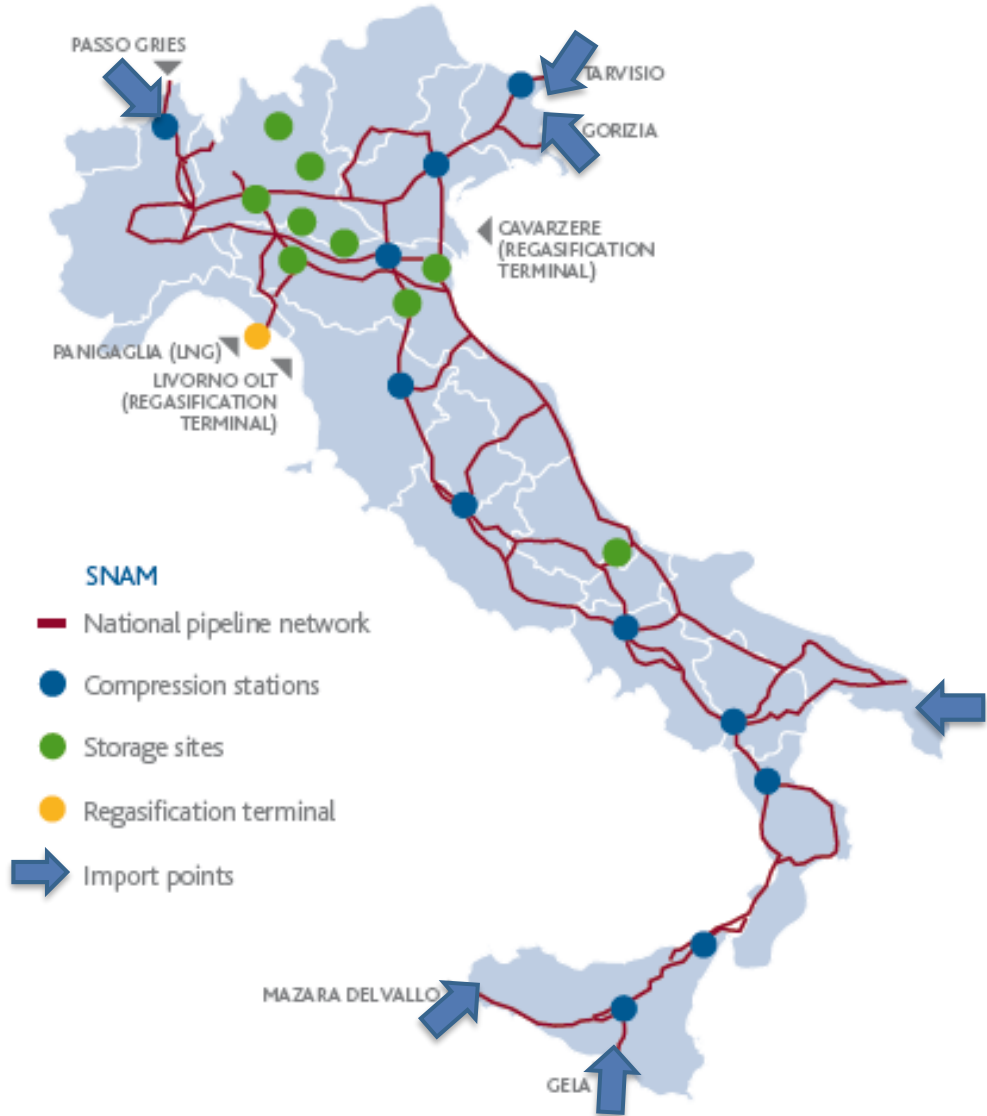


IEEE RTSI Firenze



Firenze, 11 September 2019

An Italian and European leader in gas infrastructure



Integrated operations in Italy



TRANSPORT

- **32.625 km** of gas pipelines
- **13 compressor stations** (**961 MW** installed power)



STORAGE

- **9 storage fields** (each with a compressor station and a treatment plant)
- **16.9 billion m3** of total storage capacity (including strategic storage)



LNG

- **1 regasification terminal**
- **17,500 m3** of LGN – maximum daily regasification capacity

European presence through 5 International associates

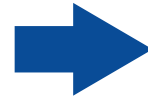


SnamTEC: €850m for the “Snam of the future”



From a company focused on:

- fossil fuels
- steel
- an «underground» business



...to a company:

- leader in the **renewables**
- with a **high technological profile**
- **interconnected** with the territory

Snamtec – Tomorrow’s Energy Company

Biomethane and green gas



- €100m investment in biomethane
- Projects on hydrogen and power to gas

Sustainable mobility



- €100m investment in CNG and in SSLNG
- Cooperation along the chain on the development of sustainable mobility

Energy efficiency



- Real-time remote leak detection
- Energy Efficiency
- Cogeneration
- Equipment substitutions

Technologies



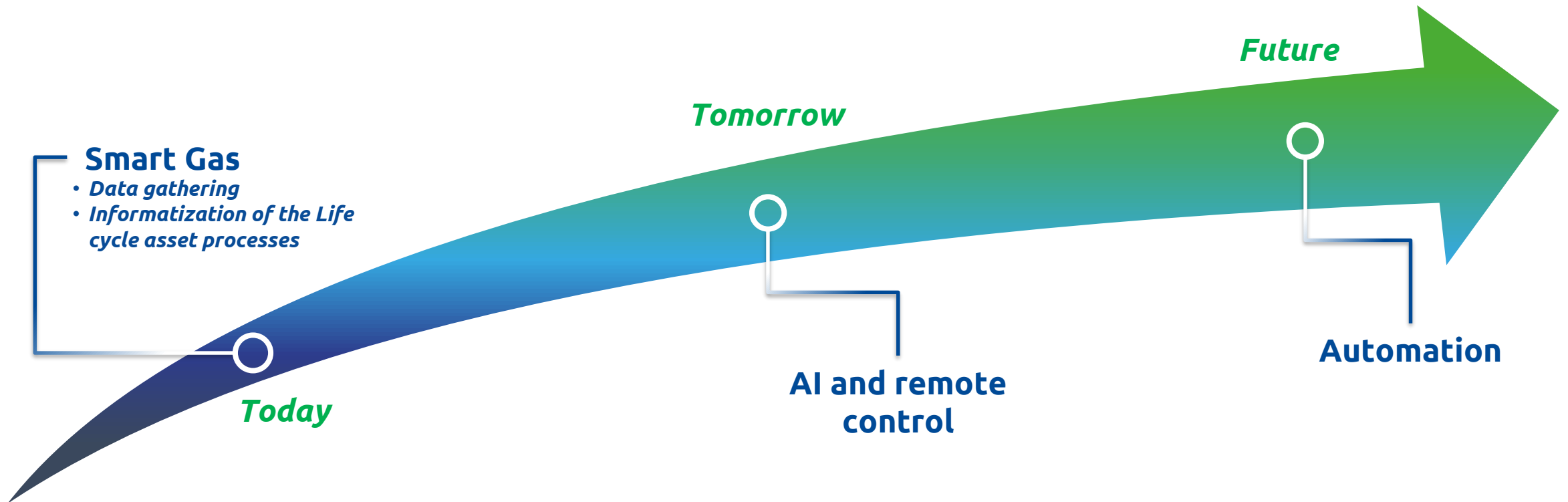
- «Smart gas» project
- Neural network forecasting project (DAFNE)
- Testing drones and satellites for asset monitoring

Snam: a Data Driven Company



Smart Gas Project is the first step towards a Data Driven Company:

- Asset life cycle processes digitalization
- Asset data real time updates



Smart Gas: An integrated asset management model



REAL-TIME DATA STREAM

“Smart” asset design phase:

- Integrated with **Geographical Information Systems**
- Asset **data collection systems**



AUTOMATIC WORK-FORCE MANAGEMENT

- Automatic definition of **work-order planning**
- Automatic scheduling and **assignment of work orders** on field activities



- >1.000 users connected
- >400.000 work orders managed yearly
- >800.000 working hours automatically scheduled yearly



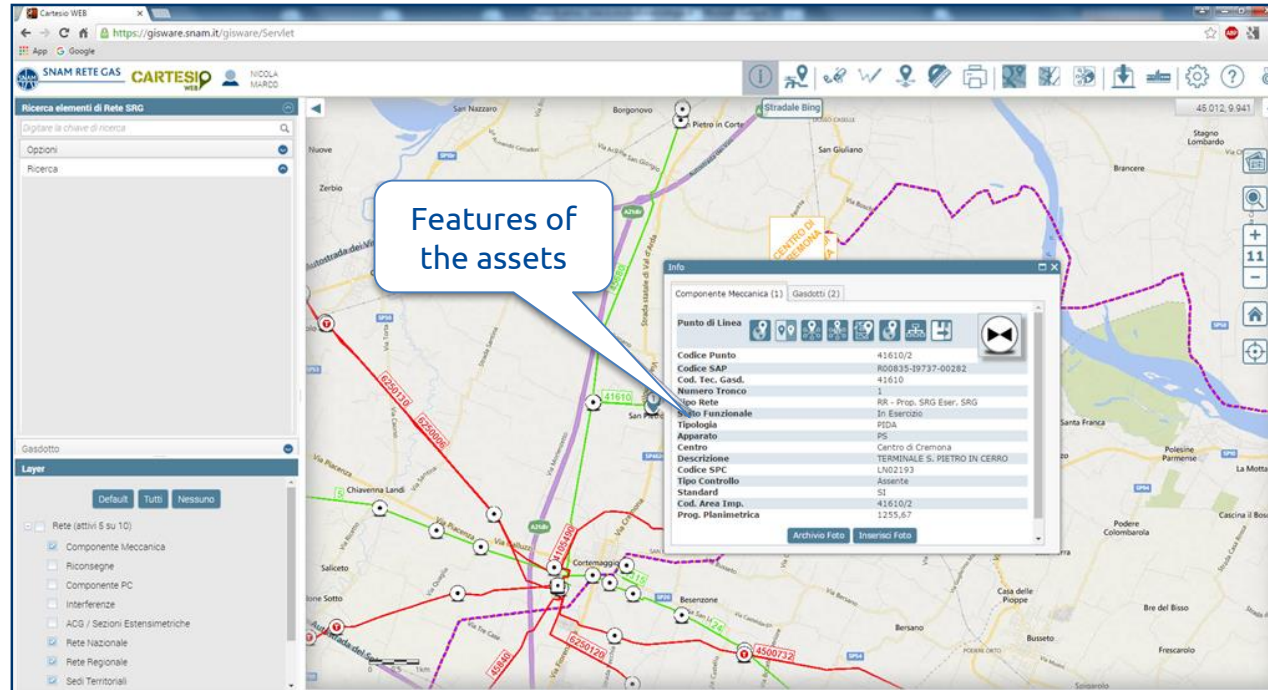
ADVANCED MOBILE SUPPORT

Field workers rely on:

- Integrated **navigator**
- **Augmented reality**
- **Remote** operational and collaboration tools



Smart gas - Main tools



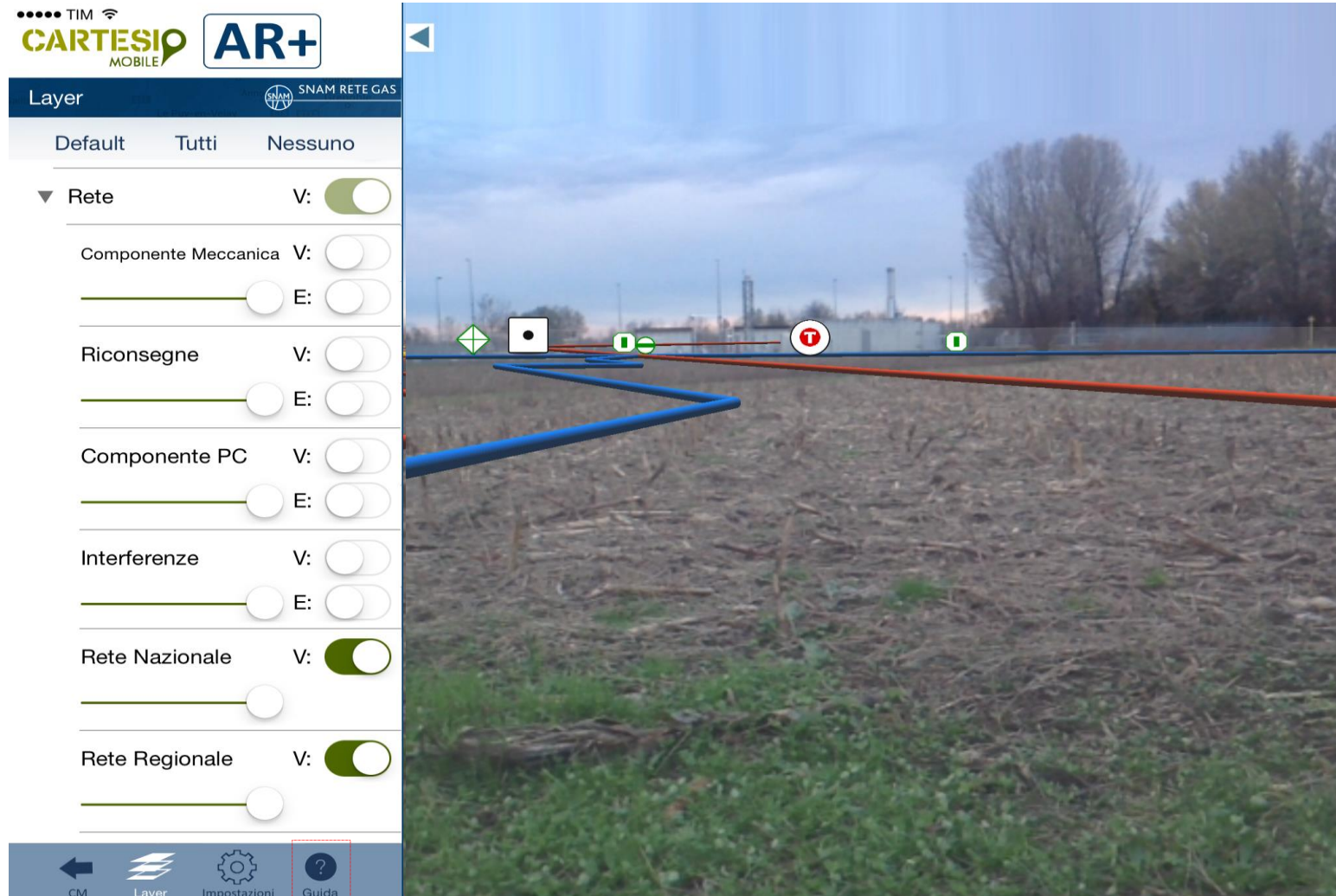
- Display **detailed data and features of the assets**

- **Attach images and photos to the assets**

- Display the **Google "Street View"** near the asset



Smart gas - Main tools - Augmented reality



- Augmented reality allows to display the **3D pipelines paths** and the location of other relevant assets by using the camera