



Your first choice  
for building the smart  
digital future

# PRESS KIT

LATEST EDITION





**FIWARE is for free,  
for all, forever.**

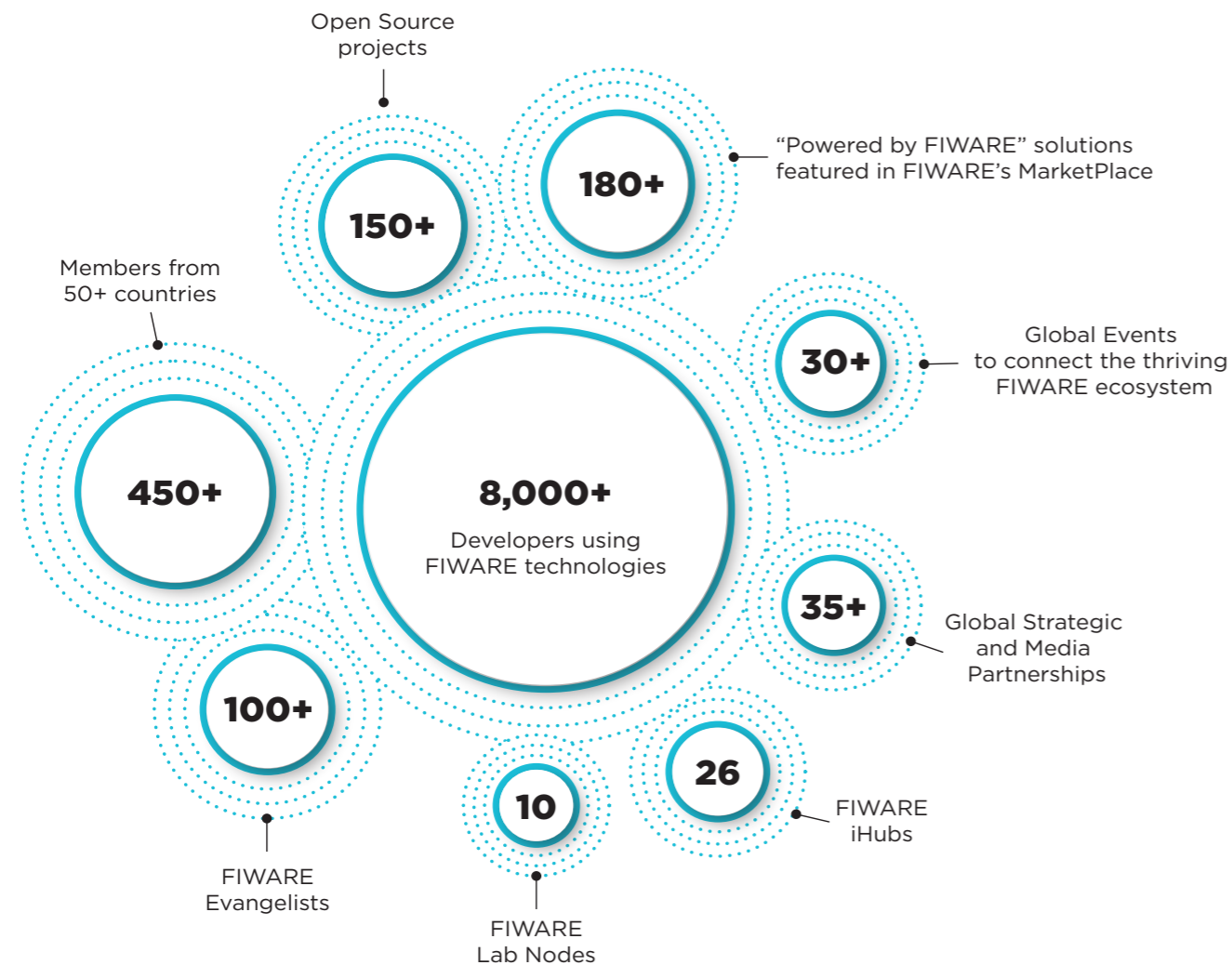
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# ABOUT US

FIWARE Foundation is a non-profit organization that drives the definition and encourages the adoption of **open standards — implemented using Open Source technologies and reference architectures** — to ease the development of smart digital solutions across multiple domains, based on FIWARE technology.




# WHAT WE DO

Together with its 450+ global members and partners, FIWARE Foundation drives the definition, and the Open Source implementation, of key open standards that enable the development of portable and interoperable smart digital solutions, in a faster, easier, interoperable and affordable way, following an Open Source approach that avoids vendor lock-in, whilst also nurturing FIWARE as a sustainable and innovation-driven business ecosystem.

The foundation achieves that through the support of a fast-growing global community that shares a common vision and combines their efforts toward making FIWARE the Open Source technology of choice for industries, governments, universities and associations to reach their full potential and scale up their activities, thereby, entering new markets and growing their businesses. Founded in 2016, the foundation has **Atos, Engineering, Red Hat, NEC, Telefónica** and **Trigyn Technologies** among its Platinum members.



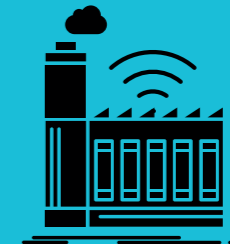


**There is  
more than  
meets  
the eye**

We accelerate  
the emergence of  
innovative marketplaces  
of **smart portable** and  
**interoperable solutions**,  
guiding industries,  
governments, universities,  
and civil society  
to develop their  
smart vision.



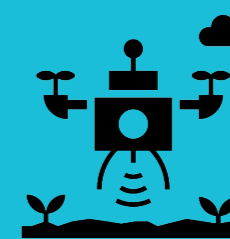
SMART CITIES



SMART INDUSTRY

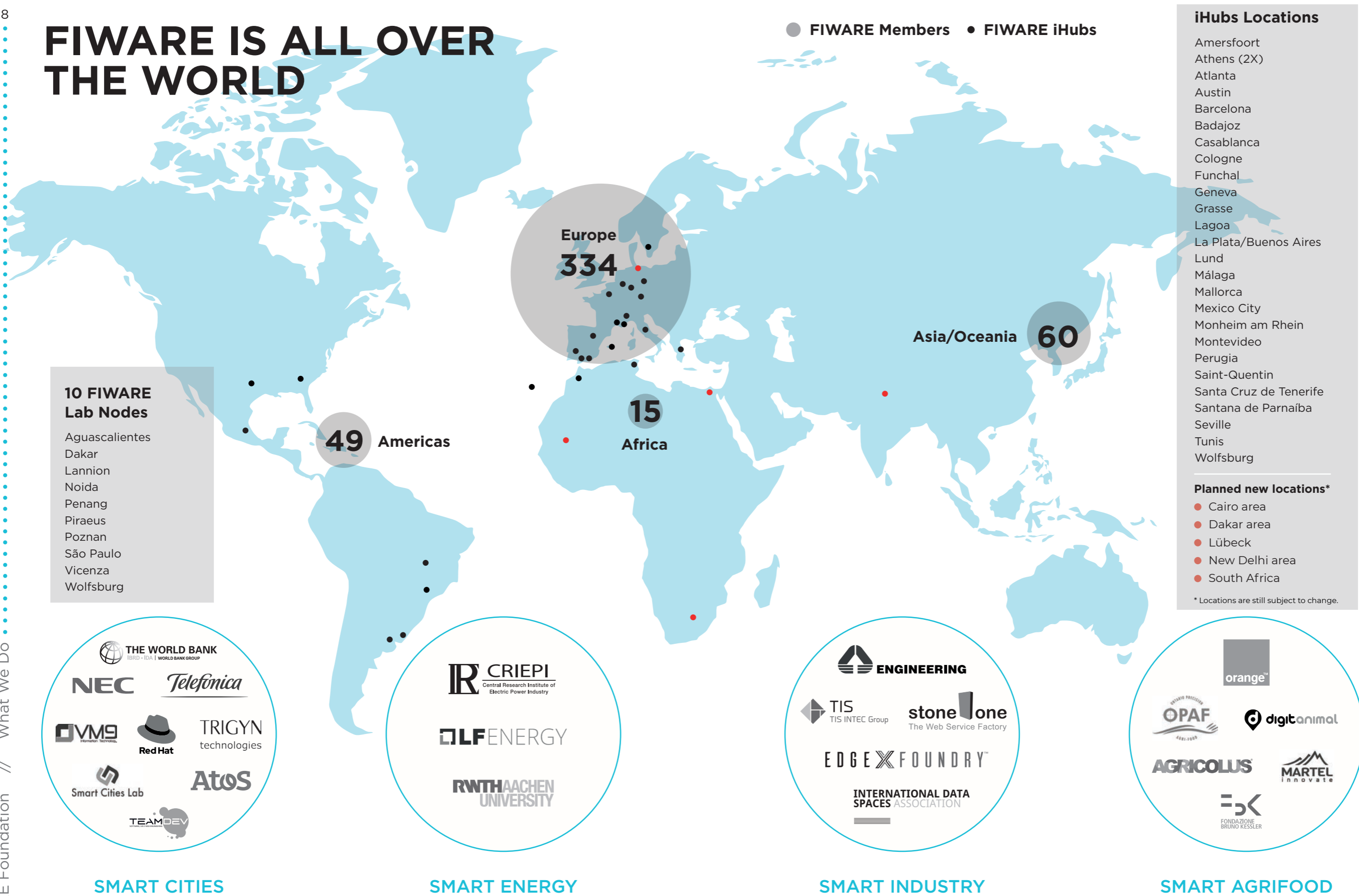


SMART ENERGY



SMART AGRIFOOD

# FIWARE IS ALL OVER THE WORLD



For further information on our members\*, visit: [www.fiware.org/about-us/join](http://www.fiware.org/about-us/join)  
 \*The companies featured here are some examples and do not represent the overall number of FIWARE Foundation members and strategic partners.





## WHAT DOES IT MEAN TO BE “SMART”?

With the world's **population rising at an unparalleled speed**, a lack of natural resources and more automated services are just the tip of the iceberg concerning issues that public administrations are dealing with. In an attempt to tackle contemporary problems stemming from large crowds living in relatively small spaces, **smart solution providers step in by introducing innovative technology**, such as waste management, intelligent industrial LED lightings, smart irrigation systems, to name but a few, that can be taken up by public service providers to improve citizens' daily life.

FIWARE sees **smart environments as an ecosystem** driven by an efficient administration of public services. ICT-based solutions, with technologies such as big data, Internet of Things (IoT), artificial intelligence (AI), and robotics fuse into every single industry

and become the backbone of our social sphere. **Being smart goes beyond technology**: it requires public administrations to move away from inward, fragmentary-oriented organizational structures towards **highly collaborative frameworks** (that include private businesses, not-for-profit organizations, social enterprises and citizens) in order to deliver seamless public services and, thus, **drive the advancement of an information society**.

Each country surely has its own goals and challenges (the word 'smart' itself may mean different things across continents), but by **establishing sustainable structures and offering new approaches** to citizens, authorities, local companies, and other stakeholders to engage within the management of services, public service providers can pave the way for economic development, ultimately increasing the quality of life for their citizens and visitors.



# PRODUCT INFORMATION

The future will gravitate around the management of **context data**. Context data describes what is going on, who is involved, where, when, why. Context is meaningful in farms, describing the state of the crops and soil. In the industry field, it can help factory managers improve efficiency in industrial systems. At energy plants, it can be helpful to describe the status of the plant and the predicted energy demand. Finally, in cities, **data collection generates valuable insights** that help public administrations and businesses to improve the way we live, work and engage with one another.

The processing of context data will drive **smart decisions in the future**. Smart decisions will ultimately improve daily processes, raising the productivity of people, and businesses. Capturing, managing, processing, analysing and visualizing context data will be at the core of solutions in **Smart Cities, Smart Industry, Smart Agrifood and Smart Energy**.

Context data is a blend of **information coming from multiple sources**. But the data owners are at the driver's seat when deciding **who can access their data, when, how, where and what for**. This means that they can exercise full sovereignty over their data, eventually deciding whether they want to monetize their data or not and who will have to pay for it. That's why context information management provides the basis for the **new Data Economy**.

FIWARE lays out the **fundamental context management standards** needed for the creation of interoperable platforms and digital infrastructures. By enabling the blending of tools for integrating multiple context data sources and helping to process and analyze context management at a large scale, **FIWARE stands out as your first choice for building the smart digital future**.

## Standards are driving the smarter tomorrow

Common open standards are an important element of data infrastructure worldwide. They help technology users and providers publish and use data in ways that can drive new business models, create open ecosystems and help public administrations to implement policy goals to deliver more effective public services and hence, boost citizens' living standards. A long-established champion of open standards, FIWARE will always strive to ensure that standards drive the open source technology market, that data is available to the widest range of users, for the widest range of purposes. Anytime. Anyday. Anywhere.

## Some highlights from our work with our long-standing partners:

- In 2016, the **European Commission** published the 2016 Rolling Plan for ICT Standardisation in which **ETSI** was requested to create an ISG (Industry Specification Group) aimed at the definition of a standard Context Information Management (CIM) API with FIWARE NGSI as a candidate. In the beginning of 2017, ETSI created the CIM ISG which was successfully brought to market with the so called ETSI NGSI-LD API specifications in January 2019.
- FIWARE Foundation has (together with its members) actively participated in standardization activities within **ETSI** (NGSI-LD API specifications), **W3C** (Web of Things), **GSMA** (IoT Big Data Ecosystem project) and **TM Forum** (via the Front-runner Smart Cities program).
- In 2018, FIWARE Context Broker was selected as the new Connecting Europe Facility (CEF) Building Block, under the umbrella of **Horizon2020**, to help build the next generation of European digital public services.
- FIWARE Foundation and its Community have been actively contributing to the development of **the International Data Spaces Association Reference Architecture Model (IDS-RAM 3.0)**.

## Here are some of our global partnerships, collaborations and references:





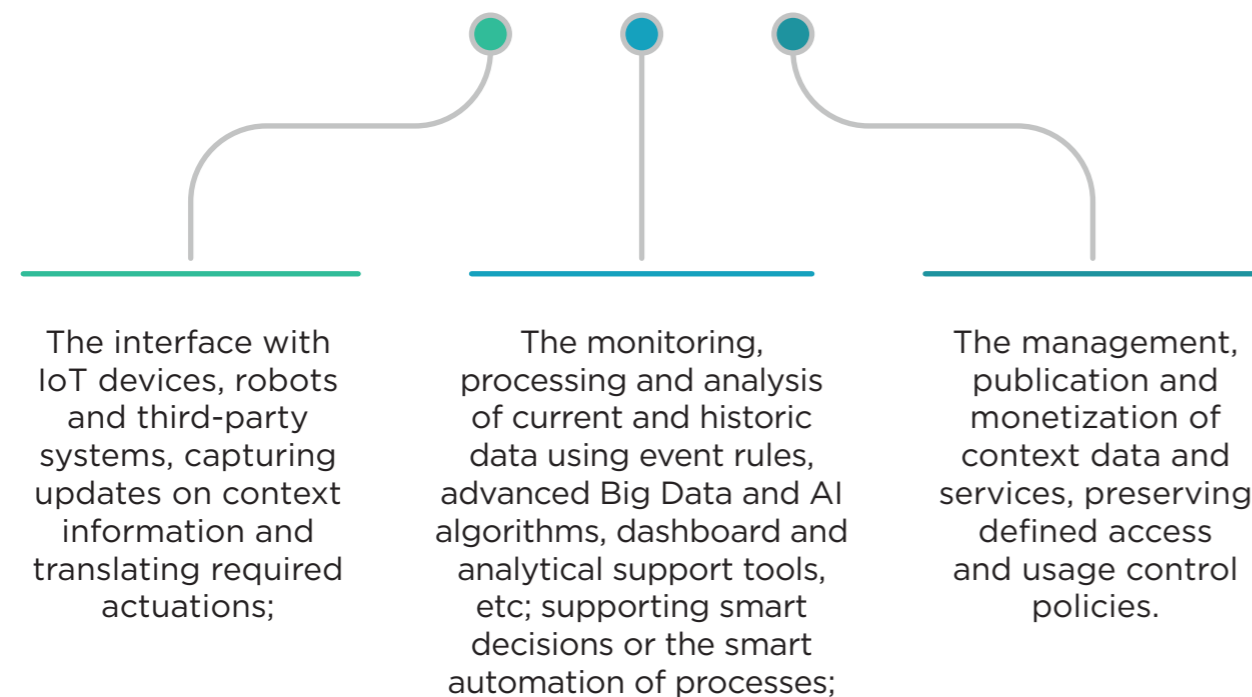
## Developing and integrating smart solutions

FIWARE brings a curated framework of open source software platform components which can be assembled together and with other third-party components to build “Powered by FIWARE” platforms that support the development of smart solutions in a faster, easier and affordable way.

The core component of any “Powered by FIWARE” platform is the so-called **Context Broker**, which supports the FIWARE NGSI API, a simple yet powerful API for solving a basic need in any smart solution: how to gather, manage and provide access to context information. The **FIWARE NGSI API** enables the integration of FIWARE platform components, the interoperability of smart solutions/services running on top of “Powered by FIWARE” platforms as well as their portability (replicability) across different “Powered by FIWARE” platforms.

The FIWARE NGSI API has evolved over time, following inputs from the global community of developers that have long been supporting the technology. The NGSIv2 version has been widely used in multiple scenarios and has served as the basis for the NGSI-LD API specifications, recently published by the European Telecommunications Standards Institute (ETSI). The Orion Context Broker provides an open source reference implementation of the NGSIv2 API specifications and will soon also provide a reference implementation of the ETSI NGSI-LD API specifications.

Building around the FIWARE Context Broker, a rich suite of complementary FIWARE components facilitate (among other things):



The FIWARE Context Broker technology can easily be integrated with blockchain technologies to provide a trustworthy and immutable tracing of certain updates on context.



## FIWARE Context Broker technology: a building block for connecting Europe

The European Commission (EC) has formally adopted FIWARE Context Broker technology as a CEF Building Block within their Digital CEF (Connecting Europe Facility) Building Blocks program, under the umbrella of **Horizon2020**. This means that the EC officially recommends public administrations as well as industrial players within the European Union (EU) member states to adopt this technology in order to foster the development of digital services, which can be replicated (ported) across the EU.

## FIWARE Marketplace

The **FIWARE Marketplace** is a one-stop-shop, providing entrepreneurs with first-hand access to a wide range of “Powered by FIWARE” solutions and platforms, FIWARE-ready technologies as well as related training, coaching, consultancy, integration and support services. The “Powered by FIWARE” and “FIWARE-ready” labels help entrepreneurs to gain visibility and credibility, essential to building partnerships and gaining market traction.

Check out the 180+ global solutions that are already in our Marketplace: [www.marketplace.fiware.org](http://www.marketplace.fiware.org)

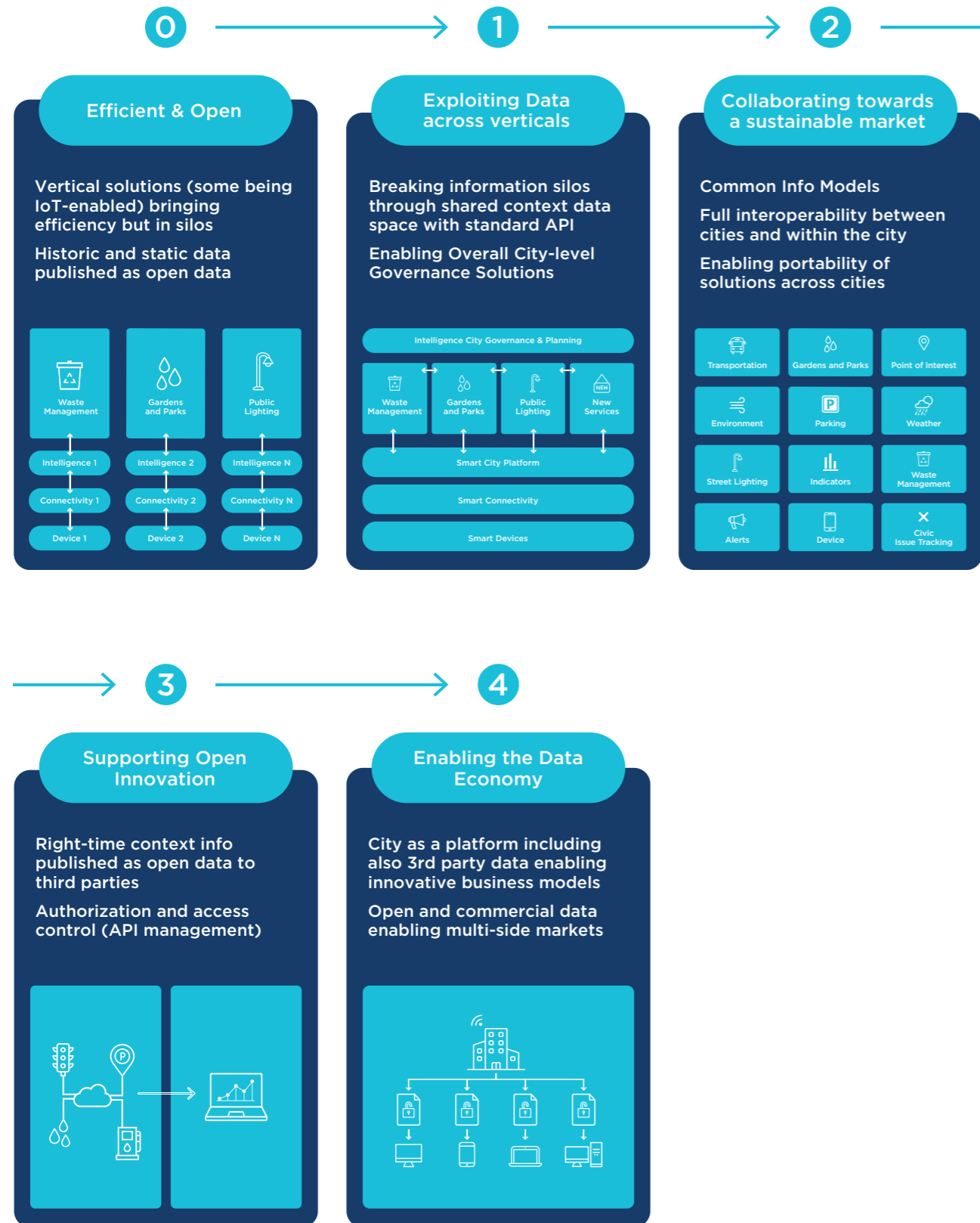
## FIWARE - Paving the way

In the future digital sphere, context data must be pervasive and accessible in right-time. It creates a digital continuum, blurring the frontiers between application domains. FIWARE is bringing the standards of reference at every step to be taken by organizations in their transformation journey towards:

- Becoming truly smart, breaking the silos;
- Collaborating with other organizations towards a sustainable market;
- Fostering open innovation;
- Enabling the Data Economy.



# The Open Source platform of choice for building Smart Solutions



# IMPACT STORIES

Check out some of the Impact Stories published in the past few months.



Montevideo (Uruguay) has 18 beaches stretching along 15km of coastline and more than 30 lifeguard stations. By integrating cutting-edge FIWARE technology and open data, a unified system has been created for beachgoers to access real-time information on weather conditions, crowd status, beach and safety conditions.

The lack of a holistic view of the mobility needs of employees is a huge challenge for those managing fleet services. To tackle this issue, Ubiwhere, together with PROEF, has been improving and validating the solution 'Thumbeo Corporate', which digitizes fleet management and permits sharing of vehicles among employees, whether for the transportation of goods or passengers.



Since September 2017, Eridanis has supported the IT department of Nice Côte d'Azur metropolis (France) in setting up its FIWARE platform. When turning operational back then, it assured the provision of various datasets in different domains, accessible through an API in NGSI V2 format.



# FIWARE IN THE SPOTLIGHT

“ FIWOO, one of the first IoT-Editor platforms in the market in which IT skills were not a must-have, is a horizontal, open, modular, scalable, robust, secure, interoperable and integrable platform. It is based on the open source platform FIWARE and its main reference standards, which are based on open source technologies, reference architectures and more than 800 Smart Data Models. ”

Reuters, UK



**Frankfurter Allgemeine**  
ZEITUNG FÜR DEUTSCHLAND

“ Auch die nicht kommerzielle Organisation Fiware nutzt den Mobilitätsdatenraum. Sie hat für die Stadtwerke Wolfsburg das innerstädtische Parken digitalisiert. An Parkplätzen installierte Sensoren melden dem System, ob sie frei sind oder nicht. Eine Navigationsfunktion in der städtischen „WOB-App“ leitet Autofahrer direkt zu dem freien Parkplatz, der ihrem Ziel am nächsten liegt. „Bis zu 30 Prozent des innerstädtischen Verkehrs ist Parkplatzsuchverkehr“, sagt Fiware-Vorstandschef Ulrich Ahle, diesen wolle man reduzieren. ”

Frankfurter Allgemeine Zeitung, Germany

“ El Puerto de Huelva dispondrá del primer nodo de innovación Fiware portuario a nivel mundial, que será puesto en marcha por la empresa Telefónica, adjudicataria del concurso de gestión del nodo de innovación tecnológica, que irá ubicado en el edificio de la Lonja pesquera. Así lo ha dado a conocer este miércoles la empresa de telecomunicaciones durante la celebración de la II Jornada de Innovación Tecnológica en Las Cocheras del Puerto de Huelva. ”

Andalucía Información, Spain



# HOT THEMES

## SMART WORLD BY FIWARE

Divided into sectors, the **SMART WORLD BY FIWARE** (made entirely with LEGO® bricks) showcases how FIWARE is powering up Smart Cities with connected mobility, highlighting various domains and their interactions. The **SMART WORLD BY FIWARE** was introduced, for the very first time, in June 2019 at **Aarhus's IoT Week**, in Denmark. Ever since, it has been present at major smart mobility events across the globe, featuring FIWARE's solutions and achievements represented in this model.

In spite of the limitations brought on by COVID-19 with regards to showcasing the gigantic model at global leading events, activities related to the **SMART WORLD BY FIWARE** have not come to a stand still. On the contrary, a **video storytelling** has been created, explaining how each sector interacts with - and complements the other - in order to create smart environments and how Open Source technology facilitates the process.

Also, in December 2020, the Smart MaaS **stop motion video** was released and features the Smart World by FIWARE and the infinite possibilities of 'Powered by FIWARE' solutions, based on a protagonist living and working in a Smart City. With this brand new video, people of all ages are able to enjoy FIWARE's vision of a modern, smart digital future, from a safe distance. The goal of Smart MaaS is to build an open source, standardised mobility service platform, and reference architecture for the creation of new innovative mobility services. The Smart MaaS platform uses FIWARE infrastructures and technologies.



The SMART WORLD BY FIWARE is constantly being updated with the latest projects and developments from the FIWARE community.

Following its presence at the **ITS World Congress** (Nov. 11-15, Hamburg, Germany) and the Smart City Expo World Congress **SCEWC** (Nov. 16-18, Barcelona, Spain), the model will be shown in a permanent exhibition at **Forum Digital Technologies** (Berlin), before it heads out to the **E-world Energy & Water Fair** (Feb. 8-10, 2022, Essen, Germany).



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Bundestag



### INDUSTRY

This sector features examples of “Digital Twin” and “Supply Chain” and shows the different robots, which are controlled by a FIWARE-based platform. “StoneOne” presents an example from the field of “Maintenance”. Besides, NEC Lab, Linz Center for Mechatronics and Engineering show how FIWARE’s reference architecture is successfully used in the “Industry 4.0” area.



### URBAN MEDIASPACE

The building is part of an effort to reshape former industrial areas of the Port of Aarhus into residential and commercial areas. It includes future-ready public housing, a library, culture center with an underground parking facility and a station and light rail system with trains running through and under the building.



### MOBILITY HUB

The sector demonstrates how various intelligent transport concepts are interlinked. FIWARE members across the world provide feasible and smart solutions for these types of implementation.



### TOURIST CITY - MOUNTAIN AREA

The sector illustrates Werfenweng, a small community in Upper Austria, as a part of the “Samo” initiative – Soft Mobility. This is an example of fully integrated green and sustainable mobility – a role model for smart mobility of the future.

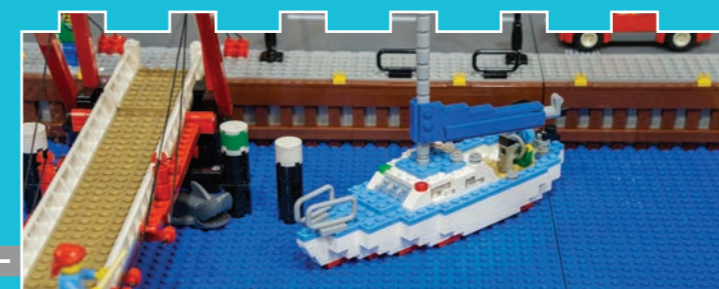
### RED CITY HALL

The Red City Hall shows the relation to the current political situation, the relationship between the energy change and the traffic change, in the backdrop of international movements such as “Fridays for Future.” Topics such as “traffic avoidance,” “alternative fuels,” or “ecological footprint” are discussed globally today.



### CITY HALL

The sector represents the city hall of Aarhus. Aarhus is among the smartest and most innovative cities in Europe today. It has been awarded the accolade of the city of culture and innovation on several occasions.



### FARMING

This sector shows examples from the project “Internet of Food and Farming” (IoF2020), one of the largest EU projects to date. “City Agriculture” is an important component for the optimization of supply chains, i.e. the avoidance of long transport distances and production and consumption as close as possible to the consumer.



### ENERGY

The sector represents the concept of a funded project in North Germany, showing how the energy sector can support future green mobility. The gas is produced from the sun and wind, then stored and provided to the gas fuel station to support a local bus, running between the cities of Niebüll and Husum in Northern Germany.



### KIEL HARBOUR

This sector showcases mobility developments around Kiel (Schleswig-Holstein, Germany), including technology for water level monitoring in coastal cities, data for the water warning systems, water storage in the streets in case of flood. It also features sensors detecting the occupancy and punctuality rate of naval vehicles in real-time, as well as opening and closing process automatization of movable bridges.

### SMART HOUSE

The Smart House is supported by the IoT sensor hub, which combines and evaluates various data sources and environmental sensors. This model shows that air pollution measured on the ground changes road usage in urban areas.



# HOT THEMES

## FIWARE is committed to the Sustainable Development Goals (SDGs)

As more and more people move into urban areas, a thorough management of urban growth needs to be in place in order for global issues to be tackled and sustainable development fully achieved. To this end, **B20**, the private sector's voice of the G20 community, addresses the global challenges and priorities defined by the G20 countries, by building solid consensus amongst business leaders, international organizations and civil society.

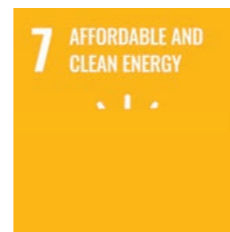
A recent recommendation from the B20 has been towards making Smart Cities the main focus of the G20's efforts to implement Society 5.0 (Japan's smart vision of the future) for SDGs. In line with its commitment from public administrations and private businesses towards the SDGs, FIWARE has been guiding cities and industries to deliver their digital vision, with the active involvement of all the relevant actors.

The FIWARE Community fully endorses the SDGs and is working hard to help deliver them. For instance, **the Fighting Climate Change with FIWARE booklet** features 30+ game-changing solutions that have become vital to the fight against climate change and are, ultimately, setting common standards for Smart Cities. Such solutions are based on FIWARE's Open Source technology and fully aligned with the SDGs.

Additionally, with the **Front-runner Smart Cities Program** - jointly launched with **TM Forum** and aimed at defining a Common Reference Architecture and Data Models for Smart Cities - FIWARE Foundation engages in the global coalition that promotes the adoption of appropriate regulatory frameworks in data sharing and encourages cities to share experiences and best practices.

Together with its members, FIWARE strives to promote transparency, sustainability, accountability, and economic development led by smart, user-centric digital technologies. Going forward, the FIWARE Community plans to establish new sustainability targets that demonstrate its contribution to the achievement of the SDGs. This way, cities can take advantage of highly collaborative frameworks (private businesses, not-for-profit organizations, social enterprises, citizens, etc.) in order to deliver seamless public services and, thus, drive the advancement of an information society.

## SUSTAINABLE DEVELOPMENT GOALS



# HOT THEMES

## The FIWARE Community is powering up cities across the globe

In the last few years, FIWARE adoption has grown considerably among cities worldwide. To showcase how roughly 250 cities (spread across 30 countries worldwide) are benefiting from FIWARE tech on a practical level, in October 2021, FIWARE Foundation launched the second edition of its booklet **FIWARE-4Cities**.

The second edition showcases **62 cities** and **66 solutions** from **18 countries**, and is a footprint of how FIWARE has been helping cities worldwide to understand the potential of open source technology - and open common standards - and get their smart city projects off the ground.

The booklet will soon become a book including 100+ cities showcasing precisely how they have turned to replicable, ready-to-use FIWARE-based solutions to improve the competitiveness of businesses and citizens' participation.

### Smart Cities worldwide trust FIWARE technology.

Find out more  
in the world's top  
Smart Cities  
reference catalogue



#SmartCitiesBooklet

**FIWARE 4 CITIES / Ed.2**



# HOT THEMES

## The FIWARE Community is growing (& counting)

FIWARE Foundation is a growing global community with a common effort of achieving a solid headway towards making FIWARE Open Source technology the best instrument for companies to scale their activities, enter new markets and grow their businesses.

Ever since COVID-19 hit the world, FIWARE has grown roughly 30% in terms of membership, a reflection of how important digitalization is for cities and the overall economy. Check out who our new joiners are:

**STADTWERKE  
WOLFSBURG**



Founded in 1939, **Stadtwerke Wolfsburg AG** and its subsidiaries (that includes **WobCom**, Wolfsburg AG, among many others) are the infrastructure service providers for Wolfsburg and the region. With the aim of contributing to the development of both the residential and business areas around Wolfsburg, the organisation provides customer-oriented services and competent advice in the areas of telecommunications, mobility, building infrastructure and many others.

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**MAXIMAL  
IMPACT  
FOUNDATION**

The **Maximal Impact Foundation vzw (MIMPACT)** will be officially launched during the Smart City Expo World Congress (Barcelona - Nov. 16-18, 2021) and is coming on board as a member straight away - MIMPACT will be co-exhibiting at the FIWARE booth. A not-for-profit organisation bringing together open ethics, inclusive governance, digital commons, and impact finance to global ecosystems to create pivotal change for societies around the world, MIMPACT aims to guide leaders who are tackling global problems with proven tools and open practices.

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**LATITUDO 40**

An Italian startup offering an innovative 'all-in-one' Urban Data Analytics Platform for sustainable decision-making, **Latitudo 40** uses a combination of satellite imagery, artificial intelligence and geospatial analysis to make climate action plans simple and effective and provide a better quality of life for citizens. The company's motto is to learn from the past, study the present and design a better future.

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**TYF**

An energy service provider with 20+ years of experience, **TYF** was founded on the belief that the global energy system is changing rapidly. Thus, sustainable energy systems are becoming a priority, and efficient techniques have to be adopted to increase the system's reliability and sustainability. TYF delivers advanced services for energy management and efficiency, renewables integration and optimization, among others.

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# HOT THEMES

## FIWARE iHubs Network

Serving as innovation engines, the **FIWARE iHubs** focus on building communities that will, in turn, enable local digital businesses to thrive not only at a regional but on a global level. The FIWARE iHubs network is growing bigger and reaching roughly 30 on a global scale. The new joiners to the FIWARE iHubs network span a range of industries and concrete offers:

>> **DigiCityConnect FIWARE iHub** (U.S): Located in Atlanta, DigiCityConnect is a solutions company providing IoT/5G platforms for smart city applications. It will use the iHub to broker public and private data for application within smart cities to solve problems that only an open community can address. Through its extensive community, the iHub aims to leverage already available smart city infrastructure and IoT capabilities and drive the adoption of FIWARE tech within the region.

>> **MOA GLOBAL** (Brazil): MOA is an IoT developer of hardware and firmware mainly focused on smart cities, agro, health as well as tracking and logistics. By joining the FIWARE iHubs network, MOA GLOBAL aims to extend the IoT ecosystem that's part of the FIWARE community as well as connect companies, universities and research centers working on IoT projects.

>> **Maroc Numeric Cluster** (Morocco): A public-private governance association, Maroc Numeric Cluster has been promoting digital innovation in Morocco and internationally since 2010, due to its large network of members and partners (large companies, SMEs, start-ups, academic institutions, research centers). By joining the network, the organization will contribute toward helping entrepreneurs that will, in turn, create jobs and develop innovative solutions to solve African problems.

>> **ATIO - Advanced Technology and Innovation Organization** (Spain): An association aiming to develop the use of digital technologies for the intensive agriculture production systems and the sustainable development, Atio is focused on automated intensive farming systems, and smart water. The iHub will use the FIWARE platform to help and support farmers and practitioners of intensive farming systems in the region of Catalunya through training and technical assistance.

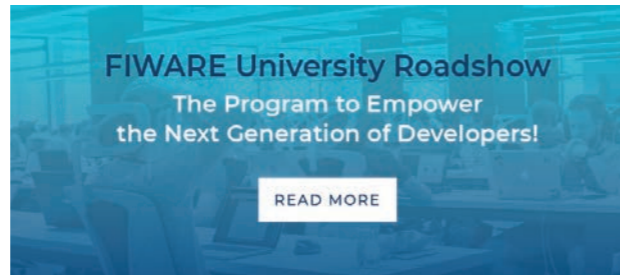
>> **Digital Innovation Hub of the Balearic Islands in Artificial Intelligence in Tourism and Agri-food - DIHBAI-TUR** (Spain): The Digital Innovation Hub (DIH) of the Balearic Islands for artificial intelligence within tourism and agri-food, DIHBAI-TUR aims to promote digital entrepreneurship, support and boost a digital ecosystem of companies (specially SMEs). By joining the other FIWARE iHubs, DIHBAI-TUR strives to be part of the growing FIWARE ecosystem, learn from successful use cases and generate specialised knowledge within the region.



# HOT THEMES

## FIWARE University Roadshow

Launched in 2020, the FIWARE University Roadshow aims to mobilize universities - specially professors, lecturers and researchers - offering Computer Science or Software Engineering courses to incorporate FIWARE technology and workshops within their curriculum. Over 35 universities are currently planning to integrate FIWARE modules into their lectures, whilst the **University of Messina**, the **University of Murcia**, the **Electronic Technologies Department at the University of Seville** and the **University of Milano-Bicocca** have already launched the FIWARE University Roadshow within their curriculum.



## The FIWARE Scientific Advisory Board



In March 2021, the FIWARE Scientific Advisory Board (FISAB) was officially launched to provide support and advice to the FIWARE Foundation **Board of Directors**. The objective of FISAB is to continuously explore developments and innovations in the field of open source, open data, big data, context information management, standardization of interfaces and standard data models, blockchain, artificial intelligence, and digital twin.

The following experts and renowned academics from universities, research centers and institutes, technical academies and foundations have been elected to advise the Board on upcoming trends in cutting-edge technologies. **Antonello Monti**, RWTH Aachen University; **Antonio Skarmeta**, University of Murcia; **Joaquín Salvachúa**, Universidad Politécnica de Madrid; **Luis Muñoz**, University of Cantabria; **Néjib Moalla**, Université Lumière Lyon 2; **Niall Aughney**, Irish Manufacturing Research; **Paolo Traverso**, Fondazione Bruno Kessler.

During the **FIWARE Smart Fest, Ed. 2** (Jan. 19-20), the **FIWARE Scientific Advisory Board** will organize a session to reinforce their commitment to fostering developments and innovations in the field of open source, open data, Big Data, context information management, standardization of interfaces and standard data models, blockchain, AI and Digital Twin. Attendees from the academic community will also learn about the latest scientific trends in ICT, Open Source, and data management and how these topics are related to data spaces.

Want to know more about FISAB, and the FIWARE University Roadshow? Contact **Tonia Sapia**.

# HOT THEMES

## FIWARE is on the front line in the fight against climate change

The “Fighting Climate Change with FIWARE” booklet continues to grow as the world is positively responding to it. **Edition 5.0** is now out and features **40+ ‘off-the-shelf’ game-changing solutions** from the FIWARE Community that have become vital to the fight against climate change and are, ultimately, setting common standards for Smart Cities.

The booklet also brings forewords from book writers **Mike Barlow**, **Cornelia Levy-Bencheton** as well as author and water thought leader **Monica A.**

**Altamirano**. Additionally, it includes Voices from the Industry featuring **Emanuele Bompan** (Environmental Journalist and author), **Robert Brears** (Editor-in-Chief, The Palgrave Handbook of Climate Resilient Societies) and **Ana Torralba Barallat** (Urban Mobility & Sustainable Cities Consultant), who are, in one way or another, experts in climate change adaptation.

Click [here](#) to learn about these FIWARE-based solutions that are tackling or minimizing the devastating effects of climate change.





# HOT THEMES

## FIWARE's Ever-Growing Marketplace

With the purpose of disseminating existing commercial offerings around FIWARE, the FIWARE Marketplace provides access to a wide range of “Powered by FIWARE” solutions/platforms, “FIWARE-ready technologies” as well as training, coaching, consultancy, and support services. The “Powered by FIWARE” and “FIWARE-ready” labels help entrepreneurs to gain visibility and credibility, essential to building partnerships and gaining market traction.



Besides acting as a single one-stop-shop for companies to learn about and purchase ‘off-the-shelf’ solutions, platforms, IoT devices, software enablers centered around IoT and Open Source - and based on or supported by FIWARE technologies - the FIWARE Marketplace is the ideal starting point for technology enthusiasts to find up-to-date information on disruptive technologies. Over 180+ global solutions are already featured in our Marketplace and the number of offerings continues to grow. Check out who the latest joiners are:

>> **Snap4City: Scalable Smart aNalytic APplication Builder for Sentient Cities**, a “powered by FIWARE” solution provides flexible methods for the agile creation of a large range of smart city applications that exploit heterogeneous data, thereby, enabling services for stakeholders across many different areas.

>> **SRM Consulting:** Created initially for the execution of cartographic production works, the organization went on to become a company with a highly innovative and technological apparatus and solutions. One of these solutions is **MavDrone**, an extension of the solution Ipsilum Aerial Solution (IAS). IAS is a platform developed for the command and control of drone fleets and has already been used in several mapping and mission monitoring projects.

>> **Seneco:** The sensor-based, connected **Citygrid** solution ensures that street lights/lamps always light up when presence is detected, and dim down after some time. When a lamp fails, the information can be dispatched immediately so maintenance can be planned accordingly. The solution is already being deployed across several European cities.

Apply to be certified and featured in the FIWARE Marketplace here:  
<https://marketplace.fiware.org/apply>

# HOT THEMES

## Open Source-based ‘off the shelf’ and ready-to-use solutions to fight COVID-19

FIWARE is known for its ability and speed to address urgent challenges and the needs of society, companies, and public administrations. The need for ready-to-use solutions, based on Open Source and open standards principles, to help automate data sharing continues to grow rapidly.



This has, once again, become evident during the current COVID-19 pandemic as Open Source solutions have enabled health authorities to better track patients and scientists to better evaluate the scientific validity of available data worldwide. One of these outstanding solutions is the biosurveillance system **Eng-DE4Bios**. Based on FIWARE technology, the ready-to-use system has been successfully deployed in the Veneto region (Northeast Italy) and is currently rolled-out in further regions and countries. The success of this solution can be witnessed by its constant participation in dozens of online events, including the **FIWARE Healthcare DAY**, on October 8, 2020.



For years, FIWARE has been harnessing the Open Source’s model ability to deliver innovation at faster and less costly rates. This has never been needed more than these days when time, technology and innovation are the most critical elements to save lives. It is now all about helping public services and the suffering health institutions to find ways to cope and adapt smoothly, while quickly saving the lives of infected people. On that note, the **FIWARE4Health Booklet**, launched in October 2020, addresses how Open Source technology is contributing to addressing urgent challenges and the needs of society.



# HOT THEMES

## FIWARE Incorporates Disruptive Technologies into its Tech Roadmap

Reference architectures are tangible proof points that combine partner technology with **FIWARE technology** to create an innovative design to simplify the process of creating solid, ready-to-use environments for smart applications to be run on.

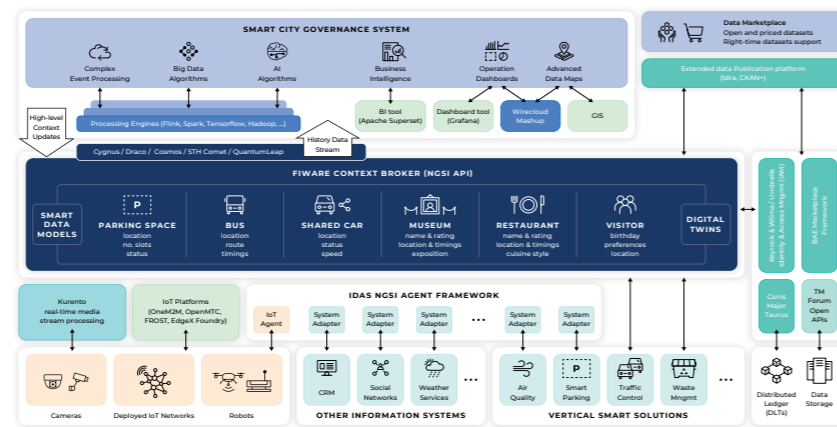
As disruptive technologies such as Blockchain, AI, and Distributed Ledger Technologies (DLTs) - to mention but a few - assume key roles in accelerating the development, governance, and operation of businesses in a more trusted, accountable, and transparent manner, FIWARE has added these technologies to its '**Powered by FIWARE**' architectures, allowing users to learn how to design applications using the latest technologies and experience its benefits on a practical level.

For instance, DLTs bring value to FIWARE because they can be used to store transaction logs managed in any 'Powered by FIWARE' solution. Therefore, these logs cannot be manipulated and can hence, provide the basis for auditing processes: **warranting transparency** in Smart Cities and animal welfare in livestock farming, and **certifying quality** in Smart Factories, for instance. Additionally, FIWARE brings great value to DLTs by being able to address one crucial question: how to ensure that the data stored in a Distributed Ledger (e.g., the IOTA Tangle) is not fake data? FIWARE can guarantee that between the time that such data is generated by a sensor, robotic system or information system and is stored into a Distributed Ledger: no human intervention takes place and, therefore, **the data cannot be manipulated**.

Finally, the **FIWARE Tech Roadmap** contemplates the evolution of some of its components, by leveraging on some of the advantages that DLTs have to offer:

- The components supporting the **monetization of APIs and data resources** are relying on DLTs such as IOTA Tangle to log usage records, which are later the basis for a trustworthy process and payment to API/data providers;
- The components dealing with **Identity Management and Access Control** can use DLTs to manage access control policies so that they cannot be manipulated and can then be stored and handled in a distributed manner.

The FIWARE Smart Cities Reference Architecture



# HOT THEMES

## Boosting the FIWARE Know-How and Technical Skills

FIWARE Foundation offers a series of training workshops in the form of online webinars. These are designed to appeal to a variety of audiences and are ranked according to their level of expertise. Wrapped under the umbrella of **#WednesdayWebinars**, **Business Boost Webinars**, and **Hop-on Sessions** these virtual experiences cover all there is to know about FIWARE from a technical and a business standpoint. They hereby look at what each of the FIWARE components brings and how apps can be developed using them. They also explain the vision and value proposition of FIWARE in the domains of **Smart Cities**, **Smart Agrifood**, **Smart Energy**, and **Smart Industry** as well as showcasing the kind of initiatives members of the **FIWARE Community** are carrying out beyond the development of the technology.

Catered to audiences from Asia to North America, these **live knowledge-sharing sessions cover a broad range of topics** by industry experts on latest and trending skills and technologies. Besides learning about the components present in solutions, platforms, IoT devices, and software enablers based on - or supported by - FIWARE technologies, participants can also stay up-to-date with the leading technologies and trends in digitization for the coming years and hear how they can navigate the economic, political and social elements brought on by the current digital revolution.

Visit and stay-up-to-date with our upcoming webinars:  
[www.fiware.org/community/fiware-webinars](http://www.fiware.org/community/fiware-webinars)





# HOT THEMES

## FIWARE Accelerator Welcomes its Newest Partners on Board

Having supported startups and SMEs since 2014 with the FIWARE Accelerate Program — in which over 1,000 startups received €80 million in funding from the European Commission — in April 2020, FIWARE began a new chapter with the **FIWARE Accelerator**. Recognized as an important matching unit between venture capitalists and entrepreneurs, the program focuses on driving high-potential startups and enterprises to develop and bring onto the market innovative smart solutions, based on FIWARE technology.




By offering tailored funding and open call opportunities, business development guidance, global visibility and network, prototype testing within the global FIWARE Community, and access to a global portfolio of relevant industry players, VCs, standardization and research institutions, private and public entities, FIWARE Accelerator strives to bring SMEs and startups to the forefront of innovation, based on Open Source development models.

### Different skills put to work for to the greater good

The program works closely with major accelerators and incubators to create business opportunities and deliver technical training for startups and SMEs. Check out who the newest partners are:


 The company was established in 1986 and currently operates as an international innovation management consultant with offices in France, Belgium, the UK and Colombia. With over 30 years of experience in the preparation of European research and innovation (R&I) project proposals, **Zabala** has been a long-term partner of FIWARE and is currently managing over 31 million EUR in cascade funding opportunities. The synergies with FIWARE's work and what it means for the startups enrolled in the FIWARE Accelerator is of great dimension;


 Following its early involvement with the accelerator "SpeedUP Europe" — in which FIWARE Open Source was deployed to create solutions for clean tech, Smart Cities and Smart AgriFood — **Gateway49** has been created in cooperation with **Lübeck's Chamber of Commerce and Industry** and **Glocal Consult**. The company supports early stage startups working in the fields of life science, food, Smart Cities, logistics and new digital technologies;

 The company is a regional internet service provider in Wolfsburg. It is building a fibre optics network in Wolfsburg, together with Stadtwerke Wolfsburg AG. With a strong focus on Smart Cities and Mobility topics, **WOBCOM** will work with

FIWARE to increase the number of startups and users of smart digital solutions, like FIWARE. Investors day and pitches will be co-organized. During the 3 year collaboration, coaching and training activities will be organized as well as hackathons and challenges;

 This is a leading business initiative for the promotion of Baden-Württemberg (Germany) as a hub for innovation and high-tech. As a partner of the programme, **bwcon** will be promoting the use of FIWARE technology, stimulating the creation of innovative smart solutions, as well as collaborating on virtual events, technical workshops and mentoring for startups and SMEs.

 Designed to stimulate networking and facilitate fruitful relationships between companies, research institutions, and centers of excellence, **Polo Tecnologico** (Italy) aims to set up a group of hi-tech enterprises. A structured and integrated system, it offers several services to its members, including scouting, brand visibility, investors' searches, identification of calls for proposals and funding, and much more. Via the collaboration with Polo Tecnologico, FIWARE will further help high-potential startups and enterprises to develop and bring to the market innovative smart solutions.

 In June, the 6th FIWARE Accelerator Partner was welcomed on board. **Innoloft** is building a B2B tech ecosystem empowered by a network of different organizations. Together with other partners, Innoloft helps boost business and cutting-edge smart solutions from startups to global players.

Since the launch of the FIWARE Accelerator, 110+ open calls have been promoted by the initiative, culminating in several dozen opportunities for funding, partners introductions and tender processes within European-led projects. Other similar agreements with international accelerator initiatives are currently under analysis and will soon be materialized.





# FIWARE PRESENCE AT GLOBAL EVENTS

## Smart City Expo World Congress - SCEWC (November 16-18, 2021)

During **SCEWC 2021**, the FIWARE community met in person to discuss issues around smart cities and regions and the role played by AI, Digital Twin, blockchain, data spaces and much more. Some highlights from the event:

- 14,934 In-person attendees
- 21,210 Online attendees
- 452 Exhibitors
- 350 Speakers
- 120 Countries
- 15 Co-exhibitors, including 3 iHubs and 3 European Projects
- 30+ Daily live demos and presentations by co exhibitors and partners
- Dozens of international media outlets covering the FIWARE booth;
- The **Smart World by FIWARE** (made with Lego® bricks) became the biggest attraction of the event.



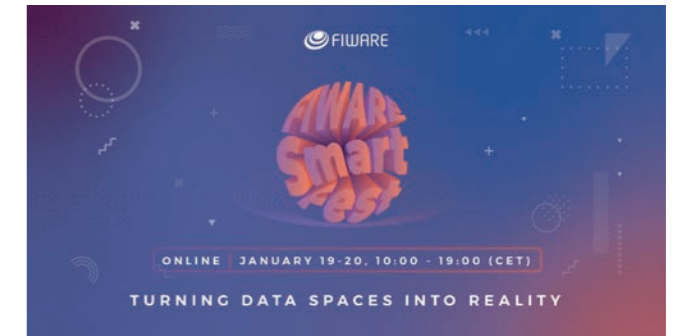
© FIWARE Foundation

On September 14-15, 2022, FIWARE will be hosting its **Global Summit**. The 2-day event will take place in Gran Canaria (Spain) and will be filled with world-class innovation, collaboration, and networking. Open to FIWARE members, partners, enthusiasts and newcomers - from startups to global players, public admin to academia, developers to strategists, project managers to CxOs - the Summit showcases the disruptors that are driving the digital transformation of cities and regions.

Looking into joining the FIWARE community, our global ecosystem, or finding out more about the impact and opportunities presented by open source technology? Then this Summit is for you. Visit [fiware.org/summit](https://www.fiware.org/summit).

## FIWARE Smart Fest, Ed. 2 (January 19-20, 2022)

Held over two-days, this virtual event will provide attendees with a 360° view on Data Spaces: successful available use cases and best practices, prerequisites, opportunities, hands-on tips, joint discussions on policies and all this with a fantastic lineup of international speakers.



Highlights will include keynote speeches from representatives from the Data Spaces Business Alliance's (DSBA) founding organizations, namely: **Ana Garcia Robles**, BDVA's Secretary General, **Ulrich Ahle**, CEO of FIWARE Foundation, **Lars Nagel**, CEO at IDSA and **Francesco Bonfiglio**, Gaia-X's CEO, among many others experts and thought leaders from the Data Spaces spectrum.

Register [here](#).

## E-World Energy & Water 2022 (February 08-10, Essen, Germany)

FIWARE is returning to the **E-world conference** alongside its Platinum Member Atos to present solutions around Smart Energy and Water. Our booth will also showcase the acclaimed Smart World by FIWARE.

The E-world Energy & Water 2022's conference program includes topics such as the digitalization of energy supplier sales, electromobility, legal aspects of rolling out charging infrastructure, and business models for energy efficiency.

Check out the full list of events that FIWARE will be attending or organising within the next few months: [www.fiware.org/event-directory](https://www.fiware.org/event-directory)





# WHAT'S HOT & HAPPENING

## >> [October 28](#)

FIWARE Foundation celebrates its **5th anniversary** with many accomplishments to date. Over the past five years, we've seen (first-hand) how FIWARE users are noticing key benefits such as agility of operations, faster innovation, and collaborative coding. From long-established enterprises to open source newcomers, hundreds of users worldwide and across industries have come to use the FIWARE open source platform to take their business to a smart digital level. So far, 250+ cities worldwide are using FIWARE tech toward delivering smart digital experiences.

As FIWARE technology adoption expands, so too does FIWARE Foundation. With 450+ members and dozens of strategic and media partners, we also recently welcomed FIWARE iHub number 26 and have recently spearheaded game-changing initiatives (refer to page 38) that are

set to make a difference. Our team has also grown. We have a proud team of 35+ people working from Spain, Tunisia, Italy, Germany, Peru.

## >> [November 18-19](#)

**Dario Avallone**, FIWARE Foundation's Board of Directors Chairman and **Ulrich Ahle**, FIWARE Foundation CEO attend the **2nd Gaia-X Summit**. A highly anticipated event, the virtual summit will highlight the release of the next phase of Gaia-X research, development and progress made so far, while equally featuring an exciting collection of key speakers. During the event, Dario and Ulrich will join a panel on the recently founded **Data Spaces Business Alliance** (DSBA).

## >> [November 30](#)

**Ulrich Ahle**, FIWARE Foundation CEO delivers a speech on 'Data Spaces Business Alliance: from concept to

Market', during the **European Big Data Value Forum** (EBDVF), the flagship event of the European Big Data and Data-Driven AI Research and Innovation community. Organised by **BDVA** and the European Commission (**DG CNECT**), the physical part of the event will take place in Ljubljana (Slovenia). Under the theme 'Digital Transformation powered by Data and AI', the event brings together industry professionals, business developers, researchers and policy-makers from all over Europe and other regions of the world to advance policy actions in the areas of Data and AI.

## >> [December 16](#)

The **Data Spaces Business Alliance** (DSBA), a joint initiative between the **Big Data Value Association** (BDVA), **FIWARE**, **GAIA-X**, and the **International Data Spaces Association** (IDSA), organised the 'Brokering Event for European Data Spaces'.

Curated under the umbrella of the **European Commission's Digital Europe Programme** - which focuses on bringing digital technology to businesses, citizens and public administrations - the event was designed to build the European data spaces across specific sectors, and was driven by an impressive lineup of speakers from the European Commission and beyond.

With 750+ registrations and 550+ active participants, the event also allowed attendees to engage with the DSBA communities. This resulted in nearly 300 matchmaking activities, 100+ one-to-one meetings and 60+ pitches.

Check out the [full list of events](#) that FIWARE will be attending or organising within the next few months.

## Smart Data Models Program

**Smart Data Models** is a global and collaborative program driving the adoption of "de facto" standards of data models for digital twin classes across a wide range of domains. The mapping of these data models into concrete JSON/JSON-LD structures - provided under this program - has become a crucial asset for developers looking for means to guarantee interoperability between different internet and cloud solutions, breaking vertical data silos within organizations and enabling data sharing among organizations within data spaces, at a fast speed.



Led by **FIWARE**, **TM Forum**, **IUDX** and **OASC** the program follows a truly open approach and is boosting the creation of a global open data and open source community. Providing roughly 700 new Smart Data Models after its first operational month, it aims to grow the number of new models by at least 20% yearly and extend its community via the many more co-leading organizations and contributors that are yet to join.

You can join this unique and impactful program anytime by simply contacting us on [Github](#) or [smartdatamodels.org](#).



# YEARS OF SUCCESS

...AND COUNTING





# WHAT A YEAR!

February 2021

FIWARE Foundation and Digital Twin Consortium® enter into a collaborative agreement to accelerate the development, deployment, and wide-scale adoption of open digital twin technologies. Together, the organizations will drive interoperability, based on information exchange by harmonizing technology components and other elements.

March 2021

The AI-Marketplace platform is officially launched to connect AI experts, providers, and manufacturers to jointly develop AI solutions for more efficient product creation. FIWARE, with its experience in building digital and open source-based platforms, is contributing its expertise in building a marketplace for digital services that deploy FIWARE components and TM Forum APIs.

June 2021

FIWARE Foundation joins living-in.eu, the global movement supporting public authorities, cities and communities in their digital transformation. Given FIWARE's long-lasting commitment to guiding cities to understand the potential of open source technology and open common standards toward creating sustainable, greener living space for their citizens, the partnership is a natural step towards fostering a cohesive and digital Europe.

May 2021

FIWARE Foundation joins forces with international publication Renewable Matter to further drive coverage of its initiatives around urban challenges, smarter living and secure data exchange. As part of the partnership, the FIWARE Community will access insightful content on the latest cutting-edge innovations and visions for development that puts people and respect for the planet first.

September 2021

FIWARE Foundation signs the **SmartCitiesWorld Open Letter** to COP26 (United Nations' 2021 Climate Change Conference) leaders. The letter asks cities and organisations to pledge their support to 10 major guiding principles that should be reflected in any final agreement following the UN conference in Glasgow (Oct 31, 2021 - Fri, Nov 12, 2021).

November 2021

FIWARE Foundation joins the **Mobility Data Space**, a data sharing community for the mobility sector. With 16 initial use cases (of which two are powered by FIWARE) from multimodal mobility to smart parking management, it aims to facilitate competition around innovative, environmentally friendly, sustainable, and user-friendly mobility concepts by giving all users equal and transparent access to relevant data.

# MEET OUR BOARD OF OFFICERS

## Ulrich Ahle - CEO



Following his extensive experience in the industrial sector (including Vice President and leader of Manufacturing, Retail & Transportation Consulting & Systems Integration at Atos Germany), helping clients to digitize their business, Ulrich joined the foundation in September 2016. He is on the Board of the International Data Spaces Association and was also on the Board of prostep ivip Association for 16 years, before becoming an Honorary Member in 2019.

## Stefano De Panfilis - COO

Stefano joined Engineering Ingegneria Informatica S.p.A. in 1984 and went from Director of R&D Laboratories Department (overseeing 100+ researchers in Europe and beyond) to Chief Innovation Officer of the Engineering Group in 2011. He joined FIWARE Foundation in 2017. Besides his role as COO, he is responsible for the FIWARE Lab Nodes and is also a member of the FIWARE Technical Steering Committee.



## Juanjo Hierro - CTO

After a thriving trajectory at Telefónica Spain's R&D Labs (including Industrial IoT Unit's CTO), Juanjo joined the foundation in 2017. His involvement with FIWARE dates back to 2011, when he was already coordinating activities related to the FIWARE platform. He has been heavily involved in the launch of the OASC initiative, contributing to the definition of technical mechanisms adopted by cities joining the initiative.



## Cristina Brandtstetter - CMO

With a strong track record of success over her 20+ years international career in Operations, Change Management, Strategy, M&A, Marketing & PR, Product Management, Consulting, build-up organisations of industry/vertical teams and diversified go-to-market channels (among many other areas), Cristina joined the foundation in June 2019 to lead the organization's Marketing, Press and PR teams, with a strong focus on corporate portfolio and partner activities.





# PRESS CONTACT

For further information about us  
or for interview requests, please contact:

**Val De Oliveira**  
[valdirene.deoliveira@fiware.org](mailto:valdirene.deoliveira@fiware.org)



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