Some quick rules to making the most of this webinar
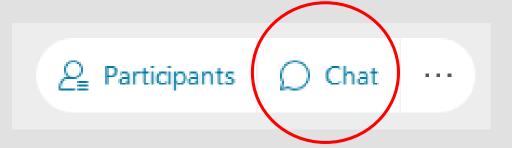
KEY RULES

Please make sure to **mute your microphone** during the whole webinar to ensure a seamless experience.

In order to post questions, please use the "Chat" panel. You should take the following steps:

1. Click on the **Chat icon** to open the panel

2. Enter your question in the chat text box and then press **Enter**

Questions will be collected throughout the webinar and answered in the dedicated Q&A session

Objectives of the webinar

Understand the **current status, needs and challenges of digitalising Public Administrations in Europe** and the potential role of (E)DIHs

Get inspired by the experience of other DIHs in serving the public sector

Get an insight on possible **improvement of the service offering to support the public sector**

DIH-WORLD

Agenda

Time	Session
11:00 - 11:05	**Welcome greetings and introduction** David Brunelleschi, Senior Manager, PwC
11:05 - 11:20	**Needs, goals and barriers for digitising Public Administrations and the role of DIHs** Giovanna Galasso, Director, PwC
11:20 - 11:35	**The experience of AIR4S in serving the Public Sector** Javier Valero Criado, Manager, AIR4S
11:35 - 11:50	**The experience of IMEC in serving the Public Sector** Jan Adriaenssens, Director of City of Things, IMEC
11:50 - 12:00	**Q&A Session and closing remarks**

01.

Introduction to DIH-World

The DIH-World project

DIH-World is an Innovation Action funded by the EU through the Horizon 2020 programme. It lasts for three years (2020-2023) with the participation of **41 partners from 26 European countries.**

DIH-World includes **27 Digital Innovation Hubs,** which will grow to around 70 with the launch of **two open calls for experiments**, respectively in 2021 and 2022.

The aim of this project is to **accelerate the development and consolidation of DIHs** and to improve the **digitalisation of European SMEs and public sector bodies.**
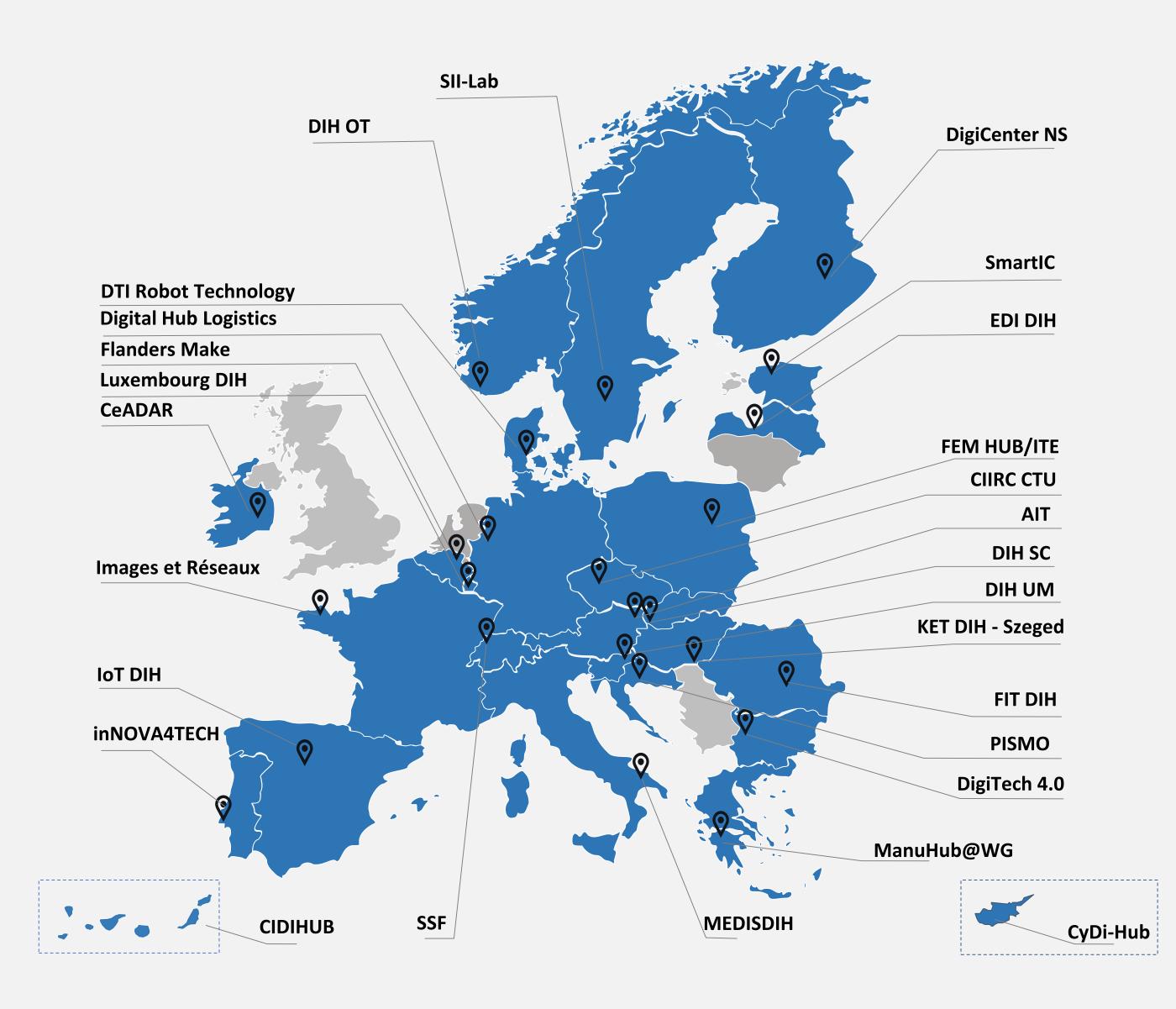
CARSA   IMP³ROVE ACADEMY

pwc   eurada   cbt   innovalia ASSOCIATION

DIH-WORLD

SII-Lab
DIH OT
DigiCenter NS
SmartIC
EDI DIH
DTI Robot Technology
Digital Hub Logistics
Flanders Make
Luxembourg DIH
CeADAR
FEM HUB/ITE
CIIRC CTU
AIT
DIH SC
DIH UM
Images et Réseaux
KET DIH - Szeged
IoT DIH
FIT DIH
PISMO
DigiTech 4.0
inNOVA4TECH
ManuHub@WG
CIDIHUB
SSF
MEDISDIH
CyDi-Hub

DIH-World goals & activities

DIH-World objectives

- Accelerate the uptake of advanced **digital technologies** by European **manufacturing SMEs** in all sectors
- Accelerate the **matureness of DIHs** and the development of their collaboration capabilities

Developing the network

- Increase awareness on the **benefits of DIHs** towards industry and on the importance for DIHs to be part of a network
- Launch **open calls for experiments** that will provide technological **support to SMEs** and midcaps

Monitoring the impact

- Consolidate the DIHs services to support SMEs and midcaps in their digitalisation, by creating a framework to **ensure the successful implementation** of the experiments and monitoring the impact

Setting up the DIH Community

- Support the creation of a trusted **community of DIHs** that collaborate in concrete projects, learn from each other and share knowledge and experiences

Fostering collaboration

- Support collaboration among DIHs, through activities and tools designed to facilitate networking with external stakeholders, also leveraging the outcomes of the **AI DIH Network project**

Creating the DIH Academy

- Set up the **DIH-Academy** that will provide the tools to **train DIHs and support them** both in the preparation and further growth of their business model and in further strengthening the collaboration aspects across Europe

DIH-WORLD

02.

Needs, goals and barriers of digitalising Public Administrations and the role of (E)DIHs

Needs, goals and barriers of digitalising Public Administrations and the role of (E)DIHs

Giovanna Galasso

Director, PwC Public Sector Srl
giovanna.galasso@pwc.com

Setting the scene: EU Policy objectives
The Digital Europe Programme

FOCUS

With a planned overall budget of **€7.5 billion** it foresees funding projects to bring digital technology to businesses, citizens and public administrations in **5 key areas:** supercomputing, AI, cybersecurity, advanced digital skills, and dissemination of digital technologies across society

EDIHS

A network of 200 hubs, selected and funded together with MS

> 10% of EDIHs should target Public Sector organisations

PRE-SELECTION

105 out of 337 **pre-selected EDIH candidates** have declared to work supporting also Public Sector bodies

DIH-WORLD

Setting the scene: EU Policy objectives
EDIHs targeting the public sector in the DEP

EDIHs serving the public sector

- EDIHs will serve **local and regional public administrations** and other public sector organisations that aspire to use the so-called **"Transformation Platform Ecosystem"**, which includes the European Digital Service Infrastructures and building blocks (eID, eInvoicing, eDelivery, eSignature, context broker, etc.), interoperability solutions (eHealth patient summary and ePrescription), as well as the Open Data Platform, which can serve both the public and the private sector

- EDIHs will help public administrations:
  - use agreed **standards** and **open source solutions**,
  - **access government platforms** or shared infrastructures (offered on the European or MS level),
  - **experiment with AI** and **Blockchain** for real-time policy-making (e.g. traffic optimisation),
  - help PAs **improve** their **cybersecurity**
  - assist public authorities/buyers to fully use the potential **procuring innovation**,
  - bring PAs into **contact with companies** that are ready to supply the necessary digital technology solutions ('technology providers'), stimulating further the development of the local **ecosystem**.

DIH-W☉RLD

Setting the scene: EU Policy objectives
The Berlin Declaration on Digital Government

"***The public sector*** *is an **essential element** for the European Single Market and a **driving force for new and innovative technological solutions for public services** and societal challenges*".

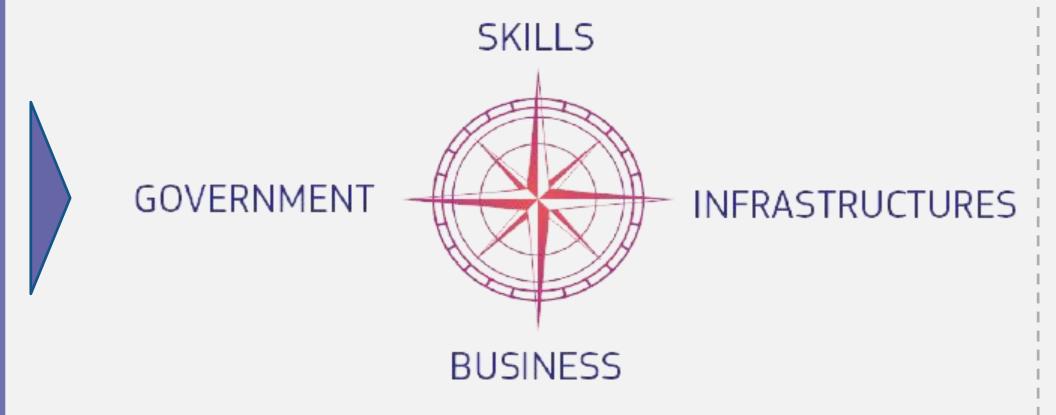The declaration sets out **7 key principles** with related policy action lines at national and EU level:

1. **Validity and respect** of fundamental rights and democratic values in the digital sphere;
2. **Social participation** and digital inclusion to shape the digital world;
3. **Empowerment and digital literacy**, allowing all citizens to participate in the digital sphere;
4. **Trust and security in digital government interactions**, allowing everyone to navigate the digital world safely, authenticate and be digitally recognised within the EU conveniently;
5. **Digital sovereignty and interoperability**, as a key in ensuring the ability of citizens and public administrations to make decisions and act self-determined in the digital world;
6. **Human-centred systems and innovative technologies in the public sector**, strengthening its pioneering role in the research on secure and trustworthy technology design;
7. **A resilient and sustainable digital society**, preserving our natural foundations of life in line with the Green Deal and using digital technologies to enhance the sustainability of our health systems.

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Setting the scene: EU Policy objectives
The digital compass and Europe's ambitions for 2030

- > 80% of all adults should have basic digital skills
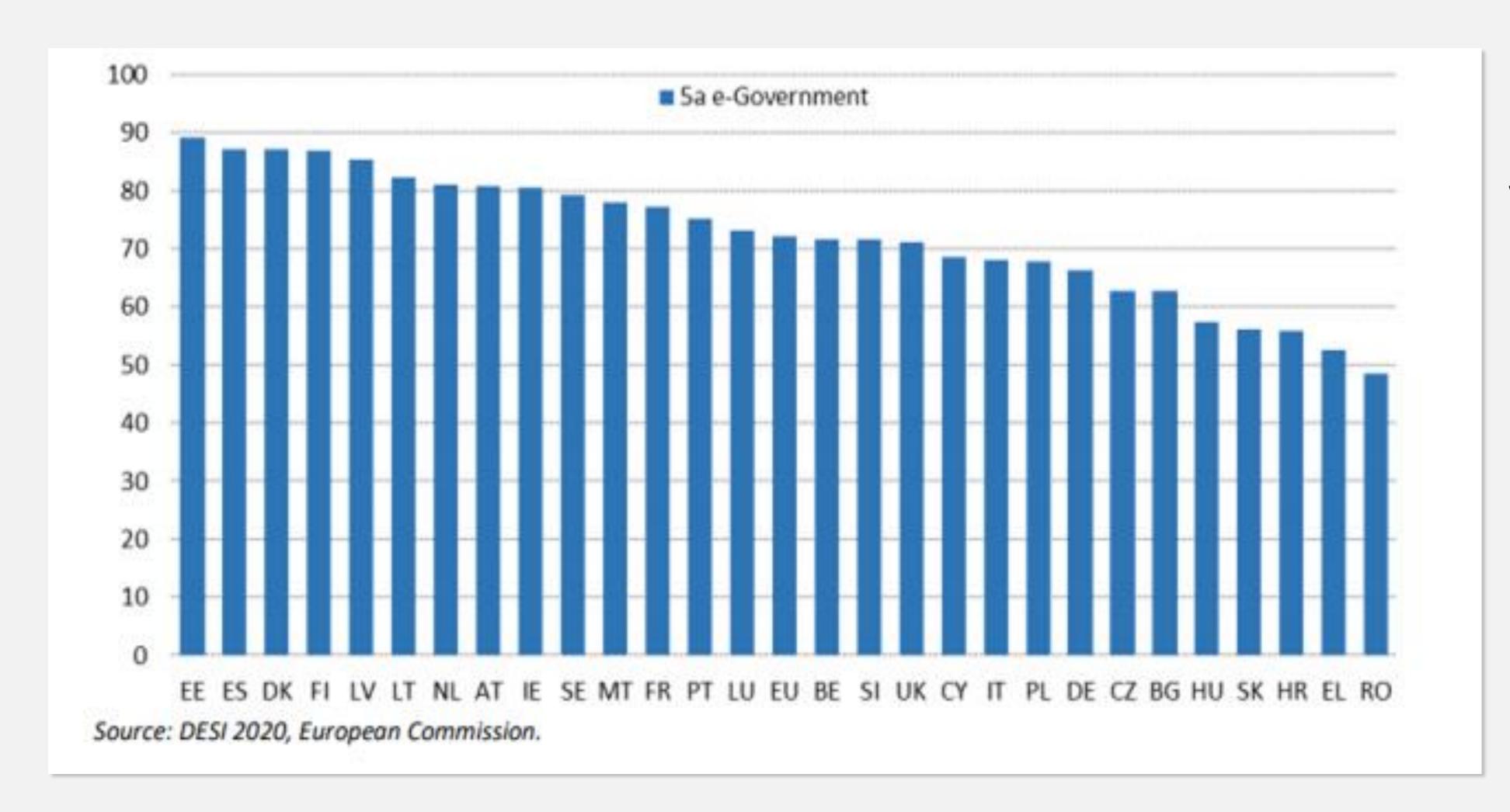- 20 million ICT specialists should be employed in the EU – with an increasing % of women

- All **key public services** should be available **online**
  - Currently only 75% of key public services for citizens and 84% of key services for businesses are available online
  - only 58% of key services are eID enabled (domestically) and 9% (cross-border)
- All citizens will have access to their **e-medical records**
- 80% citizens should use an **eID solution**

SKILLS

GOVERNMENT

INFRASTRUCTURES

BUSINESS

- All households should have gigabit connectivity and all populated areas should be covered by 5G
- EU production of sustainable semiconductors should be 20% of world production
- 10,000 climate neutral highly secure edge nodes should be deployed
- Europe should have its first quantum computer.

- 75% of companies should use cloud computing services, big data and AI
- > 90% SMEs should reach at least basic level of digital intensity
- The number of EU unicorns should double

DIH-WORLD

DESI 2020: Digital public service overall
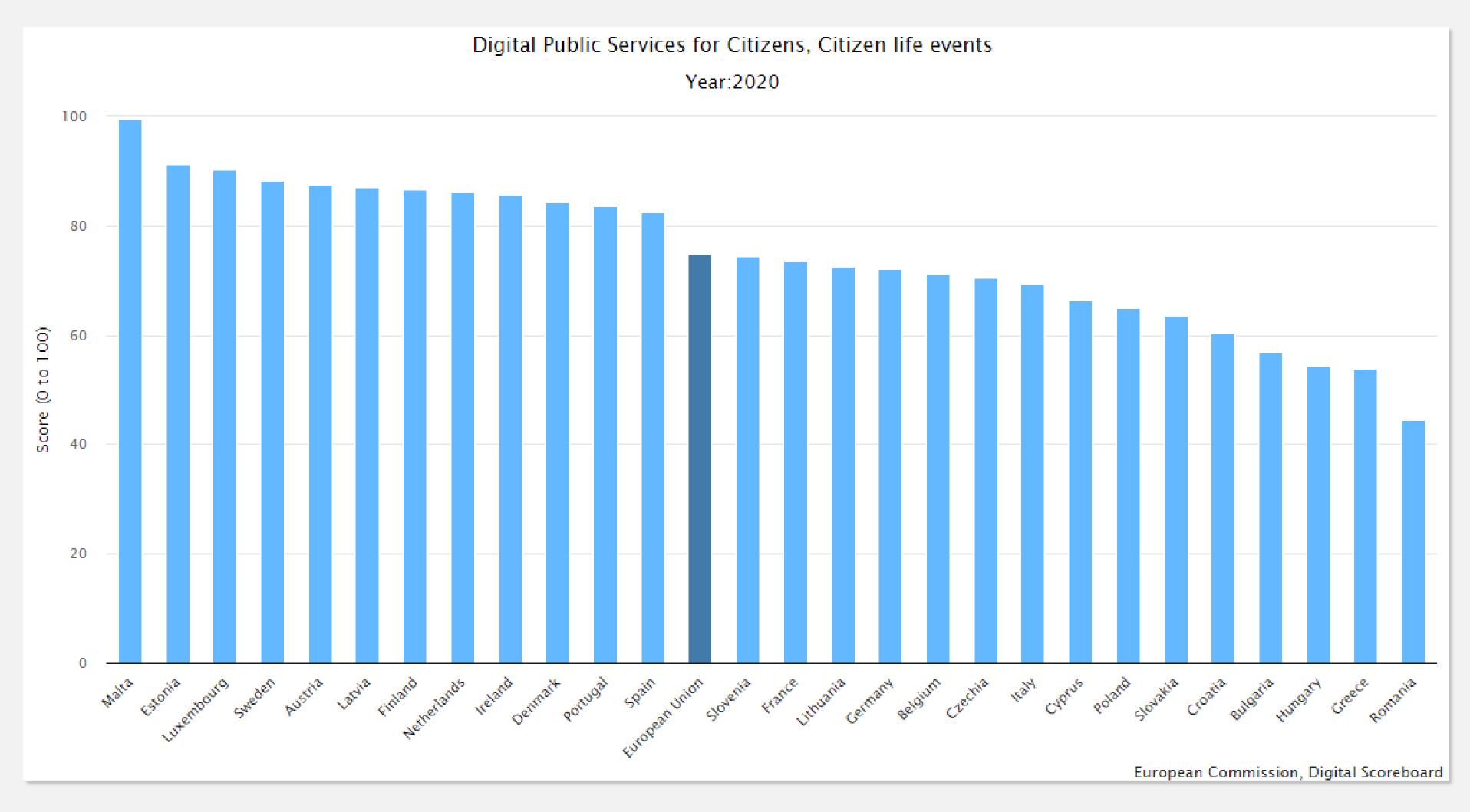

Source: DESI 2020, European Commission.

Top performers are Estonia, Spain, Denmark, Finland and Latvia, all of which have **scores greater than 85.**

On the other hand, Romania, Greece, Croatia, Slovakia and Hungary all score less than 60 and significantly below the **EU average of 72.2.**

DESI 2020: Digital public services for citizens - online service completion

Digital Public Services for Citizens, Citizen life events

Year:2020

Digital Public services for **citizens** are relatively **well developed** across Europe
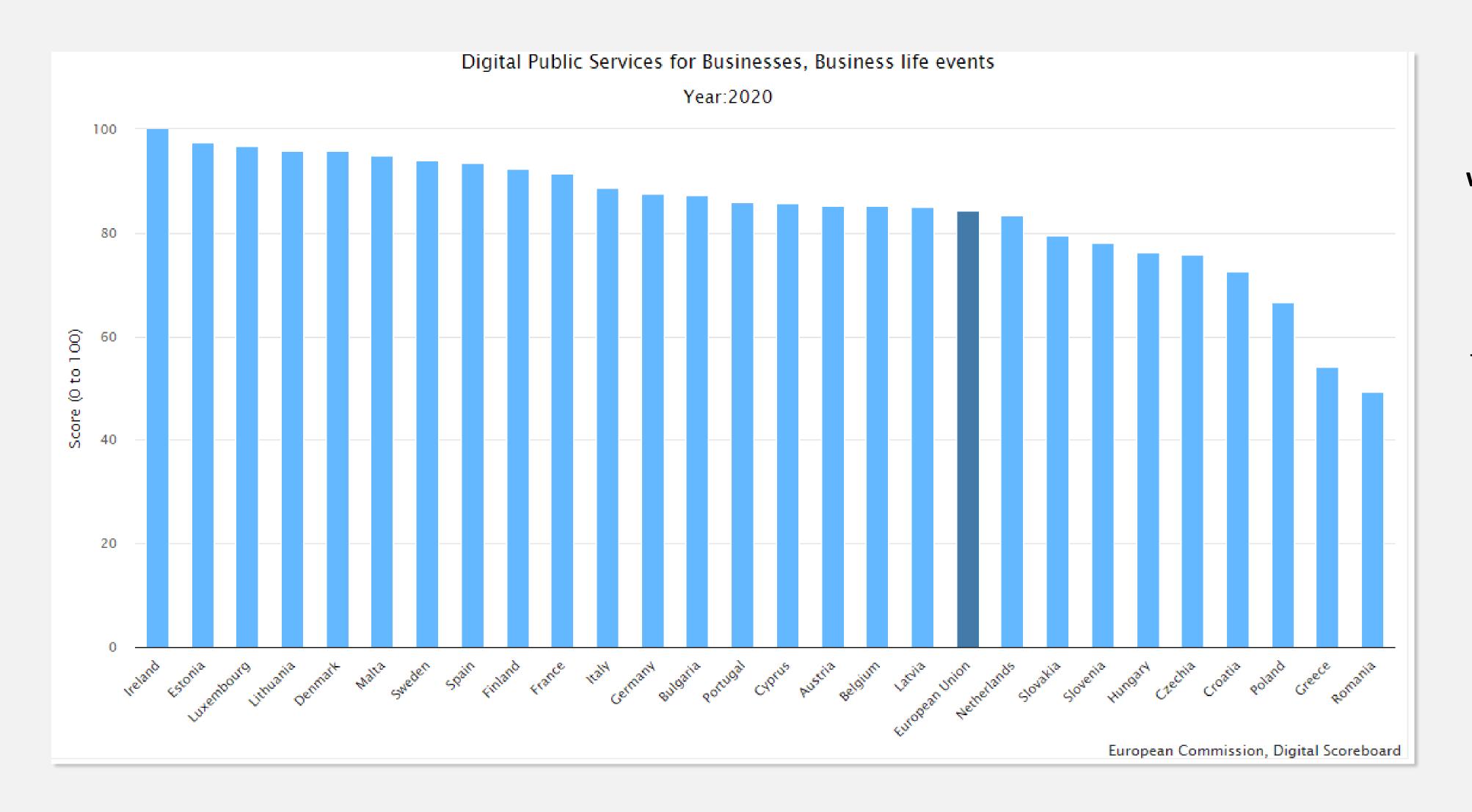
Romania, Croatia, Cyprus and Bulgaria scored less than 80.

European Commission, Digital Scoreboard

DIH-WORLD

DESI 2020: Digital public services for businesses

Digital Public Services for Businesses, Business life events
Year:2020

Score (0 to 100)

Ireland, Estonia, Luxembourg, Lithuania, Denmark, Malta, Sweden, Spain, Finland, France, Italy, Germany, Bulgaria, Portugal, Cyprus, Austria, Belgium, Latvia, European Union, Netherlands, Slovakia, Slovenia, Hungary, Czechia, Croatia, Poland, Greece, Romania

European Commission, Digital Scoreboard
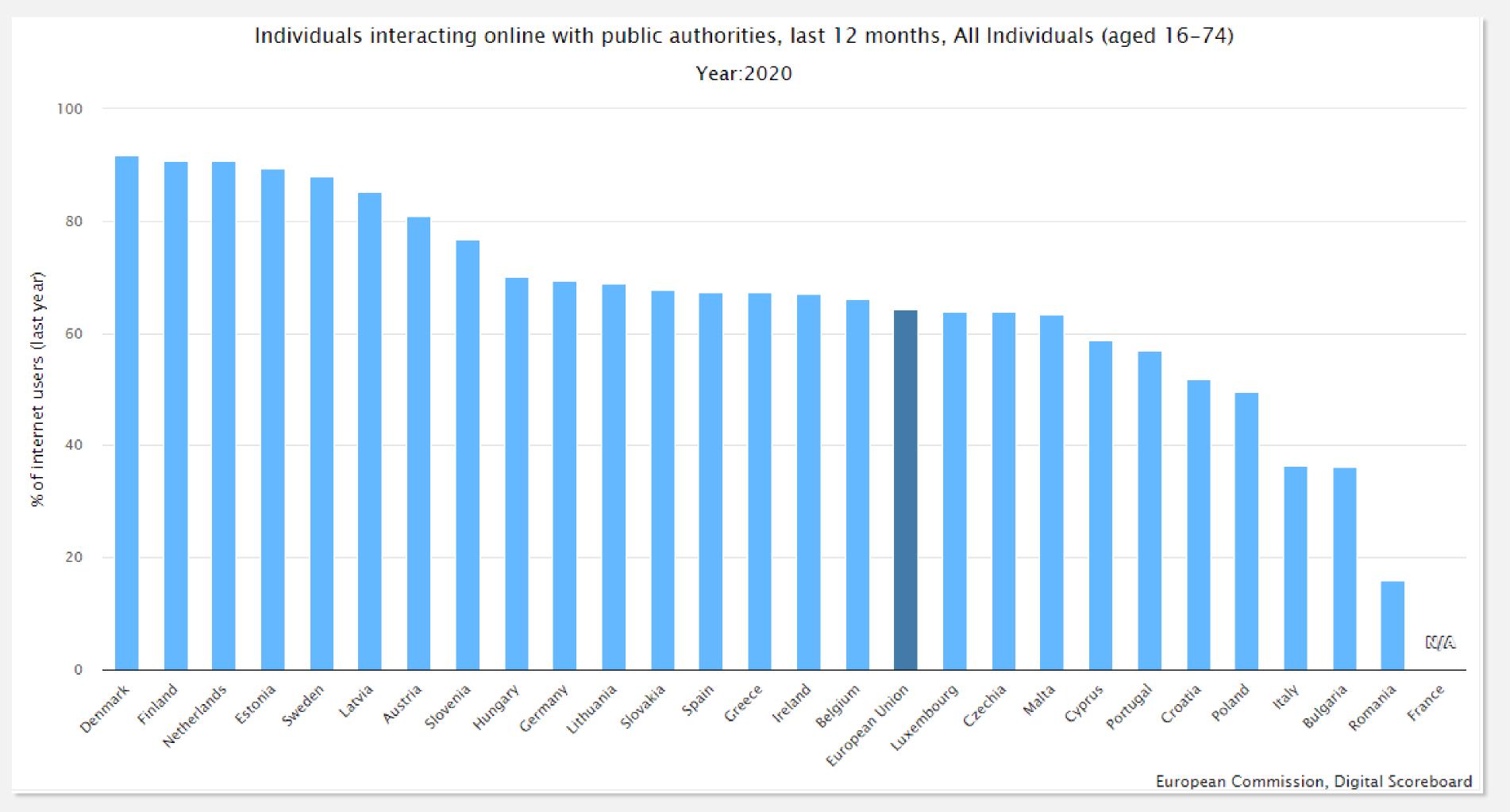
Digital public services for **business** are also **well developed** across the EU - more than those for citizens.

Compared to 2018, there was an increase of 3.3 points in 2019. Since 2014, the increase is more than 16.5 points

DIH-WORLD
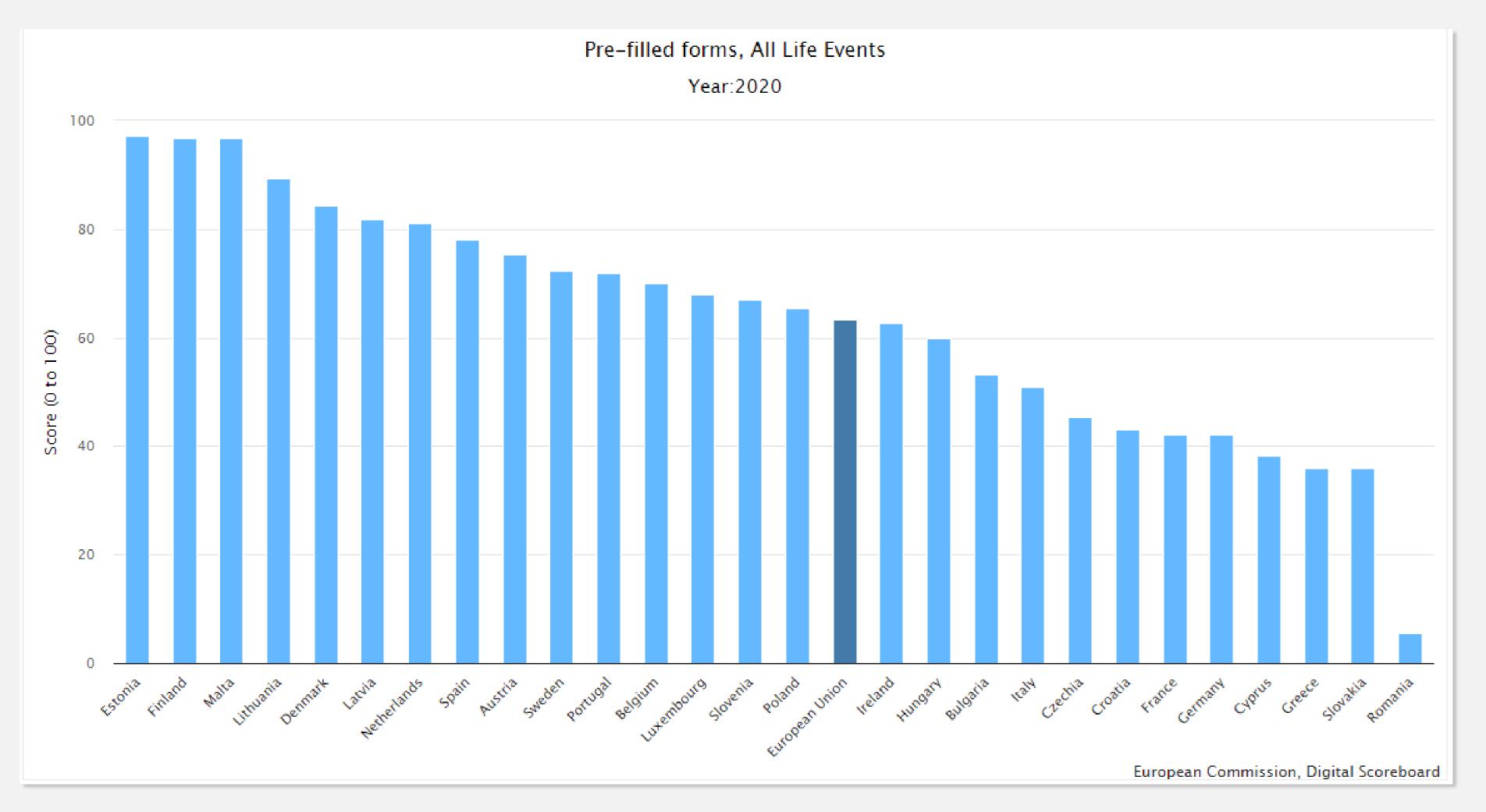
DESI 2020: Citizens' use of eGovernment services

Individuals interacting online with public authorities, last 12 months, All Individuals (aged 16-74)
Year:2020

European Commission, Digital Scoreboard

However, the **use** of digital public **services** is **not very high** on average. This is often related to the difficulties encountered by citizens in using digital services due to poor broadband connectivity, low digital skills in some countries. User centred design of online services is needed
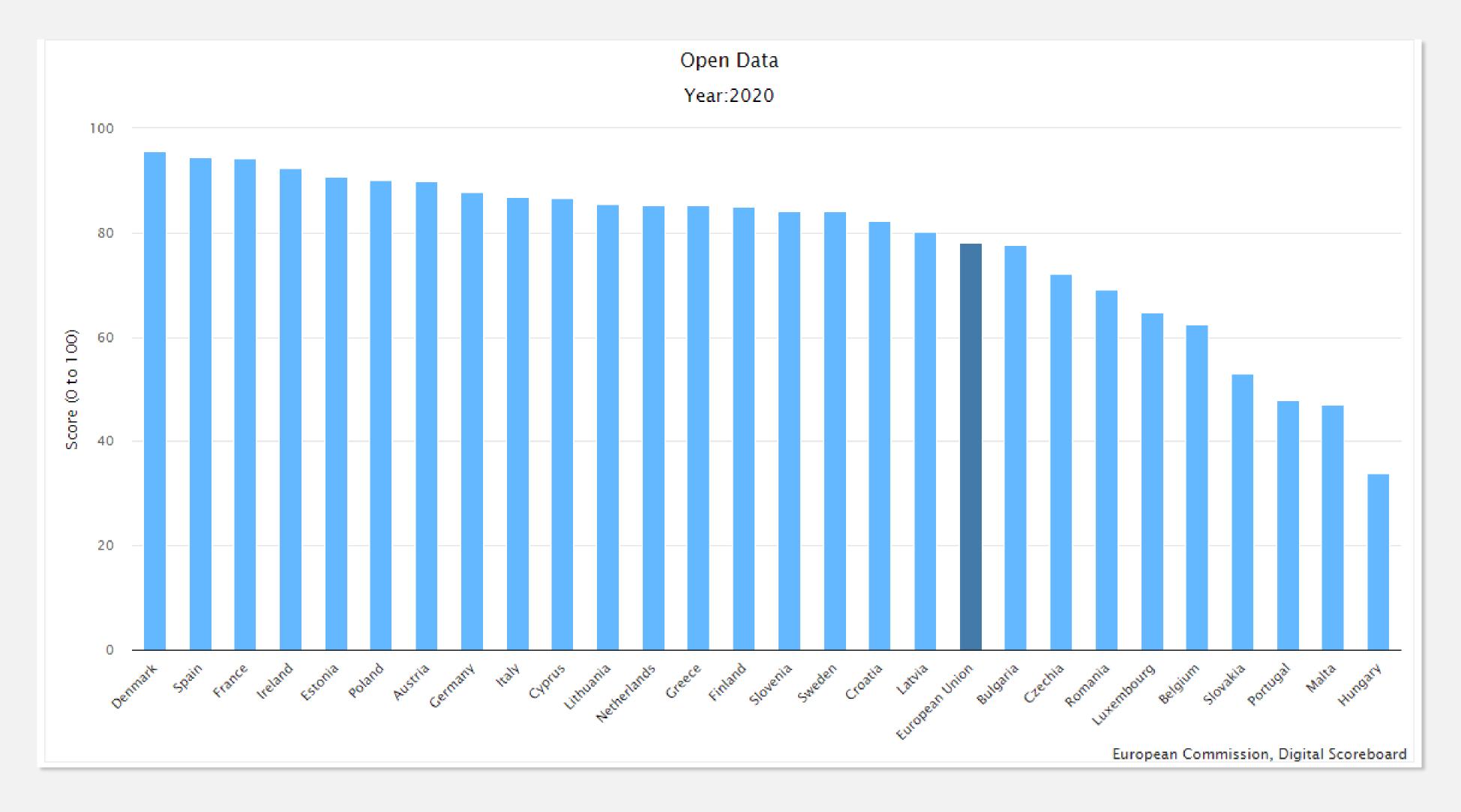
DIH-WORLD

17

DESI 2020: amount of data that is pre-filled in online forms

Pre-filled forms, All Life Events
Year:2020

European Commission, Digital Scoreboard

The availability of **pre-filled data in forms** for users is still **low** on average. The use of **inter-connected data** and registers is key to ensure that users do not need to submit the same data again - in many countries the **"once only principle"** is not widespread yet

DIH-WORLD

18

DESI 2020: open data

Open Data
Year:2020

European Commission, Digital Scoreboard

This interesting indicator measures the **government's commitment to open data**, which is fundamental for the future development of smart cities and interconnected systems within Public Sector service offerings

Public Sector Digitalisation: what could be improved according to the eGovernment benchmarking report?

User Centricity:
- Making government websites **more compatible** with mobile devices
- Reducing the **gap** between *Online Availability* of services for businesses and the one for citizens
- Using more **innovative technologies**, e.g. AI powered chatbots and blockchain-enabled eIDs

Transparency:
- Improve the **security and compliance to privacy** regulation on the data collection and use
- Enhancing **cybersecurity** of public sector websites and infrastructures

Key Enablers:
- Implementing **digital enablers** in eGovernment service delivery
- Making better use of **national eID** for the services that require online identification

Cross-Border Mobility:
- Making the use of a service from **another European country** easier for citizens and businesses
- Improving **cross-border acceptance** of eIDs

DIH-W⬤RLD

Needs and challenges of digitising Public Administrations

On top of the areas for improvement identified in the eGovernment report, some of the most crucial **needs** and **challenges** for the digital transformation of public services still exist and are represented by:

- **Interoperability** of public services at all levels: EU, national, regional and local, from the technical to the legal dimension
- The **management of** an increasing amount of **data** to be processed, analysed and connected
- The **use innovative technologies** in the most effective way to improve processes and service delivery, following principles of **inclusiveness and ethics**
- The general lack of **digital skills** and culture needed to lead and implement the digital transformation
- A tendency of public sector employees to **resist change** coupled with lack of **incentives** towards innovation
- Working and liaising with **external stakeholders** and private sector partners to improve delivery of public services and foster innovation
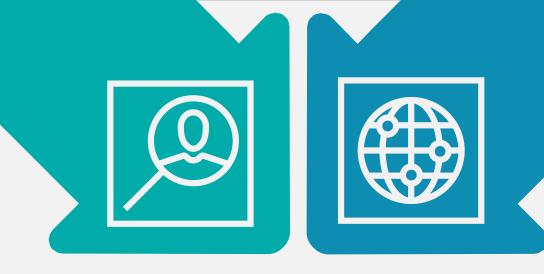
DIHs as enablers of public sector digital transformation

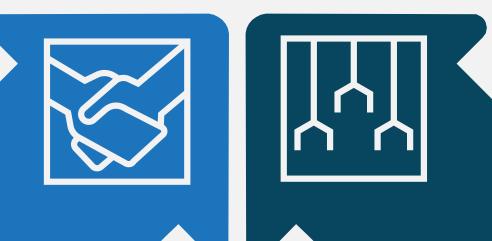## DIGITAL INNOVATION HUB

SKILLS AND TRAINING

- Supporting advanced **digital skills trainings** to use AI, HPC, Cybersecurity and European CEF building blocks
- Providing trainings on how to write tender specifications for **procuring** advanced ICT
- Supporting the implementation of the **DEP Advanced Digital Skills pillar** for PAs
- Contributing to the implementation of the AI Regulation

SUPPORT TO FIND INVESTMENTS

- Bridge with the local market to find possible applicants to public procurement
- Providing support to leverage the purchasing power of the public sector, transforming it into a large innovation buyer, and acting as a test site for **innovation procurement**

INNOVATION ECOSYSTEM & NETWORKING

- Brokering between end-users and potential suppliers of technological solutions
- Finding **solutions at cross-border** level with other DIHs
- **Linking** public **buyers** to tech **suppliers** (marketplace facilitator)
- Replicating locally developed digital public services via DIHs

TEST BEFORE INVEST

- Digital maturity assessment
- Knowledge and technology transfer
- Testing/implementing the solutions provided by the Transformation Platform Ecosystem
- Experimenting and **testing with HC, AI, Cybersecurity, blockchain for PAs**
- Providing infrastructure (standards, platforms)

03.

The direct experience of DIHs
working with the Public Sector

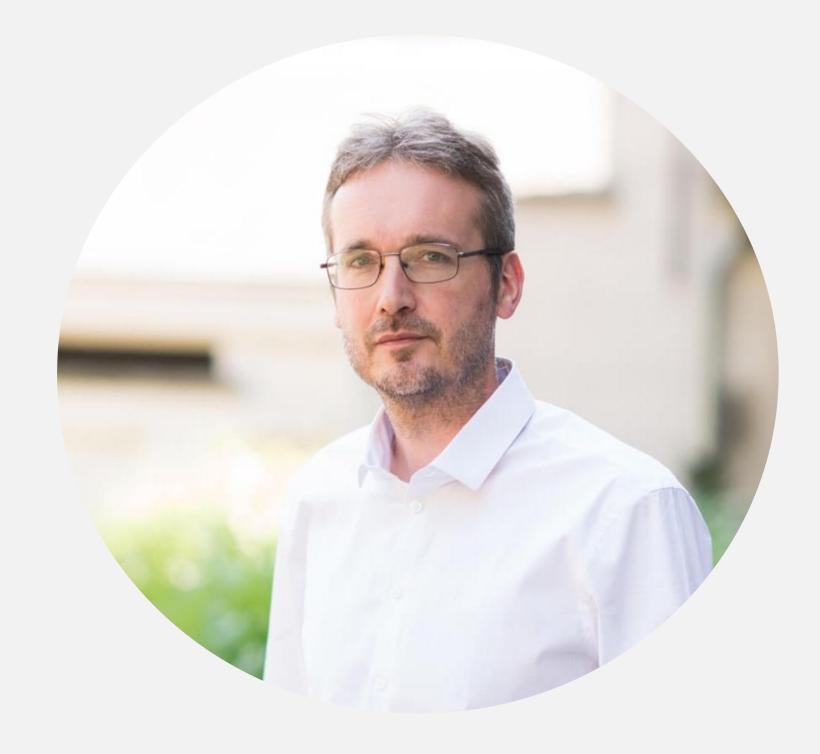# The direct experience of DIHs serving the public sector: today's speakers

Javier Valero Criado

DIH AIR4S Manager, Spain

Jan Adriaenssens, PhD

Director of City of Things at IMEC, Belgium
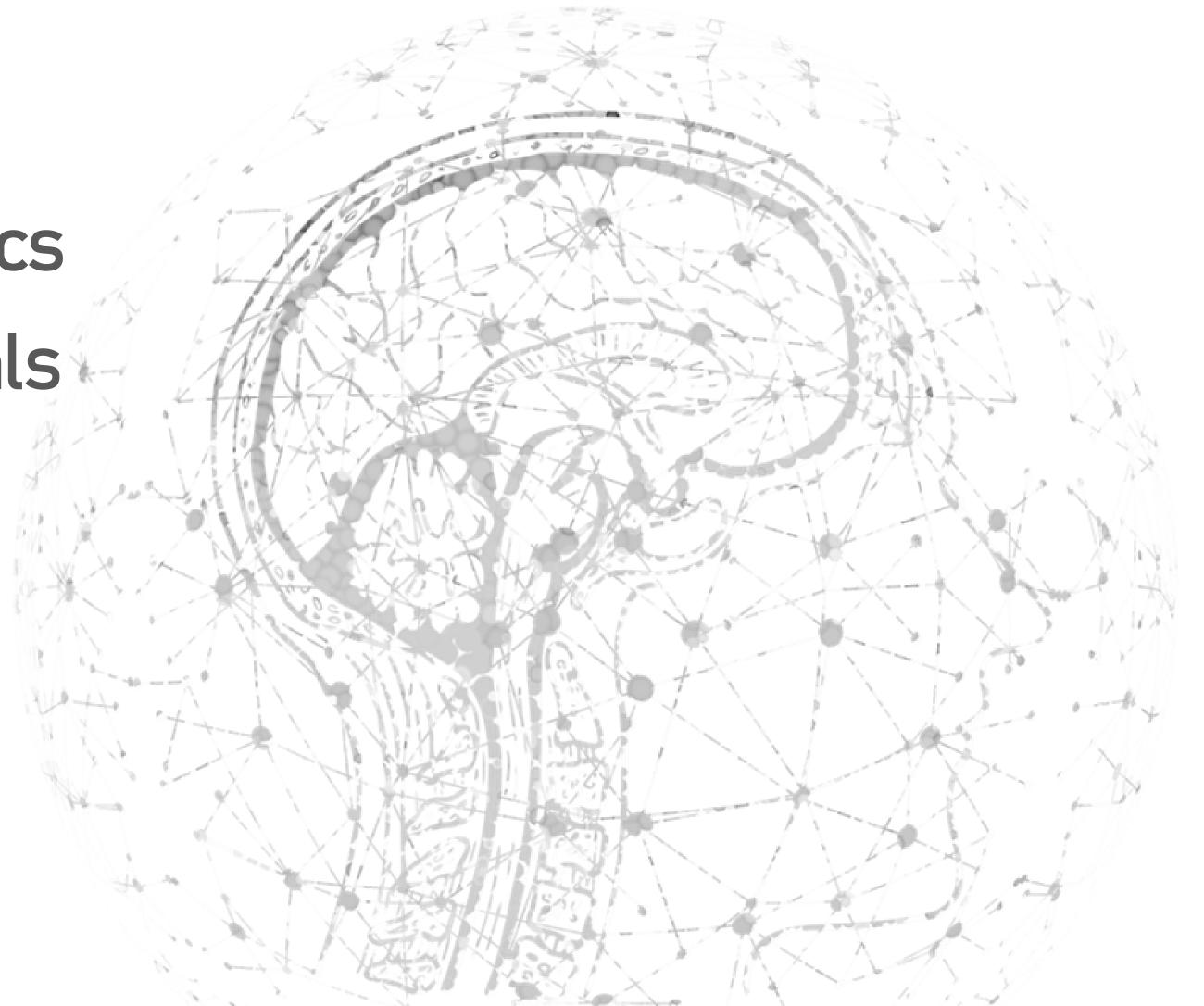
04.

The experience of AIR4S (Spain)
serving the Public Sector

CORE PARTNERS

Academia & R&D Centers

- Universidad Politécnica de Madrid (AIR4S coordinator)
- Spanish National Research Council (CSIC)
- National Institute for Agricultural and Food Research and Technology (INIA)

Business partners

- Accenture S.L
- Madrid Chamber of Commerce (reaches >190k companies and SMEs based in Madrid)

Competence Centers

- ESCP Business School
- Funding Box Communities S.L

Public Agencies & Municipalities

- Innovation Council from the Madrid Regional Government
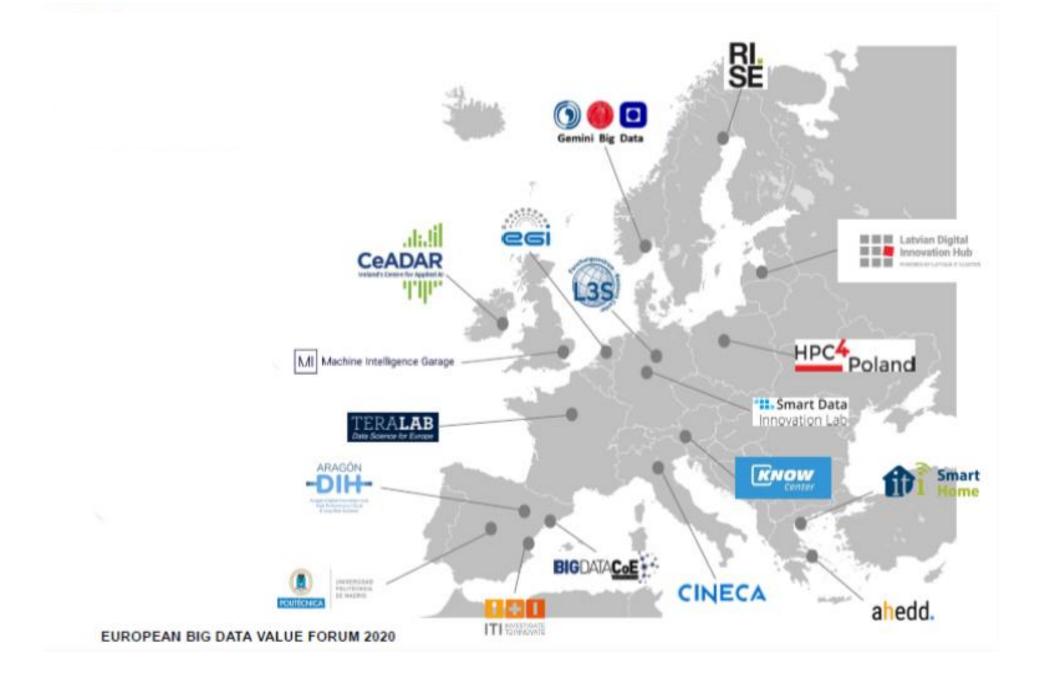- Madrid City Council (Innovation & Entrepreneurship Area)

Madrid's Data Space (MiSS)

AIR4S provides connection with Madrid Data Space MiSS (coordinated by the UPM) services and resources for development of use cases/experiments based on AI & data exploitation

EUROPEAN BIG DATA VALUE FORUM 2020

Specific resources/services provided

- HPC infrastructure "CeSVIMA" (providing total computing of ≈100 Tflops)

- Data integration & homogeneisation from unstructured or structured data sources

- Availability of data sets for training of AI applications

- Knowledge graph generation and ontology development
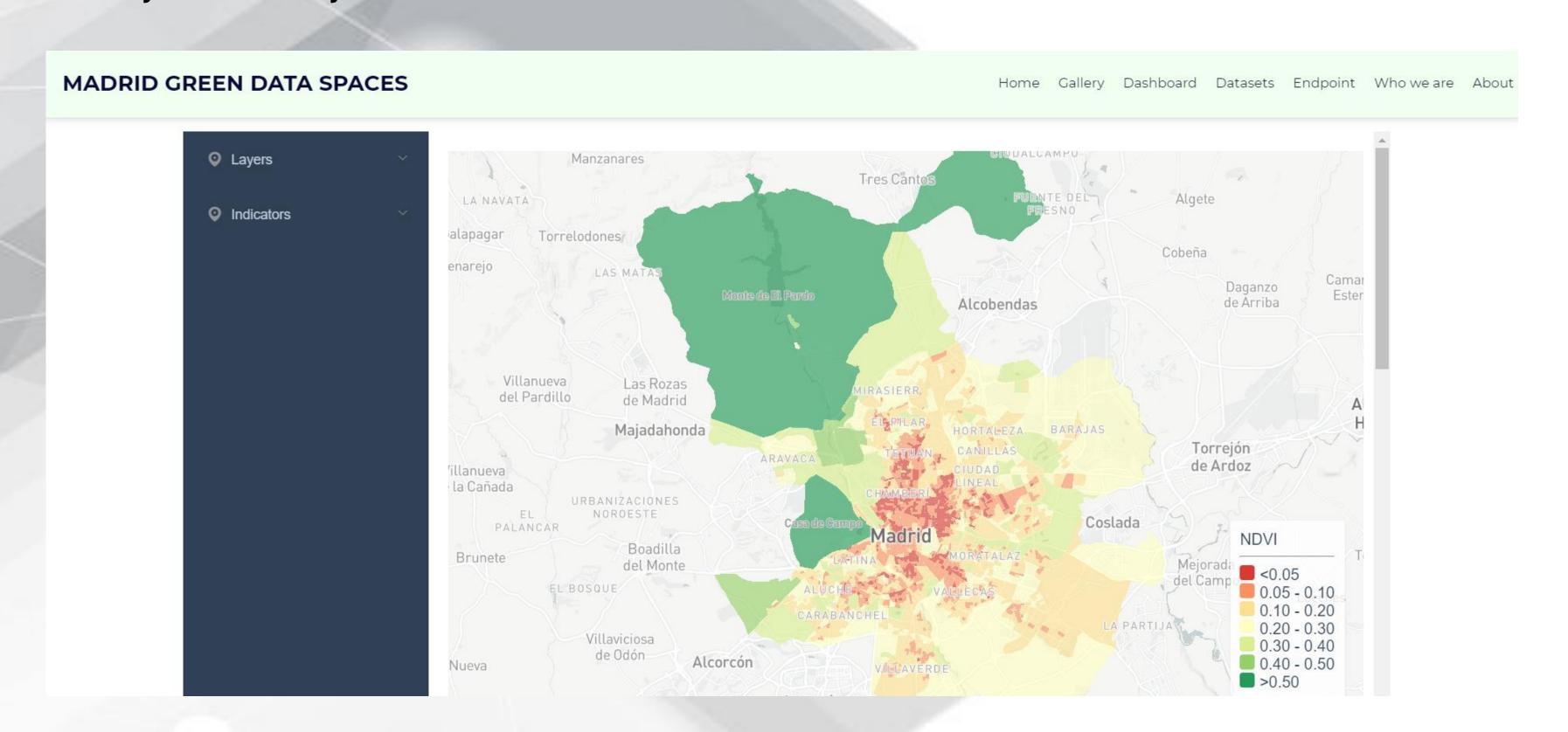
- Advanced data visualization

Examples

Madrid Green Data Space https://mgds.oeg.fi.upm.es/dashboard.html

Client: Madrid City Council

AIR4S has provided support services for the deployment of a data platform with a special focus on air quality and mobility for the city of Madrid
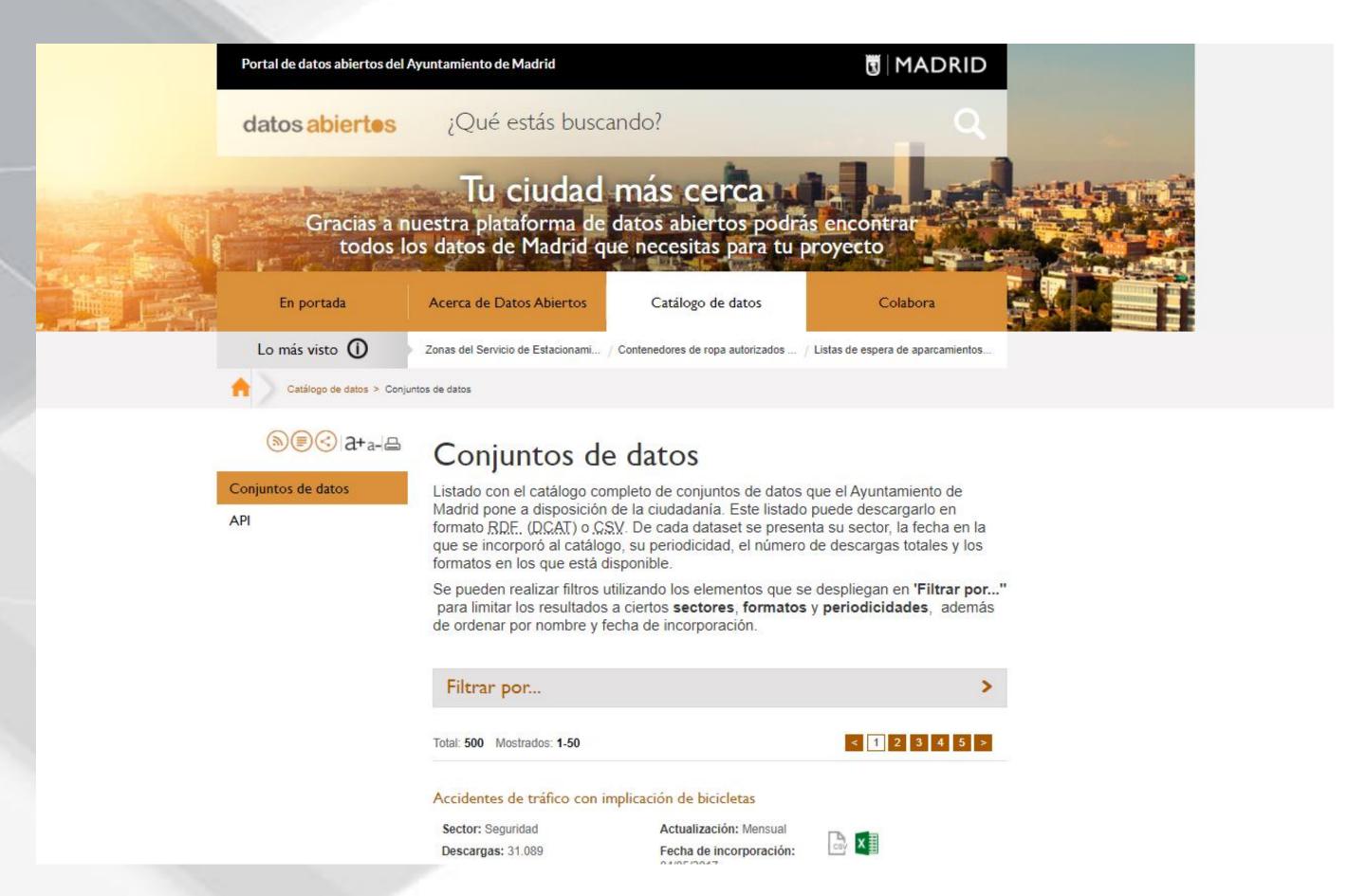
Ciudades Abiertas: *https://ciudadesabiertas.es/* → Open Government solutions for efficient publication of open data, development of participatory processes and the publication of services that favor transparency by default.

Clients: Madrid, Zaragoza, Santiago de Compostela and A Coruña.

AIR4S has provided support services for the creation of ontologies to guide the publication of open data.

AI4GOV **(in process)** → specific master on AI for public services, targeting the development of advanced digital skills in the public sector to address its lack of highly specialised digital skills in AI.

Specific AI & Robotics training programmes (including practice modules), open for public sector professionals as well, aimed at covering professional technical and business skills related to AI & Robotics:

- Basic & advanced AI & Robotics technical courses

- AI & Robotics for business and management course

- Ethical aspects of AI & Data Governance **(in process)**

- "Train the trainer" courses for school teachers **(in process)**

dih-air4s@upm.es
javier.valero@upm.es

05.

The experience of IMEC (Belgium) serving the Public Sector

Technological research with and for the public sector

Jan Adriaenssens *(Director City of Things)*

20 July 2021 (DIH-World webinar)

USA
San Francisco

USA
Berkeley

USA
Orlando

Belgium
Leuven (HQ)

The Netherlands
Wageningen/Nijmegen – OnePlanet Research Center

The Netherlands
Eindhoven – Holst Centre

India
Bangalore

China
Shanghai

Japan
Osaka

Japan
Tokyo

Taiwan
Hsinchu

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38

Academic excellence
Imec, bridge between universities, government and industry

Imec drives the semiconductor roadmap

imec

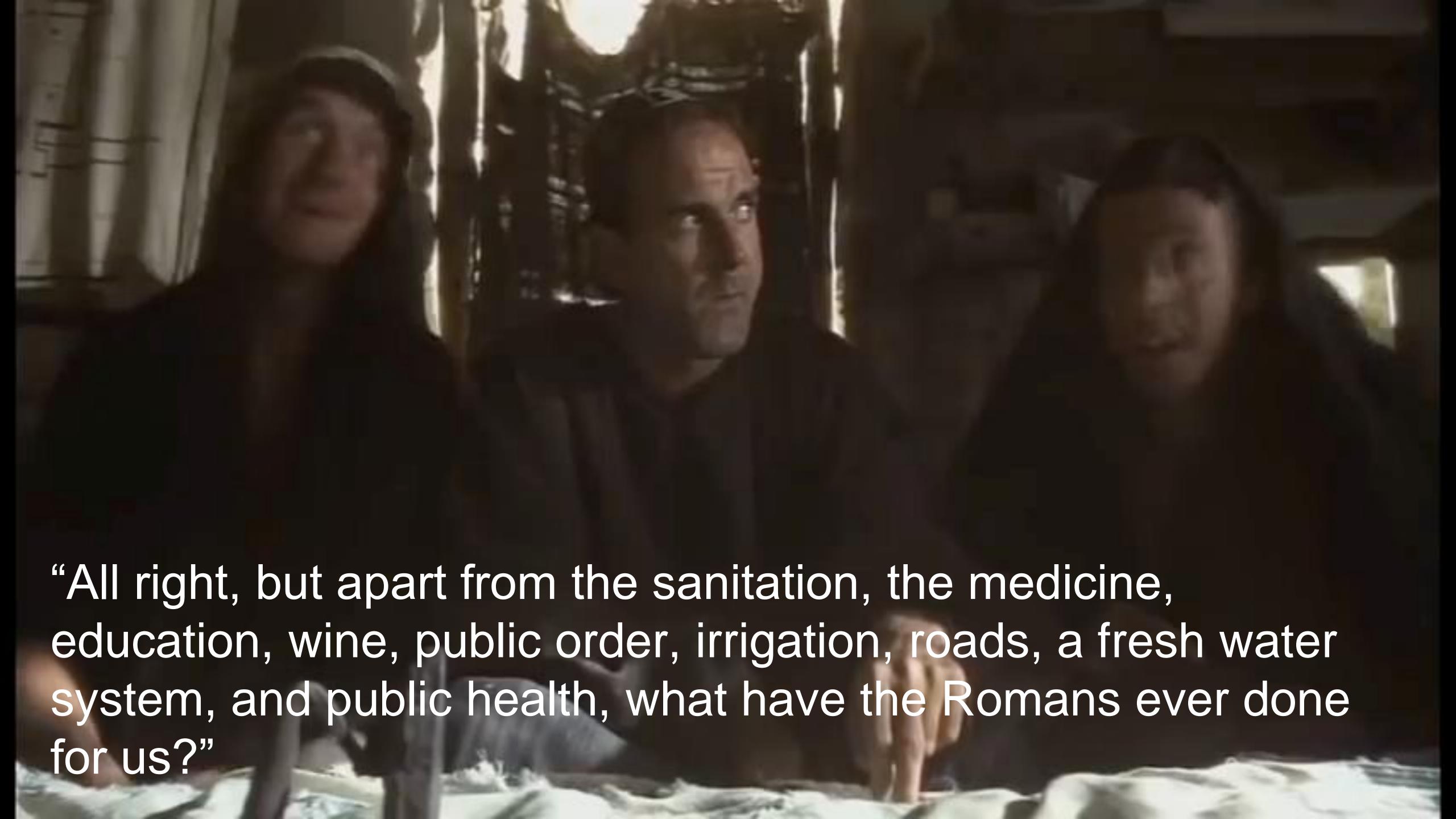# Dilemmas in a General Theory of Planning*

HORST W. J. RITTEL

Professor of the Science of Design, University of California, Berkeley

MELVIN M. WEBBER

Professor of City Planning, University of California, Berkeley

ABSTRACT

The search for scientific bases for confronting problems of social policy is bound to fail, because of the nature of these problems They are "wicked" problems, whereas science has developed to deal with "tame" problems Policy problems cannot be definitively described Moreover, in a pluralistic society there is nothing like the undisputable public good, there is no objective definition of equity, policies that respond to social problems cannot be meaningfully correct or false, and it makes no sense to talk about "optimal solutions" to social problems unless severe qualifications are imposed first Even worse, there are no "solutions" in the sense of definitive and objective answers
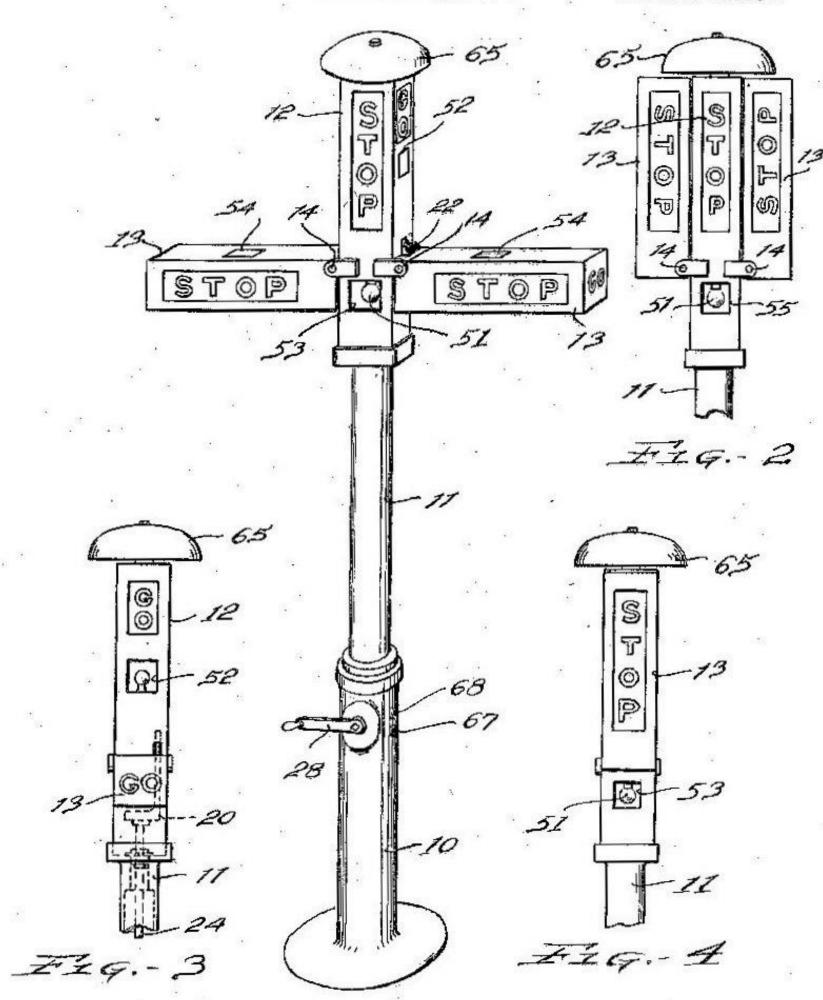
"All right, but apart from the sanitation, the medicine, education, wine, public order, irrigation, roads, a fresh water system, and public health, what have the Romans ever done for us?"

C-ITS consumer apps

Policy support apps

Commerical C-ITS cloud services

LTE base stations

Private

Public

Legacy interfaces

Public C-ITS cloud service

Policy support apps

External public data sources

Internal public data sources

MobiliData

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The "internet of water" in Flanders
Towards a fine-grained 2,500 sensor node water quality network

Water Quality | Air Quality | People Flows | Flooding Risk | Traffic Situation | Climate

DIGITAL TWIN

Afgesloten straat   Storm

LUCHTKWALITEIT

NO₂ Stikstofgehalte (NO₂)

PM₁₀ Fijn stof (PM₁₀)

PM₂.₅ Fijn stof (PM₂·₅)

LAAG   HOOG

Minimum   Extreem

HERSTART   13:00

imec   vito

imec

https://www.digitalurbantwins.com/

https://vloca.vlaanderen.be

City of Things / imec

17 May 2021

White Paper I Smart Cities I Smart Architecture I ⏱ 15 min

White paper on Open Urban Digital Twins – insights in the current state of play

Imec has written a white paper based on its multi-year research into Urban Digital Twins. It provides you with the necessary insights and gives an overview of the current state of play.

Download the white paper →

CITY OF THINGS

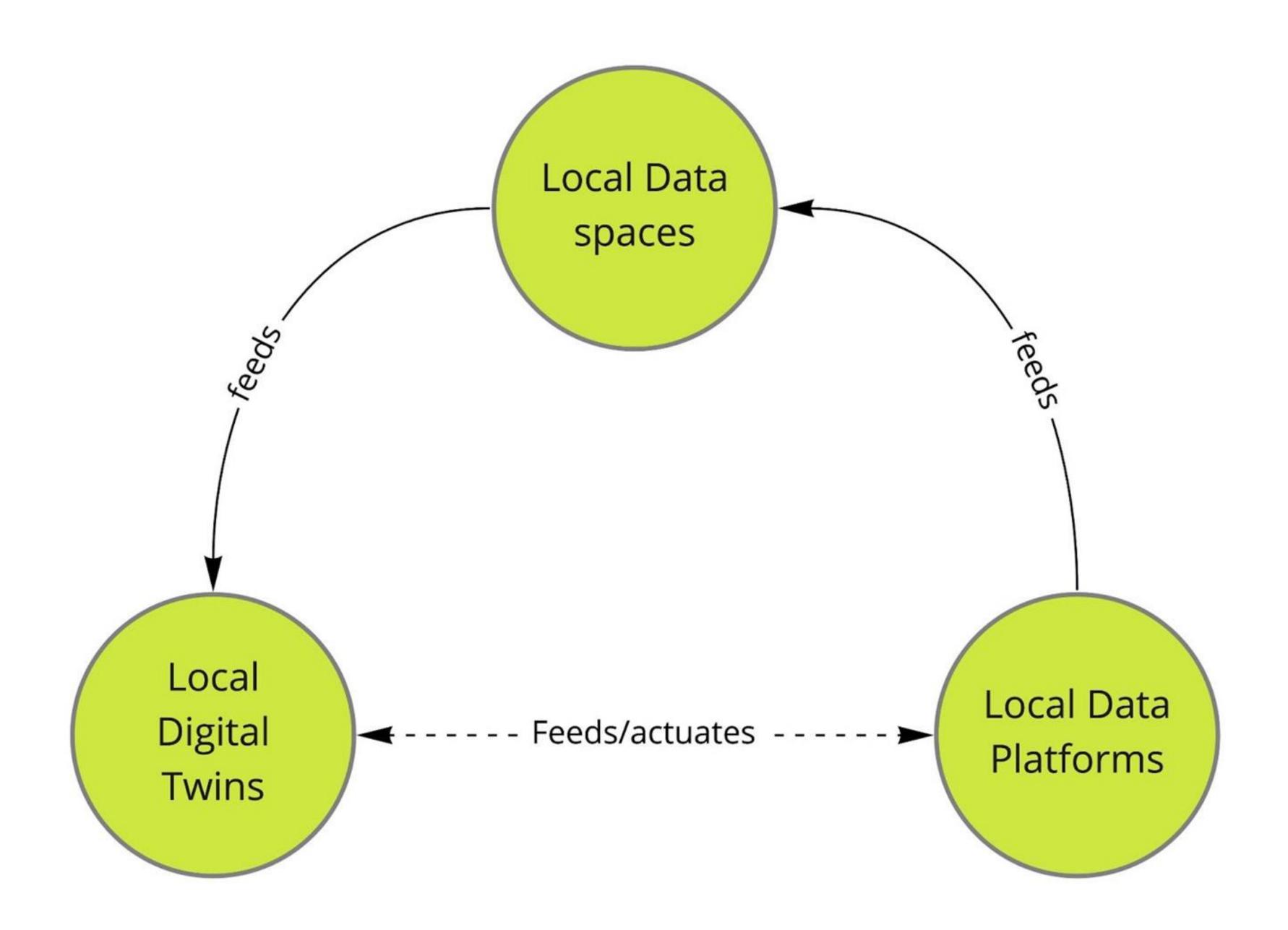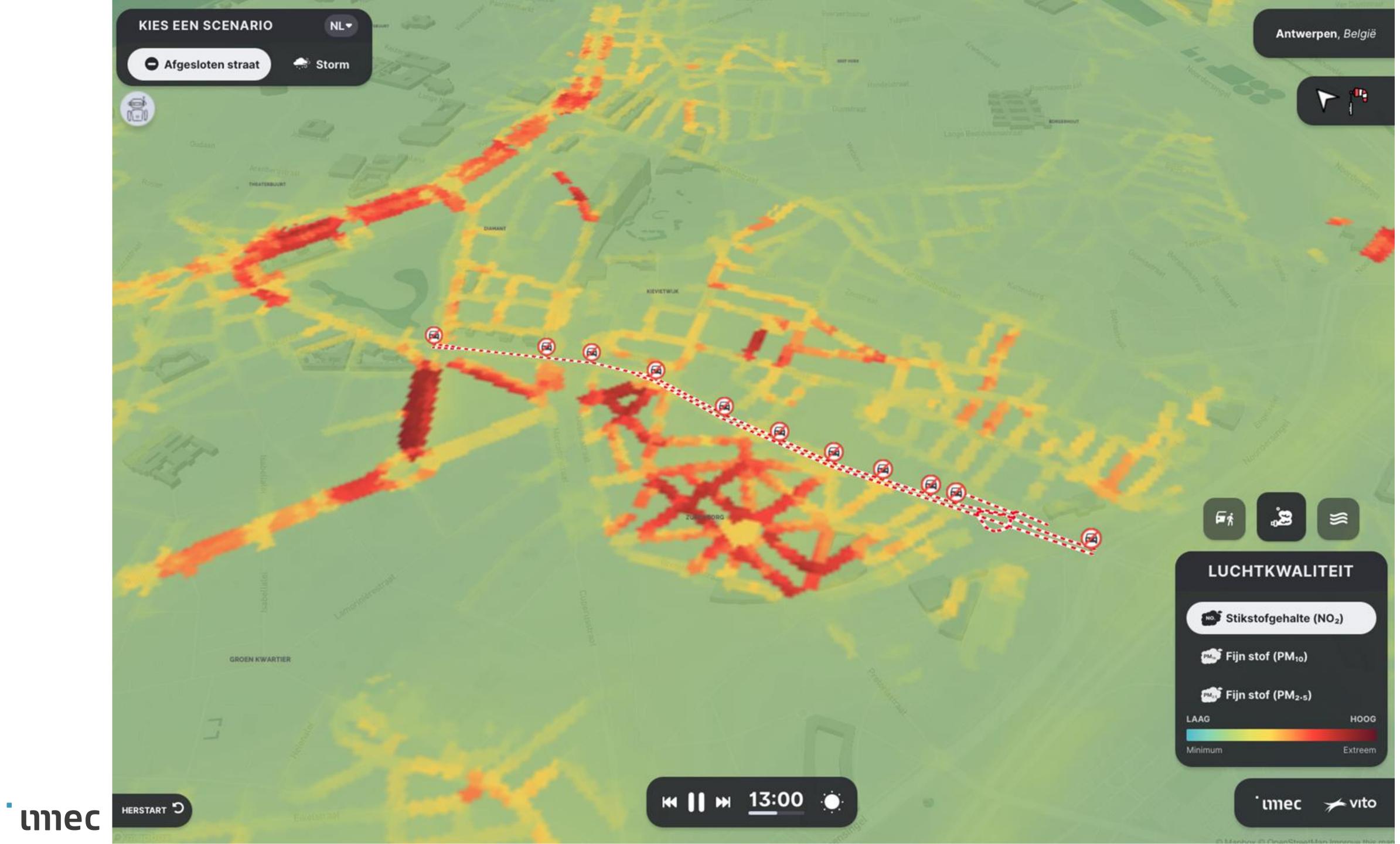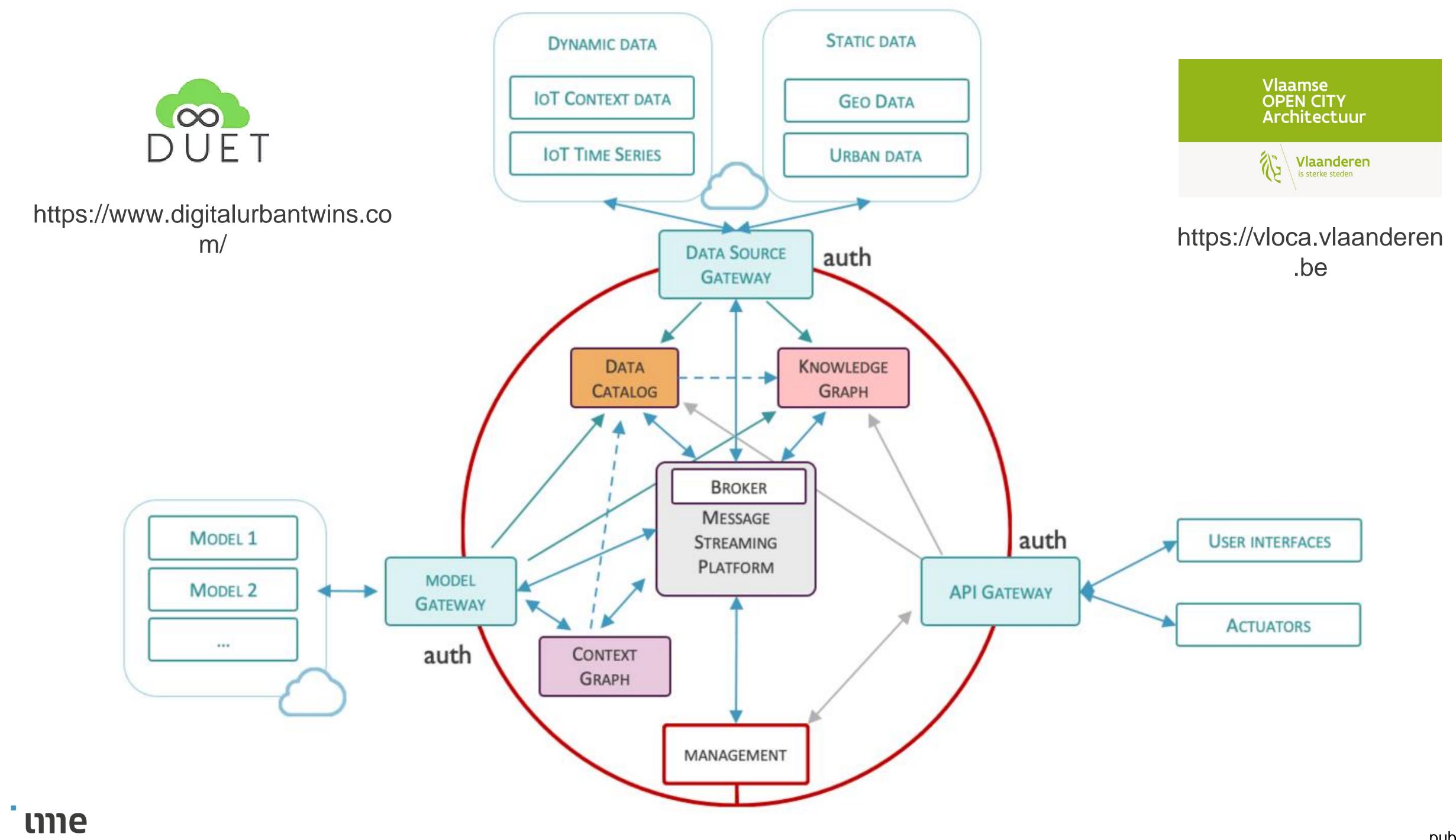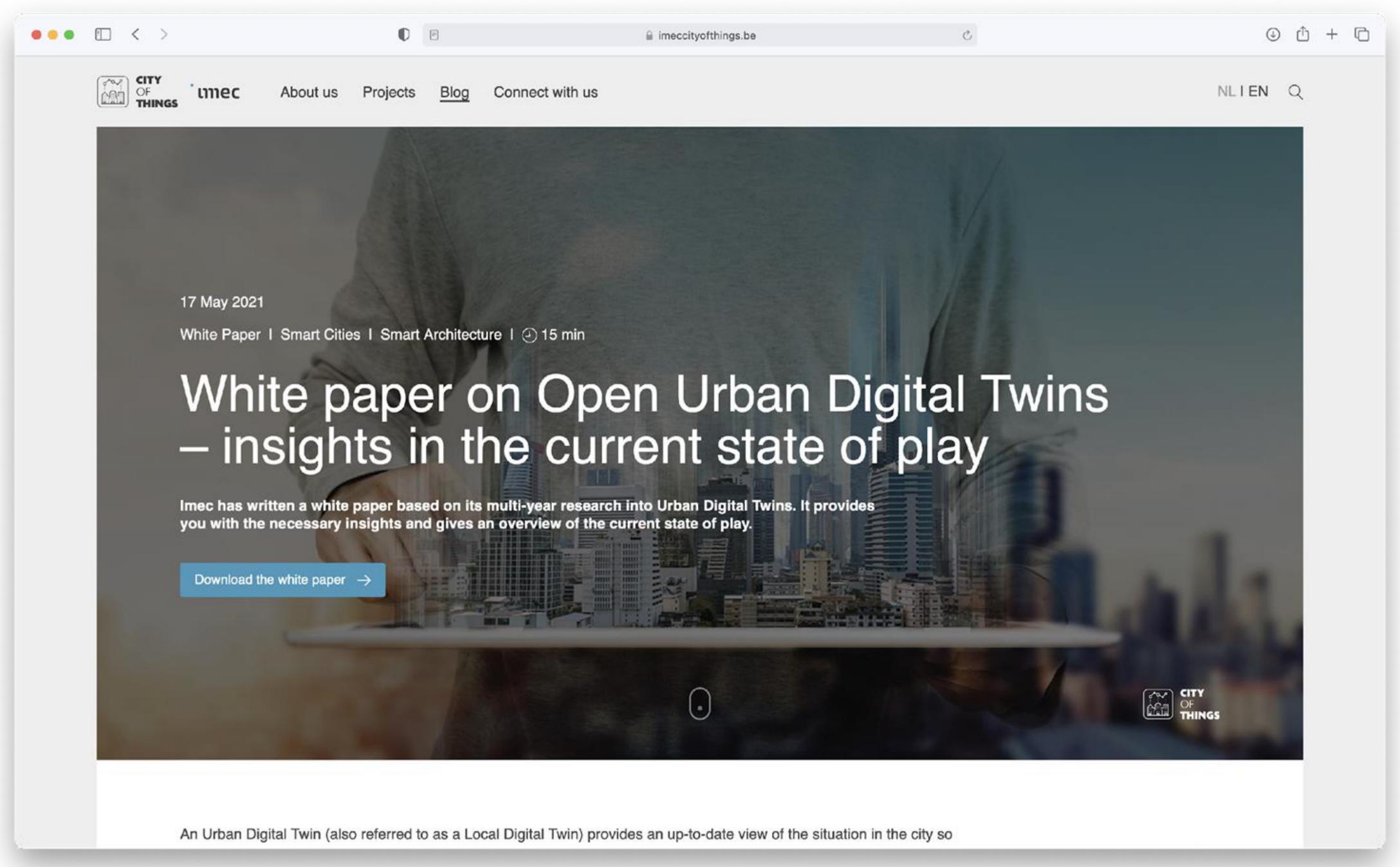An Urban Digital Twin (also referred to as a Local Digital Twin) provides an up-to-date view of the situation in the city so

Structural collaboration between public sector and RTO

Joint goals, blended teams, defined responsibilities

- As an RTO, we work best *with* the public sector, not *for* the public sector

- We are a neutral and trusted partner

  - We will not commercialize products and services generated in these projects

- In our public sector projects, we adhere to an "open for impact" approach:

  - Open knowledge, open data, open source, open innovation

- We are never alone in a project

  - We invest in involving the 'quadruple helix' as intensely as possible

  - We structurally involve research partners and public sector partners

  - We work best in blended trusted teams, even joining each other's workspaces

- We know our place: we are *only* the technology partner

  - We know some usefull puzzle pieces, but never enough to make the full puzzle

imec

Q&A

DIH-WORLD

06.

Closing remarks

Next appointments

- **Next DIH-World webinars**
  - "Information about regulatory frames and legal issues" on 2 September 2021
  - "Know-how and IPRs management in jointly provided services" in September/early October 2021

- **Open calls for experiment**
  - The possibility to apply to the DIH-WORLD first wave of open calls closed on the 15th of July
  - The **evaluation** will be closing on the 15th of September
  - The **next round of experiments: from October 2021**

KEY DATES

The key dates of the open call are as follows:

Activity	Dates
Launch of the call	03/05/2021
Deadline to submit proposals	15/07/2021 at 13h00 (CET)
Evaluation and selection	16/07/2021 – 15/09/2021
Contract's signature	16/09/2021 – 15/10/2021
Experiment starting month	October 2021

THANK YOU

and STAY TUNED!