



P14

## Inventory of best practices by region

February 2020



Fondo Europeo di Sviluppo Regionale

P14 – Inventory of best practices by region

## **THE INTERREG V-A ITALY-SWITZERLAND CO-OPERATION PROGRAMME**

**AXIS III** - Integrated and sustainable mobility

**Specific objective 3.1** - Improving mobility in cross-border areas

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**Authors** Giorgio Gabba (Protoscar SA), with the contribution of Alyona Zubaryeva of Eurac Research (South Tyrol data) and Giuseppe Testa of the Municipality of Verbania (VCO data).

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## 1 Project Summary

The **MOBSTER** project (Mobility and Sustainable Tourism with Electric Vehicles) considers the tools already in use in the field of e-mobility and applies them - in an innovative way - to the promotion of electric mobility and sustainable tourism in the cross-border locations of Italy and Switzerland.

The initiative involves Italian and Swiss partners from the provinces of South Tyrol, Verbano-Cusio-Ossola and Canton of Ticino, all areas where tourism plays a priority role.

## 2 Document Summary

This document concerns the results of activity A3.1 of WP3. After presenting the method for collecting information, we move on to the review of the situation of electro-mobility in each territory, focusing on issues that have the greatest impact on the tourism sector, without neglecting those that have an indirect impact. In the section dedicated to research results, we analyse issues from a variety of experiences that may be considered as best practices to be used as a reference for the MOBSTER project.

## 3 How experiences were collected

The information for the preparation of this document was provided by EURAC, as regards the province of Bolzano, and by the Municipality of Verbania as regards the province of Verbano-Cusio-Ossola (hereinafter VCO), with some contributions by Protoscar, which also collected information from the Canton of Ticino. The collection of experiences derives from the knowledge of each project partner, from direct contacts with people and organisations that are active in the tourism and electro-mobility sector of each territory, as well as from Internet research.

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As far as two-wheelers are concerned, the tourism offer is substantial across the 3 territories involved in the project; for this reason, we chose to showcase only the most interesting examples.

## 4 Electro-mobility at present

The issue we considered relevant for the tourism sector are:

- offer of public charging infrastructure,
- offer of private charging infrastructure at tourist facilities,
- itineraries or tourist packages dedicated to owners of electric vehicles.

The aspects that have an indirect impact on tourism and that we considered important for the project are the electro-mobility support policies, i.e.:

- direct policies: that is, economic benefits for the purchase of electric vehicles and charging stations,
- indirect policies: that is, information actions to make electro-mobility known.

Although these actions are generally aimed at residents, they still constitute a starting point on which to engage initiatives aimed at the tourism sector.

Note that for the VCO the information focuses essentially on the Verbania area.

### 4.1 Issues with indirect impact on the tourism sector

#### 4.1.1 Province of Bolzano

The autonomous province of Bolzano offers contributions both for the purchase of plug-in electric and hybrid cars, and for the purchase of charging stations. The initiative is aimed at both individuals and companies.

The contribution is € 4,000 for the purchase of electric cars and € 2,000 for plug-in hybrids with emissions below 50 g/km (see [1] for details). Half of the subsidy is made available by the Province, while the other half is in the form of dealer discounts. For companies, there are also contributions for the purchase of electric bicycles or tricycles (30% of the cost, with a maximum ceiling of € 1,000). We also point out the higher contributions for driving schools and taxi companies.

Charging stations for private individuals are subsidised up to 80% of the eligible expenditure, with a maximum ceiling of € 1,000, (see [1] for details). Similar conditions apply to companies, with subsidisable costs of up to 70%.

We point out the eTestDays initiative (see [2] for details), dedicated to companies, which makes an electric car available for trial drives for 4 days. It is interesting to note the

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presence of several hotels among the 75 companies that participated in the 2019 eTestDays. Another promotional initiative, dedicated to everyone, is the E-Drive Day, during which it is possible to learn about electric mobility in all its aspects, and test vehicles, not only cars but also scooters, e-bikes and motor scooters.



Figure 1: eTestDays and E-Drive Day: two initiatives in the province of Bolzano for the promotion of electro-mobility (from [1] and [2]).

### 4.1.2 Canton of Ticino

The Canton of Ticino has a long history of electro-mobility. Indeed, the city of Mendrisio was the site of one of the first pilot projects at European level for the introduction of electric vehicles on the market (Project VEL 1, 1994-2001). A centre of competence (InfoVEL) was set up during the project and continued to operate even after its end, supported by the Canton and various local authorities. Thanks to Project VEL1 and the subsequent promotional activity of InfoVEL, the Canton was at the forefront in establishing a charging infrastructure. This infrastructure has recently been updated and modernised (see Chapter 4.2.1.2) and the Canton has implemented a policy to subsidise the purchase of electric cars and charging stations.

The Canton has also allocated 2.5 million CHF for the purchase of electric cars, granting a subsidy of 2,000 CHF, which is disbursed only if a seller applies a 2,000 CHF discount to the price on the pricelist. Only residents are entitled to receive such subsidy (both natural and legal persons, but not municipalities), provided that the car is purchased and registered in Ticino and is kept for at least 6 months. Each person (both natural and legal) can receive the subsidy for only 1 car (see [4], Art. 5).



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As for the charging infrastructure, the subsidy for the purchase of charging stations to be installed at the recipient's home and at workplaces (for employees) amounts to 0.5 million CHF. Also in this case, the municipalities are excluded. The applicant receives a flat-rate compensation of 500 CHF, provided that the charging station has a power  $\geq 3\text{kW}$ , loads in Mode 3 or 4, and is fixed to the wall or on a dedicated support (see [4], Art. 6).

### 4.1.3 Province of Verbano-Cusio-Ossola (VCO)

The electro-mobility incentive policies currently in place are those implemented at national and regional level. The Piedmont Region's initiatives include:

- car tax exemption for the first 5 years from the date of registration for hybrid vehicles (petrol/electric supply) with power equal to or less than 100 kW;
- contribution from € 1,000 to € 10,000 for scrapping or conversion to fuels other than diesel of commercial vehicles, with mass of less than 3.5 tons and those from 3.5 to 12 tons used for transport by micro, small and medium-sized enterprises.
- It should also be noted that in 2020 the first electric boat will be commissioned for use on Lake Maggiore.

## 4.2 Electro-mobility in the tourism sector

### 4.2.1 Public infrastructure offer for cars

#### 4.2.1.1 Province of Bolzano

The network of public charging stations is widespread, with around 200 stations available. Most of the stations are managed by Neogy (see [3]).

The broadly disseminated infrastructure (Figure2) is already able to satisfy the needs of both resident and passing-through tourists.

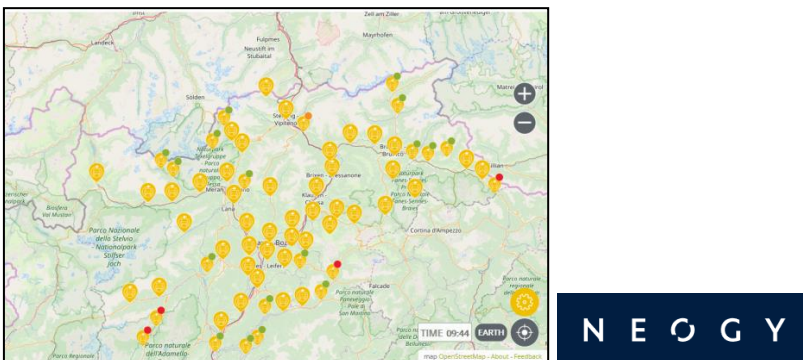


Figure2: public access charging infrastructure in South Tyrol (from[3]).

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As for the accessibility of stations, the most relevant points are:

- roaming: the Neogy network is connected to the most widespread European roaming platform (Hubject), thus facilitating access to the charging stations of all tourists subscribing to other networks that join the platform;
- possibility of direct payment, via App and credit card (see Figure3);
- pre-paid cards, also available at tourist offices, which allow a refill of 40 kWh or 80 kWh. While this method is intended for resident tourists, the previous one is particularly suitable for those merely passing through.

**PREPAID CARD NEOGY**  
La carta prepagata per accedere alle stazioni di ricarica pubbliche di Neogy

La prepaid card, la carta prepagata Neogy, è la soluzione ideale per turisti o per chi è in Trentino-Alto Adige per un periodo limitato e vuole usufruire delle stazioni pubbliche di ricarica di Neogy.

**I tuoi vantaggi**

- Usarfruirsi in modo conveniente, veloce e pratico di tutte le stazioni di ricarica Neogy con un'unica tessera
- Scegli la carta prepagata che fa al caso tuo: da 80 kWh oppure da 40 kWh
- Ricarichi la tua macchina con energia verde, prodotta localmente senza emissioni di CO<sub>2</sub>

Puoi acquistare la prepaid card nei principali uffici turistici del Trentino-AltoAdige:  
Uffici turistici in Alto Adige >  
Uffici turistici in Trentino >

**DIRECT PAYMENT**  
Il servizio di ricarica presso le stazioni pubbliche Neogy con pagamento direttamente in loco

A chi è solo di passaggio e non utilizza quindi abitualmente le stazioni pubbliche di Neogy è dedicato il sistema del direct payments, grazie al quale è possibile fare comodamente rifornimento anche senza apposita card e pagando direttamente in loco con carta di credito o tramite paypal.

**I tuoi vantaggi**

- Paghì solo quello che effettivamente consumi, senza costi fissi
- Accedi direttamente alla stazione di ricarica (senza apposita card o app)
- Effettui il pagamento in modo sicuro con carta di credito o account paypal
- Ricarichi la tua macchina con energia verde, prodotta localmente senza emissioni di CO<sub>2</sub>

**Come funziona**

1. Punta con il tuo smartphone il QR code presente sulla colonnina, si aprirà un'apposita pagina: immetti i tuoi dati e scegli se pagare con carta di credito oppure attraverso paypal
2. Ricarica la tua macchina collegandola alla colonnina con il cavo di ricarica
3. Riceverai immediatamente la fattura della tua ricarica via e-mail

**Costi**  
Ricarica quick (22 kW) 0,06 €/min IVA inclusa  
Ricarica fast 0,55 €/min IVA inclusa

Figure3: examples of payment solutions offered by the Neogy network, designed for the needs of tourists

The charging points supply electricity from renewable sources.

### 4.2.1.2 Canton of Ticino

The current network of public charging stations, called Emotì (see [5]), is managed by Enertì, a company founded by the Canton's power companies.

The network has a widespread diffusion over the territory (see [6]), which is not the result of a Canton planning, but of individual actions by the municipalities or some private individuals, which have been undertaken year after year as the result of the VEL1 project (see Chapter 4.1.2). In addition to multi-storey car parks, many stations have been deliberately positioned by local authorities in parking lots near some of the points of interest in the municipality, thus indirectly satisfying the needs of tourists as well.

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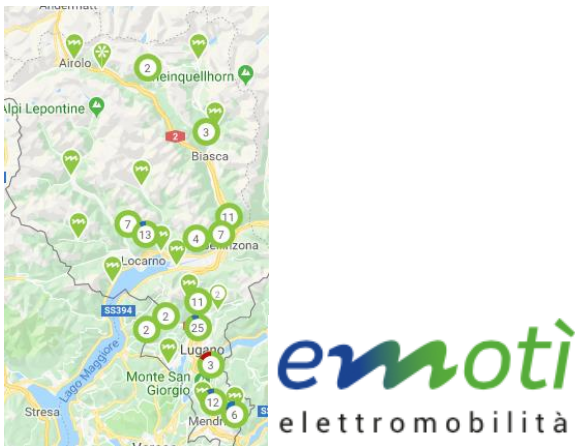


Figure 4: distribution on the territory of the Emotì network (from [6]).

As for the accessibility to stations, the most relevant points are:

- possibility of roaming;
- connection to a national network: Emotì is part of the network of the national CPO EVPass;
- possibility to pay via App based upon consumption (without subscription), by registration, without needing the Emotì RFID card (Figure 5);
- synergy with public transport: the Swiss Pass card can be used to access the App.



Figure 5: Emotì app, Emotì card and Swiss Pass card (from [5]).

From a technical point of view, we point out, in particular (Figure6):

- the Type 1 and Type 2 double cable, which allows a better charging experience and to simultaneously charge 2 cars, regardless of the type of vehicle connector (note that the trend of car manufacturers who used the Type 1 connector is to offer the Type 2 connector for the European market and Type 1 connector for North America and Japan);
- possibility to also charge bicycles/quadricycles thanks to the two national sockets present.

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Figure6: note the 4 charging cables (2 Type 1 and 2 Type 2) for charging 2 cars in parallel and the socket for bicycles/quadricycles (in blue on the side of the station) (from [5]).

The electricity supplied by the charging stations is TiAcqua certified (see [7]), that is 100% renewable coming largely from the Ticino hydroelectric plants.

### 4.2.1.3 Province of Verbano-Cusio-Ossola (VCO)

The public charging infrastructure (EVBility) currently consists of a charging station in collaboration with VCO Trasporti, which was installed in May 2016 and is located on Piazzale Flaim, in Intra (VB), with 1 reserved parking space.

As for the accessibility of stations, the most relevant aspect is the free recharge through the Regional Service Card, by registering on the Ricaricaev website ([8]).

From a technical point of view, we point out, in particular:

- 1 Type 2 connector socket (Mennekes)
- 1 Type 3A connector socket
- the maximum power managed by the column is defined on the basis of the connection power made available by the municipal administration (18 kW).

The infrastructure offer is expected to increase, also in points of tourist interest, thanks to the Memorandum of Understanding entered into with Enel X Mobility, which the Municipality of Verbania approved in 2018 for a duration of 8 years. The agreement provides for the installation of 6 electric charging stations in the following points of the municipal area:

- Via XXV Aprile.
- Piazza Parri (Trobaso).
- Villa Taranto/Corso Europa.
- Hospital parking.

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- Station parking.
- Municipal swimming pool parking.

In addition to Verbania, there are other municipalities in which Enel-X has already started or is planning to install charging stations.

### 4.2.2 Public infrastructure offer for bicycles

#### 4.2.2.1 Province of Bolzano

The presence of public e-bike charging stations has not been reported.

#### 4.2.2.2 Canton of Ticino

In addition to the possibility of charging bicycles at Emotì stations equipped with a national socket (see Chapter 4.2.1.2), there are the charging stations designed for electric bicycles, which have been installed along the 4 itineraries that will be described in Chapter 4.2.6.2.

24 free charging stations have been installed along these routes.

From a technical point of view, the stations (Figure 7 and [10]) are characterized by:

- free accessibility;
- simultaneous charging of 4 bicycles, directly connecting the station to the battery without having to use your own battery charger; the connection is made by an adapter cable that the cyclist must have or that can be requested from the support points at the charging stations;
- pairing with a column with itinerary and tourist information.



Figure 7: example of e-bike charging stations (from [9])

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For this project, it was decided to use existing charging stations, rather than develop new ones. The choice fell on the stations of Austrian company Bike Energy (see [10]).

By the summer of 2020, a new route will be operational; it will connect the border with the Province of Como at Porlezza, with the border with the province of Varese at Ponte Tresa, passing through Lugano. The same charging stations of the previous itineraries will be used along this route as well. Since this is an ongoing project, maps and charging locations are not yet publicly available.

Both initiatives have been funded by Regional Development Bodies (ERS). Each region of the Canton has its own body, financed by individual municipalities on a fixed amount determined on the basis of the number of inhabitants. The purpose of these bodies is to subsidise both public and private local projects. In this case, municipalities and individuals who installed the recharging stations received grants for the purchase which, in certain cases, exceeded 50%.

### 4.2.2.3 Province of Verbano-Cusio-Ossola

11 E-bike charging points are available in the area (see [11] and Figure8), including 2 stations located in the Lake Orta's portion in the Novara province, which, however, are to be included in the local infrastructure offer to support tourism. The charging points were constructed by a local company (ETraction). Some racks were installed by local authorities, others by private individuals.



### 4.2.3 Infrastructure offer for cars at tourist facilities

#### 4.2.3.1 Province of Bolzano

Several hotels already have charging stations, in addition to those offering Tesla's Destination Charging. There are no general rules on pricing policies: some facilities make recharging available for free, while others require a payment.

Noteworthy is the Neogy recharge infrastructure offer for hotels, restaurants and shopping centres (see Figure 10 and [13]). The most interesting issues are:

- a tourist facility that uses the Neogy package does not have to worry about the access and payment system and its maintenance;
- inclusion of charging stations in interactive Neogy and international maps;
- possibility of "cross-selling", i.e., advertising through the Neogy app.



Per aziende > Strutture ricettive e centri commerciali

#### WE-DRIVE DESTINATION

We-drive Destination è l'offerta dedicata ad alberghi, ristoranti e centri commerciali, che ti consente di installare una o più stazioni di ricarica presso la tua struttura e di metterla a disposizione della tua clientela. Distinguiti sul mercato con un servizio innovativo per i tuoi clienti!

##### I tuoi vantaggi

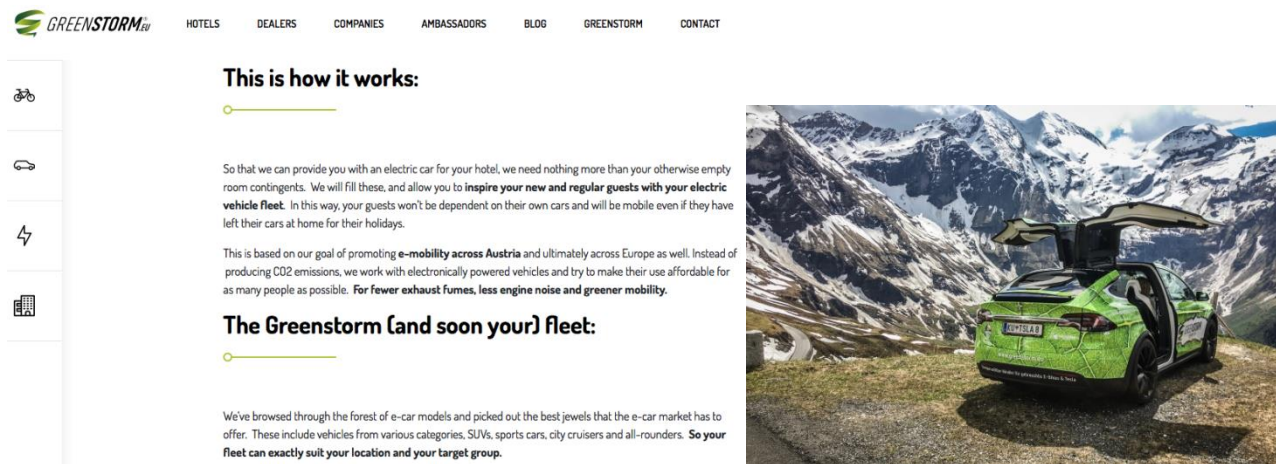
- Fornitura di **una o più stazioni di ricarica**
- **Manutenzione** della stazione di ricarica con servizio di pronto intervento 24 ore su 24
- Predisposizione della piazzola con segnaletica orizzontale e verticale
- Telesorveglianza della stazione in tempo reale (stazione smart)
- Inserimento della stazione nella rete di ricarica Neogy estesa su tutto il territorio provinciale e **visibilità in tempo reale su portali nazionali e internazionali con pubblicità della struttura ospitante**
- Geolocalizzazione della stazione tramite app per smartphone con pubblicità della struttura ospitante
- Disponibilità dei dati sulle ricariche effettuate
- Pacchetto omaggio di carte prepagate smart mobility per l'accesso alla rete di punti ricarica Alperia (stazioni quick)

Figure 10: the Neogy page with the offer of a package for recharging at hotels, restaurants and shopping centres (from[13]).



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Although not strictly connected to the territory, the proposal that the Austrian company GreenStorm makes to hotels is interesting from the point of view of business models (see Figure 11 and [18]). This company rents new electric cars to the facility in exchange for vouchers in order to use unoccupied rooms. The concept is similar to that which the same company applies to e-bikes and which is explained in more detail in Chapter 4.2.4.1.



The screenshot shows the GreenStorm website interface. At the top, there is a navigation menu with links for HOTELS, DEALERS, COMPANIES, AMBASSADORS, BLOG, GREENSTORM, and CONTACT. On the left, there is a vertical sidebar with icons for a bicycle, a car, a lightning bolt, and a calendar. The main content area features the heading "This is how it works:" followed by a paragraph explaining the service: "So that we can provide you with an electric car for your hotel, we need nothing more than your otherwise empty room contingents. We will fill these, and allow you to inspire your new and regular guests with your electric vehicle fleet. In this way, your guests won't be dependent on their own cars and will be mobile even if they have left their cars at home for their holidays." Below this is another paragraph: "This is based on our goal of promoting e-mobility across Austria and ultimately across Europe as well. Instead of producing CO2 emissions, we work with electronically powered vehicles and try to make their use affordable for as many people as possible. For fewer exhaust fumes, less engine noise and greener mobility." The section is titled "The Greenstorm (and soon your) fleet:" and includes a final paragraph: "We've browsed through the forest of e-car models and picked out the best jewels that the e-car market has to offer. These include vehicles from various categories, SUVs, sports cars, city cruisers and all-rounders. So your fleet can exactly suit your location and your target group." To the right of the text is a photograph of a bright green electric car parked on a mountain road with its trunk open, set against a backdrop of snow-capped mountains.

Figure 11: the business model proposed by greenstorm.eu to hotels for long-term car rental. The cars offered range from City Cars to luxury ones, such as the Tesla Model X (from [18]).

### 4.2.3.2 Canton of Ticino

Several hotels are already equipped with charging stations, among which we point out those that are part of the "Grand Tour" of Switzerland (see Chapter 4.2.5.2 for details).

There are no general rules on pricing policies: some facilities make recharging available for free, while others require a payment. In general, all facilities offer Mode 3 accelerated charging with Type 2 connectors (sockets) and quite a lot of them the Tesla's Destination Charging.

This chapter showcases two good examples of how hotels advertise their charging stations to their guests:

- in the first case (see [14]), detailed information is provided on the type of charge available, also including indications on nearby public stations, with an easily accessible page being a page below the Homepage of the site;
- in the second case (Figure 12), the presence of the charging station is already advertised on the Homepage of the site.

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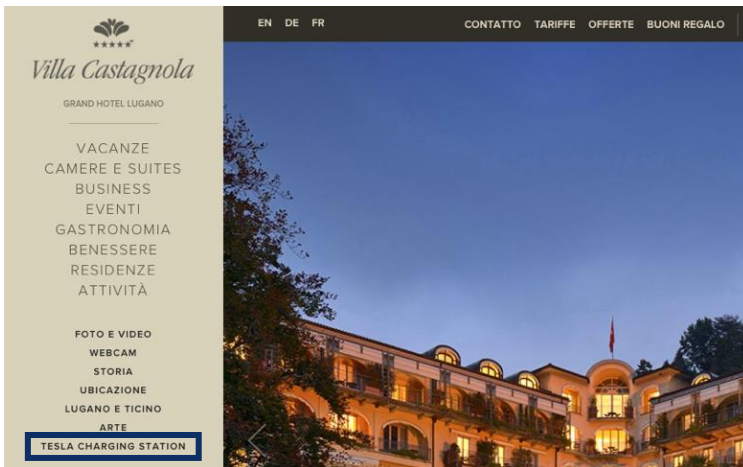


Figure 12: in this example, the presence of Tesla'' Destination Charging is advertised on the Homepage of the site (from [15])

### 4.2.3.3 Province of Verbano-Cusio-Ossola

Several hotels already have charging stations, in addition to those offering Tesla's Destination Charging. There are no general rules on pricing policies: some facilities make recharging available for free, while others require a payment. Figure 13 shows a good example of advertising charging stations on the Homepage of the site.



Figure 13: in this example, the presence of Tesla'' Destination Charging is advertised on the first page of the site (from [16])

### 4.2.4 Infrastructure offer at tourist facilities for bicycles

#### 4.2.4.1 Province of Bolzano

The charging stations installed along Canton of Ticino's routes (see 4.2.2.2) are available in a variety of facilities, including mountain huts and lodges (see [17] and Figure14).

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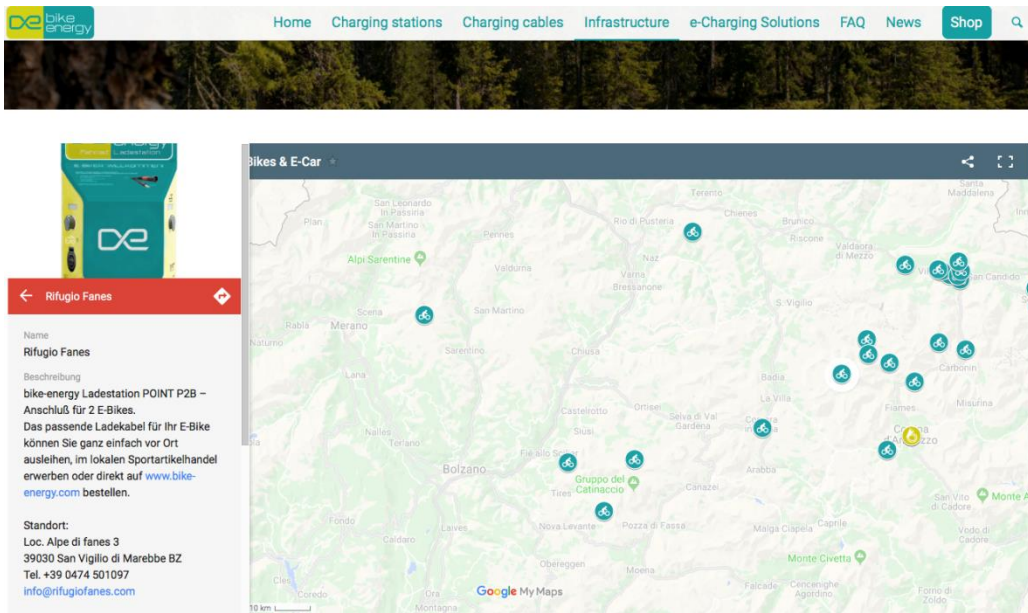


Figure 14: presence of Bike Energy charging stations in the province of Bolzano; the details of the charging location shown on the left refer to the Fanes mountain lodge (from [17]).

Although not strictly connected to the territory, the proposal that Austrian company GreenStorm presents to hotels is interesting in terms of business models (see [18] and [15]). GreenStorm offers to the facility for rent new electric bikes in exchange for vouchers to be redeemed for the use of unoccupied rooms. The profit for GreenStorm is in the sale of vouchers and e-bikes that are collected at the end of the tourist season. The advantage of the hotel is that it has an extra service for its guests and that it gives to potential new customers rooms that would have otherwise remained vacant, not to mention the revenues from any additional extras.

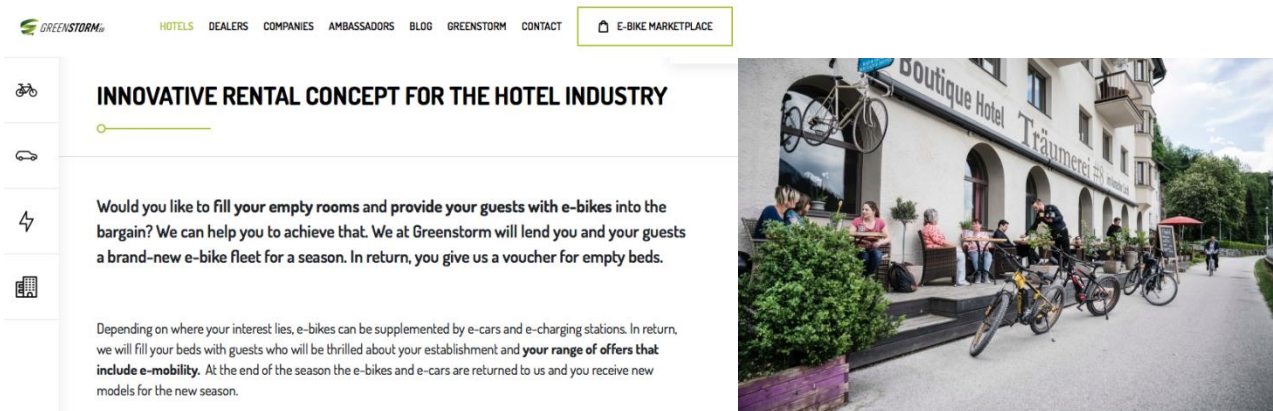


Figure 15: the business model proposed by greenstorm.eu to hotels for long-term car rental (from [18]).

#### 4.2.4.2 Canton of Ticino

Merida, one of the best-selling MTB brands in Switzerland, has created e-bike service points called "SOSta Merida". The locations (Figure 16) deliver minor maintenance services and charge batteries, thus relieving riders from bringing along their own battery charger. In Ticino, there are 8 points, of which 3 at mountain huts, 1 at an amusement centre and the others at hotels (see [18]).



Figure 16: Merida e-bike service and recharge points (from [18]).

From a business model point of view, we point out the long-term rental offer designed for tourist facilities by the Ticino-based company bike-port.ch, through its partner rentabike.ch (see [20] **Errore. L'origine riferimento non è stata trovata.** and Figure 17). The company offers a "Basic" and a "Premium" package which, in addition to bicycles, include maintenance and repair, information on the tourist facility on the website, rent-a-bike magazine and newsletter, and information on the national slow-tourism portal [21], operator training, and so on. The bike-port/rent-a-bike business model lies in the revenues from the rental and sale of e-bikes used at the end of the rental, while for tourist facilities the business model consists in offering an additional service to their own customers (possibly also for a fee) without worrying about the vehicle selection and maintenance, as well as in advertising on some of the websites, such as SwitzerlandMobility (SvizzeraMobile), most visited by 2-wheel enthusiasts (see [21] and Figure 18).

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The screenshot shows the 'RENT A BIKE' website. The main heading is 'Werden Sie E-Bike Vermieter' (Become an E-bike Rental Provider). Below this, there is a list of 'Ihre Vorteile' (Your Advantages) for becoming a rental provider:

- Flexible Saisonlängere (5 - 12 Monate)
- Komplettservice für E-Bikes
- TOP E-Bikes der Marken E-VES, Tour de Suisse und Stevens Bikes
- Lieferung und Abholung der E-Bikes
- Refinanzierung der Mietkosten durch die Vermietung
- Nationales Marketing inklusive, Schweizer Netzwerk
- Handbuch mit Tipps für die Vermietung

Below the text is a photograph of two cyclists on a trail. At the bottom, there is a table titled 'Tarife/Laufzeiten 2020 (pro E-Bike in CHF exkl. MwSt.)' (Rates/Running times 2020 (per E-bike in CHF excl. VAT)).

weitere Preise auf Anfrage	E-Bike Komfort	E-MTB Hardtail	E-MTB Fully
5 Monate	895.00	965.00	1195.00
6 Monate	996.00	1134.00	1374.00
7 Monate	1085.00	1253.00	1533.00
8 Monate	1176.00	1352.00	1672.00

Figure 17: long-term rental offers from rentabike.ch. On the right, the Cycling in Switzerland page to which every facility that contacts Bike-Port/Rent-a-Bike is automatically added (from [20]).

The screenshot shows the 'SvizzeraMobile' website with the heading 'La Svizzera in bici'. Below the heading, it says 'I servizi che avete richiesti ...' (The services you requested ...) and '150 risultati' (150 results). There are three search results displayed:

- Capanna Piandios** (Acquarossa): 6716 Acquarossa, Letti: 39, 17 CHF. Contact: Tel +41 (0)76 400 03 01, capanna@sciclubcrap.ch, www.sciclubcrap.ch, www.capanneti.ch.
- B&B Gottardo** (Airolo): Strada di Valle 35, 6780 Airolo, Letti: 4, 45 - 65 CHF. Contact: Tel +41 (0)91 869 27 70 / +41 (0)79 512 81 91, albertodotta@bluewin.ch, www.bnb.ch/479.
- B&B Motta** (Airolo): Via San Gottardo 43, 6780 Airolo, Letti: 60. Contact: Tel +41 (0)91 869 22 11, welcome@bbmotta.ch, www.bbmotta.ch.

Figure 18: the Cycling In Switzerland page to which every facility that contacts Bike-Port/Rent-a-Bike is automatically added (from [21]).

### 4.2.4.3 Province of Verbano-Cusio-Ossola

Some of the charging points listed in Chapter 4.2.2.3, to which reference is made for details, have been installed at tourist facilities.

### 4.2.5 Itineraries and tourist promotion for owners of electric cars

#### 4.2.5.1 Province of Bolzano

There are no offers dedicated to owners of electric cars.

## P14 – Inventory of best practices by region

### 4.2.5.2 Canton of Ticino

The “Grand Tour of Switzerland” section of the official website of the Swiss tourist board (see Figure 19 and [22]), explicitly mentions the possibility of making an “E-Grand Tour” which also involves Ticino.



Il Grand Tour of Switzerland è il primo road trip al mondo per auto elettriche. Una fitta rete formata da ben 300 stazioni di ricarica fornisce corrente sull'intero percorso, garantendo così un piacere di guida comodo quanto pulito lungo oltre 1600 chilometri.



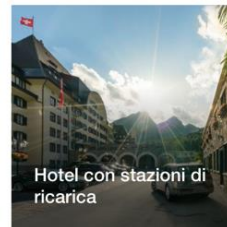
Virtual tour  
Grand Tour of Switzerland

[Ulteriori informazioni](#) →

#### E-Grand Tour

Il Grand Tour of Switzerland è il primo road trip al mondo per auto elettriche. Una fitta rete formata da ben 300 stazioni di ricarica fornisce corrente sull'intero percorso, garantendo così un piacere di guida comodo quanto pulito lungo oltre 1600 chilometri.

[Maggiori informazioni](#) →



Hotel con stazioni di ricarica



Stazioni di ricarica

Panoramica delle stazioni di ricarica

Figure 19: presentation of the “E-Grand Tour” on the Switzerland Tourism website (from [22]).

A map (Figure 20) pinpoints where the public charging stations are located along the route and which hotels have an agreement in place with the Tour for the delivery of charging services.



Figure 20: map of the Grand Tour with charging locations highlighted (from [22]).

### 4.2.5.3 Province of Verbano-Cusio-Ossola

There are no offers dedicated to owners of electric cars.

## P14 – Inventory of best practices by region

### 4.2.6 Itineraries and tourist promotion for e-bike owners

#### 4.2.6.1 Province of Bolzano

The wide range of bike trials and itineraries can meet the needs of all e-bike users. E-bikes are explicitly mentioned on portals dedicated to bicycle tourism (see for example [23], [24] and Figure 21).

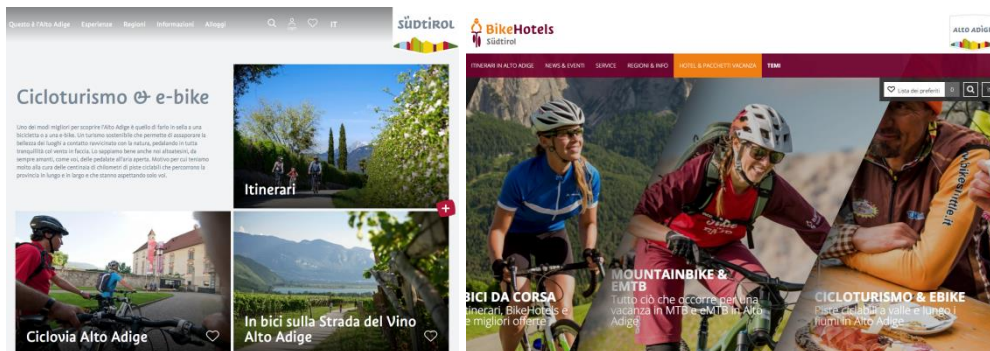


Figure 21: examples of how e-bike tourism is emphasized in official tourism portals (from [23] and [24]).

Several hotels also offer packages dedicated to tourists with e-bikes (see for example [25] and Figure 22).

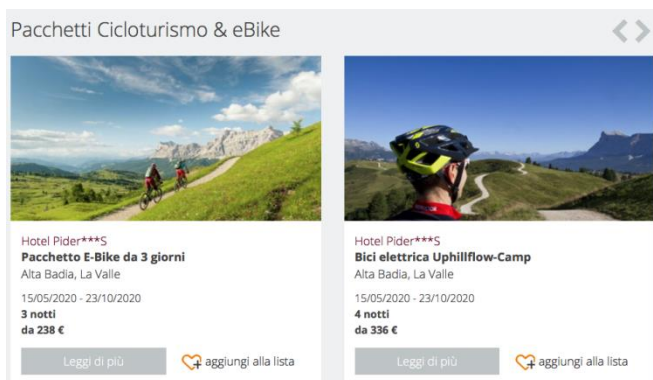


Figure 22: example of tourist packages dedicated to e-bikes (from [25]).

We also point out the “BikeHotels” website (see Figure 23 and [26]), which features a calculator to read e-bike power, testifying to the attention paid for this type of tourism by the bike tourism portal.

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### Assistente Autonomia eBike

Calcola l'autonomia dell'eBike per il tuo prossimo giro.

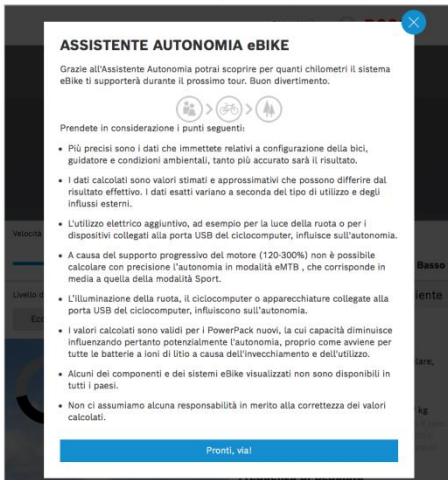


Figure 23: e-bike power calculator (from [26]).

### 4.2.6.2 Canton of Ticino

In addition to the normal proposals for muscle bikes (racing, city and MTB), 4 e-bike itineraries (see [9]) have been created starting from Bellinzona, along which bikers can find 24 charging stations (see Chapter 4.2.2.2). The itineraries are advertised on the websites of the Canton's and regional tourist offices (see for example [9]).

It is interesting to note that:

- one of the itineraries, and specifically the Val di Blenio's, already extends beyond the Canton's borders, being connected to the trail of Valle Surselva dei Grigioni,
- it is possible to download from the website ([9]) both GPX data and pdf brochures of all itineraries.

The second example is the presence on the Ticino Tourism website of a section dedicated to e-MTB rental (see Figure 24 and [27]), with a list of providers.



## P14 – Inventory of best practices by region



Figure 24: section dedicated to E-MTB rental on the Ticino Turismo website (from [27]).

### 4.2.6.3 Province of Verbano-Cusio-Ossola

Even if there are no itineraries dedicated to e-bikes, bicycle trails are highlighted in the official tourist website [28]. Finally, we point out a linked site [29], which is dedicated exclusively to bicycle tourism.

## 5 Best practices

### 5.1 Car charging infrastructure

The Province of Bolzano and the Canton of Ticino already have a good coverage of their territory, while in the VCO the infrastructure is to be developed and is now taking its first steps. However, even where coverage of tourist sites is more extensive, it remains still patchy in areas outside the main inhabited centres. For example, the Ticino valleys feature recharging stations only in some centres of the valley floor, while passes, cableway stations and places atop valleys or halfway up valley slopes are not covered.

As regards the technical characteristics of the stations, the most interesting best practices are:

1. **Charging cables:** presence of cable with plug to improve the charging experience (Emoti network, see Chapter 4.2.1.2);
2. **Sockets for bicycles and quadricycles:** charging stations with sockets to recharge bicycles and quadricycles (Emoti network, see Chapter 4.2.1.2).

For access and payment systems, please note:

3. **International roaming:** participation in the main roaming platform (Hsubject) at European level (see Chapter 4.2.1.1) of the Neogy network;
4. **App and credit card:** payment by App and credit card proposed by Neogy and Emoti, which does not require the RFID card of the local operator of the charging stations, (see Chapters 4.2.1.1 and 4.2.1.2);
5. **Prepaid cards:** payment with prepaid cards, available from tourist offices (see Chapter 4.2.1.1), offered by Neogy.

In terms of synergy with public transport, please note:

6. **Unique authentication:** offered by Emoti to authenticate with the App using the same credentials as the train pass card (see Chapter 4.2.1.2).

In terms of synergy with tourist information, please note:

7. **Cross selling:** offered by Neogy (see Chapter 4.2.3.1) to use the App to bring up the information of the facility equipped with a charging station (“cross selling”); this service can also be made to incorporate general information on tourist offers available in a given area.

In terms of business models:

8. **Solutions for tour operators:** Neogy's offer (see Chapter 4.2.3.1) of recharging solutions dedicated to tour operators, thus relieving them of the chores like maintenance, monitoring, etc.

It is recommended to use all these points as specifications for the design of new car charging points. Point 6 is seemingly the most challenging, since each territory has its own subscription systems for public transport, tourist cards etc. Even points that are not strictly technical, such as the "cross-selling" opportunity (7) and the business model (8) are to be kept in mind.

## 5.2 Charging infrastructure for e-bikes

Charging stations for electric bicycles are generally much less popular than those for cars, although many Emotì charging stations also have bicycle charging sockets. Most are located in inhabited centres or along bicycle paths of the valley floor. Some mountain lodges have already installed charging stations on their own initiative (see 4.2.4.1 for the province of Bolzano and 4.2.4.2 for the Canton of Ticino, even if, in the latter case, the stations are managed by a specific bicycle brand).

As regards the technical characteristics of the stations, the best practices considered most interesting for both public and private charging locations are:

9. **Charging without charger:** possibility to directly recharge the bicycle without need to bring along one's personal charger (see Chapters 4.2.2.2, 4.2.4.1 and 4.2.4.2, and, even if the latter example applies to only one bicycle brand). In particular, the adoption of the Bike-Energy solution (see [30]) for public charging stations in the Canton of Ticino and at various private facilities in the province of Bolzano, allows avoiding a problem that had occurred with car charging stations installed in Ticino: the availability without access restrictions of 230V domestic sockets specifically designed for bicycles or electric scooters, led has in some cases to improper use (e.g. charging of mobile phones). Therefore, the Bike-Energy solution with an AC/DC converter installed at the station and usable with an adapter cable, is particularly interesting from this point of view.
10. **Simple and essential:** simple and essential design, both of the Bike-Energy stations and of the Etraction stations in the VCO (see Chapter 4.2.2.2 and 4.2.2.3);
11. **Support surface:** surfaces provided by the Etraction stations in the VCO to support batteries (see Chapter 4.2.2.3).

As regards access and payment systems, the most interesting best practices are:

## P14 – Inventory of best practices by region

12. **Free and unrestricted access:** free access without authentication requirements offered by stations installed in all 3 geographical areas (see Chapter 4.2.2.2 and 4.2.2.3).

As regards synergy with tourist information, the most interesting best practices are:

13. **Information column:** presence of an information column at charging stations, containing information on itinerary and area (see public stations in Ticino and in the VCO, Chapter 4.2.2.2 and 4.2.2.3).

As regards business models, the most interesting best practices are:

14. **Charging and maintenance integration:** integration of the charging station with equipment for small maintenance, offered by the Merida stations in the Canton of Ticino, in order to offer a complete package to tour operators (Chapter 4.2.4.2);

15. **Identification mark:** creation of a sign (see Merida stations in the Canton of Ticino) identifying the service/recharge point, which is displayed by the facility (Chapter 4.2.4.2);

16. **Uniform equipment:** uniformity of equipment offered by the Merida stations in the Canton of Ticino: everyone knows what to expect on a site which features the above mentioned sign (see Chapter 4.2.4.2).

It is recommended to use all these points as specifications for the design of new e-bike charging points. The most challenging point is the choice between the 2 approaches presented in point 1, that is, the design of a charging station that does not require cyclists to bring along their own battery charger, or vice versa. Each approach has its advantages and disadvantages to be considered: it is advisable to study the first approach further by examining the technical specifications [30] and the price list [31] of Bike-Energy.

The operators of the Canton of Ticino sector have shown that tourists who use e-bikes appreciate the presence of charging stations that do not require the use of a battery charger. They also report some drawbacks: since many cyclists do not have the Bike-Energy adapter cable but must ask for it at the support point at the charging station (typically a bar, a restaurant or the cable car station), they happen to call the support point in advance to be sure that the adapter cable is suitable for their e-bike. Sometimes, those who manage the cables are unable to answer this question with accuracy, but respond in general term indicating that in most cases the cable is suitable, which, however, cannot allay the caller's doubts.

### 5.3 Itineraries and tourist promotion for owners of electric vehicles

As regards synergy with the promotion of the territory, the most interesting best practices are:

17. **Routes for electric cars:** creation of routes for electric cars in Switzerland (Chapter 4.2.5.2)
18. **E-bike trails:** creation of e-bike trails in the Canton of Ticino (Chapter 4.2.6.2), equipped with public recharging stations and their identification on the official websites of the tourist boards;
19. **List of hotels with car charging:** posting on the official website of the Swiss tourist board of a list of all the hotels that offer charging services to their guests, along the itineraries for electric cars mentioned above (Chapter 4.2.5.2) ;
20. **List of hotels and offers for e-bikes:** category “eBike hotel” in the tourist website of South Tyrol dedicated to bicycles, with the list of all hotels and tourist packages dedicated to this vehicle (see 4.2.6.1);
21. **E-bike rental:** list of e-bike rental facilities on the main bicycle tourism portal of Switzerland.

With regard to the promotion of the single tour operator, we point out the following best practices:

22. **Charging information:** clear and comprehensive communication on charging solutions at the tourist facility, also providing a list of charging stations located nearby (Chapter 4.2.3.2);
23. **Identification of charging locations:** information already on the Homepage of the website of the tourist facility concerning charging locations (Chapters 4.2.3.2 and 4.2.3.3).

With regard to the promotion of electro-mobility, we point out the following best practices:

24. **eTestDays:** eTestDays dedicated to economic operators organised in Bolzano (Chapter 4.1.1);
25. **Infrastructure subsidies:** financing policy for the purchase of charging stations in the province of Bolzano and in the Canton of Ticino (Chapters 4.1.1 and 4.1.2);
26. **Subsidies for small-scale projects:** possibility of financing small-scale projects also in peripheral areas, offered by the Regional Development Bodies of the Canton of Ticino (see Chapter 4.2.2.2).

## P14 – Inventory of best practices by region

As regards business models, we point out:

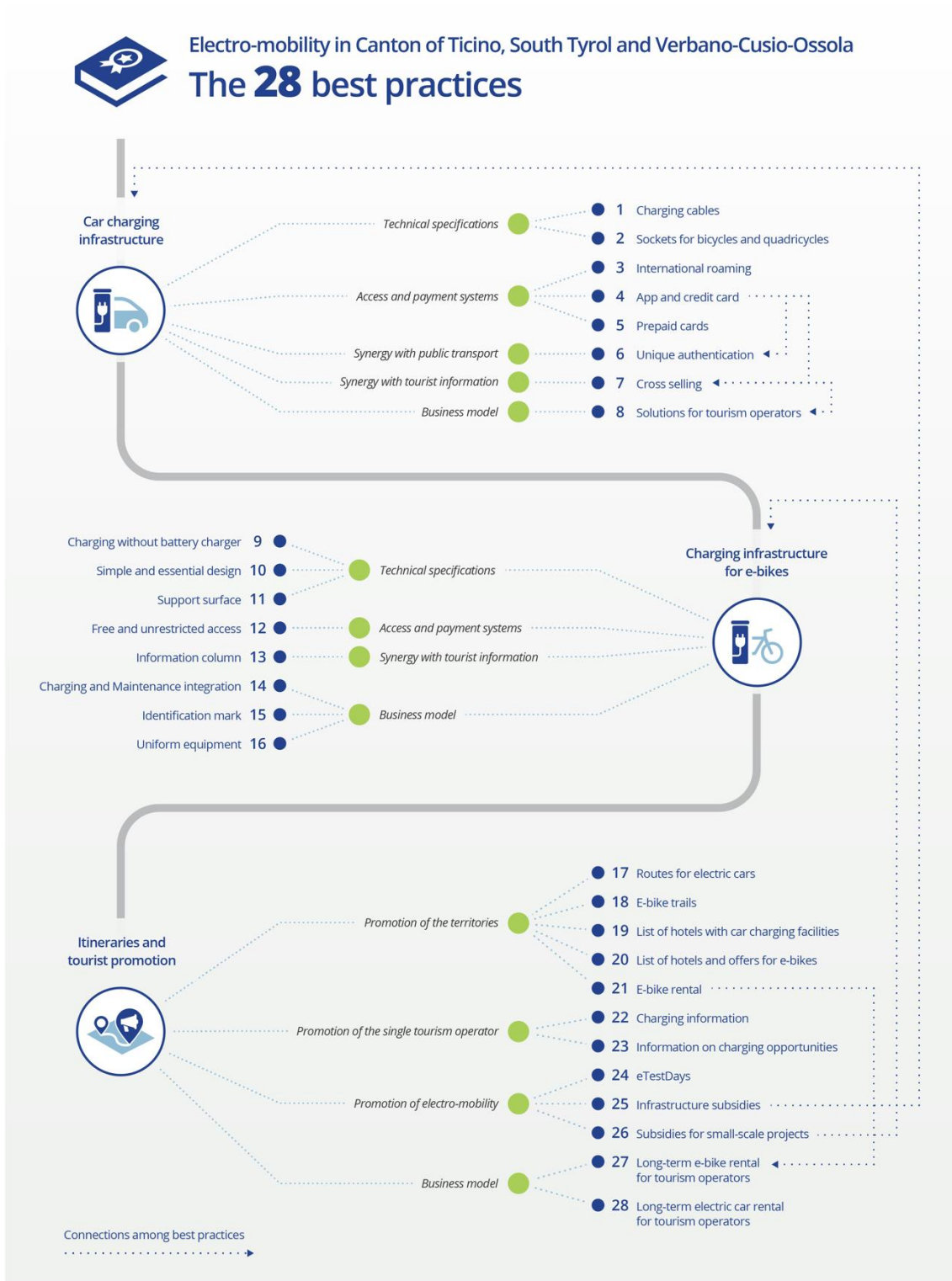
27. **Long-term e-bike rental for tour operators:** long-term e-bike rental offer to tour operators (see Chapters 4.2.4.1 and 4.2.4.2).
28. **Long-term electric car rental for tour operators:** long-term electric car rental offer to tour operators (see Chapter 4.2.3.1).

We recommend relying upon these best practices in drafting advice addressed to tour operators and public bodies, on how to promote and encourage electric mobility for tourism. Issues to be mentioned include the need to post, particularly on websites most visited by tourists, sections dedicated to electro-mobility, which group all the necessary information (itineraries, structures, location of types of recharging as in points 17, 18, 19, 20 and 21) and notifications concerning charging points at a given facility, possibly on the Homepage, and accompanied by all the information that answers typical customer questions (what type of vehicle can I recharge? Are adapters needed? What are the costs?), as in points 22 and 23 and the organization of events, as in point 24, focused on tour operators. Points 25 and 26 are also a starting point for putting together recommendations addressed to public bodies on possible incentive policies for the purchase of recharging stations by tourist facilities.

Point 27 is relevant to the MOBSTER project, in terms of a complete package for tour operators which includes charging stations and e-bike rental. The same applies to point 28, at which the complete package is for electric cars rather than bicycles.

## 6 Conclusions: map of best practices

The best practices of Chapter 5 are summarised in the map of Figure 25.



## P14 – Inventory of best practices by region

Figure 25: summary of best practices. The numbers that identify each "best practice" coincide with those of Chapter 5.

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Figure6: courtesy of Enerti SA, Rivera (Switzerland)

Figure7: courtesy of Bed&Bike Tremola San Gottardo, Airolo (Switzerland) (photo by Ivana De Maria)

Figure8: courtesy of Etraction e-bike SC, Omegna (Italy)

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Figure 24: courtesy of Schweiz Tourismus, Zurich (Switzerland) (photo by Tine Sturzenegger)