TELEKOM DATA INTELLIGENCE HUB

Create value from data

Serif Aktas

Senior Sales Manager

T-Systems International GmbH

Data Intelligence Hub

DATAMARKETPLACE

DATAANALYTICS

DATASOVEREIGNTY

ERLEBEN, WAS VERBINDET.

CURRENT CHALLANGES IN THE ECONOMY

Data is the new oil!

However, companies can only fully exploit the potential of their data if they link it intelligently across companies and industries.

PwC, 2018

Hewlett Packard Enterprise and Continental launch blockchain-based data monetization platform

FEBRUARY 25, 2019 • PRESS RELEASE

Microsoft and the BMW Group launch the Open Manufacturing Platform

April 2, 2019 | Microsoft News Center

Challenges

- No standards for data exchange
- Huge amount of unstructured data
- Incompatible data models
- Organizational silos
- Fear of loss of control
- Inconsistent terminology

ERLEBEN, WAS VERBINDET.

DATA INTELLIGENCE HUB BY DEUTSCHE TELEKOM VISION OF A DATA DRIVEN ECOSYSTEM

Build "THE 1ST ECOSYSTEM" for ALL ANALYTICS MATTERS,
including SECURE DATA EXCHANGE between companies and enabling
DATA-DRIVEN PRODUCT & SERVICE INNOVATIONS,
in which the DATA OWNER KEEPS CONTROL OVER DATA USAGE
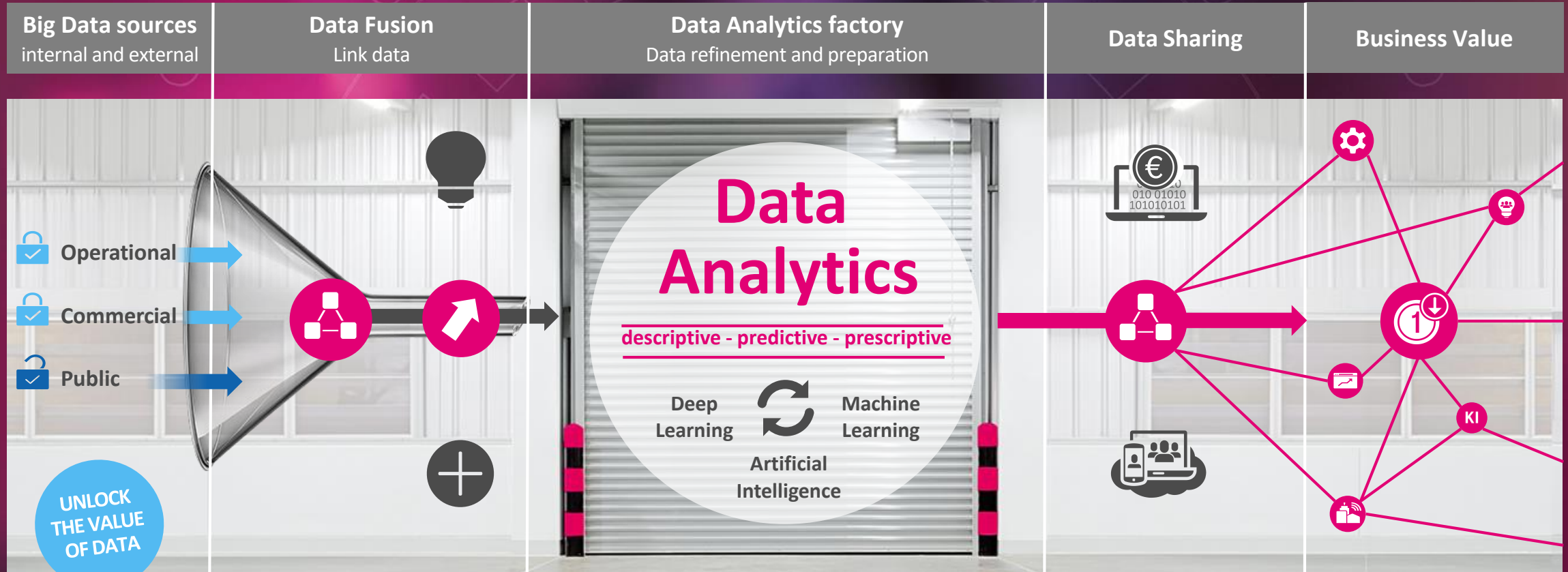
CLOSE DATA GAPS

OPTIMIZE PROCESS CHAINS

INCREASE ADDED VALUE

DATA - VALUE CREATION & REFINEMENT

Big Data sources internal and external	Data Fusion Link data	Data Analytics factory Data refinement and preparation	Data Sharing	Business Value

Operational

Commercial

Public

UNLOCK THE VALUE OF DATA

Data Analytics

descriptive - predictive - prescriptive

Deep Learning

Machine Learning

Artificial Intelligence

010 01010 101010101

KI

Increasing complexity requires new analysis options

1) Gartner

Provider

Purchaser

DATA INTELLIGENCE HUB

Ecosystem for Data Exchange & Analytics Opportunities

Analytics — Individual customer solutions from T-Systems or selected analytics partners (Analytics Insights)

Open Data

Workspaces — Self-service applications with 50+ tools for developing data-driven business models

Closed Data

Data catalogue — Prefilled with > 200,000 open data sets of various categories and formats

100 % RELIABILITY Data will never be used or stored for own interests

Data-driven business models

← **simple and secure** →

Data monetization and market access in self-serving!

Price autonomy

Self-service access to valuable, easy-to-use data!

Autonomous supplier selection

Trust Secure, smooth data exchange based on standards

Open Neutrality for all participants, overcoming organizational silos

Data sovereignty Data owner retains control over data flow and use

ERLEBEN, WAS VERBINDET.

Data Intelligence Hub   30.09.2019   6

ADVANTAGES OF DATA ECONOMY AND ANALYTICS

Breaking down data silos across departments & companies

Optimization of own processes & competencies

More sales with own tools, services and skills

Develop **new sources of income** with your own data

Drive developments **faster and better**

Opening up **new business fields and models**

POSSIBLE USE CASES IN MANY MICRO MARKETS

Logistics

Shipping
ETA precision

USE CASE

Transport
Route optimization

Port logistics
Process optimization

Machine Data
Smart Routing

USE CASE

Material order
Optimization

USE CASE

Manufacturing

Real Estate

Operational analysis
Optimize use of buildings

USE CASE

Supply Chain
Optimization

Automotive

Smart City

Environmental protection
Determination of air quality

USE CASE

Maintenance
Analyze train data
Analyze aircraft data

Public transport
Intermodal travel

Public Transport

Retail & Food Production

Needs analysis
Order optimization

Drinks
Production Optimization

USE CASE

Risk profiles
Individual offers

Insurance
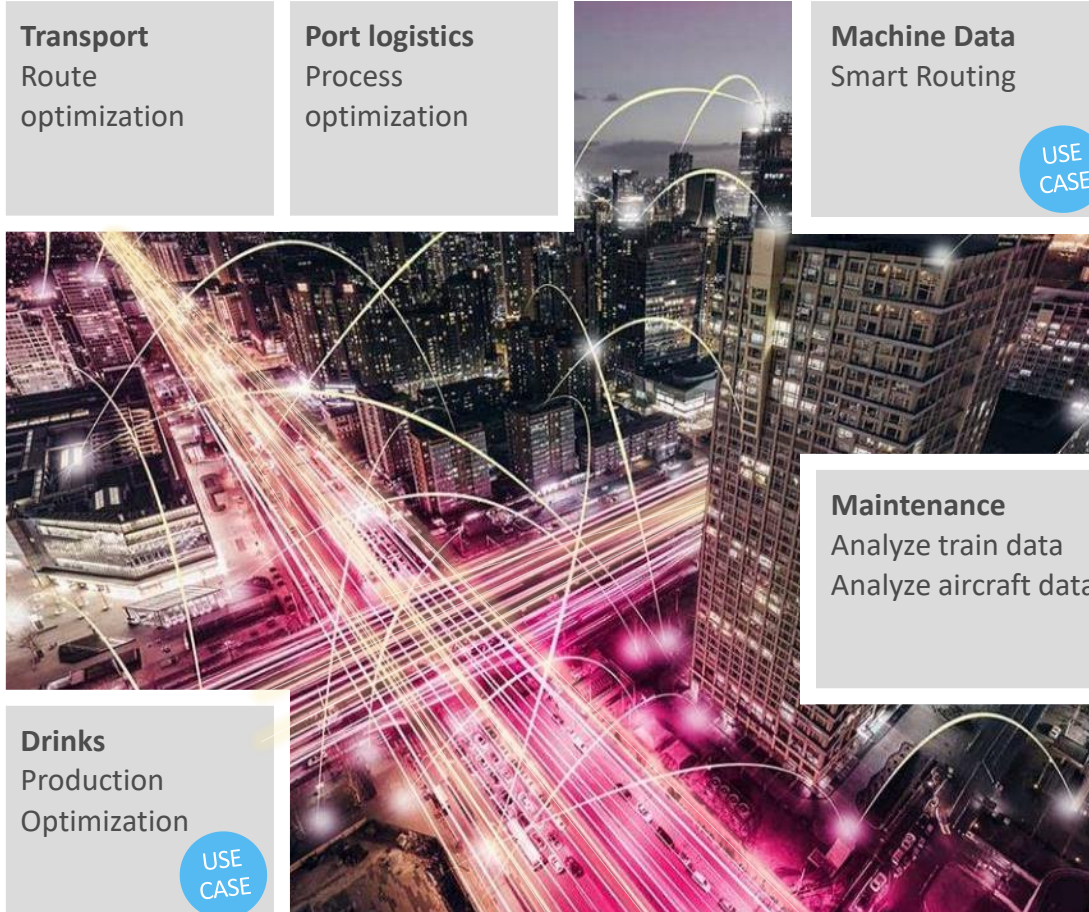
SECURE AND STANDARDIZED DATA EXCHANGE
DATA INTELLIGENCE HUB FOR SMART DATA ROUTING

Problem

- No machine data exchange across companies

- Lack of interfaces and inadequate security standards with concern for loss of data sovereignty

- Uniform standard (OPC UA) and intelligent routing (DIH) is required to ensure data sovereignty
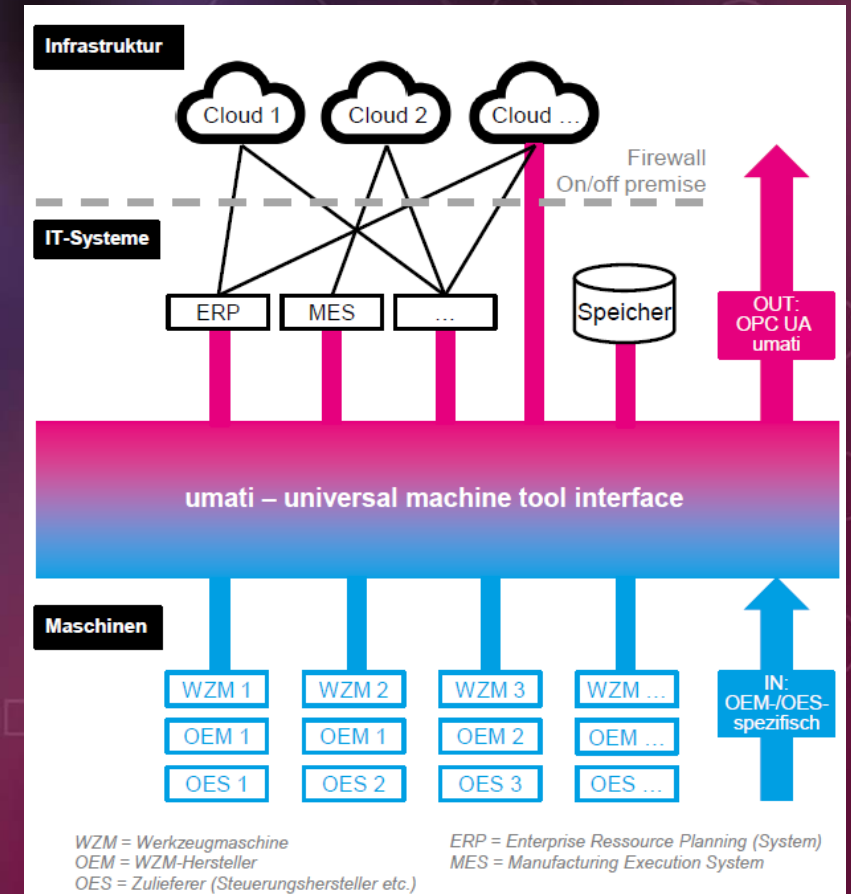
Solution

- Umati acts as a universal interface that securely, seamlessly and effortlessly integrates machine tools and equipment into customer and user-specific IT ecosystems.

- With its functionalities the DIH provides the possibility to route the data intelligently and individually to specific ecosystems
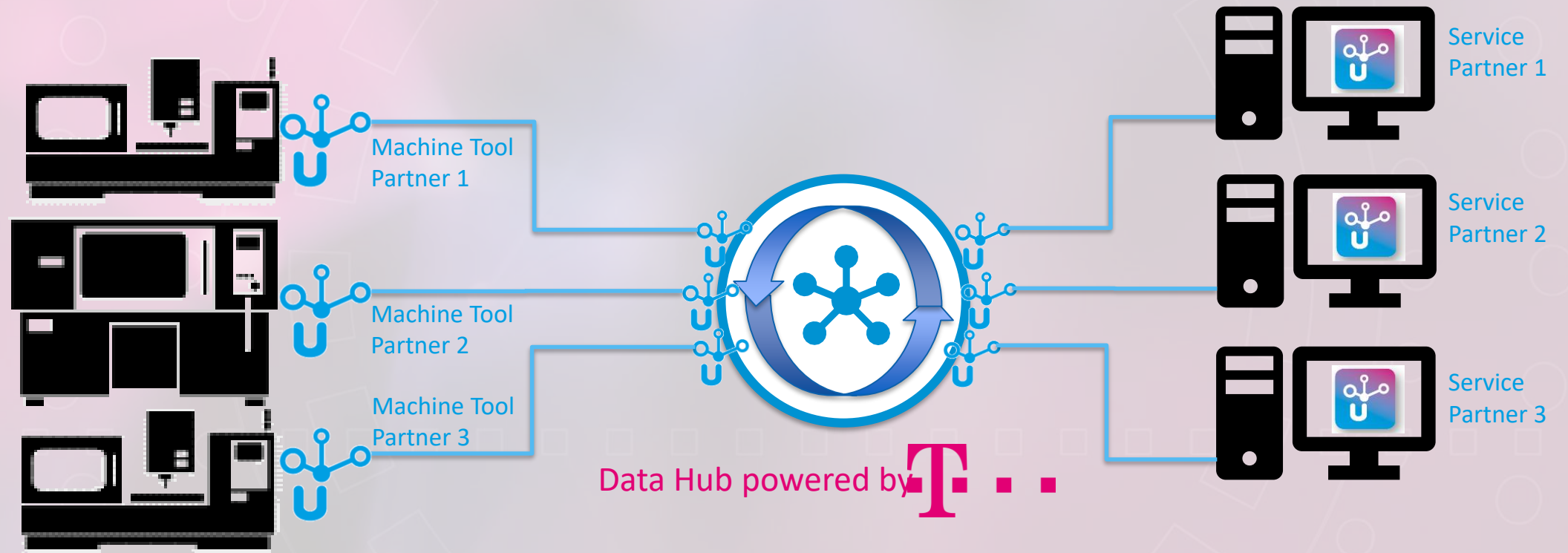
Win / Win

- Data sovereignty, avoidance of data loss

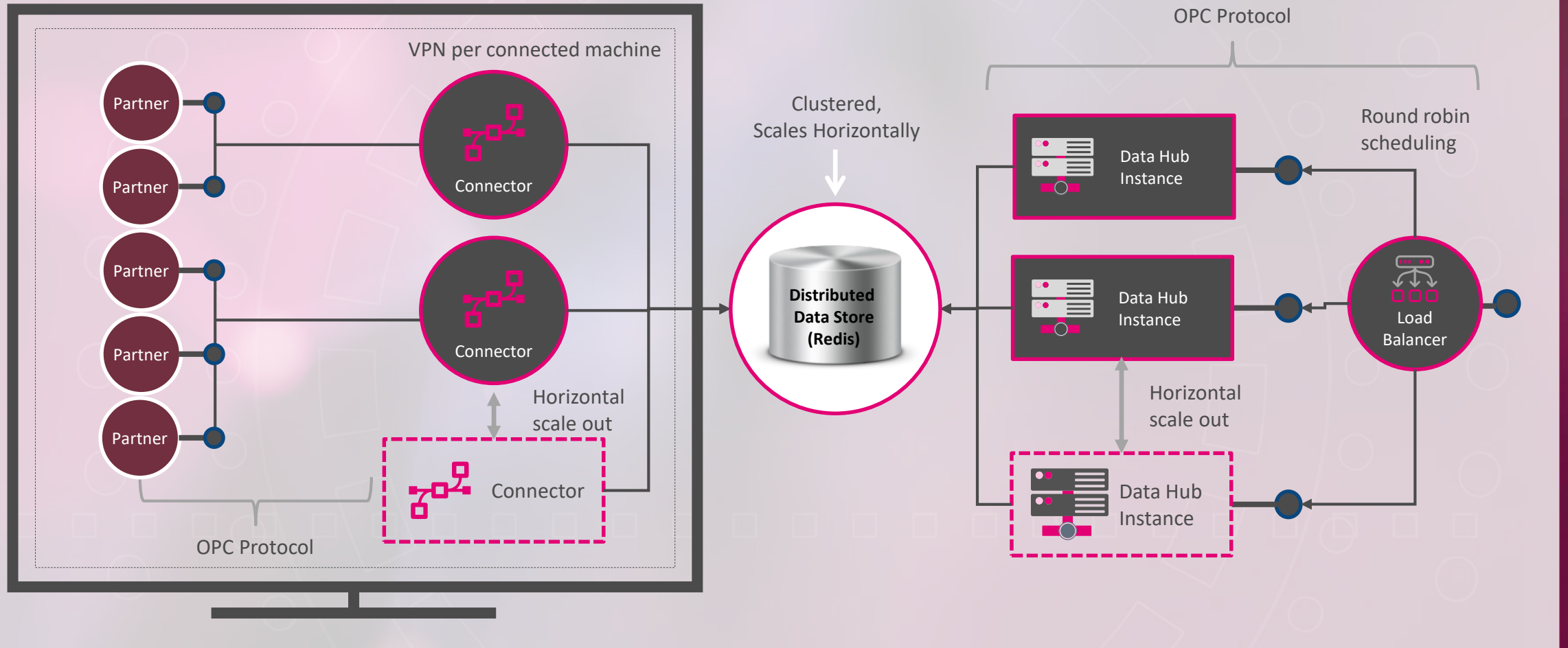- Easy and secure data exchange and Deployment with a unified platform

WHAT IS UMATI?

- umati stands for a universal machine tool interface that can safely and seamlessly integrate machine tools (WZM) and systems into customer and user-specific IT ecosystems.
- umati serves to connect machine tools to IT systems inside and outside the production environment (MES, ERP, Cloud, ...)
- At its core, umati provides standardized semantics through an information model based on the communication standard OPC UA
- umati can be extended with specific extensions by manufacturers and users of machine tools
- umati offers a standard not only in Germany, but for users all over the world

Infrastruktur
Cloud 1 Cloud 2 Cloud ...
Firewall On/off premise
IT-Systeme
ERP MES ... Speicher
OUT: OPC UA umati

umati – universal machine tool interface

Maschinen
WZM 1 WZM 2 WZM 3 WZM ...
OEM 1 OEM 1 OEM 2 OEM ...
OES 1 OES 2 OES 3 OES ...
IN: OEM-/OES-spezifisch

WZM = Werkzeugmaschine
OEM = WZM-Hersteller
OES = Zulieferer (Steuerungshersteller etc.)
ERP = Enterprise Ressource Planning (System)
MES = Manufacturing Execution System

SHOWCASE FOR EMO

Machine Tool Partner 1

Machine Tool Partner 2

Machine Tool Partner 3

Data Hub powered by **T** · ·

Service Partner 1

Service Partner 2

Service Partner 3

ERLEBEN, WAS VERBINDET.

DETAILED ARCHITECTURE

DATA INTELLIGENCE HUB CONNECTOR ADVANTAGES

Single Point of Data Exchange within your IT-infrastructure

Peer-2-Peer-communication with the advantages of an open marketplace

Open ecosystem instead of closed solution

Access control at your fingertips

Transparent usage control

Security according to **Industrial Data Space (IDS)**

ERLEBEN, WAS VERBINDET.
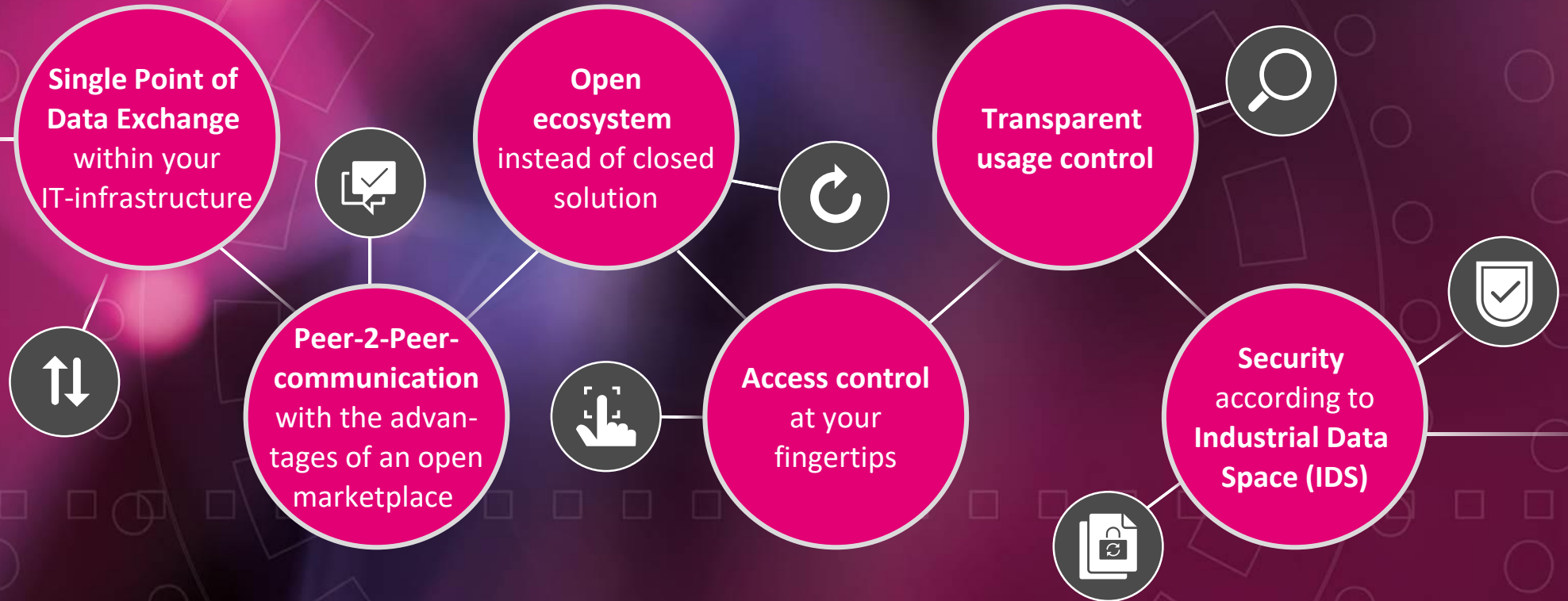
THE SECURE PUBLIC CLOUD FOR THE DATA INTELLIGENCE HUB

**Data Intelligence Hub –
Platform based on Cloud (German OTC, Azure etc.)**

Secure Public Cloud for **single and multi-tenant** Big-Data-scenarios

Selection, configuration and optimization of the Big-Data-Cloud-infrastructure for the right performance

Best class big data software ecosystem such as Cloudera and MapR or cloud-native big data applications such as HDInsight

Fast and fully automated delivery

Flexible Big-Data environments adapted to customer needs in size and design

Enterprise-grade Security Big-data-environments secured by Kerberos, LDAP & Sentry

Hybrid models integrate private und public cloud or on-premise-big-data-environments

DATA INTELLIGENCE HUB
THE TRUSTED ENVIRONMENT

T **T**echnological, industrial and manufacturer-specific independence

R **R**egulations of all European data protection laws are observed → legally compliant

U **U**ltimate data sovereignty and control for data owners

S **S**ecure data exchange and data storage

T **T**elekom data trust architecture, federal data storage and participant certification
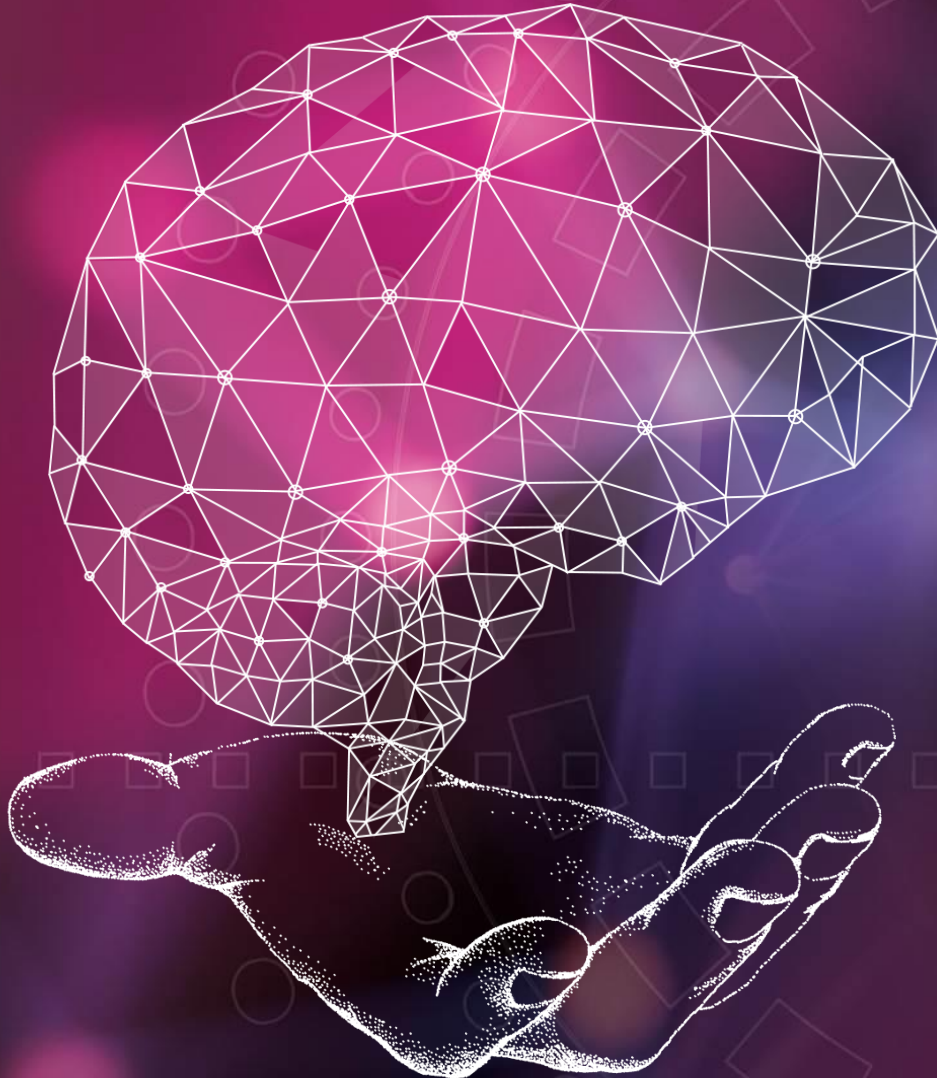
THAT'S WHY DEUTSCHE TELEKOM!

End-to-end

Consulting

Integration

Large partner network

Global presence

Security made in Germany

Neutral & open

CURRENT DATES AND LINKS

Easy to learn

09.10.2019
Completing, using and exchanging production relevant data - Live Demo
https://attendee.gotowebinar.com/register/4689760540180929035

ERLEBEN, WAS VERBINDET.

THANK YOU!

I look forward to continuing our dialog

Serif Aktas

Senior Sales Manager

T-Systems International GmbH

Data Intelligence Hub

E-mail:	Serafettin.Aktas@t-systems.com
Mobile:	+49 170 6487699