

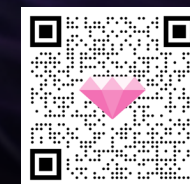
# Build & Operate Telekom Data Intelligence Hub

T-Systems dataspace offering | 2024



**T Systems**

Let's power  
higher performance

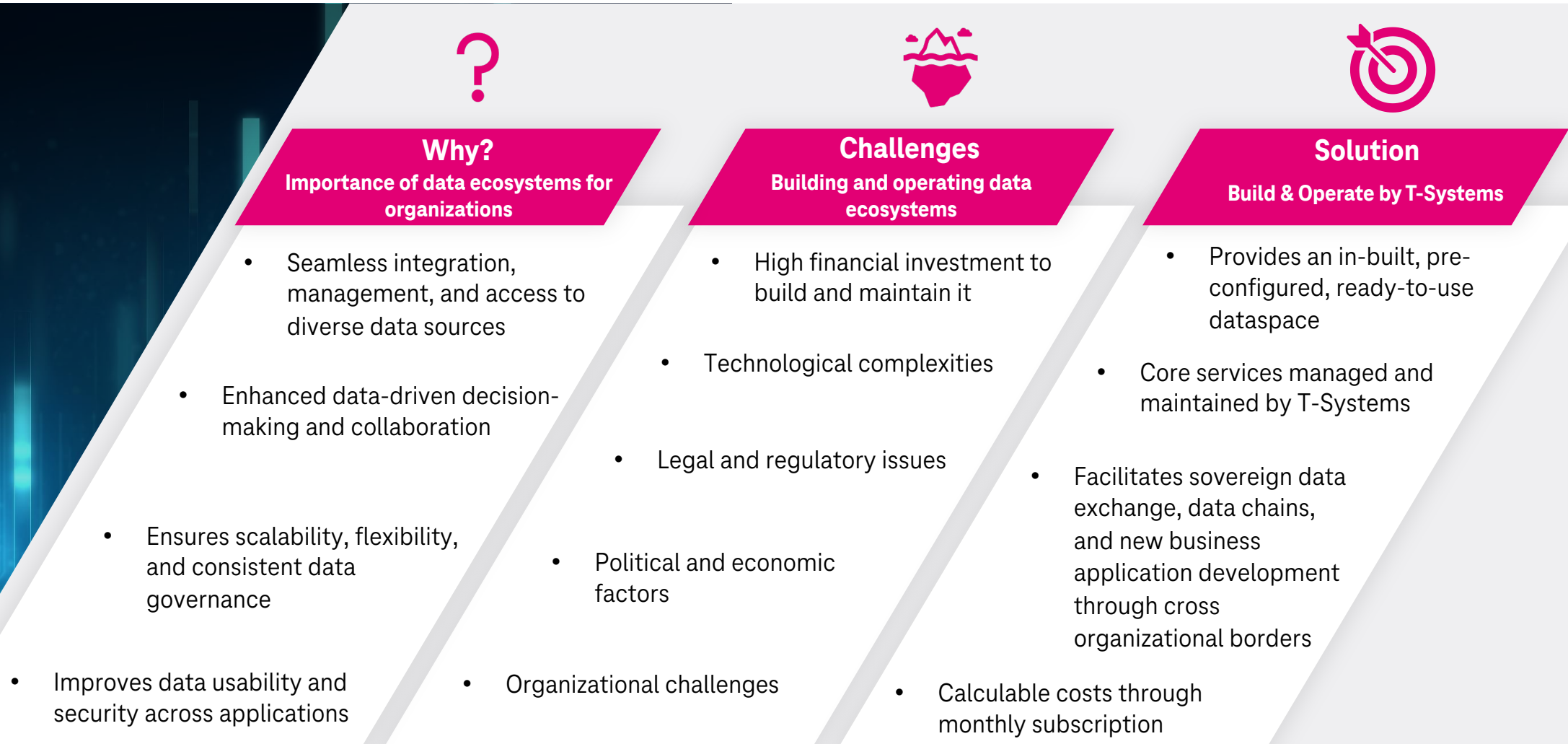
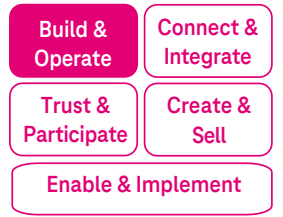


# Agenda

- 01** Why building a data ecosystem?
- 02** Why T-Systems: your one-stop-shop
- 03** T-Systems dataspace portfolio
- 04** Next Steps



# T-Systems | Dataspaces-as-a-Service

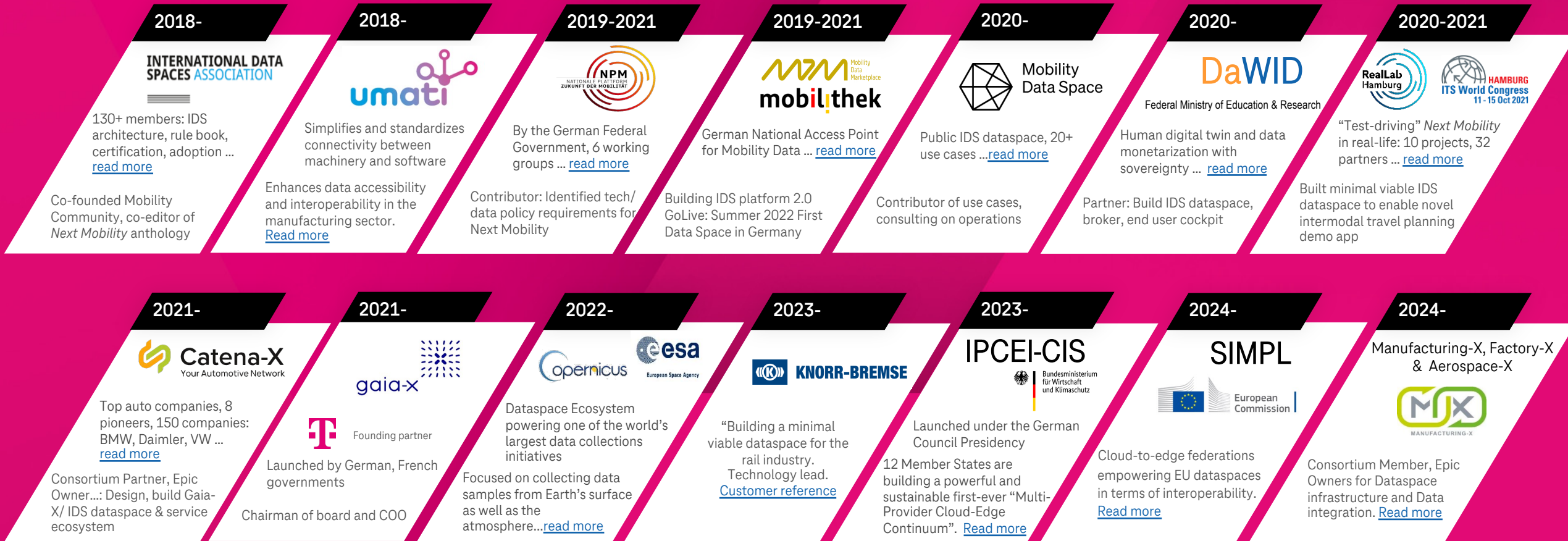


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# We are pioneers in dataspaces since 2018!



Telekom Data Intelligence Hub

<https://dih.telekom.com/en>



# Agenda

**01** Why building a data ecosystem?

**02** Why T-Systems: your one-stop-shop

**03** T-Systems dataspace portfolio

**04** Next Steps



# TSI enables data-driven trustful data exchange through cross-industry products & advisory services

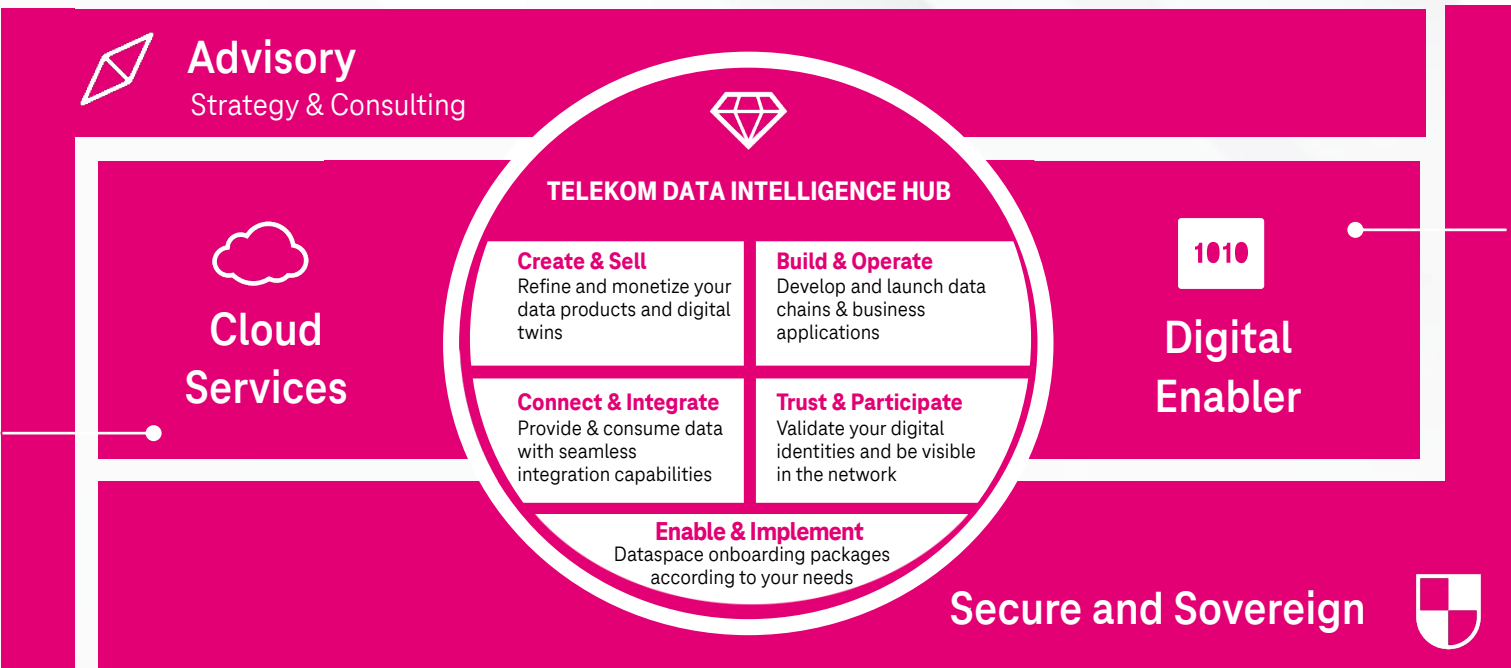


## Cross-Industry Use Case Applications

Traceability, Product Carbon Footprint, Quality, Digital Product Pass (DPP), Battery Pass,...

**Advise** on the best path to digital sovereignty & data sovereignty

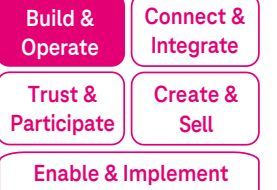
Enable and operate in **multi-cloud environments**



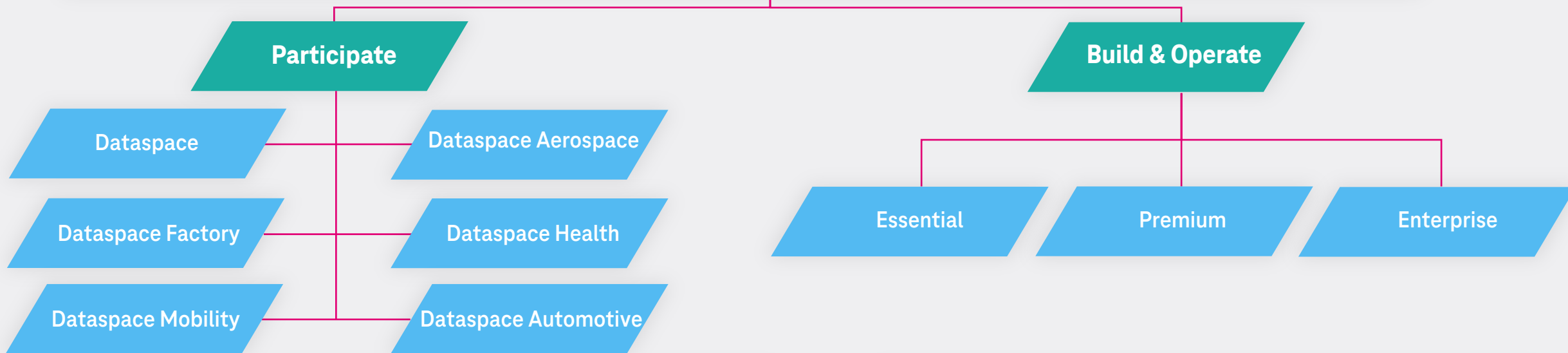
Develop and support your **digitization** strategy

**Secure** and **sovereign** data transfer with open technology & **managed service**

# Product offering | Dataspace-as-a-Service



## T-Systems | Dataspace-as-a-Service



### Dataspaces are owned and managed by Telekom Data Intelligence Hub

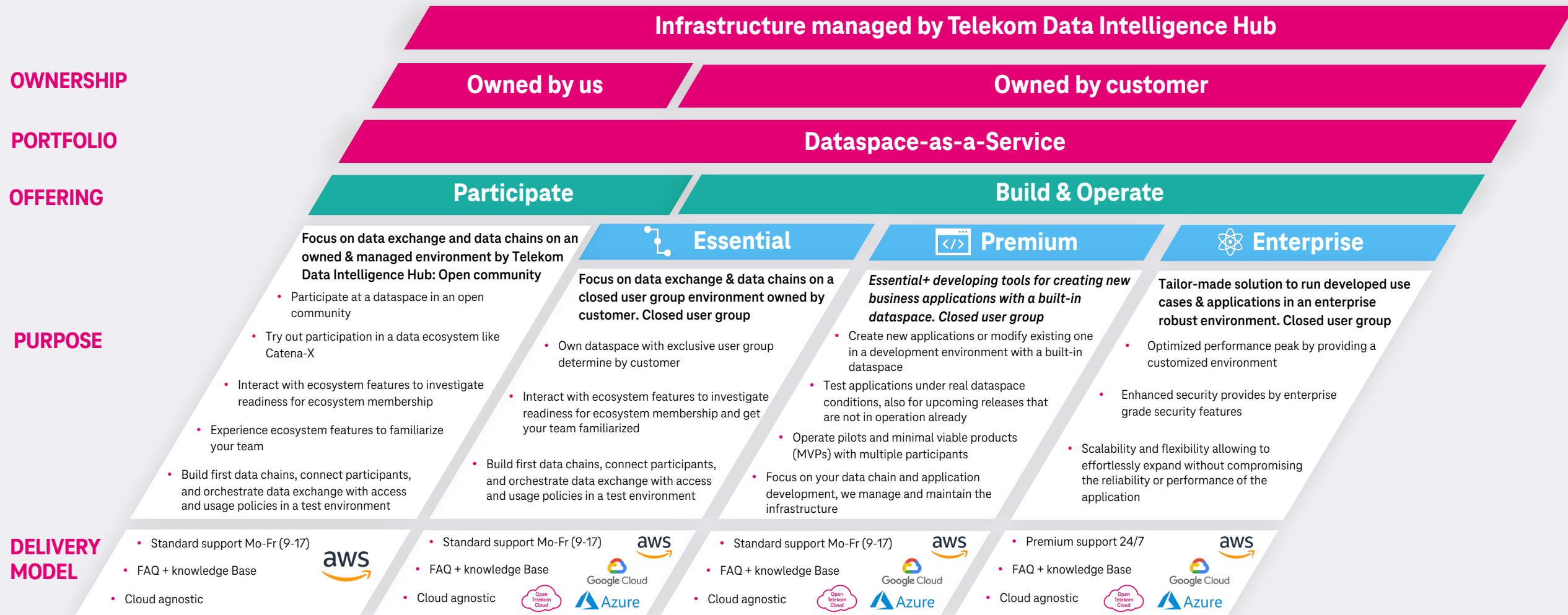
- Customer participate at a specific industry dataspace to consume specific services & applications of it
- Try out and interact with ecosystem features to investigate readiness for membership
- Public community: Participates are visible for all in the industry specific dataspace

### Build & Operate is owned by customer and the infrastructure is managed by Telekom Data Intelligence Hub

- Customer own, operate & build their own dataspace
- Focusing on doing data exchange, building data chains & develop new business applications
- Exclusive user group that can join the dataspace and is determined by dataspace owner

# Dataspace-as-a-Service | Key differences

- Build & Operate
- Connect & Integrate
- Trust & Participate
- Create & Sell
- Enable & Implement



# Build & Operate Premium | App development

Build &  
Operate

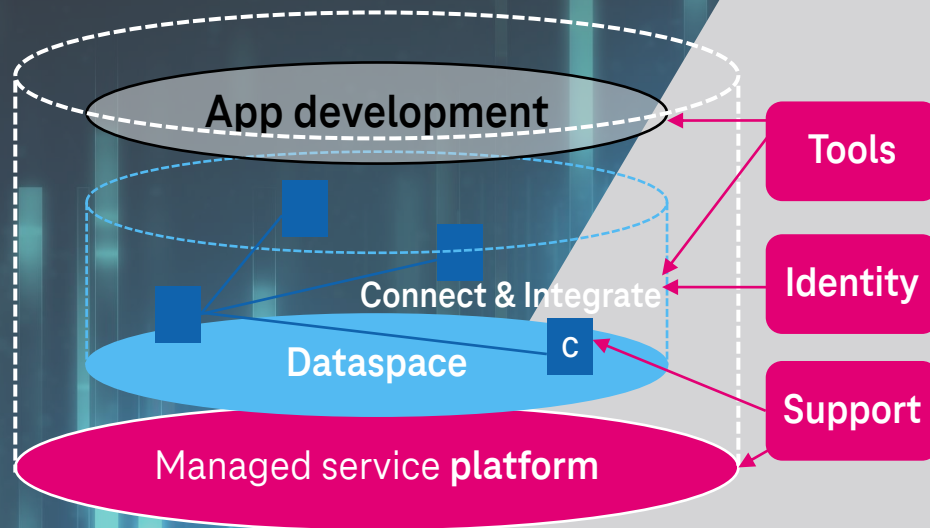
Connect &  
Integrate

Trust &  
Participate

Create &  
Sell

Enable & Implement

## Your dataspace



Speed up time to market with best-in-class data sovereignty protection

**Target Group:** Companies of all sizes of app & software developers, dataspace operators, data engineers many more

### Features

- **Upgrade existing apps or create new** to benefit from data products
- **Focus on your apps** - we maintain the dataspace that powers it
- Based on **semantic web technology** for dataspaces
- Managed service with **minimal effort**
- **Support** for app conceptualization (e.g. semantic modelling) and development (e.g. frontend design)

# Why Build & Operate? | Premium

Build &  
Operate

Connect &  
Integrate

Trust &  
Participate

Create &  
Sell

Enable & Implement

**Build and Operate is  
your kickstart of your  
dataspace journey.  
Exchange and build,  
unlock the value of  
your data**



Boosts application development based on dataspace capabilities



Secure & sovereign data exchange within your dataspace



Reduces overall business risks & increases consumer confidence through reliability of trust chains



Proof of authenticity and origin of digital assets



Ensures regulatory compliance, e.g., GDPR, eIDAS



Minimize mid- and long-term development efforts & costs due to an automated dataspace

# Why Build & Operate? | Premium

Build &  
Operate

Connect &  
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Trust &  
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## Application layer

### Create value with your applications and services

Focus on the development of use case apps. Leave the complexity of dataspace technologies to us. We support your PCF/ Pacific application development to be Catena-X compliant



## Dataspace layer

### Trustful ecosystem with the dataspace layer

Benefit from Digital.ID & rely on the state-of-the-art standards that foster decentralization, federation, and sovereignty protection



## Support layer

### Supporting environment to orchestrate & monitor applications and services

Speed up and simplify the use case app development and management process by relying on the latest cloud-native support tools



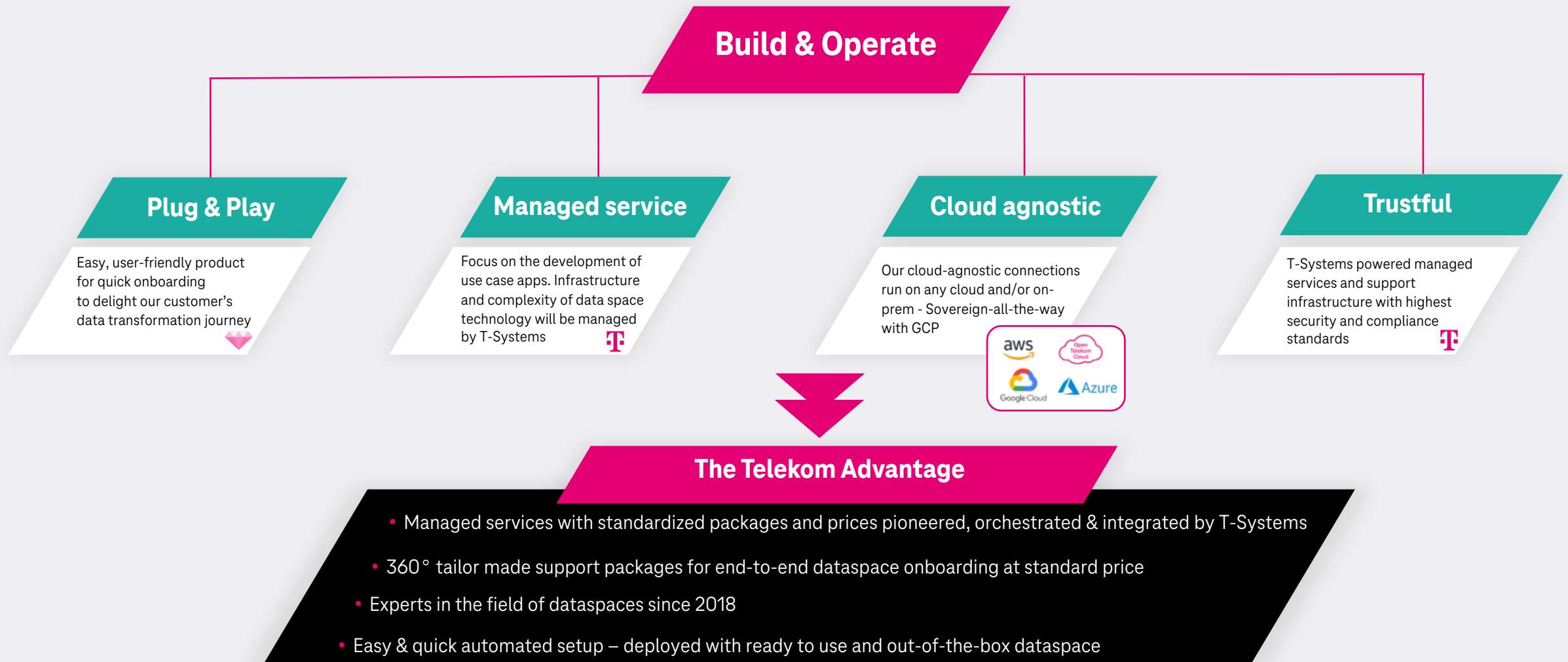
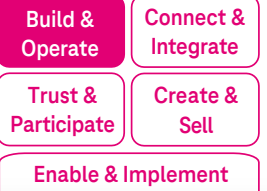
## Managed service

### T-Systems managed service capabilities

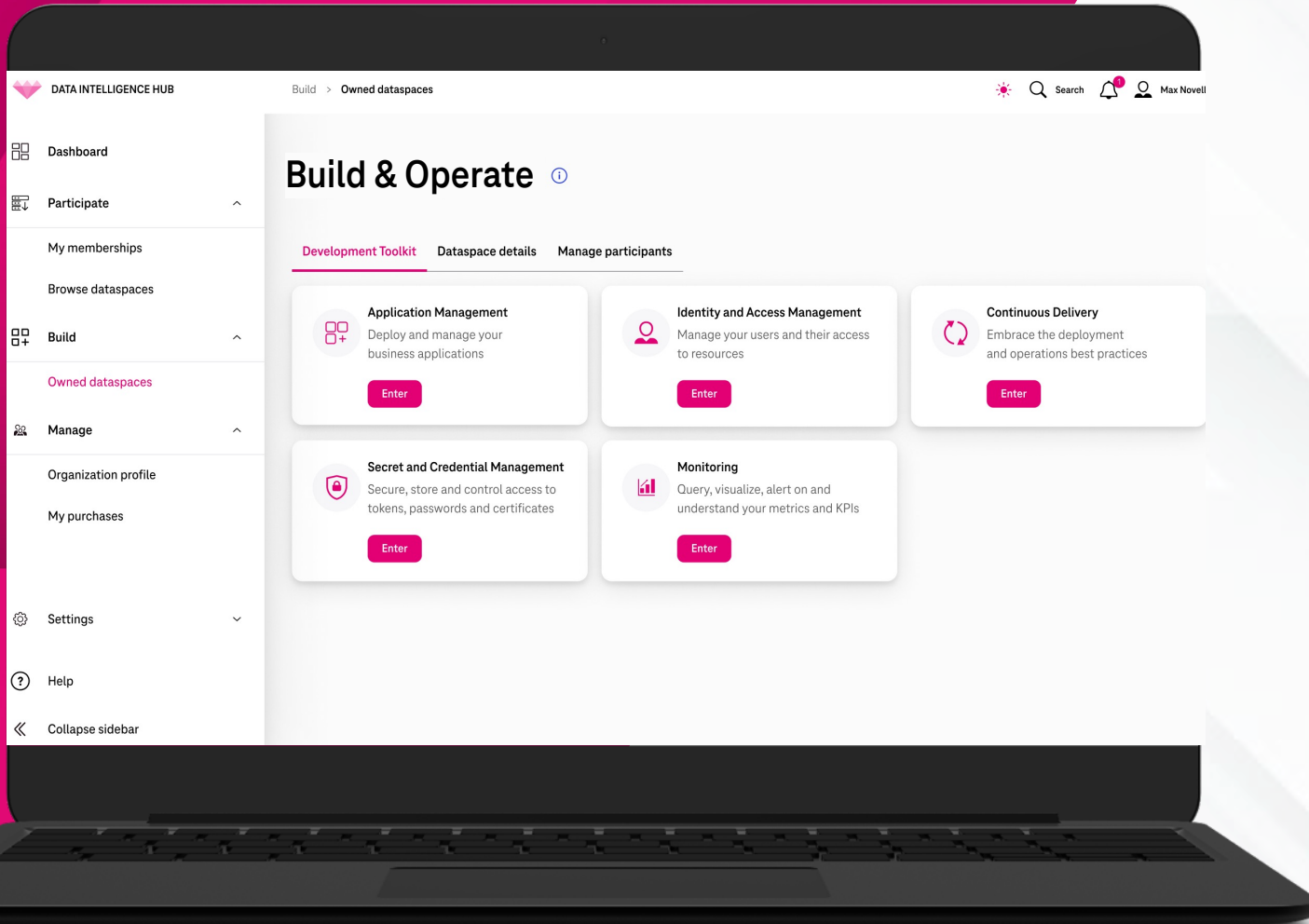
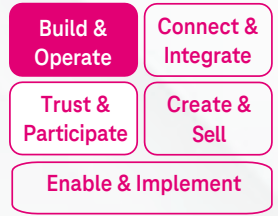
Rely on an IDSA & Gaia-X pioneer in dataspace technology with more than 5 years of experience. Build on cloud-agnostic solutions of T-Systems. Upgrade easily



# Product offering | Dataspaces-as-a-Service



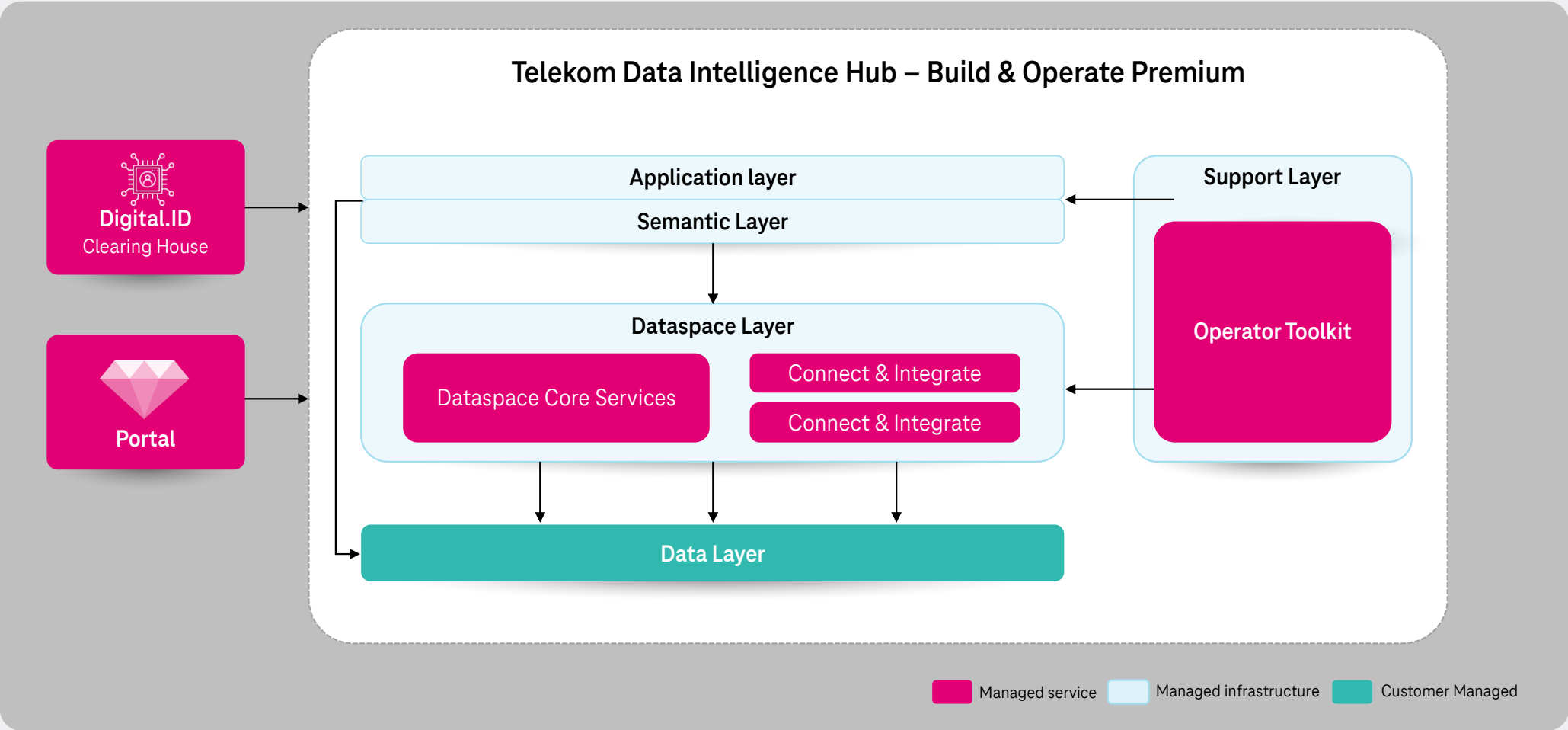
# Entry point to dataspaces | UI



- User-friendly **self-service** user interface
- Easy access to the **development toolkit**
  - Identity and access management
  - Secrets and credential management
  - Application management
  - Monitoring
- Convenient **data exchange UI** for all your participants
- IDSA & Data Space **certified** solutions
- Built-in **participant validation** to secure a trusted space with **Digital.ID**

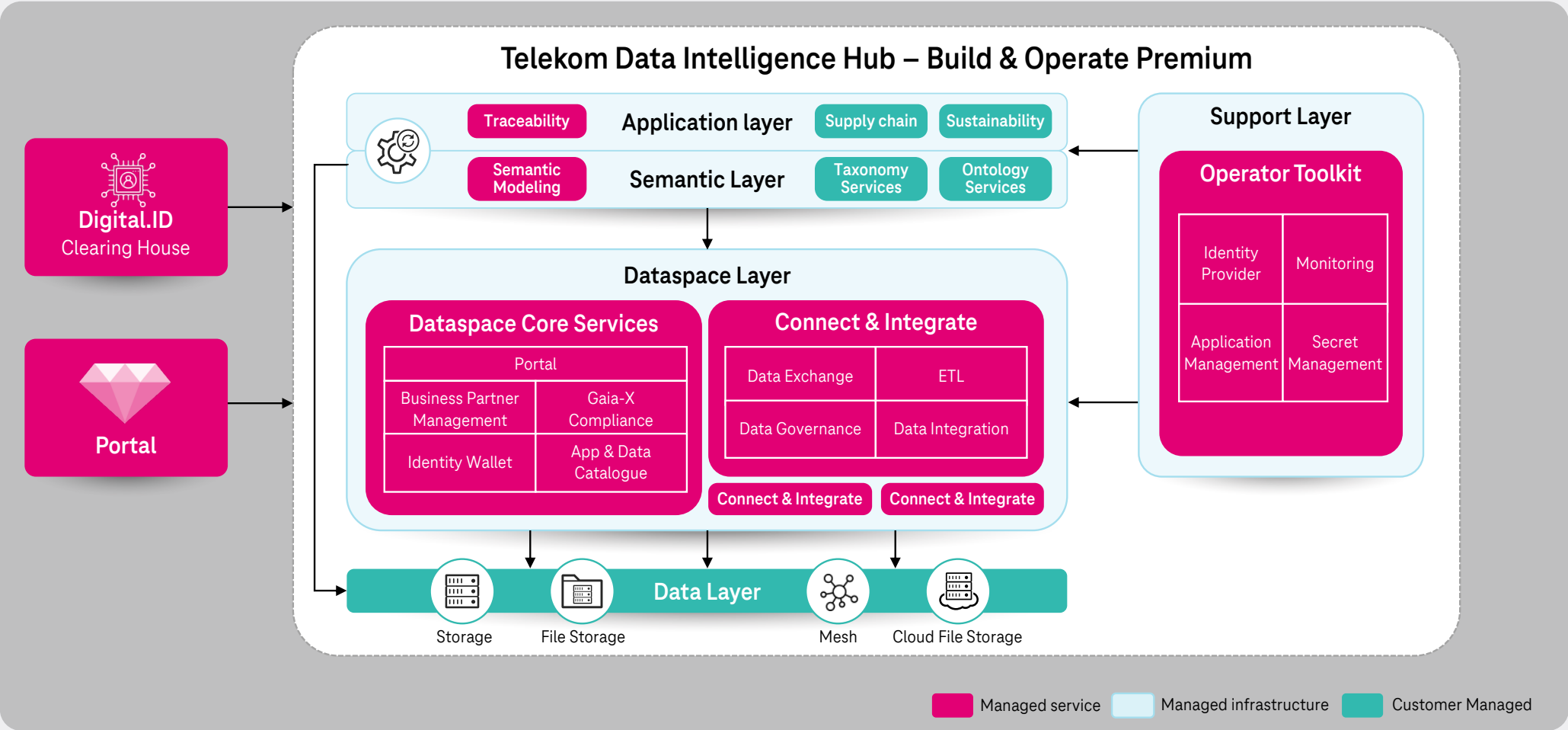
# Build & Operate | Architecture

- Build & Operate
- Connect & Integrate
- Trust & Participate
- Create & Sell
- Enable & Implement



# Build & Operate | Capability Architecture

- Build & Operate
- Connect & Integrate
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# Build & Operate | Multiple use cases



## DEVELOPMENT & UPGRADE OF APPLICATIONS

Enhance business applications with dataspace capabilities




## CARBON FOOTPRINT DOCUMENTATION

Standardize PCF documentation for transparency



## TRACEABILITY

Accelerate processes by documenting each step



## DATA EXCHANGE BEYOND DEPARTMENT AND COMPANY BORDERS

Secure cross-border data exchange for innovative applications



## APPLICATION TESTING

Validate interoperability and integration of applications

# Digital Identities & Importance of Standards

Build &  
Operate

Connect &  
Integrate

Trust &  
Participate

Create &  
Sell

Enable & Implement



## Trust – main building block in digital world

Digital validation and verification: digital proofs of identity, membership, compliance, etc.



## Digital Identities

What once had to be verified in person, can now be verified digitally



## Self-Sovereign Identity (SSI)

Sovereignty assurance: full control over data and identity information



## Decentralized Solution

Self-management without depending on third-party providers



## Importance of standards

Usage of standards improves the market acceptance and interoperability



## Implemented standards

- [W3C Decentralized Identifiers](#)
- [W3C Verifiable Credentials](#)
- [Gaia-X Trust Framework 22.10](#)
- eIDAS



# Why Digital.ID? | Digital verification matters

Build &  
Operate

Connect &  
Integrate

Trust &  
Participate

Create &  
Sell

Enable & Implement

**Digital identity  
verification ensures trust  
in dataspaces**

**Trust, but verify!**



**T Systems**



Secure digital identities for organizations & machines



Reduces overall business risks & increases consumer confidence through reliability of trust chains



Boosts operational efficiency through automation



Proof of authenticity and origin of digital assets



Ensures regulatory compliance, e.g., GDPR, eIDAS



Creates long-term business relationships built on trust

# Trust & Participate | Building trust in dataspaces

Build &  
Operate

Connect &  
Integrate

Trust &  
Participate

Create &  
Sell

Enable & Implement

## T-Systems as a Trust Anchor for Digital Ecosystems and Dataspaces



### Building Trust

Authentication and Provenance are important building blocks for establishing trust in modern industrial processes, such as supply chains and product pass applications.



### Digital Trust Chains

In the course of hyper-networking and the exchange of digital assets, traceability, proof of origin and authenticity will be a crucial factor in mapping successful digital business processes.



### Trust Anchors in Dataspaces

Ecosystems and Dataspaces rely on the legitimacy of the participating companies. Trusting cooperation thus enables a trustful exchange of digital assets.

# Digital.ID | Gaia-X verification node

- Build & Operate
- Connect & Integrate
- Trust & Participate
- Create & Sell
- Enable & Implement

## Digital.ID as GXDCH node



Verification node of the Gaia-X rules and the go-to place for Gaia-X compliance



Node operated by T-Systems, acting as Gaia-X Trust Anchor



Operate and run services of the Gaia-X Framework (compulsory and optional), to achieve compliance and support the onboarding of any Gaia-X adopter



Integrate to external Conformance Assessment Bodies for external asseverations, Identity Verification, and other Trusted Data Sources as defined by the Gaia-X AISBL

## Notarization API

- Authenticates master data and converts it into verifiable W3C format
- Establishes trust through tamper-proof digital assertions for accurate self-descriptions

# Trust & Participate | Service overview

Build &  
Operate

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## Trusted Data Sources

- **VAT ID:** for the European member states or North Ireland, the VAT Information Exchange System (VIES)
- **EORI:** registration and identification of economic operators in the European Union
- **LEI Code:** the Global Legal Entity Identifier (GLEIF) with worldwide coverage
- **Local Commercial Registration Number**

opencorporates

**Validation:** validation of companies' legal commercial registration numbers & European tax and customs identifiers

**Gaia-X Compliance:** validation of shape and content of Gaia-X Credentials, attesting the compliance with the latest Gaia-X Trust Framework

**Credential Management:** creation, secure storage and usage of Verifiable Credentials in user-friendly manner

**Certificate & Signing:** qualified certificates issued by Trust Service providers to increase trust in ecosystem

**Business Reporting:** reporting of successful and rejected validations and compliance requests for Dataspace operators



DIGITAL.ID



Credential



# Success stories & references

"As a clearing house for Gaia-X and Catena-X, T-Systems is one of the first clearing houses available on the market, not only for Catena-X, but also for other partners. We found the right partner to give the right people in the dataspace to credit - who you are, are you rightfully or wrongfully in there - and to make sure that we are Gaia-X compliant."



Oliver Ganser, Chief Executive Officer "Catena-X Association and Industry Consortium"



"The integrity of dataspaces is built on verified company identities. T-Systems, Gaia-X compliant clearing house is a key pillar during the onboarding of new members into the Catena-X dataspace, and an important partner for us in building a trusted data ecosystem"

Thomas Rösch - Chief Executive Officer, Cofinity-X

"Market players like T-Systems are playing an important role in making dataspaces a reality, operating digital clearing houses according to the specification of Gaia-X. With this we are creating a global standard for dataspaces in different domains, starting with flagship domains like the automotive."



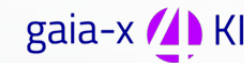
Ulrich Ahle, Chief Executive Officer - Gaia-X European Association for Data and Cloud AISBL

"In our view, we need market adopters, early movers, commercial companies that just ship the great technology, software components and services we need, and we have trailblazers like T-Systems with the data intelligence hub, which already showed us two years ago what the world of dataspaces could look like."



Lars Nagel, Chief Executive Officer, International Data Spaces Association

T Systems



Media kit dataspaces

⇒Link

# Customer Reference | Knorr-Bremse: Rail Industry

## Overview

Between actors in nearly all modern industries, data sharing is increasing. Throughout Europe, governments are investing in new infrastructures to better share and manage data in critical sectors such as transportation.

Together with T-Systems, Knorr-Bremse is driving the implementation of new principles for data traffic in the mobility sector, based on the standards of the International Data Spaces Association (IDSA).

## Goal

The creation of data federation services, components and artifacts, for building a trusted, reliable, and cybersecure federated dataspace for the rail ecosystem.

## Partners

EU funded project with 28 consortium partners throughout Europe

<https://www.youtube.com/watch?v=XI8FxxHrG8A&t=15s>



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# Next steps | Contact us!



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[Visit our website!](#)

# Thank you!

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