



Progetto Bari Matera 5G: together for the Digital Future



Progetto Bari Matera 5G



Working together ...



To follow the priorities of the territories, accordingly to the «Patto 2016 per lo sviluppo dell'Area Metropolitana di Bari», «Agenda Digitale della Municipalità di Bari», Strategic Plan Matera 2020 and other priorities



To build a «permanent 5G laboratory» for the requirements of the Public Administration, Industries and citizenship of Bari and Matera



Digital acceleration in the Puglia and Basilicata territories



5G coverage of Bari and Matera: before end 2019



10 Application Areas and more than 70 use cases: start in June 2018



Bari Matera 5G puts Italy to reach the objectives of the Action Plan 5G of the European Commission one year in advance



Bari Matera 5G allows Italy to test network solutions and innovative services that can be applied all around the Country

Progetto Bari Matera 5G



55 Partners

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Universities and Research Centers

Consiglio Nazionale delle Ricerche
Scuola Superiore Sant'Anna di Pisa

Sul territorio:

Istituto tumori di Bari
Politecnico di Bari
Università degli Studi di Bari A. Moro
Università degli Studi della Basilicata
Università del Salento

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PA and public interest communities

Sul territorio:

Aeroporti di Puglia
Agenzia lucana Sviluppo e Innovazione in Agricoltura
Agenzia Regionale per le Attività Irrigue e Forestali
Autorità Portuale del Mare Adriatico Meridionale
Azienda Mobilità e Trasporti di Bari
Azienda Ospedaliera Policlinico di Bari
Azienda Sanitaria Locale di Bari
Azienda Sanitaria Locale di Matera
Conservatorio di Musica "E.R. Duni"
Consorzio per lo Sviluppo Industriale Matera
Fondazione E. Pomarici Santomasì

TIM
Fastweb
Huawei

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Companies in Puglia and Basilicata

Sul territorio:

Digmat
Digital Lighthouse
DileoPietro
Geocart
Graffiti Smart City NEXTOME
Gruppo Servizi Informatici
HSH Informatica e Cultura
Idea 75
Innova Puglia
Isotta Fraschini Motori
Itel Telecomunicazioni
Item Oxygen
Mac&Nil SrL
Medical Electronic Applications
Mer Mec
NEXHIS
OPENET Technologies
Planetek Italia
Publisys
Silos Granari della Sicilia
SITAEL
TECNOBLEND

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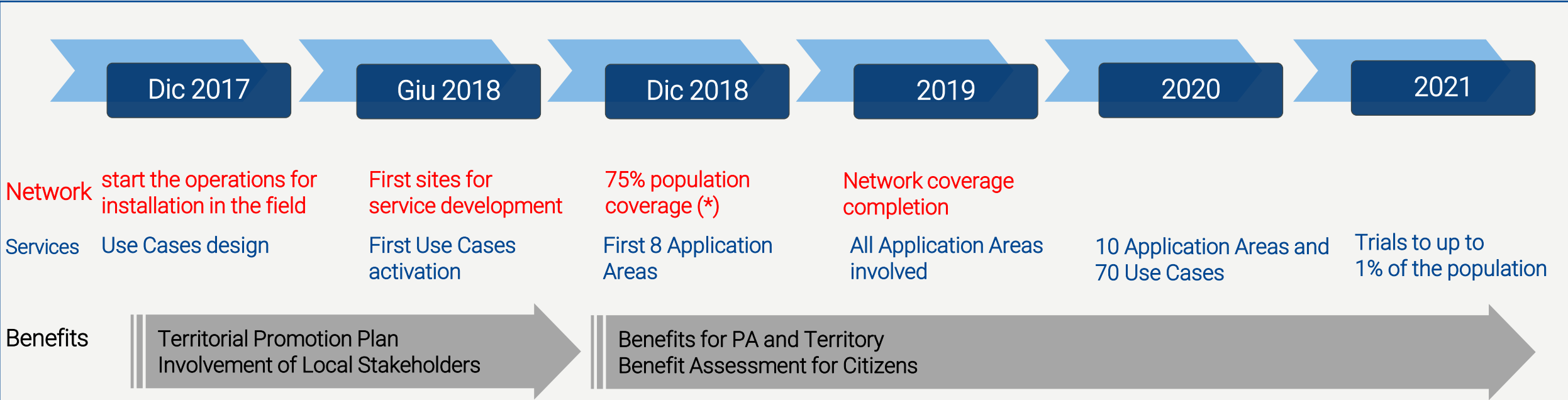
Industry segment leaders and startups

Alleantia
Athonet
Digital Magics
Ducati Motor Holding
Leonardo
NTT DATA EMEA
RAI WAY
Bosch
Sogetel
SPEE - Cybersecurity
TT Tecnosistemi
WAY

3

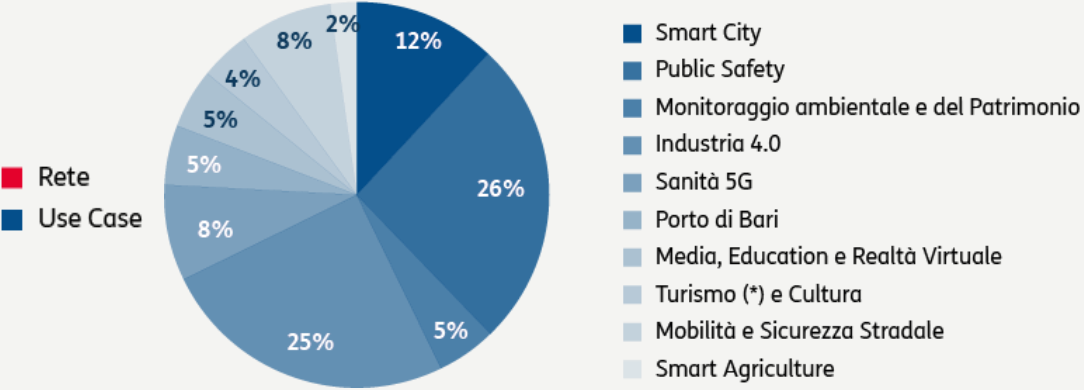
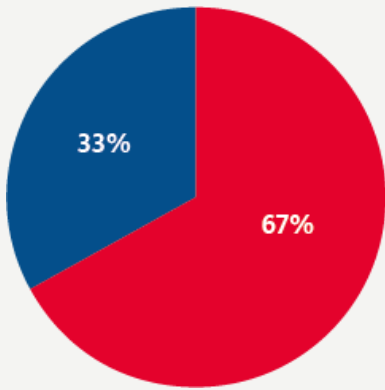
Leaders

Action Plan 2017-2021



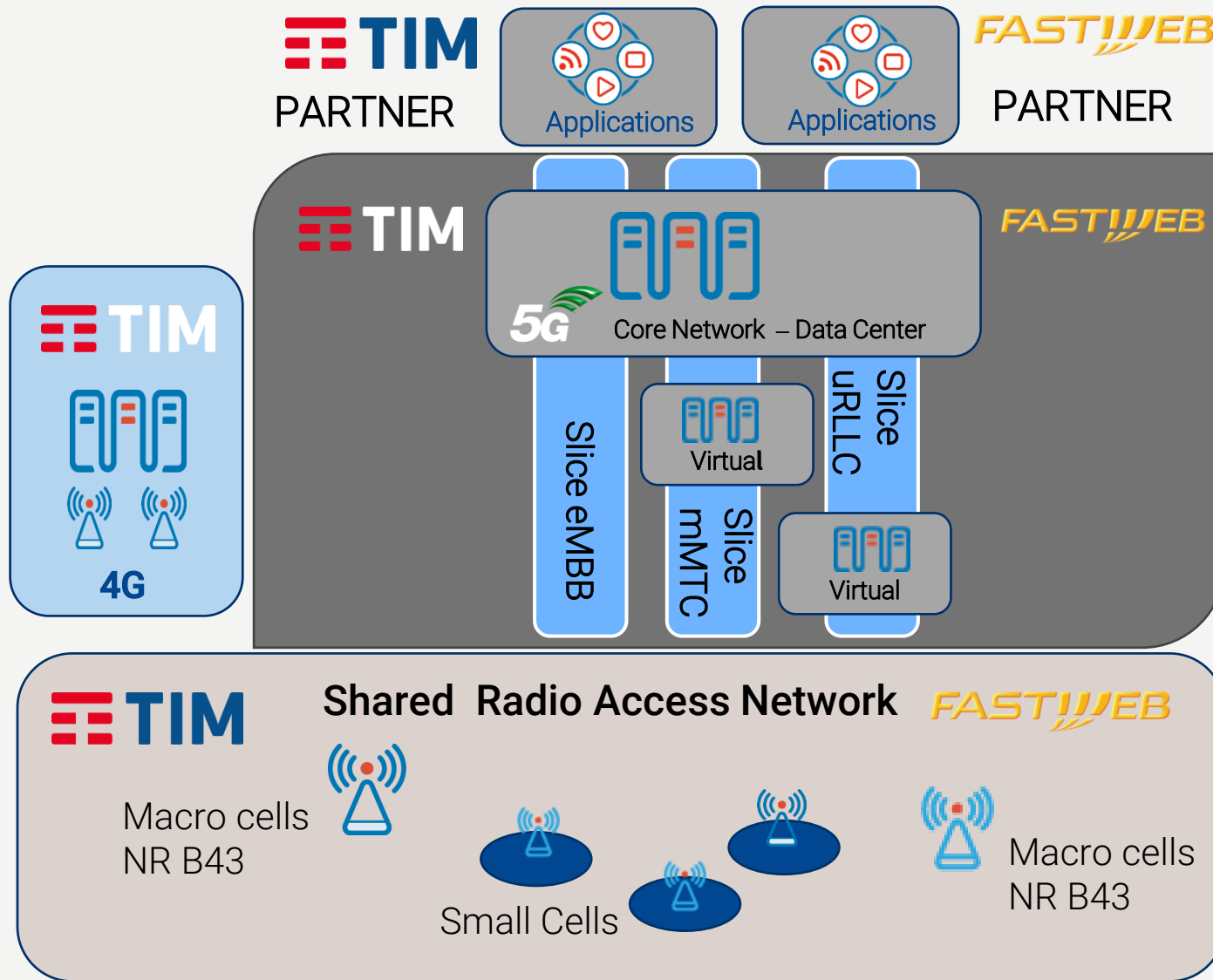
Total value in 4 years:

More than 60M€



(*) value estimated in typical propagation conditions

The new 5G network: quality and flexibility of services



Network open to development of services and apps by third parties

«Network Slice» fitting the use case requirements

Development of the multi-operator access network (*) – First in Italy

Adaptive antennas and micro-cells for optimum coverage

(*) 3GPP 23251 Standard and evolutions

5G «systemic revolution»: 10 application areas, over 70 use case



Progetto Bari Matera 5G



Turism and Culture

- **Virtual visit**

Sassi di Matera, Parco della Murgia Materana, historical churches
Multiplayer Virtual Experience Guide

- **Augmentes reality**

Smart tourism tactile guide navigation
Virtual GeoMusei

Virtual reality for command and control systems

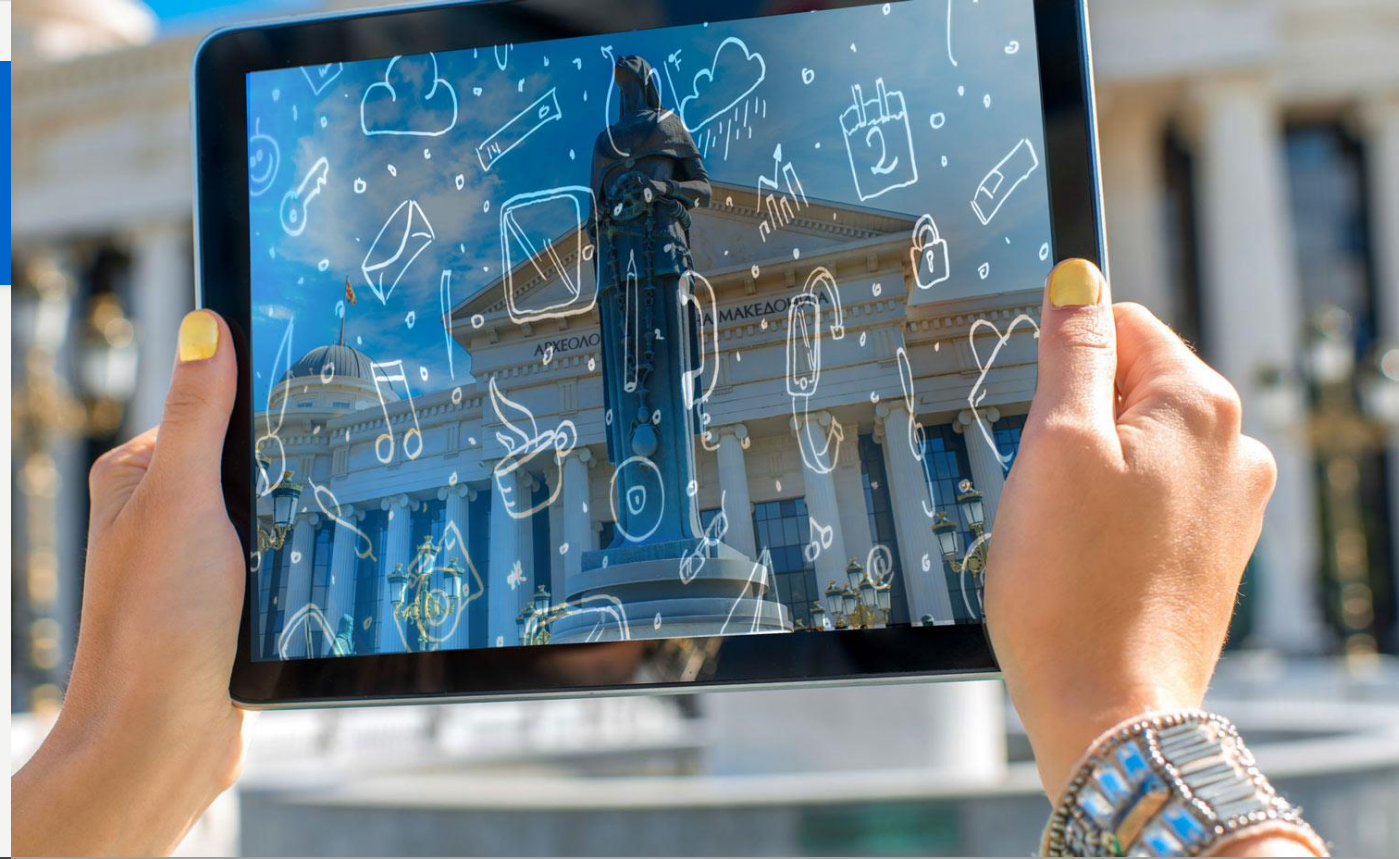
- **TIM**

- Fondazione Santomasi
- Conservatorio E. Duni
- Università Salento
- UNIBA
- CNR
- Digital Light House
- TT Tecnosistemi
- RAIWay

- NTTData
- SOGETEL
- HSH
- Geocart
- Digimat
- Publysis
- Nextome

Potential Beneficiaries

- Comune di Matera
- Comune di Bari
- Enti del turismo
- Enti per la conservazione dei beni culturali
- Associazioni di guide



Progetto Bari Matera 5G





Smart Port

- **Perimetral and environmental security services**
Area access control and monitoring
- **Port logistic services**
Loading and unloading operations automation
Strengthening goods and people management



- TIM
- Fastweb

- POLIBA
- Autorità
Portuale del
Mare Adriatico
Meridionale

- Leonardo
- Bosch
- Athonet
- Rai Way

Potential Beneficiaries

- Porto di Bari
- Forze dell'ordine e della protezione civile
- ARPA Puglia
- Città Metropolitana di Bari
- Regione Puglia

Progetto Bari Matera 5G





Smart City

- **Monitoring**

Monitoring assets and city parameters (Public Lighting, Smart Waste, Smart Home...)

- **Transport**

Security and efficiency of public transportation
Control of parking status and authorization

- **TIM**

- PoliBA
- UNIBA
- NTT Data
- Mac&Nil
- SPEE

Potential Beneficiaries

- Public Security institutions
- Comune di Bari
- Comune di Matera
- Città metropolitana di Bari
- Local corporations of garbage collection
- Port communities
- Parking and public lighting managers
-citizens



Progetto Bari Matera 5G





Public Safety

- **Citizen security and support to Policemen**

Wearable Cam, Smart Bracelets for mass events

Drones for public security

Land control and emergency handling

- **5G integration with existing platforms for big events security**

Stadium

Matera 2019

C.A.R.A, Airport...

• TIM

• Fastweb

• UNIBA

• CNR

• NTT Data

• Planetek

• InnovaPuglia

• Leonardo

• Bosch

• Athonet

• Aeroporti di Puglia

Potential Beneficiaries

• Comune di Matera

• Comune di Bari

• Traffic Police

• Insurance Companies

• San Nicola Stadium - Bari

• Bari C.A.R.A.

• Police

• Civil Protection

• Private security companies

• Mass event organizers

• ... citizens



Progetto Bari Matera 5G





Environmental Heritage Monitoring

- **Smart Environment**

Monitoring of air quality, electromagnetic field, micro-climate for buildings of historical importance

- **Smart Infrastructure**

Monitoring of environmental parameters of art assets, buildings, bridges and structures, water systems and railways
Drones for territory data collection

- **TIM**

- **NTTData**
- **CNR**
- **Nexhis**
- **MERMEC**

- **ARIF Puglia**
- **Digimat**
- **HSH**
- **SITAE**

Potential Beneficiaries

- **Comune di Bari**
- **Comune di Matera**
- **Regional administrative offices**
- **ARPA**
- **Matera Superintendence**

- **Rioni Sassi di Matera**
- **RFI - Rete Ferroviaria Italiana**
- **Consortium and water institutions**



Progetto Bari Matera 5G





Industry 4.0

- **Digitalization of processes for production support**
Asset tracking, Smart Safety and Smart Maintenance within a factory
- **Digitalization of the supply chain**
Integrated management of the supply chain based on distributed sensors

- | | | |
|-----------|-----------------|--------------------|
| • TIM | • Bosch | • Consorzio per lo |
| • Fastweb | • Uniba | Sviluppo |
| | • Alleantia | Industriale |
| | • Idea75 | Matera |
| | • Tecnoblend | • Isotta Fraschini |
| | • Di Leo Pietro | Motori |



Potential eneficiaries

- Employees of every production entity in Bari and Matera
- Public institutions for working security

Progetto Bari Matera 5G





Health 5.0

- **Hospital healthcare and remote diagnostics**

Remote diagnosis, remote monitoring of vital parameters

Home telemedicine and mobile remote diagnosis

Medical assets tracking

- **Hospital E-learning**

Smart-education for hospitalized children

- TIM
- Fastweb

- ASL Bari
- ASL Matera
- IRCCS Bari
- Policlinico Bari
- Medea
- AMTAB
- Item Oxygen
- Digital Magic

- UNIBA
- POLIBA
- NTTData
- GSI
- ITEL
- Openet
- Digimat

Potential Beneficiaries

- Partner of healthcare institutions
- Regional school departments
- Involved hospitals
- Private and public health centres

- Patients
- Doctors and paramedics
- Hospitalized children



Progetto Bari Matera 5G





Media and Virtual Reality

- **Services for contributing to advanced multimedia contents**
Video 4K and Virtual Reality for live events and remote production
Services for news contributing
- **Services for distributing advanced multimedia contents**
Video 4K and Virtual Reality for live events
Augmented and Hybrid Reality

- TIM
- Fastweb

- Rai Way

Potential Beneficiaries

- Comune di Bari
- Comune di Matera
- Città metropolitana di Bari
- Regione Puglia
- Regione Basilicata



Progetto Bari Matera 5G





Mobility and Road Safety

- **Road Safety**
Signalling of dangers and obstacles positioning
- **Assisted Driving**
Segnalling and detection of road signs and state of the roads
- **Logistics e Monitoring**
Dynamic management of lane access
Insurance telematics
Smart Logistic

• TIM

- SSSA di Pisa
- Ducati
- NTTData
- SPEE
- Digital Magics
- Way

Potential Beneficiaries

- Comune di Bari
- Comune di Matera
- Città metropolitana
- Compagnie assicurative
- ... automobilisti



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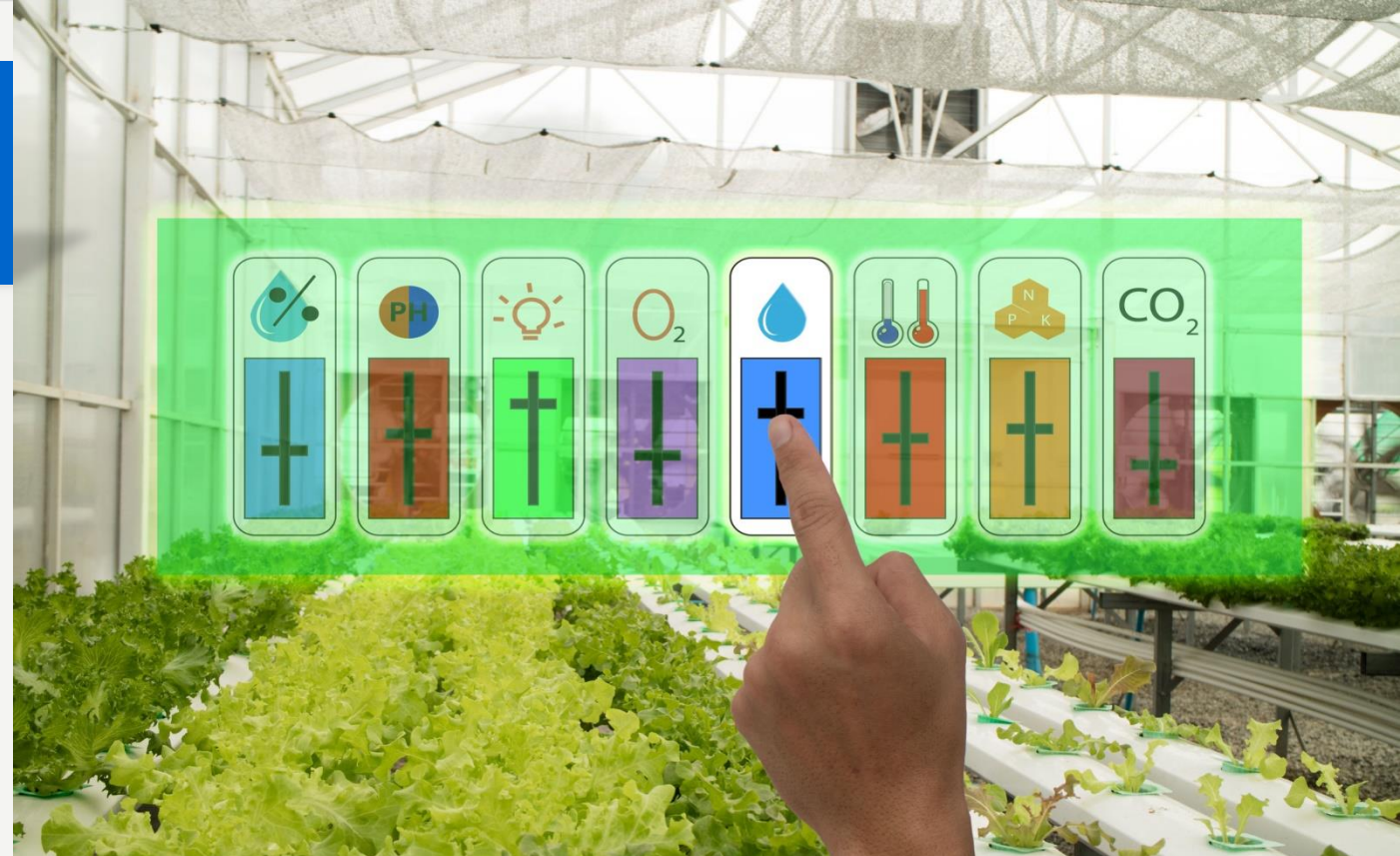
Smart Agriculture

- **Precision Agriculture**

Optimization of resources, for example water
Precision Agriculture with Autonomous Vehicles
Integrated system for agriculture management

- TIM
- Fastweb

- POLIBA
- UNIBAS
- CNR
- ALSIA
- Digimat
- Silos Granari



Potential Beneficiaries

- Associazioni agricole
- Cooperative agricole
- Centri di competenza nella gestione delle culture
- ARPA
- Aziende agricole

Progetto Bari Matera 5G



Benefits for the 5G communities of Bari and Matera



Increase of productivity,
stimulus for employment



Increased prevention and security,
greater efficiency of law enforcement



Greater control of the quality
of the territory and public property



Innovative services for citizens
in a context of smart city



Better health care,
monitoring the health conditions of workers



Greater value for
naturalistic, artistic and cultural heritage

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Thank You