# Moving towards the Digital Society: The **SGAIner** Initiative



Belt and Road Conferences





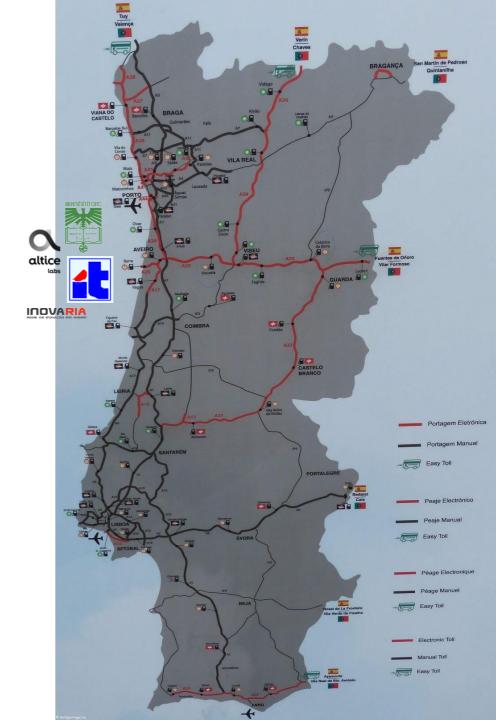




#### Context

- 1. Portugal is developing a 5G policy coupled to a process of digital transition;
- 2. Huawei is a world leader in 5G, and aims to increase its investment in Portugal;
- 3. Aveiro is a leading telecommunication pole in Portugal (academic and industrial-wise);
- 4. Collaboration projects already exist, both in national and international contexts.





#### Goals

Facilitate vertical markets digital transition to 5G

Enable easy development and experimentation

Promote the usage of novel solutions/concepts across vertical markets

Link with international successful use cases, both in Europe and Asia

Assist Portuguese industry in different vertical markets to assess trust and reliability

Smooth challenges in certification processes

Enable further research on next generation network structures.



### **Development lines**

 Deployment of an infrastructure for supporting vertical solutions over 5G

 Dissemination and outreach activities towards different industries

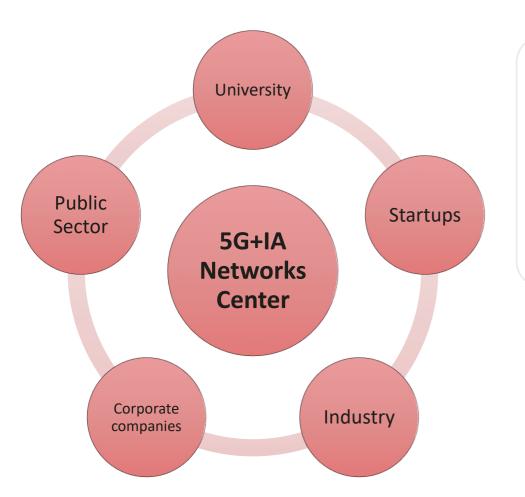
• Improved education and training

• Competence center to support industries in exploring digital transition processes exploring 5G technologies

Initiative adapted in time according to its evolution (and 5G market acceptance)



# A platform to accelerate digital transition of Portugal through 5G and Al





- Equipment and tools
- Best practices
- Funding
- Training
- ...



- Research
- Human support
- Identify new entities
- Fundraising
- ...



### **Development**

# **Deployment and operation**

First basic infrastructure

#### **Early operation**

- Nationwise
- Leverage existing projects with different companies (Bosch, Efacec, Altice, ...)

#### **National operation**

- Expand to future cases and infrastructures
- Potential for IMTT (PASMO infrastucture or 5G-Mobix)

## International operation

- International impact
- Create a well-know competence center
- Able to reach other countries by developing successful use case.

2020 2021 2022



#### **Main Site**















SDN/NFV/MANO

SA 5G Core



(Indoor)



**W** HUAWEI

MEC

-••



5G Radio (Indoor)

5G CPEs



**5G CPEs** 



**SDRs** 

Research Lab



Mobility Testbed





IIoT **Use Cases** 



**Secondary On-Campus** Site



5G Radio (Indoor)



5G CPEs



Energy Use Casel



Transportation **Use Case** 



(Outdoor)

**Outdoor Site** 

Industrial Site

Industrial graded

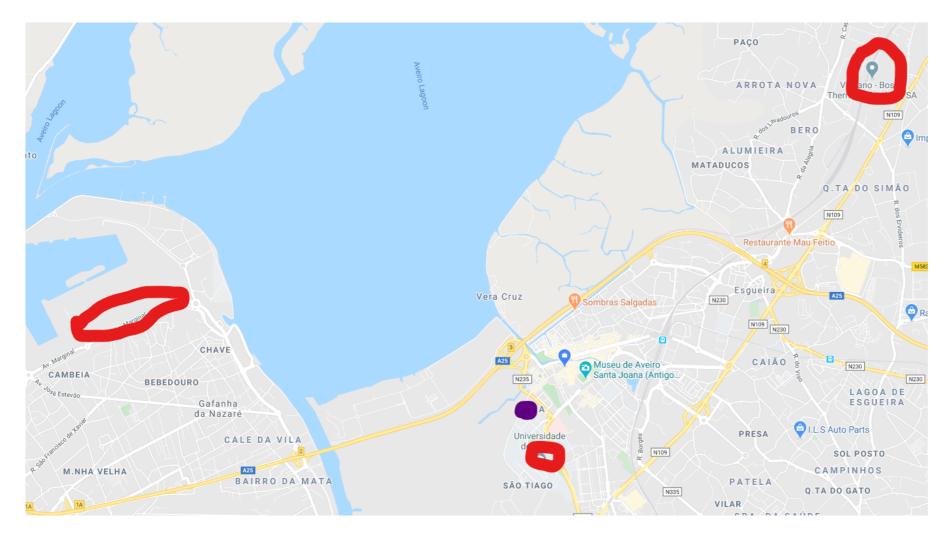
research graded





## Early Deployment Location

Full operational comercially-graded 5G test networks



- Core
  - Instituto de Telecomunicações (campus)
- Access (1st phase)
  - > Campus
  - > Bosch
  - > Aveiro Port
- Al accelerator (MEC)
  - > Bosch



## Reality in 2023

- Build on the (5G) Digital Innovation Hub setup
- Link with other similar initiatives, covering Centro Portugal actors (other DIH, Colabs)
  - > Engage on the establishment of a Zona Livre Tecnológica that can explore the synergies of existing activities
  - > Link with entities like Vortex (Altran) in Fundão
- Potential creation of a R&D innovation pole in Aveiro, associating with other initiatives
  - > Technical, financial and regulatory challenges exist for pushing Portugal to the forefront of 5G innovation.
  - > Support from the Region and development enabler for the Region, transitioning into a knowledge-based economy
  - > Building the conditions for international projects cooperation
  - > Multiple national and international projects being associated:
    - Augmanity 14.0
    - Route25 Vehicular communications
    - ATE Energy management
    - 5GASP PPDR & automotive applications
    - Imagine-B5G testing of advanced 5G infrastrutures



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Questions?





