

# DIGITAL NERVOUS SYSTEM TESTBED

Session 3 - Testbeds and Computing Continuum

## AIOTI Signature Event

Ricardo Vitorino  
Brussels, October 10 2023



# Hi, I'm Ricardo.

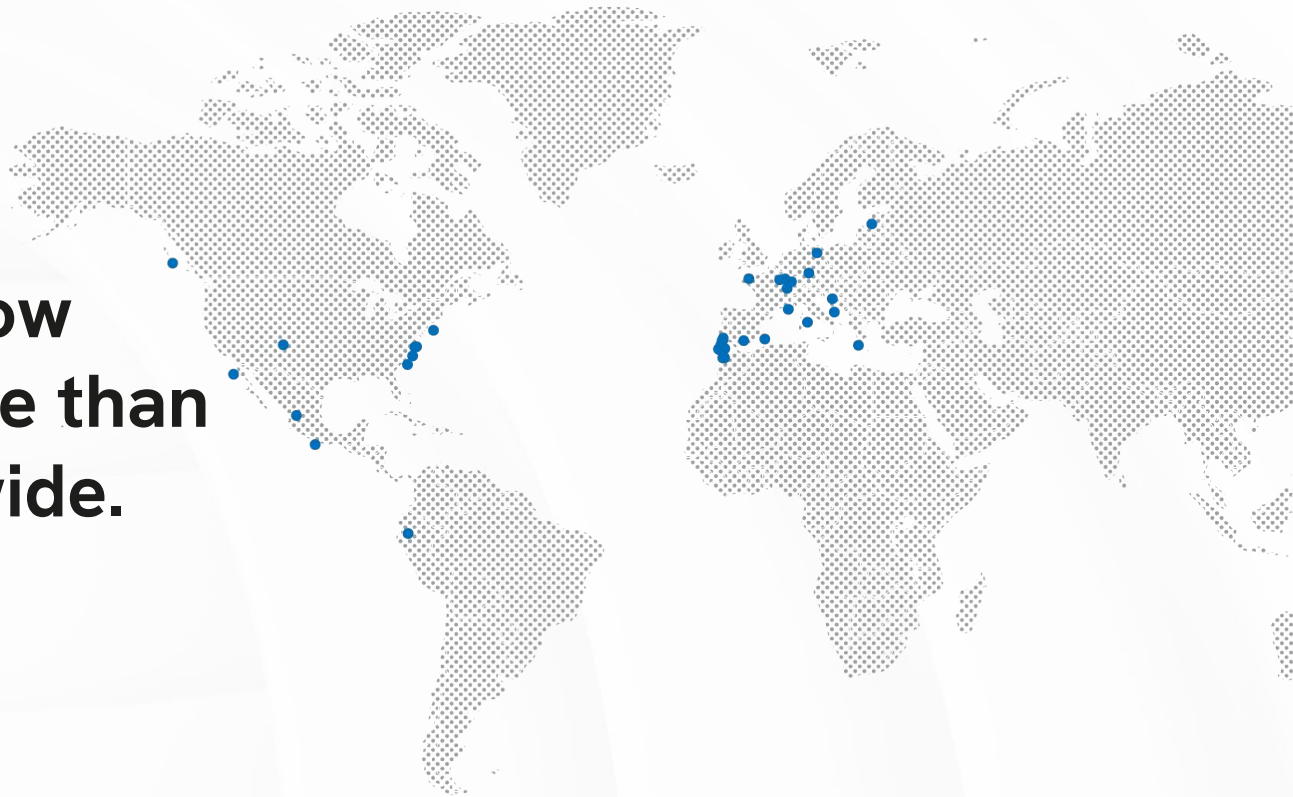
I help **Ubiwhere** create and deliver innovative technology for smart city challenges.

I help **AIOTI** maintain a web catalogue of IoT solutions for communities (urban societies and rural areas) and fostering collaboration between its members, as co-chair of the **Buildings and Communities Group**.

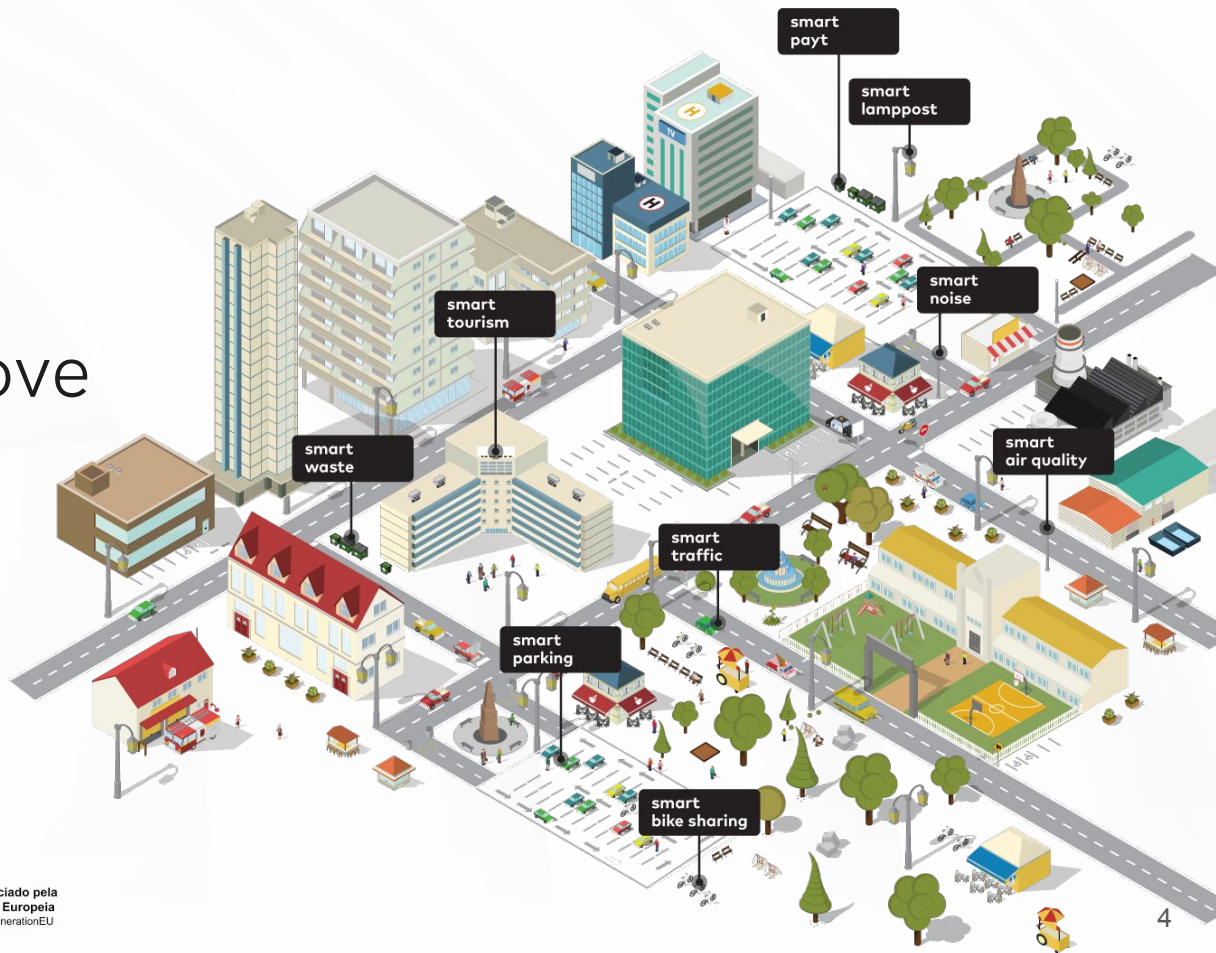
Please reach out on [LinkedIn](#) or [rvitorino@ubiwhere.com](mailto:rvitorino@ubiwhere.com)



Ubiwhere has now  
solutions in more than  
**60 cities** worldwide.



How can city management improve the **quality of life** with **digitisation**?



# CITY NERVOUS SYSTEM

An organic approach to  
smart city management.

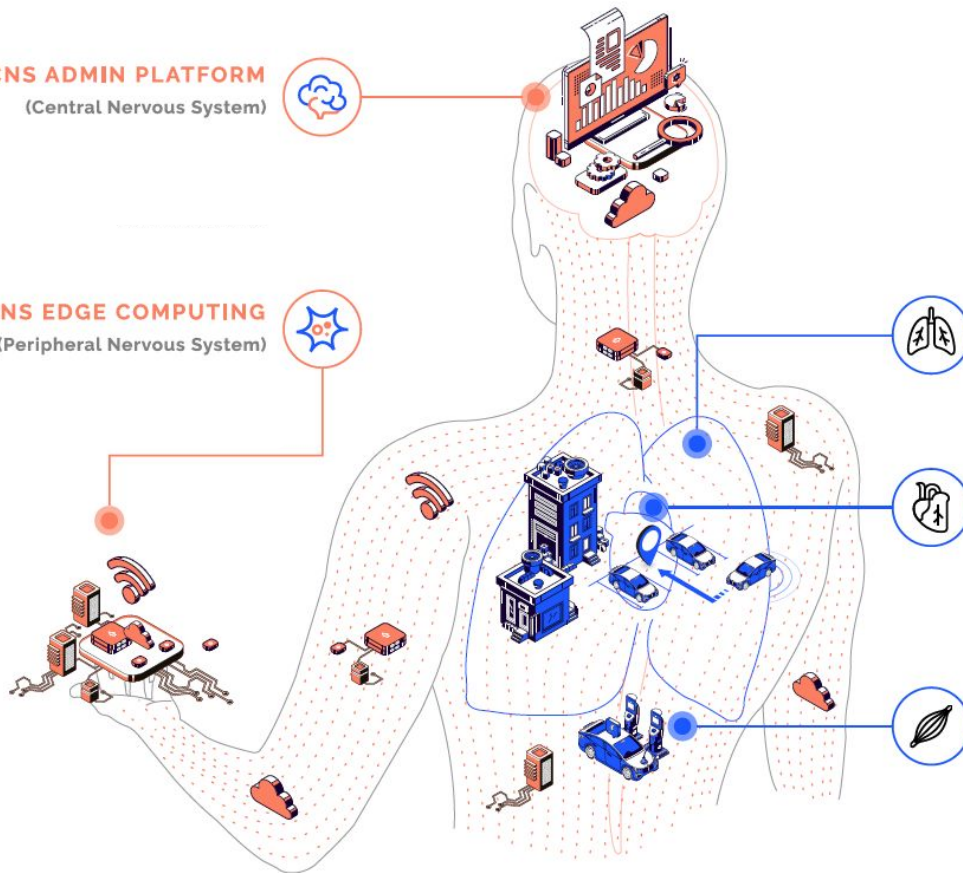


The nervous system **transmits signals** to every part of the body to **coordinate its actions**.

**CNS ADMIN PLATFORM**  
(Central Nervous System)



**CNS EDGE COMPUTING**  
(Peripheral Nervous System)



**ENVIRONMENT IMPROVEMENT**  
(Respiratory System)



**TRANSPORTATION AND MOBILITY**  
(Circulatory System)



**ENERGY EFFICIENCY**  
(Muscular System)





# The Peripheral Nervous System.

+ Wireless connectivity

+ IoT sensing

+ EV charging

+ Edge computing

+ New business models





# The Central Nervous System.

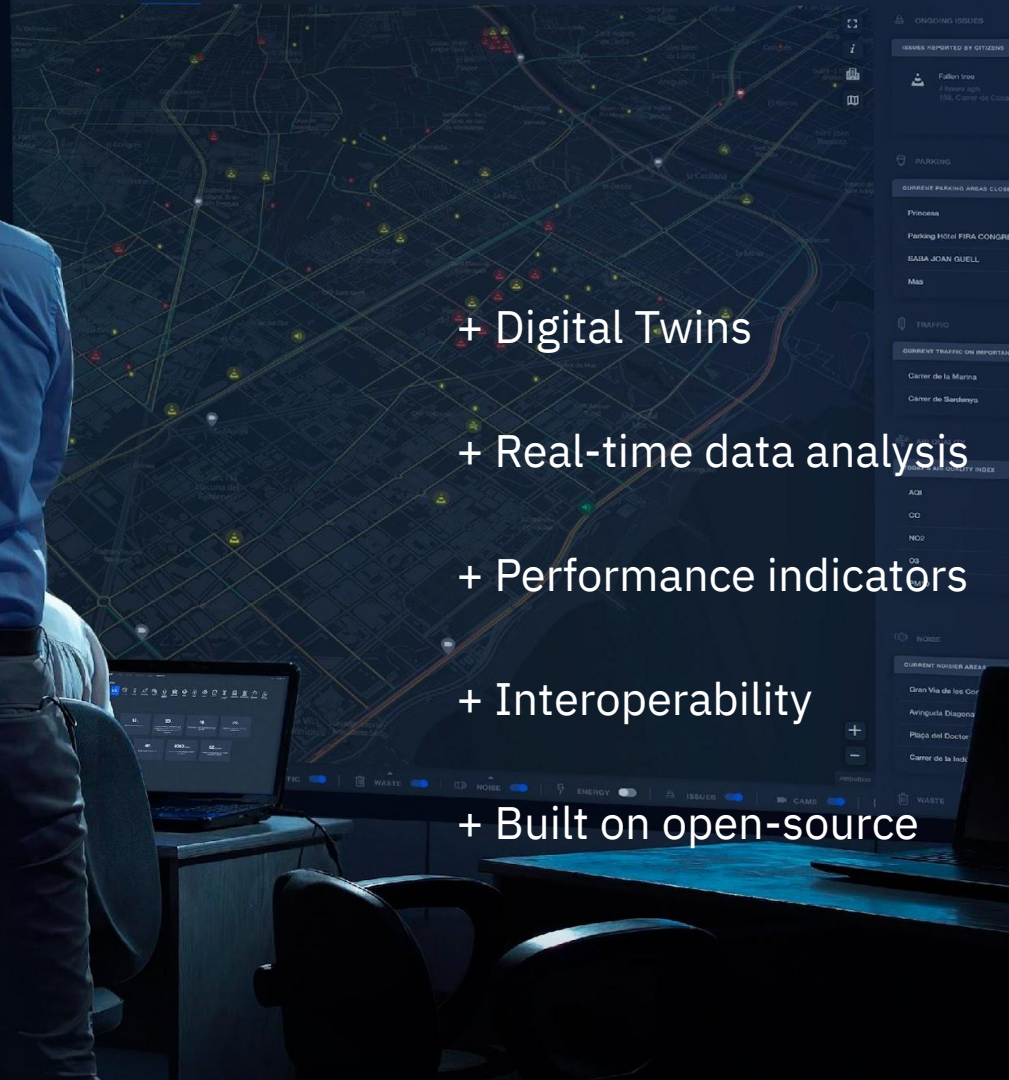
+ Digital Twins

+ Real-time data analysis

+ Performance indicators

+ Interoperability

+ Built on open-source





# About the testbed

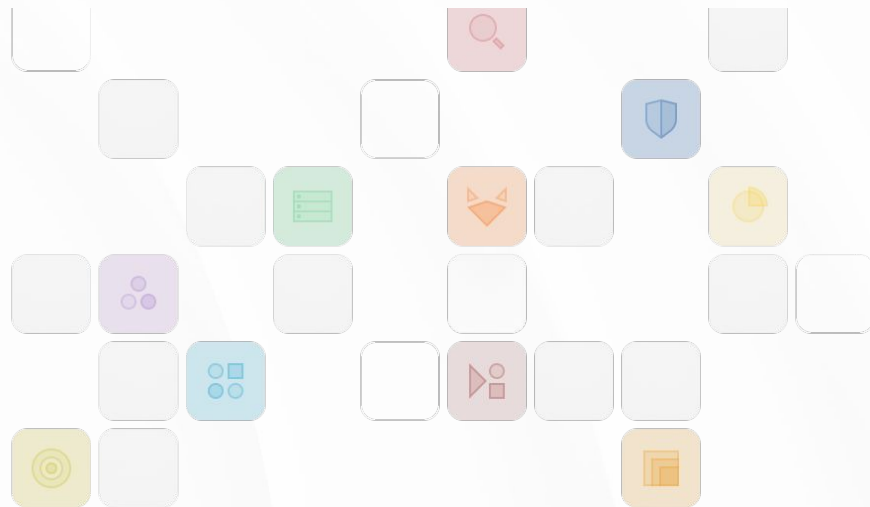
The **DNS testbed** operates like a real **nervous system**, in which the atoms are **technological services** that form the basis for testing and experimenting with innovative solutions for **SMEs** and **start-ups**.



## About the testbed

The target audience are Portuguese SMEs and start-ups.

- 20+ technological services
- 10 activity sectors/areas



# About the testbed

**20+** reliable and user-friendly **technological services** to test innovative ideas and simulate real scenarios for different sectors, to quickly identify and solve problems.

Authentication and Authorization

**Automation**

CI/CD

Cloud Computing

Data

Edge Computing

Interoperability

IoT

Machine Learning

Virtualization



## Operating System for Equipment

Customization of operating systems to meet the specific needs of your organization.



## Network Resource Management

Complete and integrated tool for intelligent company management.



## Data Ingestion and Integration

Constant monitoring that optimizes processes, prevents problems and boosts efficiency.



## Virtualized Applications

Advanced automation that allows you to efficiently install software in technological systems.



## How it works

Increasing commercially-viable pilots.

# 105

pilot products

# 4

pilot waves

## How it works

Each pilot wave consisting of three phases.

# 1<sup>st</sup>

engaging  
companies

# 2<sup>nd</sup>

training  
and support

# 3<sup>rd</sup>

testing and  
experimentation

# How it works

The DNS testbed timeline.

Waves	Time period	Goal
Wave 0	March to December 2023	35 pilot products
Wave 1	September 2023 to June 2024	25 pilot products
Wave 2	January to December 2024	30 pilot products
Wave 3	September 2024 to June 2025	15 pilot products
<b>TOTAL</b>		<b>105 pilot products</b>



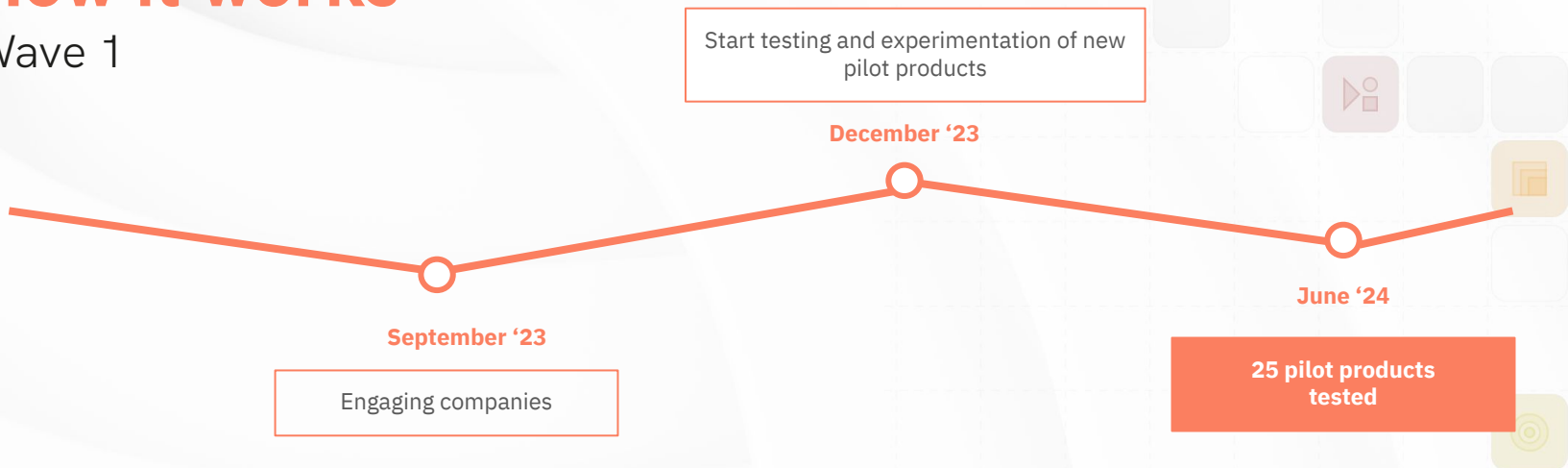
# How it works

## Wave 0



# How it works

## Wave 1



# How it started (March '23)





# Progress so far



Application approved



Demonstration of use cases at the Launch of the National Testbed Network



Participation on Blue Connectivity

# Progress so far



Website  
[www.testbed.ubiwhere.com](http://www.testbed.ubiwhere.com)



Flyer



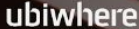
Roll Up

## Progress so far

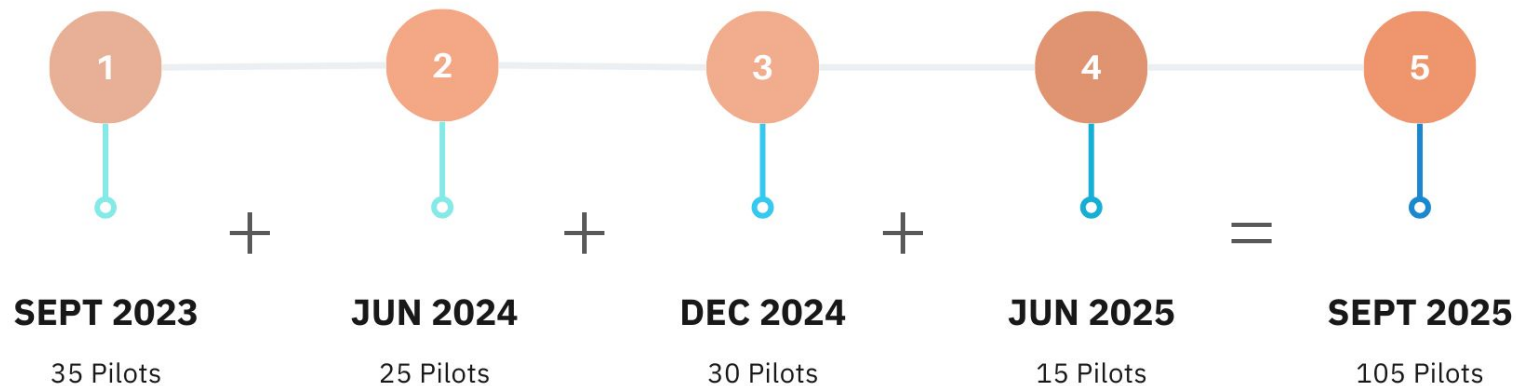
Demonstration of test results.



# Meet us at Aveiro Tech Week 2023!

EXPO	WORKSHOP
2:30 PM	5:00 - 6:30 PM
2nd - 4th October	4th October
<b>Demonstration of Digital Nervous System Testbed Pilots</b> <i>Largo do Mercado Manuel Firmino</i>	<b>Presentation of Digital Nervous System Testbed with Sandra Barnabé, Innovation Manager at Ubiwhere</b> <i>Atlas Aveiro, Aveiro Tech City Hub Floor 2</i>
	

# Suiting the future of SMEs





# THANK YOU

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