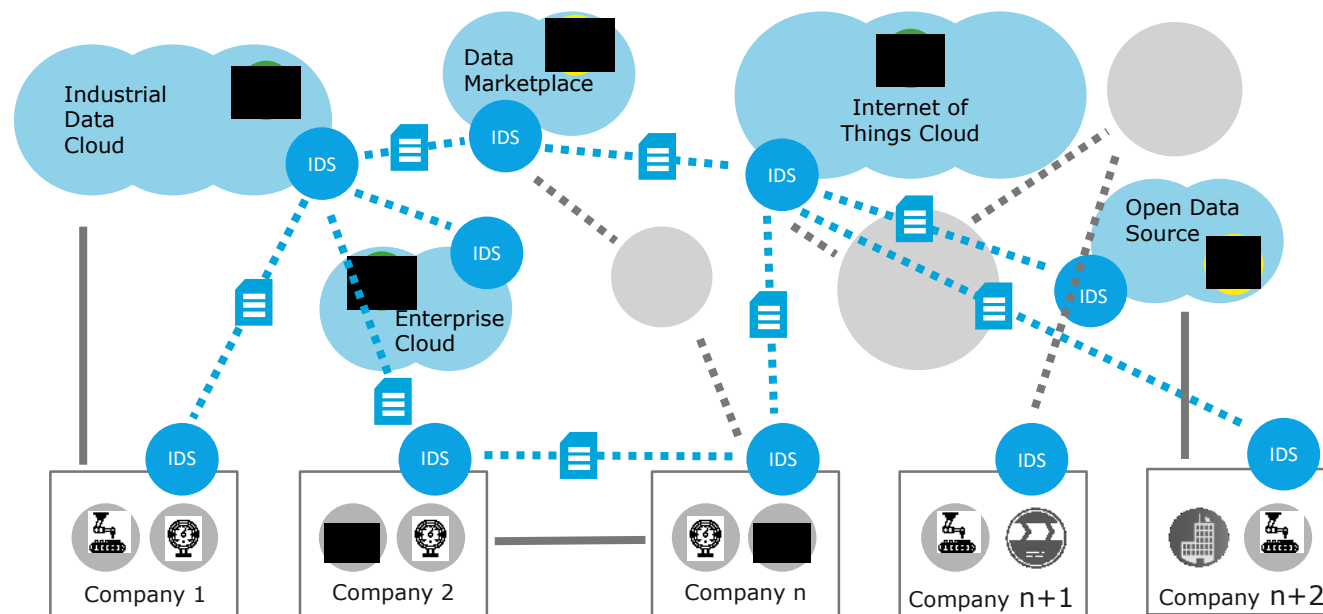
- Processing of Data
- Remote Execution

6

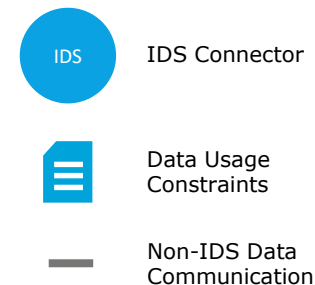
- Clearing & Billing
- Domain specific Broker and Marketplaces
- Use Restrictions and Legal Aspects (Contract Templates, etc.)



CONNECTING ALL KINDS OF DATA ENDPOINTS



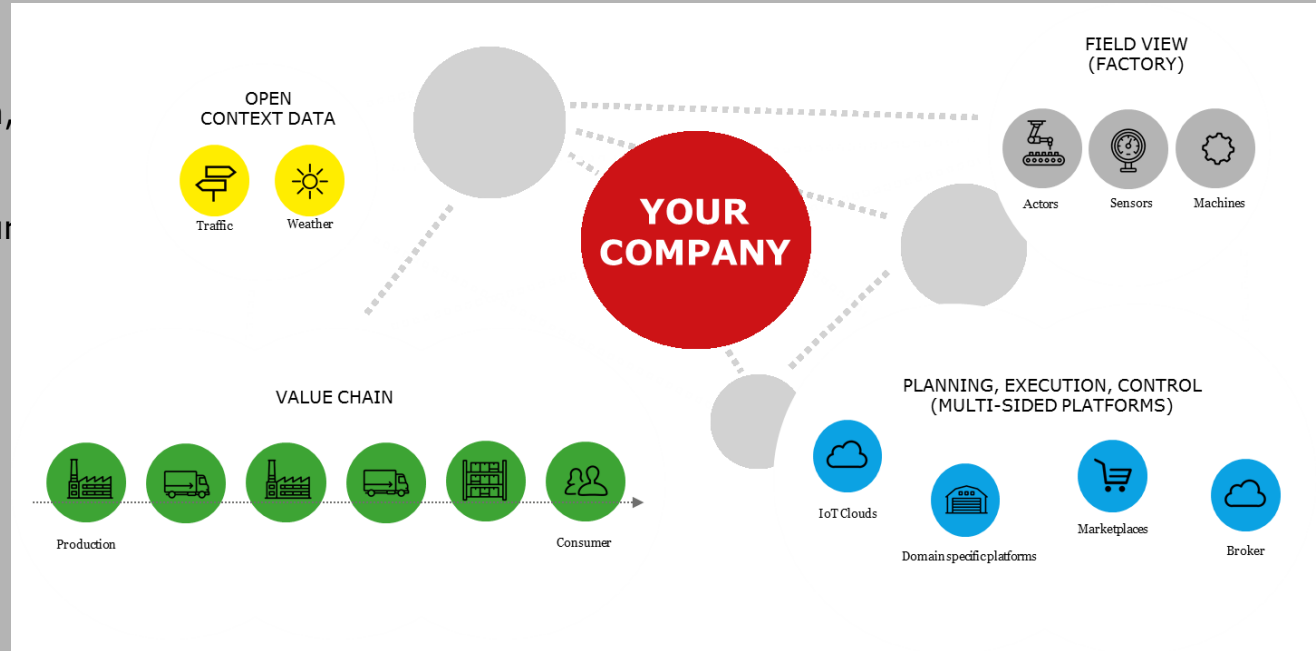
Legend:



"HOW TO" DATA ECONOMY

UNLEASH THE VALUE OF YOUR DATA

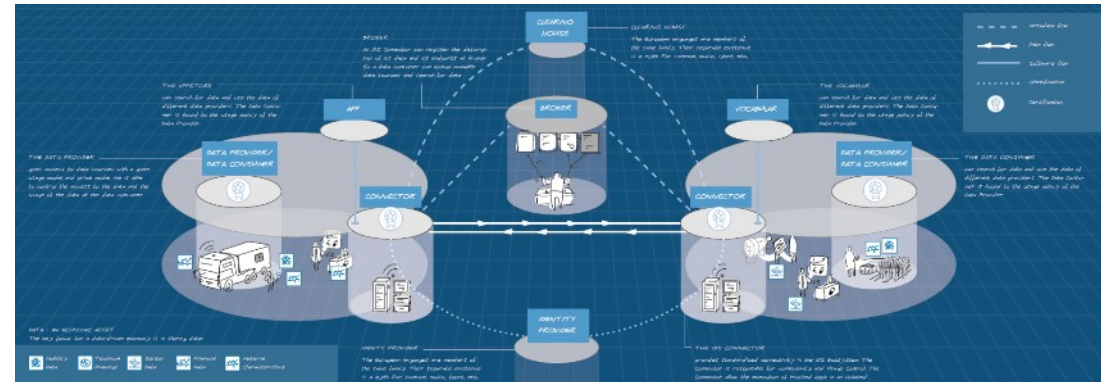
1. Make data available – dynamic, on demand (describe, expose)
2. Link with ecosystem partners (connect, match, interpret)
3. Control the access to your data (usage control)
4. Create value (Apps, remote software execution, aggregation)





A TRUSTED PEER TO PEER NETWORK FOR ALL INDUSTRIES TO SHARE DATA

- Software components enable all stakeholders (defined roles) to participate in IDS
- The quantity of all (external) IDS connectors defines the Industrial Data Space
- Internal IDS connectors are used to link data sources in the company, to transform and to improve them.





DATA ECONOMY – COMMON RULES AS BASE FOR TRUST



Our new reference
architecture version 2.0



REFERENCE ARCHITECTURE CONNECTOR

Execution Core Container:

Basic functionality for connectivity

App Store Container:

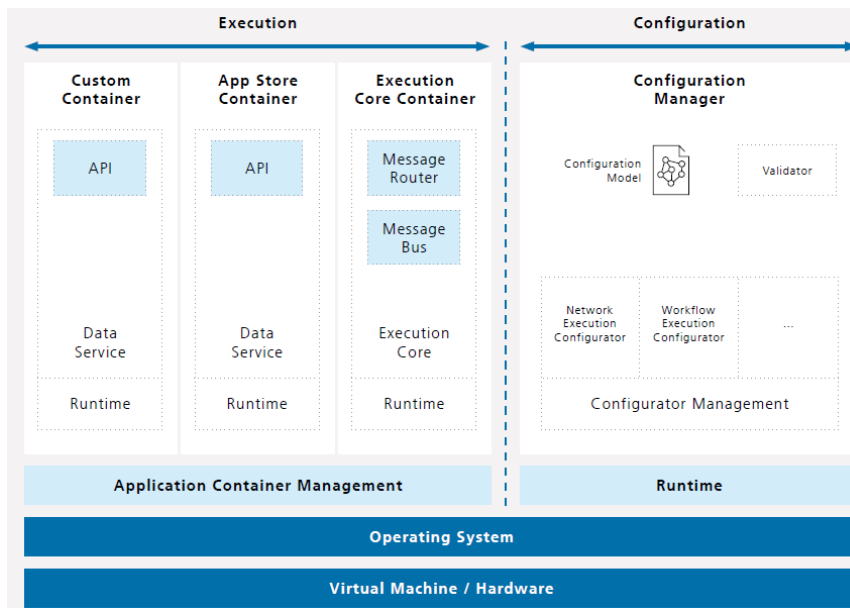
Environment for custom apps to extend functionality (i. e. transformation, analytics, pseudonymisation, protocol transformation)

Custom Container:

Adapter for internal systems

Configuration Manager

Environment for Configurations, e.g. process based, rules oriented





4 SECURITY PROFILES

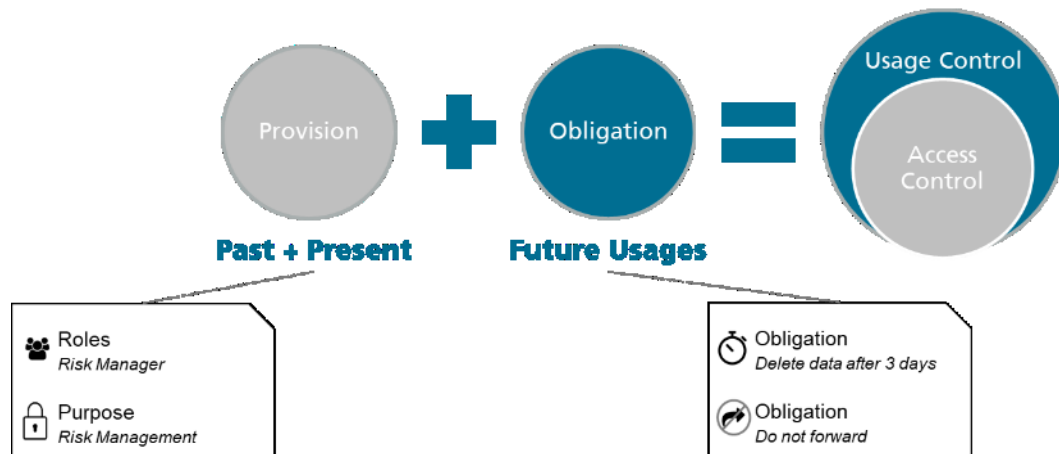
YOU DECIDE DEPENDING ON THE USE SCENARIO

	Base Free	Base	Trust	(Managed)Trust+
Reference Development	Open Source	IDS Community	IDS Community	Bound to strong SLAs
Roles	Own infrastructure	All IDS Roles supported, Billing and Clearing optional	All IDS Roles supported	All IDS Roles supported
Communication Abilities	Only private IDS with self signed certificates	Full interoperable, reduced trust	Full interoperable, Free decision of communication	Full interoperable, Free decision of communication, Hardware anchor
Higher Security Classes	Standard Security Level required	Standard Security Level required	High Security Level	Higher Security Level

DATA USAGE CONTROL

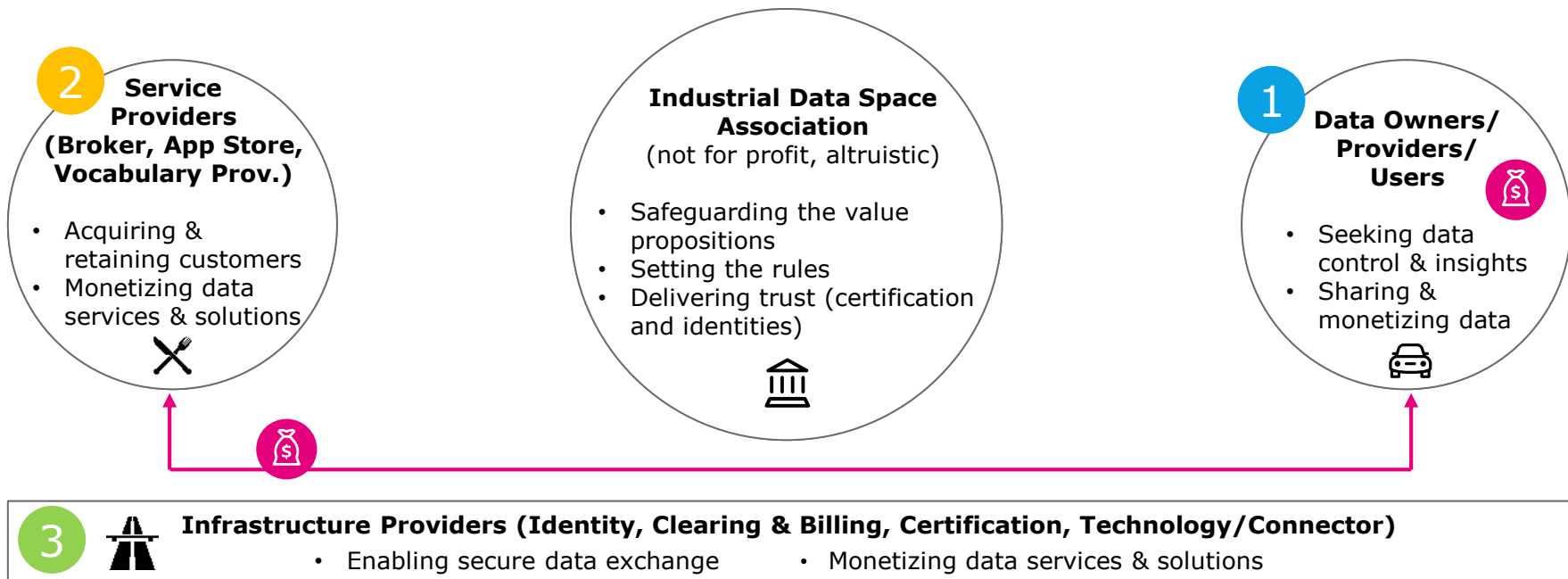
DATA USAGE CONTROL AN EXTENSION OF ACCESS CONTROL

Fine-grained policies specify how data is handled after access has been granted



ECOSYSTEM FOR THE DATA ECONOMY

OPEN, NEUTRAL, TRUSTWORTHY



90+
Companies and
Organisations

15+
Countries

25+
Use Cases

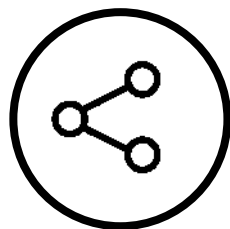
1
Ecosystem

=



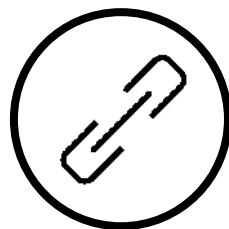


MILESTONES REACHED AND NEXT STEPS



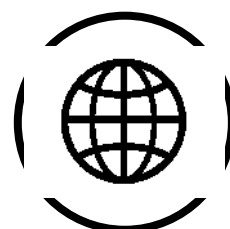
ARCHITECTURE

Release of the
reference architecture
model 2.0 on
Hannover Fair



STANDARD

DIN SPEC 27070 for the
IDS connector,
transferred in ISO



INTERNATIONAL

Members all over the
world, connecting with
important initiatives,
major european RTOs,
intense engagement in
european research
activities

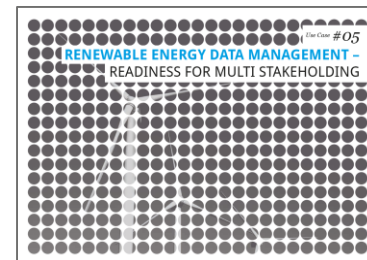
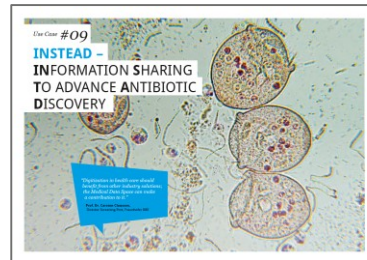


GO LIVE

Ecosystem potentially
running, first products,
enhancing global
adoption



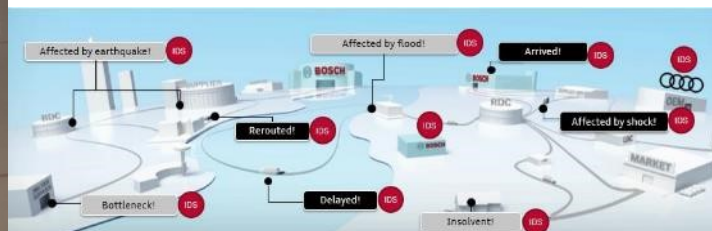
OUR GALLERY OF IMPRESSIVE IDS USE CASES AND PROJECTS



OUR USE CASES MAKE IT HAPPEN



COLLABORATIVE SUPPLY CHAIN RISK MANAGEMENT



Short Description

- Phase 1: Event based transfer of effected Supply Chain data
- Phase 2: Event based transfer of material flow data

Main Technology/IDS Components

- Internal and external IDS connector
- Vocabulary
- Data Usage Control
- Bosch Tracking & Tracing

Targets

- Set of rules
- Standardized data definitions
- Harmonized data model
- Proof of concept for the data transfer

Partners/Ecosystem

- Logistics Service Provider (tbd.)
- Tier-2 Supplier (tbd.)



Benefits

- + On demand Supply Chain Transparency
- + Realtime Tracking and Tracing
- + Proactive Supply Chain Risk Management

IDS REFERENCE ARCHITECTURE MODEL INDUSTRIAL DATA SPACE

VERSION 2.0

NEW!

DATA SPACES NOW!

INTERNATIONAL DATA SPACES ASSOCIATION MAGAZINE

#3



Data exchange as a first step towards data economy

How relevant is data
exchange for digitization?
What are the barriers for
implementation? And which
roles will industry and public
space have in an open,
interconnected system?
The second issue of the
IDS magazine is devoted
to these questions. It features
an interview with...

INDUSTRIAL DATA
SPACE ASSOCIATION



pwc





GET ENGAGED IN THE IDS ASSOCIATION

OUR MAIN STRATEGIC PILLARS

It is up to you to bring the association forward. Start co-creating the Industrial Data Space and contribute to the main strategic pillars, send representatives to the workinggroups and teams, make your own business driven experiences with Industrial Data Space.



REFERENCE ARCHITECTURE.

Defines structure and
functionality of IDS

Standardization

Implement IDS functionality
based on different technologies



FUNCTIONAL OVERVIEW.

Functional requirements as
core of the IDS DNA

Defining technology agnostic
features

Continuous addition of
requirements via use cases



USE CASES & COMMUNITIES.

Identify requirements for
IDS architecture

Validate applicability

Showcase business relevance

DEVELOPERS COMMUNITY.

Implementing IDS
components

Match architecture with
existing technologies

Challenge IDS architecture



OPERATING CONCEPT.

Establishing the
infrastructure and
foundations for the IDS
ecosystem to work

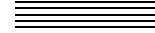


GROWTH & ADOPTION.

Non-linear member growth
Adoption of IDS technology
and components

Global liaisons and
proliferation





JOIN US !

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