

DIGITALNO SREDIŠČE SLOVENIJE
SLOVENIAN DIGITAL CENTER

Tehnologija za ljudi
Technology for the People



I FEEL
SLOVENIA

ZELENA.
USTVARJALNA.
PAMETNA.

Open Source and Open Standards for the Digitization of Smart Communities

EU Presidency Slovenia, 07.07.2021

Ulrich Ahle, CEO FIWARE Foundation

ulrich.ahle@fiware.org

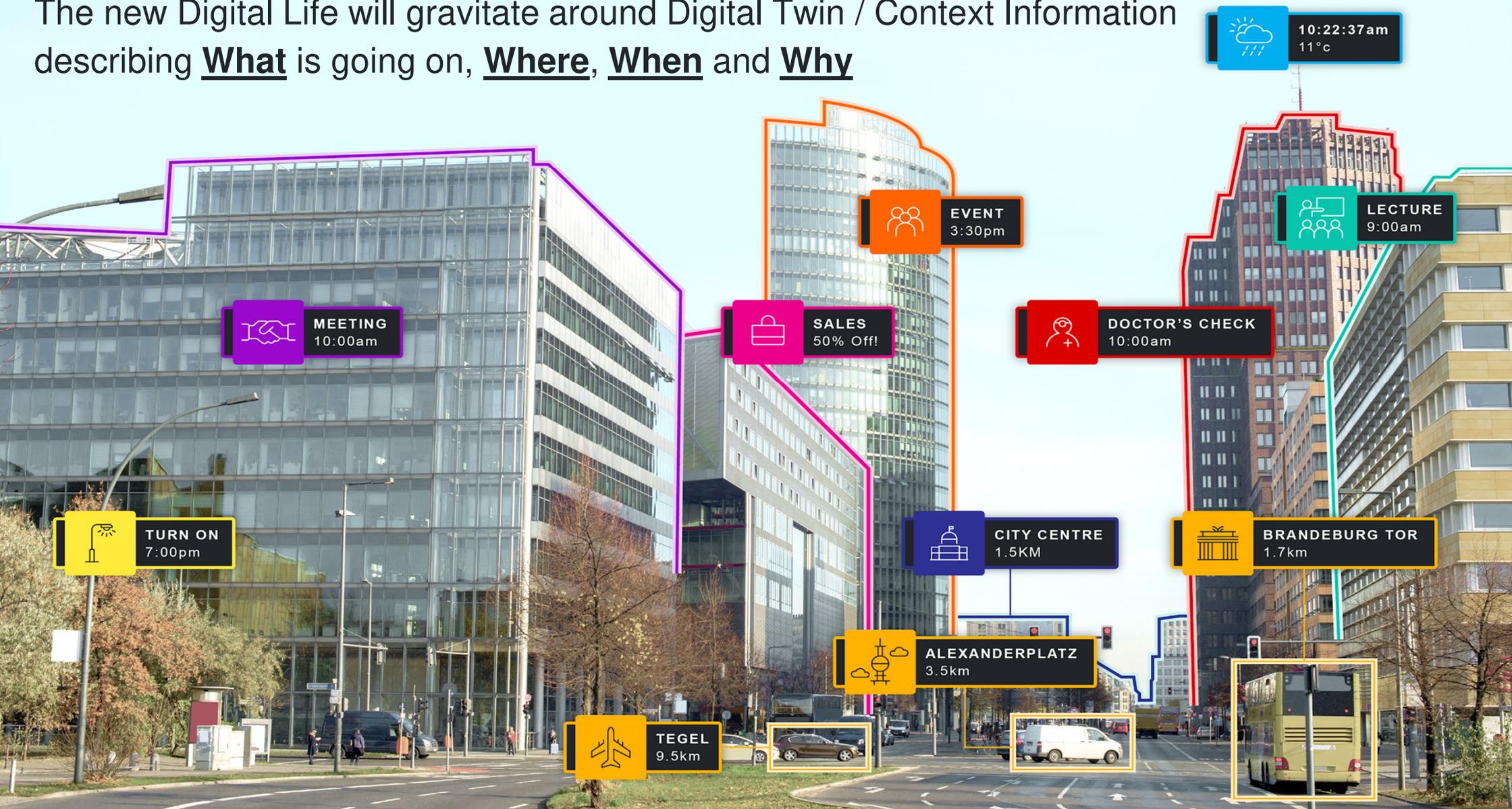
ipm GROUP //

IKT
horizontalna
mreža
.....

gaia-x
Hub Slovenia



The new Digital Life will gravitate around Digital Twin / Context Information describing What is going on, Where, When and Why



Today data are very often organized in silos



Smart
Port

Smart
Retail

Smart
Home

Smart
Transport

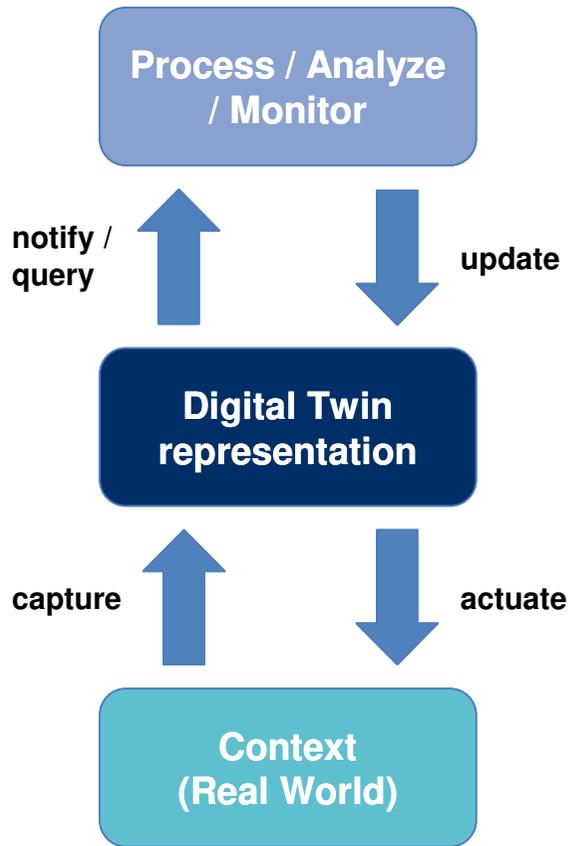
Smart
Lighting

Smart
Energy

Smart
Water

Smart
City

Modeling Context using Digital Twins



- Shop**
- Location
 - Business name
 - Franchise
 - offerings

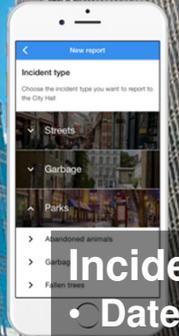


- Bus**
- Location
 - No. passengers
 - Driver
 - License plate



- Citizen**
- Birthday
 - Preferences
 - Location
 - ToDo list

Entities (Digital Twins)



- Incident / claim**
- Date
 - Location
 - Type
 - Issuer
 - Description

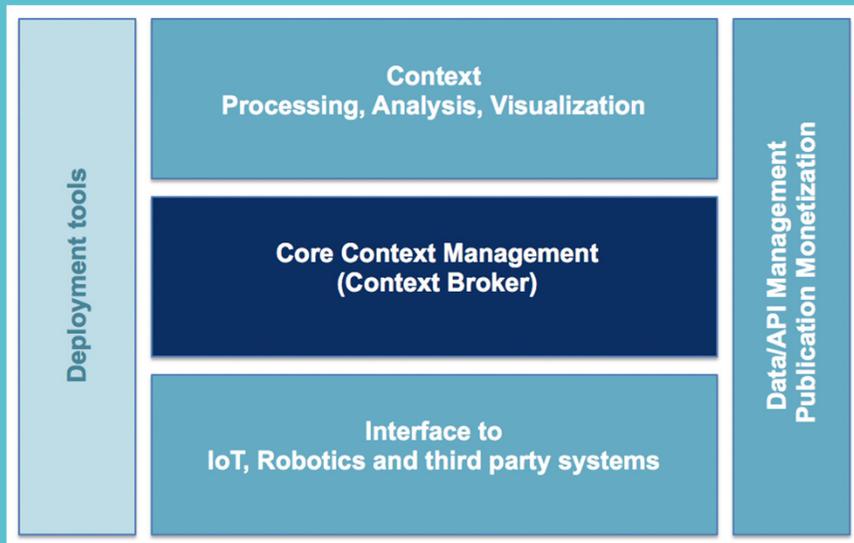
Attribute



This is FIWARE!



- A framework of open source platform components to access and manage heterogeneous context information through open APIs
- A standard for exchange of context information: **FIWARE-NGSI** (Next Generation Service Interface)
- Generic Enablers and Solutions to provide Smart Services with the **FIWARE Context Broker** as main component



Once context information is gathered, a lot of useful complementary FIWARE enablers can be used

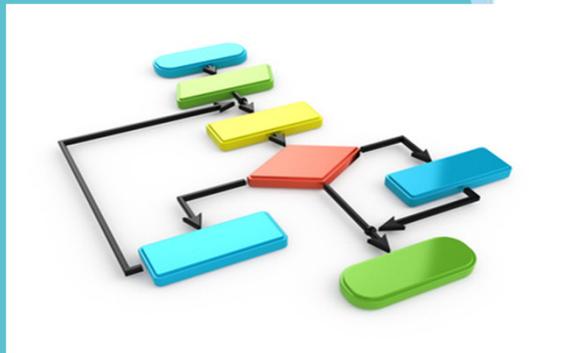
Advanced Web-based UI
(AR, 3D)



Open data publication



IoT-enabled Context Information Management

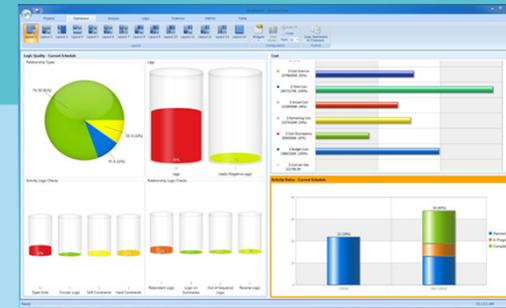


Complex Event
Processing



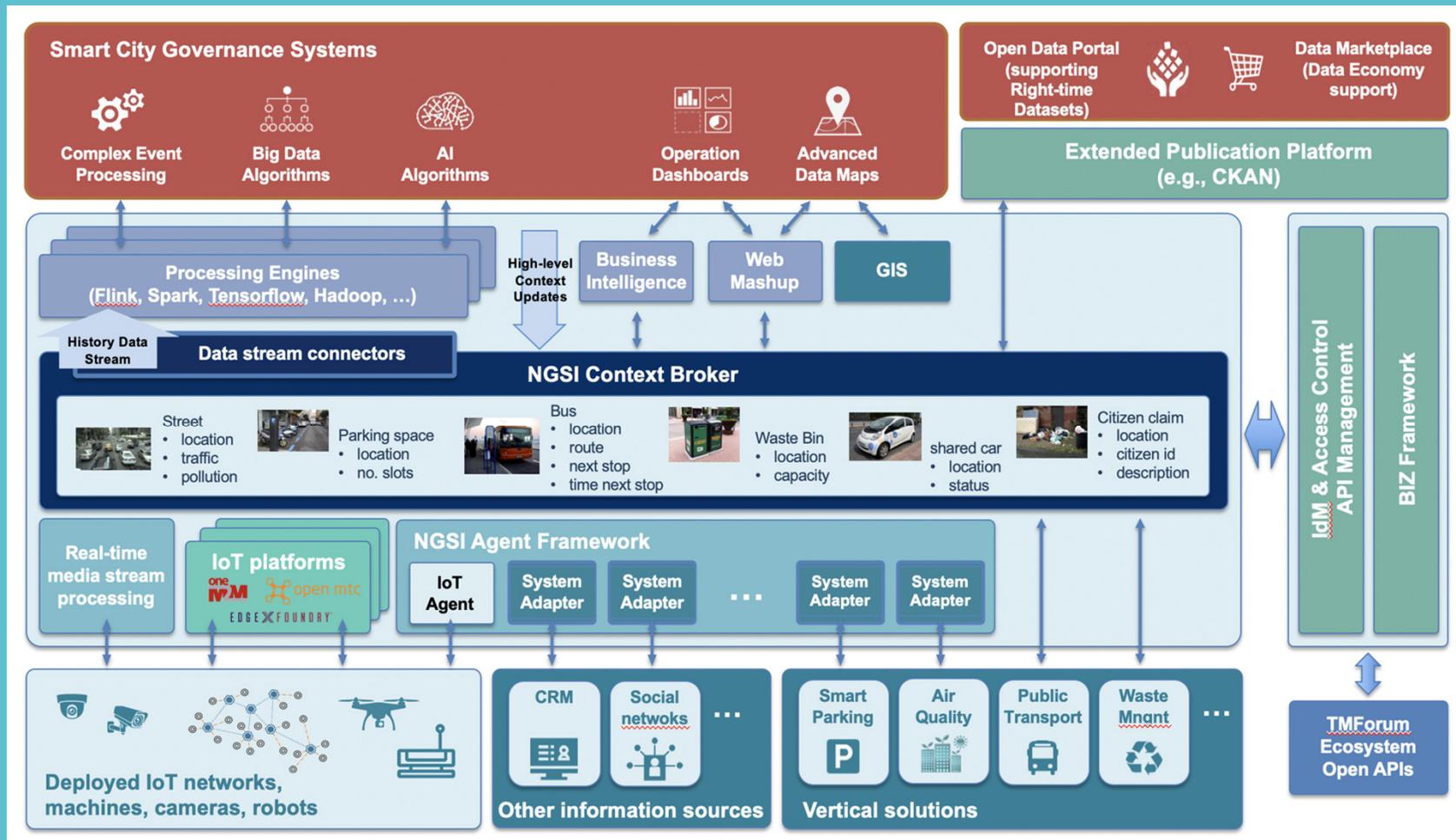
Multimedia processing

Data/Apps visualization



Big Data Analysis

A complete Reference Architecture for Smart Cities



FIWARE: Standardization on a global scale



FIWARE Context Broker

Technology has been chosen as a CEF (Connecting Europe Facility) Building Block by all European member states.

Existing CEF Building Blocks so far were:

- eDelivery
- eInvoicing
- eID
- eSignature
- eTranslation.



Joint Collaboration Program: Front-runner Smart Cities

- to support the adoption of a reference architecture and compatible **common data models**
- Using FIWARE NGSI and TM Forum Open APIs
- Smart City Common Data Models will be public and royalty-free
- Initial cities: Vienna, Nice, Genoa, Utrecht, Porto, Santander, Valencia, Gothenburg, La Plata, Montevideo



ETSI published on January 24th, 2019 “**NGSI-LD**” the new Context Information Management Standard API. The rationale is to reinforce the fact that this specification leverages on the ... **FIWARE NGSIv2** to incorporate the latest advances from Linked Data.

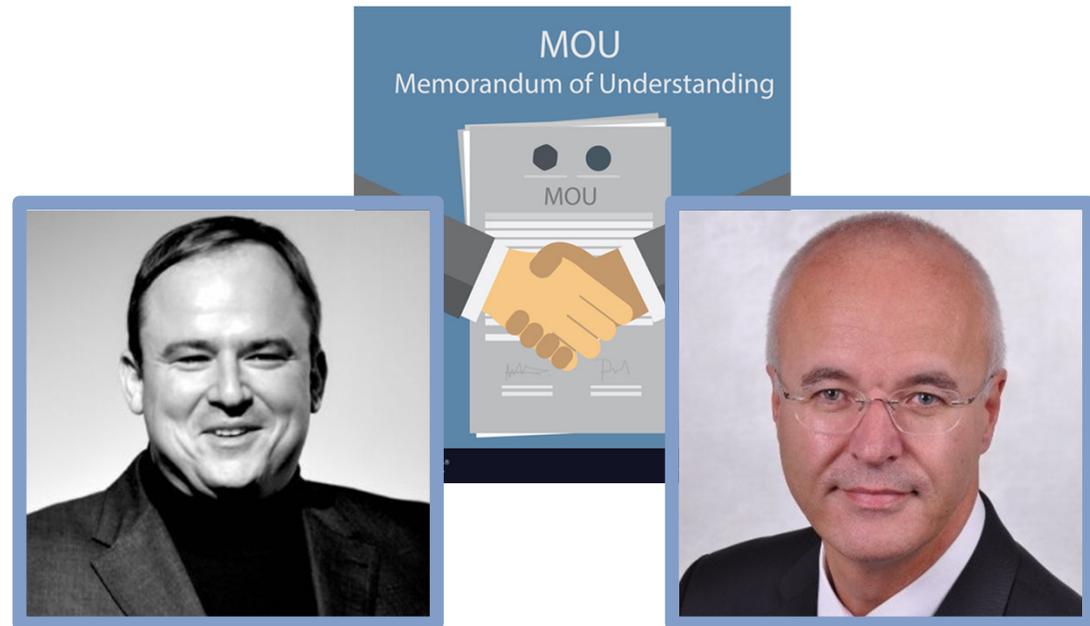
United We Thrive!

FIWARE & OASC signed an MoU

VISION: Long-lasting and sustainable partnership related to advancing and supporting cities & communities in their digital transformation.

WHAT'S NEXT:

- Press Release
- Engage each other in Digital Europe and Horizon Europe
- Organise joint workshops and events
- Cooperate in Smart Data Models



Davor Meersman
CEO OASC



Ulrich Ahle
CEO FIWARE
Foundation

Smart Data Models Initiative

- setting a clear global footprint

Launched in Nov 2018 by FIWARE and TMForum

IUDX joined the initiative in 2020

600+ data models, 45+ subjects

OASC joined in June for the Smart Cities domain incorporating it into MIM 2

Available 4 languages (EN, FR, SP, DE)

website: smartdatamodels.org

Github: <https://github.com/smart-data-models>



Current domains: [Smart Cities](#), [Smart Agrifood](#), [Smart Water](#), [Smart Energy](#), [Smart Environment](#), [Smart Robotics](#), [Smart Sensoring](#), [Cross sector](#), [Smart Aeronautics](#), [Smart Destination](#)

New domain: [Smart Health](#)

New subjects: [Risk management](#), [COVID19](#), [Distributed Ledger Technology](#), [RoboticIndustrialActivities](#)

Coming:

- Integration with OpenStreetMap
- Robotic Operative System mapping





Shri Hardeep S Puri
Minister of State (I/C)-Housing
and Urban Affairs



Shri Ravi Shankar Prasad
Minister of Electronics &
Information Technology



Shri Durga Shanker Mishra
Secretary, Ministry of Housing
and Urban Affairs



Shri Ajay Prakash Sawhney
Secretary, Ministry of
Electronics and Information
Technology

We invite you to
Launch of Digital Initiatives
National Urban Digital Mission (NUDM)
India Urban Data eXchange (IUDX)
Smart Cities Mission Website 2.0
Geospatial Management Information System (GMIS)
SmartCode Platform



23rd February 2021



15:30 - 16:30 IST

Live streaming on

facebook

smartcitiesmohua

For more details, visit



mohua.gov.in/



meitv.gov.in/



<http://niua.org/>



#TransformingUrbanIndia

The BUREAU OF INDIAN STANDARDS adopted NGSI-LD as Standard API for Smart Cities in India end of June 2021



भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

मानक भवन, 9 बहादुरशाह ज़फर मार्ग, नई दिल्ली – 110002

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI-110002

www.bis.gov.in www.standardsbis.in

June 2021

Price Group 14

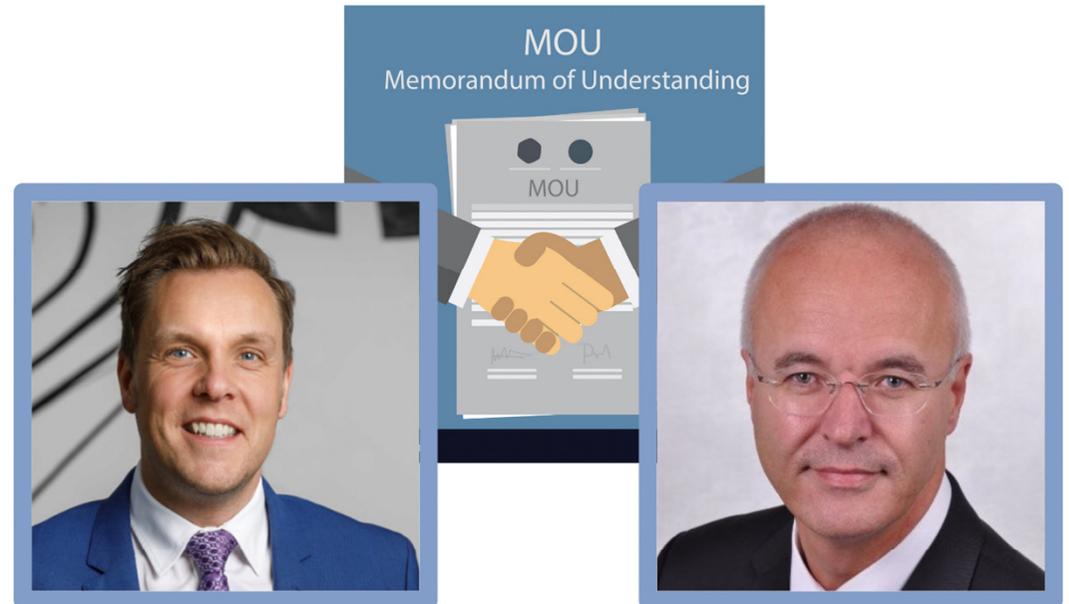
The current resource access service specifications are aligned with the NGSI-LD API Specifications as described in ETSI GS CIM 009 V1.4.1 (2021-02).

IDSA and FIWARE Foundation signed a MoU on June 8th, 2021 to intensify the long lasting partnership

VISION: Amplify the fruitful collaboration in Architectures for Data-Driven Ecosystems and contribute jointly to Open Standards for the Data Economy of the Future.

WHAT'S NEXT:

- Press Release
- Comprehensive architecture interoperability
- Close cooperation in the creation of Data Spaces based on GAIA-X
- Engage each other in Digital Europe and Horizon Europe



Lars Nagel

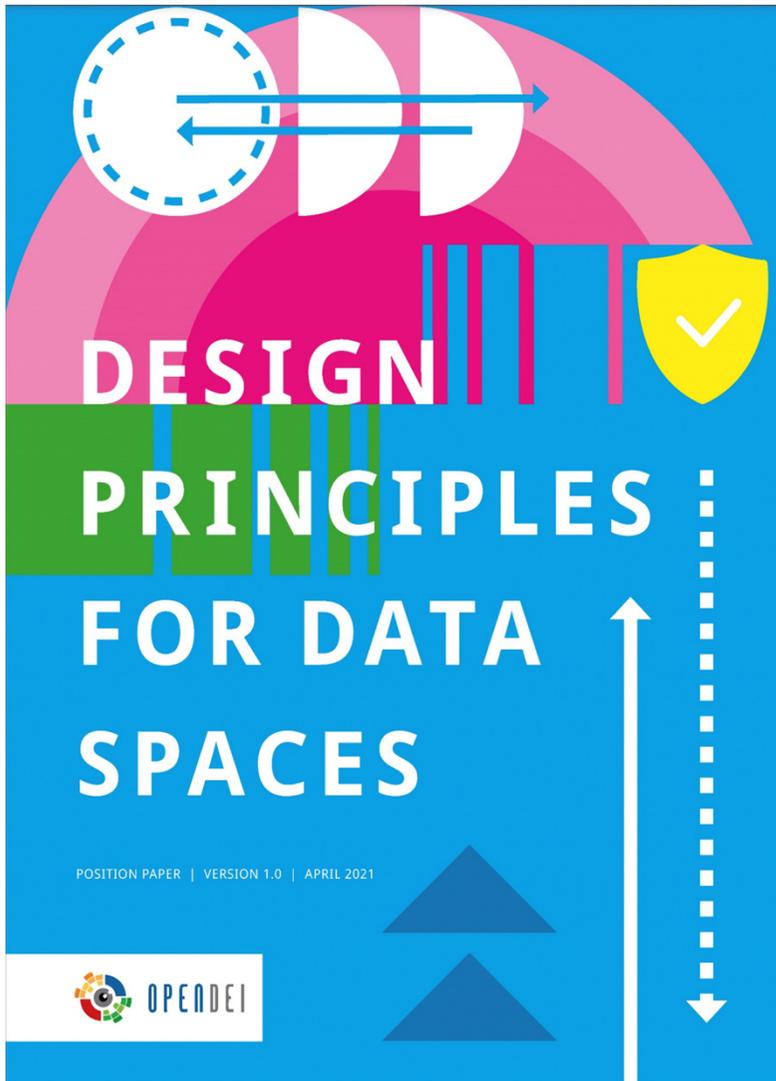
CEO IDSA
GAIA-X AISBL: Member
of the Board

Ulrich Ahle

CEO FIWARE Foundation



OPEN DEI Positioning Paper



Data space and industrial domain experts team up to define for the first time cross-sectoral and across initiatives the fundamental design principles to build data spaces.

The position paper underlines the importance of data spaces and though the sovereign sharing of data in creating the future data economy. It has been developed under the coordination and leadership of Task Force 1 lead by International Data Space Association of the Horizon 2020 project "OPEN DEI Aligning Reference Architectures, Open Platforms and Large-Scale Pilots in Digitising European Industry" with the collaboration of more than 40 data spaces and industrial domain experts representing more than 25 organisations from 13 Horizon 2020 projects and related initiatives. This is the first approach to define the design principles for data spaces, agreements on the building blocks for a soft infrastructure and governance for data spaces.

Contributing Organisations



Contributing Projects



Design Principles for Data Spaces

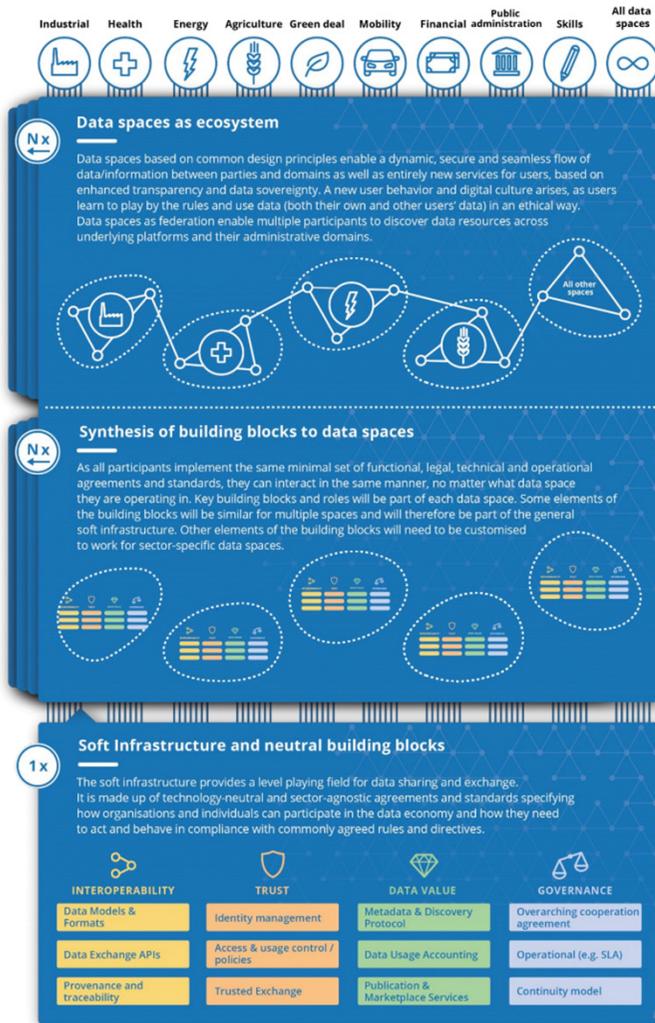
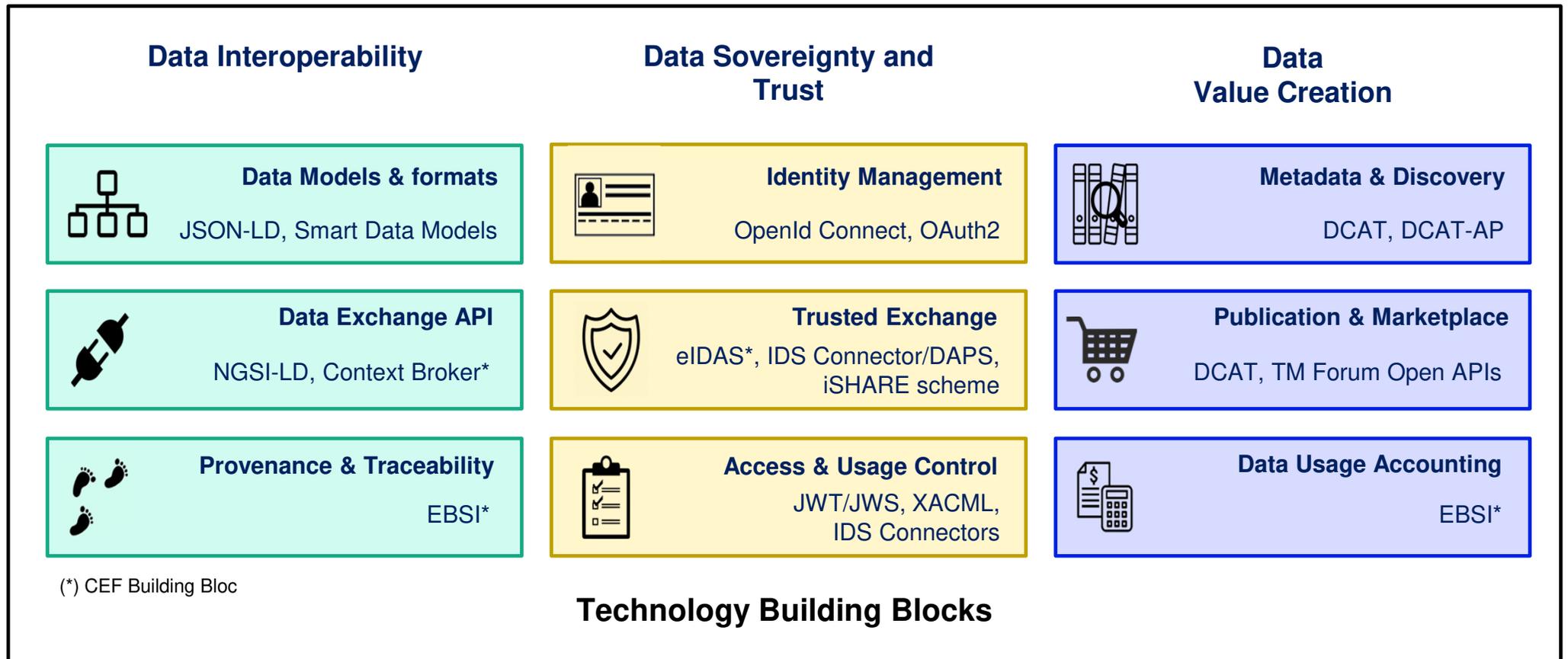
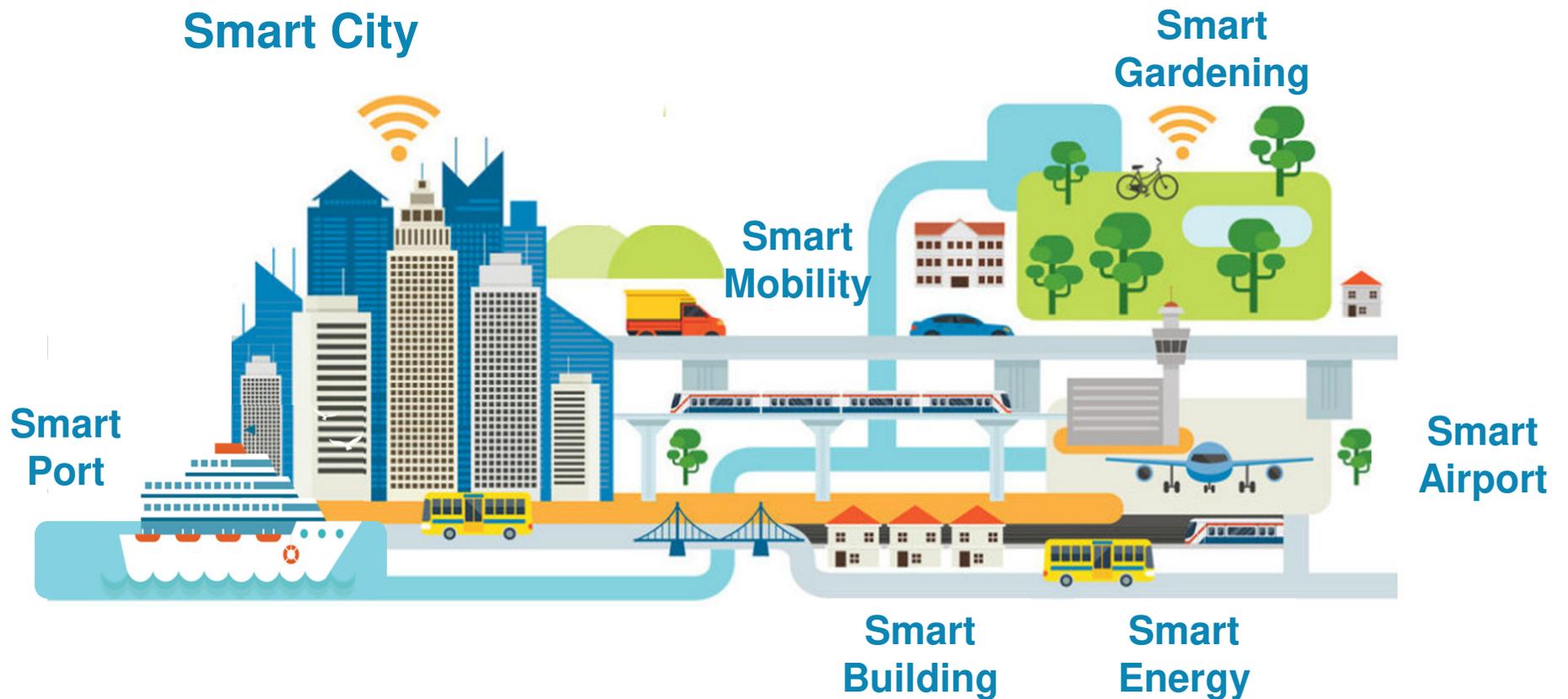


Figure 3 Overview of the stacked architecture of the soft infrastructure for data spaces.

FIWARE together with its partners is providing building blocks for the creation of Data Spaces



Smart City: a reference example of why cross-domain Digital Twins are needed



+180 Partner Offerings already on the FIWARE MARKET PLACE



Powered by FIWARE

- Platforms
- Solutions



FIWARE-ready

- IoT devices
- Software enablers



FIWARE Services

- Training / Coaching
- Systems Integration

The City of Paderborn received 18 mill. € as digital model city from Northrhine-Westfalia and 10 mill. € from a German ministry



- To create a digital ecosystem Paderborn created the Open Data Platform based on FIWARE technology and standards
- Paderborn is following the principle 'Public Money – Public Code' and recently published the complete FIWARE based platform as open source on Gitlab
- Several German cities decided already to adopt and to join forces

Paderborn Open Data Plattform auf Gitlab: <https://gitlab.com/zentrale-open-data-plattform-paderborn/overview>

[i4Trust](#) is boosting the development of smart services based on Data Spaces and providing funding opportunities

2 Open Calls	32 Bottom Up Experiments	3,2 M Equity-free Funding	9 Months Mentoring	150 SMEs 32 DIHS
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9 Month customized mentoring programme

 Implementation	 i4Trust technology framework	 Lump sum ranging from €72,000 to €120,000
 Workforce re/up-skilling	 Legal, operations, technical, and business	

[European DIH](#)

	Submission Starts: May 12, 2021 - 10:00 CEST Submission Deadline: September 6, 2021 - 14:00 CEST
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The Advantages of an Open Source Platform like FIWARE for Smart Communities

- The basic software (Platform and Generic Enablers) is available for everyone, for free, forever
- A large open source developers community is maintaining and further developing the basic software components
- A large group of start ups and global corporate companies are providing smart solutions and smart services based on FIWARE
- Lowest cost of ownership for the end users
- Standard, public, and royalty free data models and open APIs are avoiding a 'vendor-lock-in-effect'

FIWARE EVENTS

Meet the FIWARE Community face-to-face in Fall



ITS World Congress 2021

11 - 15 October

Location: Hamburg, Germany

Smart Country Convention 2021

26 - 28 October

Location: Berlin, Germany

Smart City Expo World Congress 2021

16 - 18 November

Location: Barcelona, Spain



Join FIWARE booth as a fabulous co-exhibitor!

Secure your space now by contacting: quy.le@fiware.org or angeles.tejado@fiware.org

*Renderings are subject to change.



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Global CEO Excellence Awards

Best Smart Applications Development CEO (Europe): Ulrich Ahle

