

# A Mobile Community for a Smarter Trentino.

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**Abstract.** We present here the Smart Campus project, whose goal is to establish a self-sustained mobile community and territorial lab in Trentino in order to increase the number of services that can support citizens' lives. Our design approach has included a mix of participatory design, user-centered design and end-user development methodologies. We are currently testing several interrelated mobile apps to support University of Trento staff and students; we are also building apps for the cities of Trento and Rovereto and for the province of Trentino with the goal of fostering the institution of a smart territory.

**Keywords:** Smart Campus; mobile community; territorial lab; smartphone.

## 1 The project

We present here the Smart Campus project [1], which aims at the establishment of a socio-technical environment composed of a community, a platform, and a territorial lab in order to increase the number of services that can support citizens' lives. To this end, we started with the development of smartphone apps, so as to seed a community, and are now adopting several strategies to ensure the sustainability of the project, that is to encourage community participation in the design and development of new apps. Our approach to interaction design has included a mix of participatory design [2], user-centered design [3], and end-user development methods [4].

Smart Campus is an initiative of Trento RISE, a core partner of the EIT-ICT Labs in Italy, and is being built in a collaboration between Trento RISE, the Fondazione Bruno Kessler, and the University of Trento.

## 2 Apps and platform

Our team developed several smartphone apps that have now been combined in different ways in order to address the mobile needs of different communities: university students and staff, municipality employees, city visitors.

The *Smart Campus* ecosystem is made up of six apps covering various issues of campus life, such as sustainable mobility, social life, and interactions with university services. Another three apps were created and designed by university students, with our help and support, and are currently under development. *Smart Campus* is serving as a model for other apps that could foster the transformation of Trentino into a smart territory: its composing apps were in fact combined and adapted. We are currently testing a first version of *ViviTrento*, our smart city app that supports citizens for transportation and for socio-cultural events; similarly, we are developing *ViviRovereto*, more focused on green transportation and supporting cycling through the city. Then, we extended our target to the whole region by developing *ViviTrentino*, which highlights family-friendly events in the territory. Finally, we developed a customized version of *ViviTrento* to guide visitors around the city centre for the opening of the new science museum, called *Muse (Muse pre-opening [5])*.

Furthermore, to support community-driven design and development, we have adopted an open source model and have been building a platform consisting of three main elements. Its core hosts basic activities (e.g., event management, mobility planning); atop of this is the platform-as-a-service, where application logic developed by community members will be deployed; atop of this is the client library level, where the mobile apps reside.

### 3 Conclusion

For the past two years we have been developing a series of mobile apps aimed at fostering a mobile smart community in the region of Trentino, using a variety of design methods. To promote participation of citizens in this community (as designers, developers and users), we are applying three strategies: (1) we are seeding the community by distributing smartphones equipped with *Smart Campus* among students and by recruiting citizens to test the apps in their daily life; (2) we are turning to an open source model for development; and (3) we are encouraging community members to design and build their own apps on top of the platform we provide to support them.

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