



### **Action Plan Implementation**

Regione Autonoma della Sardegna

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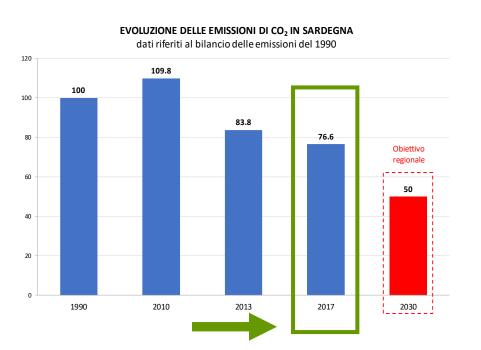
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## Regional objectives



#### 2030 Regional Objective: CO2 Emissions -50% (compared to 1990)



Co2 emissions trend in Sardinia has steadily declined.

Emissions generated by the Thermic transformation and consumption sector decreases, Transport macro-sector increases

As part of the regional and national objectives, the strategy put in place provides for the articulation on different and synergic projects aimed at a decisive reduction of **climate-changing emissions** through:

- Maximizing self-consumption
- Maximizing of energy efficiency;
- Energy generation and distribution based on Smart Grid.



# Strategic projects

RAS is mainly the <u>planner</u> (and at times the developer) of **strategic projects** such as:

- 1 Electric mobility promotion
- Micro and smart grid experimental projects in two villages: Berchidda and Benetutti
- **3** SME efficiency incentives
- 4 Pilot project for a smart-grid in Sassari and Cagliari University
- 5 SmartER Project Smart grid degli Edifici Regionali
- 6 Experimental plan in the industrial Area of Ottana
- 7 Partnership in European projects



### **Our Actions**



1. Low carbon Mobility

2. Cycling & walking mobility

3. Intermodality





### **Regional Action Plan for charging stations**

Regional Plan formally adopted in November 2018

It delivers a detailed study that, in relation to the residents and tourists mobility demand, identify for the all the regional territory:

- Places to install charging infrastructures: main urban areas, touristic areas (such as ports, airports, train stations) and main regional roads.
- Typology and technical features of infrastructures (fast, quick, slow)
- Costs and public procurement processes

Overall, 145 areas, 582 charging stations, 878 charging points



# Regional Action Plan for charging stations for electric vehicles

The **agreement protocol** with the Municipalities involved and a Private operator (Enel X) has been signed in May 2021. Installations to be completed by June 2023 Project updated to 602 charging stations in 28 Municipalities

#### Private Operator:

- The regional electric charging network will be implemented and managed by the private operator with own resources (i.e. no public funding) on the basis of the Regional Action Plan for charging stations
- The Private Operator will implement an informative and promotional campaign towards residents and tourist (app included) to promote the net and the electric mobility



# Regional Action Plan for charging stations for electric vehicles

#### Municipalities:

- guarantee to the private operator the free-of-charge grant of public areas where installing the charging stations
- Renew their own fleet with electric vehicles





# Regional Action Plan for charging stations for electric vehicles

#### Region of Sardinia:

- coordination between Municipalities and the private operator in order to simplify the administrative procedures needed to grant the areas for charging stations
- the funding needed to incentive public administrations and private operators to purchase electric vehicles (ongoing)
- The funding needed to incentive private operators to build charging stations along the main regional roads (powered by renewable energy and integrated with their own microgrid)

#### **Regional Operational Programme Sardegna ERDF**

- Act. 4.3.1. "Smart grids"
- Act. 4.6.4. "Low-impact transport infrastructure and charging hub"





# Electric mobility for smart cities (National funds)

#### **ACTIONS:**

- 1. Incentives to replace motor vehicles with electric vehicles:
- for enterprises thought open call

245 CARS - Budget: 4.000.000€



for public Administrations

130 CARS - Budget 2.990.000€ thought a framework agreement

84 CARS - Budget: 3.218.000€ thought an open call



# Electric mobility for smart cities (National funds)

- Creation of a regional network of recharging infrastructures (Città Metropolitana di Cagliari, Rete Metropolitana di Sassari, Nuoro, Oristano and Olbia)
- Public/private partnership without public funding
- Supervision by RAS
- Permits by local administrations / Municipalities in progress



# Electric mobility for smart cities (National funds)

3. co-financing individuals and SMEs for the construction of charging infrastructures powered by photovoltaic – Sardinian main roads through open call

➤ 10 projects funded - Budget: 2.400.000€



4. integration of electric mobility with smart grids in the municipalities of Santa Teresa di Gallura and Sant'Antioco

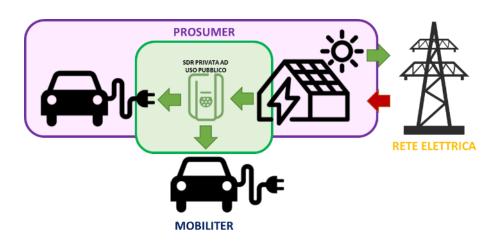
➤ Budget: 1,800.000€



### Stakeholder pilot: **SUN2CAR**

- Innovative smart charging station
- Small private/public charging stations connected to photovoltaic solar energy production with autoconsumption.
- Located strategically so to mitigate the range anxiety and promote local attractions
- Partnership with commercial and tourist services.
- First development with RETIC
   Interreg Maritime project, Pilot
   project with Sardara Municipality.

PARTNER RETIC







UN PROGETTO DI









### Stakeholder pilot: SUN2CAR

#### CIS - AREA CAMPIDANO-MARMILLA-LINAS







PARTNER RETIC









### Stakeholder pilot: SUN2CAR

Second charging station full renewable h24 18/03/2022







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# Cycling & walking mobility

### Implementation of the Regional Cycling Mobility Plan

#### The Regional Plan

- approved in December 2018
- It identifies and plans the regional cycle network
   (> 2000 km of cycle routes)
- The regional cycle network has been proposed to be part of the European network (EuroVelo) and of two national networks (National System of Tourist Cycle Routes and Bicitalia)



### The cycling mobility plan of Sardinia



- 256 URBAN CENTRES
- 231 MUNICIPAL TERRITORIES
- 3 AIRPORTS
- 8 PORTS
- 49 RAILWAY STATIONS
- 432 BUS STOPS

- BIKE + TRAIN ROUTES (550 km)
- 2 NATIONAL PARKS
- 4 REGIONAL PARKS
- NATURA 2000 SITES
- 2 UNESCO SITES
- 747 PLACES OF INTEREST





### The SNCT extension proposal

The Cycle route of Sardinia is part of the Sistema Nazionale Ciclovie Turistiche (SNCT) - **National System of Tourist Cycle routes** proposed by MIMS and MIBACT.

18 CYCLE ROUTES (1,117 km)

- BIKE + TRAIN ROUTE
  (30 km)
- 152 URBAN CENTRES
- 3 NATIONAL PARKS

MUNICIPAL TERRITORIES

4 REGIONAL PARKS

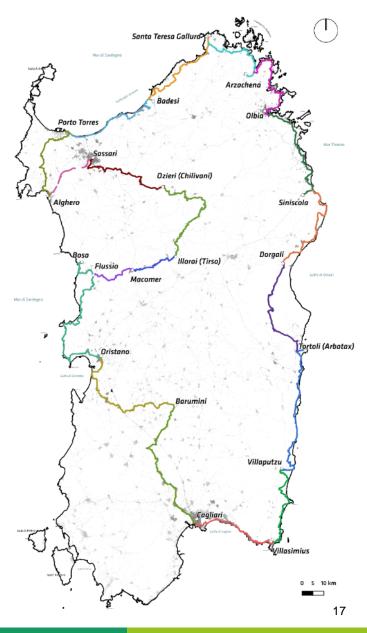
3 AIRPORTS

37 NATURA 2000 SITES

6 PORTS

- 1 UNESCO SITE
- **25** RAILWAY STATIONS
- PLACES OF INTEREST

697 BUS STOPS





#### SNCT - Sardinia timeline

**IN PROGRESS** 

**SUBMISSION & ACCEPTANCE** 2017 The bicycle network is accepted to be included in SNCT network. 2019 **CONFIRMATION & START OF THE DESIGN** Start of the design of the Cycle route of Sardinia PRIORITY TRACK **2020** Definition of the priority section: from Alghero to Cagliari 2021 PROJECT DELIVERY Delivery of the Technical and Economic Feasibility Project to MIMS DEVELOPMENT OF THE NEXT DESIGN LEVELS

Development of the next design levels of the priority section



### THE ECONOMIC FRAMEWORK

#### **CONSTRUCTION COST: 355M€**

#### **RESOURCES AVAILABLE: 65M€**

8M€ regional infrastructure plan priority routes

7M€ ERDF 2014-2020 – Action 4.6.4 metropolitan areas

16.6M€ MIMS - SNCT

Cycle route of Sardinia

.... 33M€ PNRR
Cycle route of Sardinia

5 routes covering around 670 km

3 sections
covering around 40 km
Metropolitan area of Cagliari
Sassari - Porto Torres
Olbia harbor - airport

8 route covering 770 km



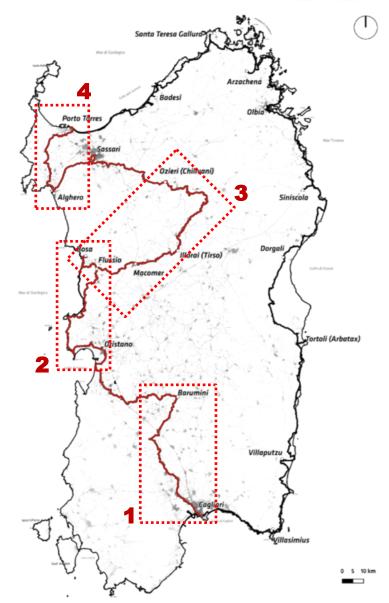




1<sup>st</sup> PRIORITY SECTION RAS: € 8,000,000.00

#### PROJECT DEVELOPED:

- 1) Cagliari-Barumini
- 2) Terralba-Oristano-Bosa
- 3) Bosa-Macomer-Ozieri
- 4) Alghero-Porto Torres





### Cycling: Alghero-Porto Torres-Sassari







1st PRIORITY SECTION SNCT: € 16,622,512.36

#### Lot 1 - Track 1

From: Cagliari, P.zza Matteotti

To: Elmas

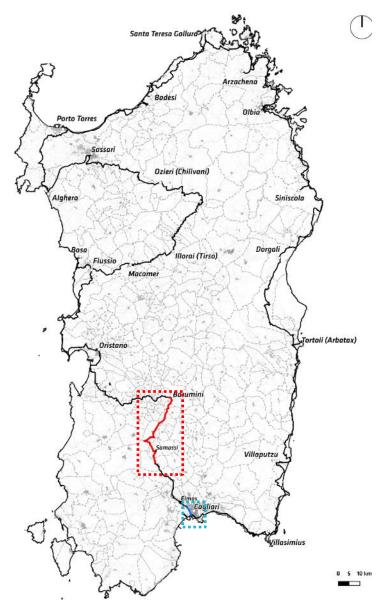
Length: 5 km

#### Lot 1 - Track 2

From: Samassi

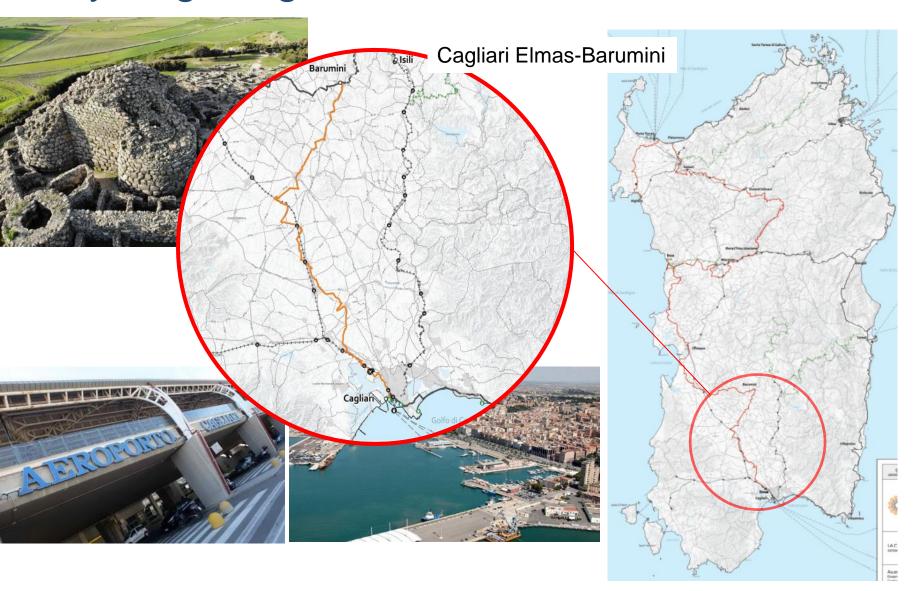
To: Barumini, Su Nuraxi (UNESCO)

Length: 38 km





### Cycling: Cagliari Elmas-Barumini





### THE PRIORITY SECTIONS

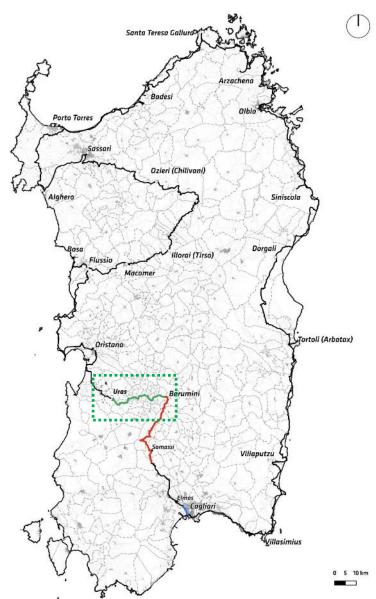
# 1st PRIORITY SECTION NEXT STEP

#### Lot 2

From: Barumini, Su Nuraxi (UNESCO)

To: Uras/Terralba

Length: 43 km



# Stakeholder contribution on accessibility







- Platform created to enable smart mobility. Passenger information and ticketing are the cornerstones of a complete SaaS product
- VIRTUAL TRAVEL ASSISTANT: the app is optimized to be best enjoyed by the blind people. Features a virtual travel assistant and the automated booking at the pick-up point directly linked to the control center or the driver.
- AUTOMATIC CHEK-IN & CHECK-OUT: uses Bluetooth technologies for the automatic check-in and check-out operations. This feature is very important to enable accessibility for visitors with mobility problems, which must not interact with the ticket validator on board the vehicle.

# State of the art and DESTI-SMART legacy



At the time of this event, RAS is transitioning to the new programming (ERDF 2021-27). The programme negotiation is still open and the final decisions are expected by second half of 2022. Consequently, the main effort is now on the development and completion of ongoing projects.

The proposed programme related to "Green Transition" allocates a budget of 473M€ which, together with the "Urban Sustainble Mobility" (53M€), make up for 35% of the Programme for Sardinia. Among others. Thanks to DESTI-SMART, planned activities include among others:

| Mobility                                                                                                      | Energy                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Promotion of sustainable multimodal urban mobility as part of the transition to a net zero carbon economy     | Increase in the use of renewable energy in public buildings                                                                    |
| Clean urban transport infrastructures                                                                         | Increase in the use of renewable energy in buildings, plants and business processes                                            |
| New cycling infrastructures                                                                                   | Support for the establishment of energy communities                                                                            |
| Digitization of transport, if dedicated in part to the reduction of greenhouse gas emissions: urban transport | implementation of digital management<br>systems for intelligent energy systems,<br>including intelligent grids and ICT systems |
| Infrastructure for alternative fuels                                                                          | Solutions for the storage of electricity                                                                                       |
| Zero emission/electric mobile railway infrastructures                                                         |                                                                                                                                |







### Thank you!

http://www.regione.sardegna.it/sardegnaenergia/ https://www.sardegnaturismo.it/

Servizio Energia ed Economia Verde

Assessorato dell'Industria, Regione Autonoma della Sardegna

