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Course-work

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1 INTRODUCTION

Working on a community building project is a both fascinating and challenging problem. We need to take into consideration factors that make a platform for mobile devices attractive, and the whole work is an answer to the complex question: "How can we impress, support and enhance a mass of users?".

It seems reasonable to start thinking about nice features which are highly appreciated from the critical mass, but actually the correct procedure needs to go deeper. Lots of extra refinements and detailed analysis are necessary, to know better the environment where to work and to create a good final product.

To get some clear ideas we have started our work with an **analysis on the existing social networks**. We studied different categories of them and their evolution over time: this helped us in understanding which social networks are the most popular ones, and why some of them can be considered better than others. We also realized some interesting facts, such as the existence of very popular social networks unknown for us: often, the popularity is influenced by the country or the kind of available devices. The main aspects of this first job have addressed our ideas towards some interesting solutions.

We did not forget the fact that our work is oriented towards a **mobile social community**. This implied a careful evaluation of our choices, and we decided to focus our attention on how people use their smartphones and what are the differences respect to more traditional platforms. Of course a mobile application, for its nature, exploits in the best way the presence of a continuous connection, bringing people together. On the other hand, we had to consider that not all the people have a smartphone and are involved in this process, even though the trends of the last few years indicate that the number of mobile users is growing more and more.

As a second step of our research project we conducted some **interviews**, to understand how the Trento students get in touch with their friends, what they think about smartphones, which social networks they prefer and how they perceive the Smart Campus environment.
The result of these interviews made us understand a lot of reasons and interests, and gave us the direction to improve and integrate Smart Campus with a social network. We realized which features attract students from the most famous mobile social networks, and we considered also their suggestions for a new work.
These aspects were the foundations of our **mobile social network design**.

The formalization of our objectives, the analysis of the existing social networks, the interviews and the real design of our application are steps that show the reader how we solved the crucial aspects of setting-up a new community, considering the matters of sociability and usability as well. Really helpful was also the work previously done by D. Rotman and J. Preece, *Intermittent Participation: How Sociability and Usability Shape Mediated Mobile Interaction* [1]. They have studied the influence of mobile interaction on usability and sociability and this brought us to understand how to work better in a mobile environment where we want to build our community.

The platform we have designed tries to help students in their university life as much as possible, taking into account their different needs.

At the end, we have also explained some interesting future research works, with some personal considerations related to the strengths and weakness of our approach.

2 OBJECTIVES

2.1 General objective

Our project has been done with the purpose of creating a mobile social network within the Smart Campus environment. Students of the University of Trento were meant as its main users, and the aim was to have them as more active as possible, producing many interactions with the new social network.
Indeed, the whole work was a way to study how to support the evolution of a mobile community.

To do this, we proposed a design for the mobile social network, trying to include interesting and helpful features for the students, enabling flexibility to students' activities and "giving life" to the university and the city of Trento.

2.2 Specific objectives

Since our work is divided into three different phases (social network analysis, interviews and social network design), we can distinguish among three specific goals:

1. To analyze the most used mobile social networks and to create an understanding of them, studying how they differ from their web-based versions, how and why they are used, which advantages and disadvantages they have

2. To interview the students of the University of Trento that are going to be the final users of our social network, in order to find out the features that they like most. The goal of these interviews is to understand their needs, how and why they interact and use social networks, what they think about the Smart Campus environment, what would convince them to use a new social network

3. To design a proposal for the mobile social networks, which:
   - Creates a sense of community among the users
   - Help students in their daily life
   - Help students interactions for university stuff or extra activities

3 SOCIAL NETWORK ANALYSIS

3.1 Introduction to social networks

Social networks, platforms to build or reinforce social relationships through the sharing of material, are having an increasing popularity year by year[1]. There exist hundreds of them[2], with their own purpose and kind of users.
People do register in social networks according to the services they offer, and depending on social and cultural factors. Indeed, different countries seem to have different way of perceiving relationships, and so different popular social networks[3].

However, in the last few years people's preferences are more likely to standardize: Facebook is the main social network in most of the countries, and the most used in the world (see Figure 3.1 – World map of SN).
According to recent studies[4], it is on the top of the highest Global Traffic Rank social networks list, followed by Twitter, LinkedIn, Pinterest, MySpace and Google+.

Recently, the competition among social networks is no more limited to their web-based versions.

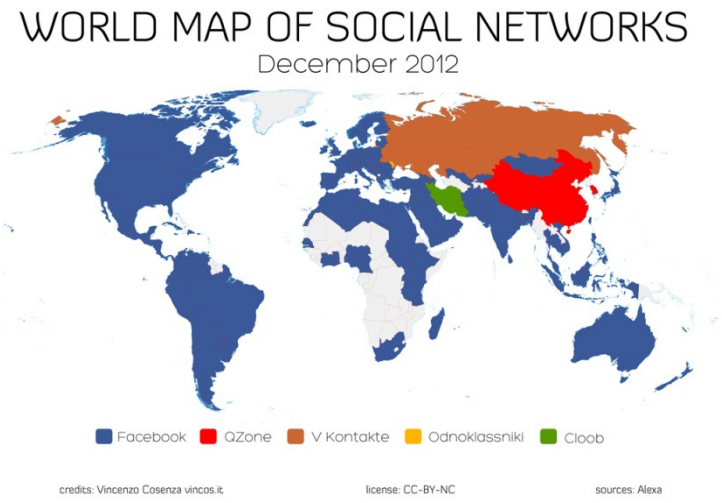


Figure 3.1–World map of SN
http://vincos.it/world-map-of-social-networks/

3.2 Mobile social networks

The increasing sales of smartphones and tablets have urged companies to extend their social networks for mobile access. Different generations of mobile social networks have been developed, and in 2010 they arrived to the fourth version[5], allowing the user to do almost all the actions possible in the

[1] A survey of December 2012 found that 67% of online adults use social networking sites. Some interesting statistics are available in the following webpages: http://pewinternet.org/Commentary/2012/March/Pew-Internet-Social-Networking-full-detail.aspx and http://www.pewinternet.org/Reports/2011/Technology-and-social-networks/Summary.aspx
[2] This is a list of the most famous ones: http://en.wikipedia.org/wiki/List_of_social_networking_websites
[3] The website http://www.pbs.org/mediashift/2007/06/orkut-friendster-get-second-chance-overseas166.html analyzes some different country-based popularities, explaining interestingly why, for example, Orkut is so diffused in Brazil, or Friendster among Filipinos, or Hi5 outside United States.
[4] http://www.ebizmba.com/articles/social-networking-websites
[5] http://en.wikipedia.org/wiki/Mobile_social_network

desktop interface. At the same time, new native mobile social networks are born, exploiting the potential of the access from everywhere.

Mobile social networks can be divided into six categories[6]: *group texter* (to send short messages), *location-aware* (to provide location information), *dating service* (to find a partner), *social networker* (counterparts of successful web-based social networks), *media share* (to share different kinds of multimedia contents) and *social gaming* (multi-player games).
The most popular one is, once again (and predictably), Facebook. Other ones very successful are Twitter, LinkedIn and Google+, and the native mobile Foursquare and Instagram[7].

Basically, mobile social networks allow users to create a profile, manage friends, exchange messages and share contents, but adapting and optimizing everything for mobile devices. Smartphone owners can be always connected and receive notification wherever they are.
Being different from their web-based version (if they have one), mobile social networks must be treated in another way, and need their own analysis.

3.3 Mobile social networks analysis

Starting from these observations, we decided to analyze deeper the following mobile social networks: Facebook, Twitter, LinkedIn, Google+, Foursquare and Instagram, which belong to different categories and are the most popular ones.

3.3.1. Facebook

Facebook mobile is a *social networker* which allows to share almost every kind of content and to follow updates of friends, groups and pages, in the mobile version as in the web-based one.
Its spreading allows to keep in touch with almost everyone from everywhere. It is mostly used for entertainment, and the main critics that it receives regard privacy issues.

Advantages:

- Easy to use (connecting, finding friends, posting states and photos, consulting the news feed and navigating among features require very low skills)
- Quick (everything works almost instantaneously) and lightweight
- Good design of the page, including all features in a findable place (as they are in the web-based version), and good use of space
- Account settings customizable

[6] http://www.gomonews.com/moso/
[7] Some references: http://www.pcmag.com/article2/0,2817,2395062,00.asp ,http://www.lockergnome.com/social/2012/02/16/top-5-mobile-social-networks/ , http://www.i-programmer.info/news/83-mobliephone/5277-top-10-smartphone-apps-2012.html and http://thebizloft.com/mappa-dei-social-network-2013/ (Italian)

Disadvantages:

- Privacy issues (friends are allowed to see the time of one's last connections; privacy setting less customizable than in the web platform)
- Lack of some minor features (ticker, games, chat advanced settings)

In conclusion, Facebook mobile has some few limitation, but allows to do almost everything efficiently. Its usability is high, and it is easy to keep in touch with friends and share material from everywhere.

3.3.2. Twitter

Twitter mobile is a *group texter* mainly used to share short sentences, read news and see trends. It has a clear purpose and performs it efficiently, but its limited features attract only some kind of users: it restricts what can be shared and has no friendship among people (which results in a lack of control).
Still, it is very popular and took into account from mass-medias.

Advantages:

- Easy to use (posting is immediate), comfortable and powerful (it includes almost every function)
- Very quick to consult
- Good design and layout (conversations are shown better than in the web-based version)
- Some additional features (such as the possibility to apply filters before posting images)
- Privacy and anonymity well-preserved

Disadvantages:

- Lack of customization (the personalized background and colors are not visible)
- Few account settings editable (most of the features present in the web version are not available; the information that can be written in the profile are very few and poor)

Being a social network for brief consultation and short writing, the mobile use of Twitter is natural and comfortable, maybe even better that of the PC version. Despite having limitations as a social network, this version can easily attract users, also thanks to its captivating graphic and immediate consulting.

3.3.3. LinkedIn

LinkedIn is a *social networker* focused on professional experience and job contacts. It easily allows to share and see every kind of information useful for this purpose, but this obviously limits its access to people interested in job issues.

Advantages:

- Good layout (much less dispersive than the PC version: features are very well-grouped), and attractive graphic
- Easy filling of fields (to complete the professional description) and management of messages
- Quick consultation of profiles

Disadvantages:

- Updates are manual
- Some features missing (above all *Look for a job*)
- No modification of account settings

The LinkedIn mobile version is very good-structured and allows a quick and pleasant consultation, even though it is interesting to wonder if people have really the need to manage professional profiles (which usually are not urgent) when they are outside. The lack of the job session emphasizes this.

3.3.4. Google+

Google+ is a recent social network similar to Facebook, used to share almost every kind of material. It has a clean graphic and allows very efficiently to divide friends in *circles* and share contents with only some of them. It has a good integration with the other Google services (Google Maps, Picasa, Blogger, etc.), but in general it seems a (clear) Facebook imitation and it does not provide a very different alternative to it.

Advantages

- Easy consultation of posts and circles
- Fast and lightweight
- Some additional features (such as *messaging*)
- Presence of most of the features of the web version
- Good integration with other Google services and with the camera of the phone (such as the *instant upload* function every time that a photo is taken)

Disadvantages:

- Improvable usability (features are distributed among different dispersive menus; some of them are duplicated – such as *photos* –, others useless – such as *atmosphere* –, others not intuitive) and not attractive graphic
- No modification of account settings
- Not interfaced with more popular social networks (Facebook, Twitter, …)
- Less customizable than the web-based version

This mobile version tries to provide the basic functions of *social networker*, adding some original features (but it could do more, to be different from Facebook). It works efficiently, but it could attract more users if its design and layout would be better studied.

3.3.5. Foursquare

Foursquare can be classified as a *location-aware* mobile social network, used to register and rank different places in the world. It is very efficient and useful in finding and suggesting places, and it has an excellent interaction with other social networks; however, interaction with friends is limited, and there are some privacy issues.

Advantages:

- Efficient (finds and shows interesting places) and useful (distinguishes among different kinds of locations and sorts them according to users' opinions; shows photos and comments)
- Integration and sharing with almost everything (Facebook, Twitter, Skype, Whatsapp, email, etc.)
- Many setting options
- Allows to check-in in places and find friends' locations
- Encourage users' contributions (with some game-based badges)

Disadvantages:

- Small screen (its features would need a bigger interface)
- Some missing features (such as the friends' profiles consultation)
- Risk of privacy violations (inform people about the place in which one is)
- Not intuitive in the beginning

Foursquare is born for mobile users and becomes very useful for them, providing detailed guides of cities and tools for sharing their life events. It could just improve its usability by re-organizing some menus and helping people who use it for the first times. Privacy issues are a minor problem, since it is up to people to choose if to share their position, but could be improved by adding some sharing options.

3.3.6. Instagram

Instagram is a *media share* social network, and, as Foursquare, is native mobile. It allows to take photos, apply particular filters and share them. In the last years its success has grown exponentially, even though it remains limited to smartphone users.

Advantages:

- Very easy and immediate to use (camera, filters and sharing are sequential actions)
- Integration with the most important social networks (Facebook, Twitter, etc.)
- Short and simple menu (all the possible actions are summarized in five icons)
- Powerful (very nice filters and effects)
- Account and privacy setting available

Disadvantages:

- Filters are available only from mobile
- Limited use (cannot see and share anything but Instagram photos)

Instagram mobile use is at the same time easy and powerful, and these are the factors which determined its success. If it could be exploited from PCs too, it would be perfect.

3.4 Conclusions

These six mobile social networks are the most popular ones, and for precise reasons which have been analyzed so far.
From now on, we have decided to continue our studies working with the two main ones, **Facebook** and **Twitter**, and two a bit more specific: **LinkedIn** and **Foursquare**. This should help us in understanding users' opinions and attitudes towards different ways to build friendship networks and to share contents.

4 INTERVIEWS

4.1 Interviews structure

In the previous part we have analyzed social networks and decided to continue our project working with the following main ones: Facebook, Twitter, LinkedIn and Foursquare. We were interested in getting users' feedback about them, as well as opinions about Smart Campus and suggestions to develop a new social network.
For this reason we interviewed some students.

We have adopted a precise strategy. First of all, we met as a group and discussed about kind of questions we wanted to ask to people. We basically divided interviews into three parts: a general introduction about the use of smartphones and the way to keep in touch with friends; a focus on the four social networks and users' thoughts about them; a discovery of Smart Campus and its features, analyzing advantages, disadvantages and the presence of an ideal social networks. The last two parts were supposed to be interactive, done by lending our smartphones to the users.
Once we prepared the list of questions, we organized them in a grid with the spaces for answers, and we made our interviews.
Finally, we analyzed the results and looked for the most important contributions and suggestions, especially for the following phase of our work.

We have decided to interview twelve students (three per person) of different nationalities (see Figure 4.1 - Nationalities).

Computer Scientists and Italian students were just a part of the sample that we chose to consider, because we tried to get opinions from as many different people as possible (see Figure 4.2 - Faculties).

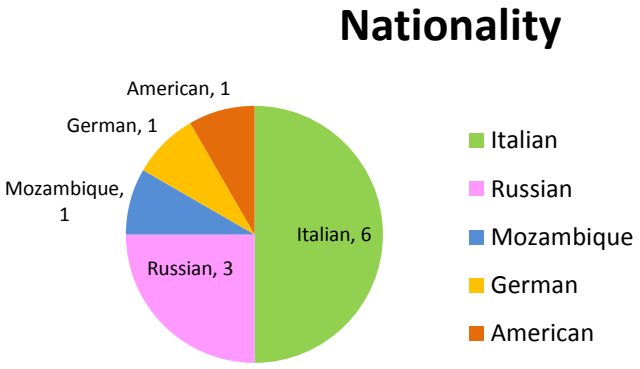


Figure 4.1 - Nationalities

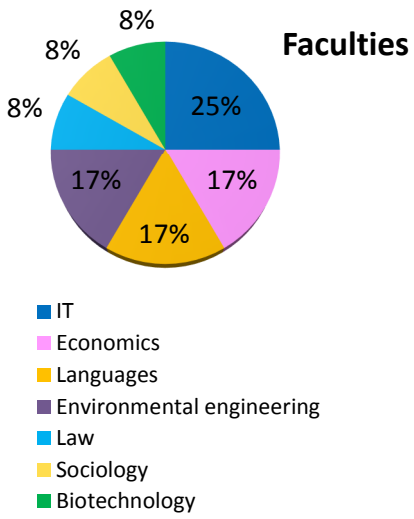


Figure 4.2 - Faculties

All our interviews began with an attempt of understanding how people get in touch with their friends and which social networks they use for this, focusing on advantages and disadvantages in exploiting

Facebook (which of course is the most popular one). Also, we asked people if they have a smartphone (and why if so, why if not), and what differences they perceive in using social networks in it instead of in the computer.

After this, we were interested in knowing what students like and dislike about the four mobile social networks: Facebook, Twitter, LinkedIn, Foursquare. We let them try the apps in our smartphones, and wrote down their opinions.

The last part was the one related to the SmartCampus project. During the interview, each student tried SmartCampus. For us it was very important to get feedback about its general idea and about each app: ViaggiaTrento, ViviTrento, MyPeople, Inbox, LifeLog and MyCVs.

At the end, we moved to the topic of a social network for Smart Campus: we wanted to know which features students need and prefer, in order to have a direction to follow for the following phase.

4.2 Results of interviews

The interviews allowed us to collect different and interesting opinions. We have separated answers into the three categories, and this is their analysis.

4.2.1. Use of smartphones and social networks

As a first question, we asked to students which tools they prefer to get in touch with their friends, and some comments about Facebook. Answers are shown in Figure 4.3 - Tools.

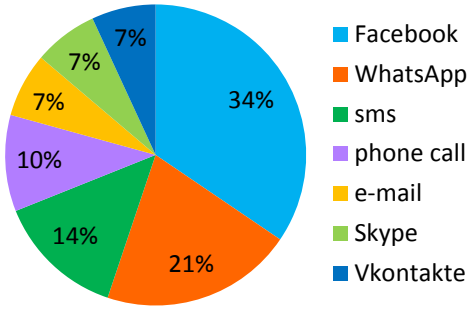


Figure 4.3 - Tools

Results elect Facebook as a winner: ten students prefer it to every other social network or communication tool. Most of them use Facebook to keep in touch with friends, to create and support groups and events, to read friends news, to publish posts and to share links and photos. Only two students do not like it and do not have an account. They presented as disadvantages its confusing organization of privacy settings, its “obsessive” behavior (you tend to spend a lot of time checking what people are doing) and the tendency of being forced to do something (such as accept friendships).

Other common communication tools are the ones offered by cell phones: students use a lot WhatsApp, sms and phone calls.

Secondly, we asked students reasons why they use smartphones. People who travel and prefer to be well informed when they are away from a laptop tend to use them a lot. Sometimes this is not limited to travelers: some students just like to get in touch with friends or virtual communities, wherever they are.

Also, international students find it easier to adapt to a new city, having maps, Internet and dictionaries.

Some students told us that they do not have strong reasons to buy a smartphone, but they are a minority: only two among twelve do not have one.

4.2.2. Opinions about the four mobile social networks

The following step was to understand what participants think about the four mobile social networks: Facebook, Twitter, Foursquare and LinkedIn. We let them try the versions installed in our smartphones, and analyzed what they like and do not like (see Figure 4.4 – Mobile apps).

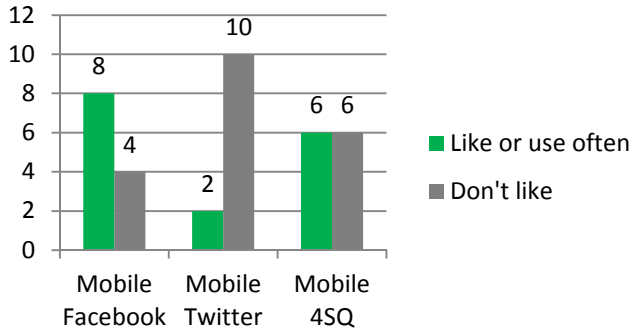


Figure 4.4 - Mobile apps

It seems that a lot of students like using mobile Facebook to send and read messages, but the web version is preferred to read news and share contents.
Almost all of them (even those who do not have a Facebook account) found the application quite simply to use, with all its features easily reachable.

Twitter mobile, instead, was liked by only two students, who use it often to read news. For the others' point of view it is not useful, especially having already Facebook (the same things can be done with Facebook, which has much more features as well).
Also, some students found this app difficult to use.

The majority of interviewed people did not know Foursquare, but after the interview half of them expressed the will to install it, thinking that the possibility to know opinions about places and to add photos to them is a nice idea.
Several students did not like the "check-in" function, meant to let friends know where one is, and were not intentioned to use it. Some of them talked about related privacy issues.

LinkedIn mobile was another particular situation. Most of people did not know it and are intentioned to create an account only when they will look for a job in the future: it seems an app not related at all with students.
Also, the mobile version was not totally appreciated. Almost no one would compile the CV from the smartphone or would spend time reading CVs of friends.

4.2.3. Comments about Smart Campus project and apps

The last part of the interview was related to Smart Campus. We have decided to ask students a general opinion about its idea, before testing the app, and we got a lot of positive comments: they liked the intention of creating a community for Trento students.

Then, we let them try the application by giving them our smartphones, and they made experiments with it, testing every single app.

- **ViaggiaTrento**: all participants found this application very useful and liked it. The timetables of busses and trains and the journey planner have been highly appreciated (especially because other

tools to do these kind of things are not so comfortable; one unique critique was the length of loading). Some people suggested to add the cost of trains.
In general, feedback were very positive, and the app has been seen as a way to be no more dependent on transport means, but to make them dependent from the person.

- **ViviTrento**: this app received lots of good comments. Students liked it, because most of them do not know where to get information about places and events in Trento, and appreciated the idea of collecting them in one unique space: almost them all said that they would use it frequently.
  However, many of them considered poor the amount of contained information and suggested an improvement (saying that, for example, prices and photos about places and events are missing. Also, it would be useful to have addresses and maps of all the places). The alphabetical order in which results are sorted was considered confusing as well.
  An interesting suggestion we received is the idea to join in some way ViviTrento with ViaggiaTrento, allowing to find easily places of events in the map and to plan journeys to there.

- **MyPeople**: only one student really liked this application and expressed the will to create different university groups. All the others found it very poor (above all the not-customizable profile) and not immediate (for example, many of them did not understand how to share contents with friends, or the exact meaning of groups and topics).
  One suggestion we got is that it should be synchronized with Facebook contacts.

- **Inbox**: this app was understood by four only students (mostly Computer Scientists), who though it could be useful for them in the future. Most of the other people did not get the meaning of functions such as Starred, Channels, Subscription and Labels, and did not know what to do there; they also tried to send new messages, discovering that there is no way to do it. A common question was “why should I replace my e-mail inbox with it?”.
  Someone suggested to join MyPeople and Inbox; another one to add a chat.

- **LifeLog**: the general opinion about this app was not so enthusiastic. Mostly, students got how to use it, but the first question was always “if I try to write something new, will the others be able to read it?” (an issue that is not clear in the app). Also, once learnt the basic functioning, almost everyone commented the not-necessity of writing a diary in a smartphone.
  Only two students liked this app, especially for the possibility to add pictures and videos or to read QR codes; but they admitted that there already exist more specialized applications to do these things.

- **MyCV**: most of the interviewed people were not intentioned to create a CV to share with other students, and did not understand its meaning. However, two of them thought about the possibility to integrate it with the information contained in the “Esse3” system, considering it trustworthy and better than LinkedIn.
  Some people appreciated the way in which competences and experiences are listed, respect to usual CVs (even though not understanding why to share it with students). One person suggested the possibility to send it as a document via e-mail.

The results of these interviews are summarized by Figure 4.5 – Smart Campus apps, which represents students' basic reactions respect to single apps.

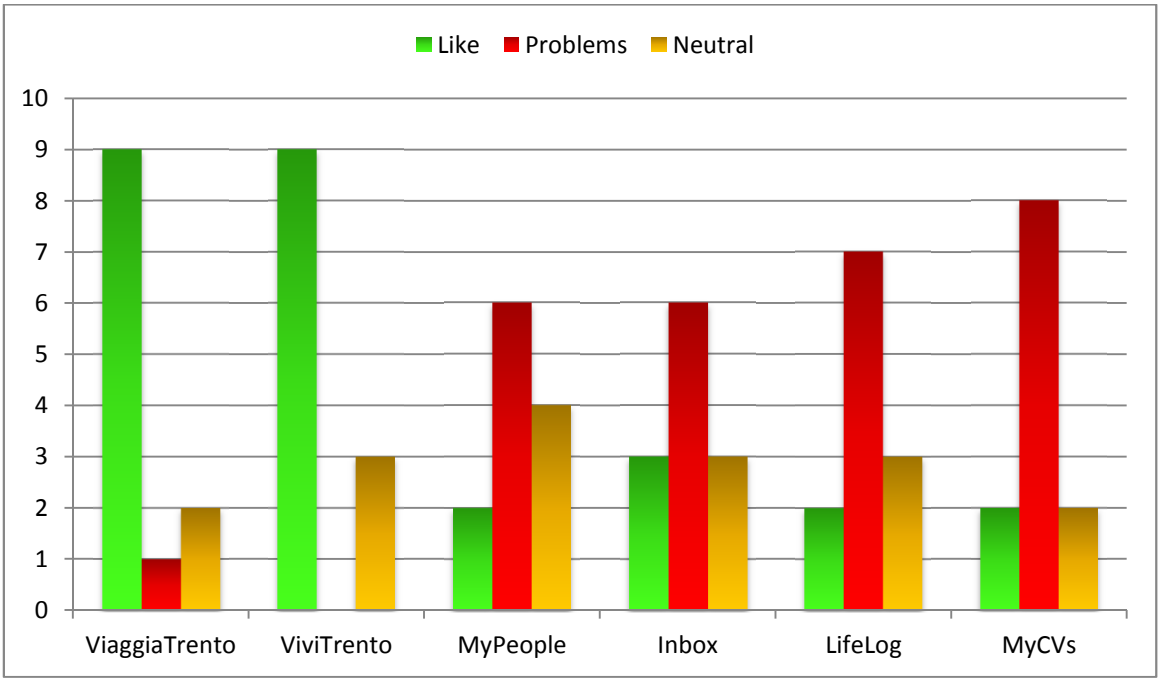


Figure 4.5 - Smart Campus apps

After this test, we asked again the overall view about Smart Campus. The general opinion was that it is nice and a great idea, with an high potential, but some parts could and should be improved.
Some students think that it is divided into too many parts, and this causes confusion. Also, they said it would not be bad to add a little tutorial to explain the first time how to use exactly features.

At the end of the interviews, we asked a quick opinion about a social network inside Smart Campus: how would students like it and what they would want to be able to do there.
A few of them would be happy to use it, to keep in touch with colleagues and to share materials, lectures and events. Other students did not guarantee that they would exploit it, because they find difficult to manage more than one social network. They would need more time, and also they do not think they would replace communication in Facebook with communication in Smart Campus.

Basically, suggestions were addressed in adding something new, something missing in other social networks. Some very interesting contributions proposed a link with the university world: marks, exams, dates, workshops, seminars; a social network or app from the university perspective, in conclusion, and possibly connected with the job world as well.

4.3 Conclusions

These interviews has been very interesting and surely helpful for the next part of our work: the design phase.

There are some very important results that we want to take into account:

- ViaggiaTrento and ViviTrento are really appreciated
    - students like to be helped in moving around the city
    - students like to have a list of interesting places
    - students like to have a collection of various events in Trento

- MyPeople and Inbox tend to be considered complex and not intuitive
    - students need simple explanations and simple names of single parts
    - students want to be able to communicate easily with their friends
    - students want to be able to share easily material with friends
    - students want to be able to compile and enrich their profiles

- LifeLog and MyCVs tend to be considered not useful
    - Students do not feel the need to write a diary in the smartphone
    - students do not feel the need to share a CV with colleagues

- students need a user-friendly interface and a tutorial for the first use
- students prefer easy and quick settings
- students want to concentrate on university stuff instead of a new social network
- students like Facebook (and do not want a copy of it)

5 SOCIAL NETWORK DESIGN

5.1 Design principles

The interview phase has been really useful to make us understand the *needs* of the community we want to work with. Knowing what students really want, we can now analyze these necessities and be able to structure the design of a social network to satisfy them, planning the usability and sociability aspects.
The social network will be integrated in Smart Campus, and of course feedback about its existing applications will be taken into account.

The first and most important aspect that we have decided to put in evidence is the need of a tool related to the university. Students do not want a space where to write posts, share links or publish photos, because they already have lots of them, and they are not likely to change their habits in favor of a new social network, especially if limited to Trento students.
What they really want is something not satisfied by other tools, and since Smart Campus is for university students, it is not difficult to discover the main topic that should be treated by the new social network.

Basically, the university life can be divided into two parts:

1. *Study life*: faculties, announcements, calls, courses, seminars, teaching activities, exams, didactic material, …
2. *Leisure*: cultural events, parties, trips, language exchanges, …

These two points will be the bases of our social network. We want to allow students to follow updates of courses and faculties having an interactive role in it, and to give them the possibility to be informed and take part to different events.

We have decided to call the social network **UniNet**, a name easy to pronounce and that gives to users the immediate idea of a network designed around the university, which is exactly what we want to build. Since it is a mobile version, its complete name will be **UniNet mobile**.

5.2 Design of UniNet

UniNet could be a seventh app inside Smart Campus, but this is not exactly what we need. As a social network, it should "*give life"* to the whole application, which right now is quite static; it should allow an immediate, pleasant and interactive consultation as the other mobile social networks do.
For this reason, we have decided to make UniNet the core of Smart Campus, and to design the other apps around it.

This means that the initial page of our social network (the *UniNet home page*) will be a stream of posts in chronological order, based on user's specific interests and basically structured as a mix of study life and leisure events.

Then, there will be a menu in the left, containing links to the Smart Campus apps. These ones will be:

- *ViaggioTrento* and *ViviTrento*: the most appreciated apps
- *Messages* and *MyFriends*: two improved version of, respectively, Inbox and MyPeople, which try to take into account students' advices and to add more social networks elements (private messages, chat, study groups, lists of friends and so on)
- *MyCourses* and *Calendar*: two new apposite apps to manage courses and timetables

Also, in the top of the screen there will always be a link to *MyProfile*, an app used to manage the own profile (MyCVs will be a part of it), and to the *settings* options.

Students will be able to use Smart Campus in two ways: consulting quickly the news related to their subscriptions and posting material or comments, or exploring the inner apps to find deeper and more precise information.

Here there is a better and detailed explanation of all the single features.

5.2.1. Subscription page

The first time that users open Smart Campus, they are asked to login with the university account, as it already happens.

After this, it is displayed a screen called *Subscription page*, which allows them to decide the kind of material they want to be subscribed to. Of course they can change subscriptions whenever they want in the future, by going to *Settings*.

Everything users will see in the UniNet home page will be based on the options selected in this list:

- ✓ Events from *ViviTrento*:
  - concerts
  - happy hours
  - movies
  - parties
  - seminars
  - exhibitions
  - performance
- ✓ Faculty and courses (this list can be synchronized with the Esse3 system):
  - list of university faculties and courses that are available for the selected faculty
- ✓ Notifications from *Calendar*:
  - today's events
  - this week's events
  - this month's events
  - other dates

Also, the user has the possibility to automatically import friends from Facebook or e-mail.

5.2.2. UniNet home page

After the login and the initial subscription, the *Home page* is the screen showed to the student (and always the first one from the following time). It is just a read-only page, and allows the interaction with the other features through the *menu*, accessible by the yellow arrow in the left. It is meant as a connection among the different parts of UniNet.

In the *Home page*, the user can see the following items:

- New notifications:
  - Events updates
  - Courses
  - Calendar
- A bar in the top, containing links to:
  - *MyProfile*
  - *Settings*
  - A dropdown to filter information displayed on the *Home page*
- A yellow arrow to access the *menu*, with links to:
  - *ViviTrento*
  - *ViaggiaTrento*
  - *Messages*
  - *MyFriends*
  - *MyCourses*
  - *Calendar*

Notifications are sorted by date (from the most recent one) and can be consulted by scrolling up and down. They can also be filtered.

5.2.3. Messages

Messages is an improvement of the actual app Inbox. It keeps the existing functionality and adds a new part, the *Chat*, meant to allow communication among students.
The user can send a private message to one or many other contacts of the campus. This service works on-line and off-line: messages can be sent and read in both cases. This feature exploits the easy connectivity of the mobile device and the nature of the interaction on the move.

Also, there are some out-coming channels to communicate with the authorities of the university. We have seven information sources, such as DISI, OPERA UNIVERSITARIA, CISCA and UNISPORT, which can also become recipients of messages. From an user's point of view, this is a simple way to communicate with university organizations (without wasting time looking for the right e-mail addresses, for example).

5.2.4. MyCourses

This app allows students to subscribe to courses they are attending, to receive notifications from them and to see related pieces of information.

When users open *MyCourses*, they see a list of courses they are subscribed to (*MyCourses home*), plus the *Course Manager* option, which allows to modify the preferences selecting the courses they are interested in.
Inside *MyCourses home* it is possible to select one course and consult one of its five parts:

- *Opinions*: contains a list (sorted by date) of posts written by different users, with general comments about the course. Everyone can answer to a post or write a new comment

- *Description*: contains a general description of the course, taken from Esse3 or some university document
- *Material*: contains a list of files uploaded by students. When users touch one folder they open it; if they touch one file they download it. There is also the "+" button, which allows the user to upload new files or create new folders.
- *Exam*: is organized as *Opinions*: a chronological list of comments written by users, but strictly related to the exam of that course. The user can write a new comment
- *Students*: a list of names and surnames of students who are subscribed to that course, to facilitate students to find their colleagues. Touching one name, the student's profile is displayed

5.2.5. MyFriends

MyFriends allows users to manage and organize their list of friends (see Chapter 5 in [2]). They basically can add friends, create groups, manage them and share files and activities.
Some standard groups are automatically created when students attend courses, and deleted when they unsubscribe.

More precisely, features inside *MyFriends* are:

- *Friends*: shows the lists of the contacts (by touching one of them, the profile is displayed and there is the possibility to send a message)
- *Groups:* shows the list of the groups and allows to create a new one
- *Find people*: looks for people by knowing the name or other parameters

Users receive a notification if someone adds them to a group, and if a friend from Facebook has started using UniNet.

5.2.6. Calendar

The *Calendar* app is structured to provide students with a clear view of the current affairs and events (related to leisure or study), an easy and convenient navigation and a quick addition of new items.

When users open *Calendar*, they see a home page (*Calendar home*) showing chronologically the list of events of the current and followings days, if there are some. There is the possibility to create a new event or to change the calendar settings. Also, in the right there are links to the other three parts of the app:

- *MyCalendars*: shows a list of years, months and days, to allow students to move easily to another date and get lists of events for different periods
- *ThisWeek*: displays a chart with the student's events for the current week. Also, the user can create a new event (pressing a slot), view the details of a certain event or change week
- *Exams and Assignments*: shows a list of deadlines for projects, exams and other dates meant to help users in organizing their study life. The visibility of these event can be limited in the settings, in order not to add too much noise to the normal calendar

New events are managed through a simple form, where the student is asked to write a title, the time and the place of the event. It is also possible to invite other students and add comments and pictures.

Events can be highlighted with special colors, and notifications can be hidden if too invasive.

5.2.7. MyProfile

This app allows students to manage their profile, writing pieces of information that will be visible to friends or globally.

Once *MyProfile* is opened, it shows a menu with four options:

- *Info*: allows to write personal information, such as home place, study field, birthday, languages spoken, interests and attended courses
- *Photo*: allows to add, change or delete a profile picture
- *MyCVs*: the same app of the actual Smart Campus. The user can decide if to fill and share it, or not
- *Contacts*: allows to write specific contact information, such as phone number, e-mail, Facebook account, etc.

5.2.8. Settings

Settings is meant as a section where users can change personal info and preferences. Precisely, they can decide what is visible in the *UniNet home page*, and modify some security and privacy options.

The modifiable preferences are:

- *Messages*: allows to put the state on/off-line, to activate or not notifications and to block contacts
- *Calendar*: allows to set the default view, to decide visibility of events and to manage notifications
- *MyCourses*: allows to subscribe and unsubscribe to courses and to set notifications
- *MyFriends*: allows to add new friends and to import contacts from Facebook or e-mail
- *MyProfile*: allows to change the visibility of the personal information

5.2.9. ViaggiaTrento and ViviTrento

The two basic apps will be kept as they are, since almost all the interviewed students liked them. We just suggest some small improvements in ViviTrento: a sorting of places based on relevance and popularity, a bigger list of places and events (possibly integrated with photos and maps in ViaggiaTrento), and a special space for international students and language exchanges.

5.3 Usability and sociability in UniNet

So far we have planned and structured the design of our social network. However, this is not enough to establish its success, because other considerations must be taken into account. We need to study the *easiness of use* and the *easiness of social interactions*, to understand how and why users will interact with UniNet, if they will be satisfied, if they will come back, and how, in case, we can support the evolution of this community.

From the usability point of view, we try to facilitate the first usage of UniNet by inserting a brief *tutorial*, meant to give an idea of what are its features and how they can be used.

The *interface* is supposed to be easily understandable, since it follows the standards of many Android applications and it recalls in some parts the structure of Facebook (which, as results of interviews have shown, is the most popular social network). For this reason, it is also easy to remember.
Once the user has learnt the design, all the features appear easily *accessible*: the *home page* is the center of the whole social network, and the link to the *menu* is present in every page. Also, the single apps contain bars to connect all the features, to provide a quick and immediate navigation. Everything works with very simple gestures: touching, scrolling, sliding, pressing.

The user has also the possibility to *personalize* many options, in order to create a space as more personal and comfortable as possible, and to gain satisfaction from the use of UniNet.

From the sociability point of view, instead, we decided first of all to follow the main direction of Smart Campus. Users will be asked to *login* with the university account: on the one hand this avoids them to fill a long and boring registration form; on the other hand it provides us a ways to trace identities and to limit the access to students of the University of Trento (that is what we want right now).

After the first login, users can import their contacts from Facebook or look for them in Smart Campus, and create groups. This allows an immediate *interaction* with friends and colleagues, and can affect positively the productivity of the students: UniNet helps in team building and team working. Also, the possibility to send messages improves the interaction dialogue among users. In general, messages and posts are supposed to be short and informal (as in the nature of a mobile environment), but nothing avoids more formal conversations.

The UniNet environment will be reserved to students. This creates a precise *social identity*, and do not limit users' expressiveness: since Smart Campus is not anonymous, they would not feel free to express, for instance, negative opinions about courses, if professors would be able to read them. Of course, freedom of speech does not mean that students are allowed to offend or not respect others' feelings. The *codes of conduct* expects general respect, and for people who behave differently we include the possibility to report offensive or not adequate behaviors to the staff (which will block or ban, in case, the involved user). The staff is meant as a *silent moderator*, and intervenes only in case of reported problems: we do not want to create too much interference with the users' activities.

Finally, the *Settings* page provides the necessary tools to manage the *privacy and security* options, allowing users to decide what friends/groups can access personal information. Also, many fields can be left empty, to protect the privacy.

Students could join the UniNet community (which immediately clarifies the university purpose by its name) because it provides simply and efficiently the resources they need (again, we can say this by looking at the results of interviews). They could discover it through friends or advertisements in the faculties.
The initial phase is the one which requires more support: people will be more likely to contribute if the others already do this. Participation could be encouraged, for example with virtual rewards or bonuses in the canteen or university bars.
Once the community grows and becomes active, most of the work is done, but of course it never finishes. A continuous support should be provided; users' needs should be repeatedly asked and new attractive features have to be periodically released.

6 CONCLUSIONS

The experience of building a new mobile community has been really interesting: we think we have conducted a good research project.

After the analysis of the existing social networks and after interviewing students to understand their attitudes with mobile environments, we started thinking about new potentialities to offer to a community, in order to improve the life of its participants (the students, in our case). Our decisions have been based on the idea of offering new services to help students in the university life, especially for what concerns the academic career and the leisure time. We exploited suggestions that students themselves told us during the interviews, and we tried to develop what they need and would prefer.
All the implemented features, of course, take place in the Smart Campus environment. We think that, exploiting the closeness of Smart Campus to the University of Trento and so its reliability, we can attract a substantial mass of students.

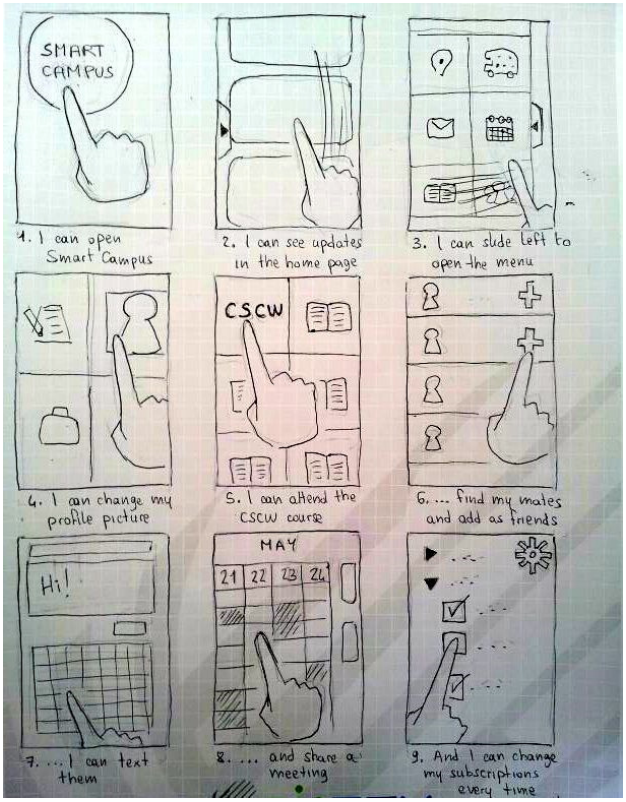
At the end of the project, we dedicated a bit of time to reflect about problems in our research and the direction of a future work.
We observed that the main weakness of our production is the really low number of people interviewed: twelve students cannot be considered a sufficient sample of our users. We tried to get opinions from different faculties and nationalities and deduced some trends, but of course there could be many more different opinions. New larger interviews could be a starting point for a future extension of the research.
Another serious problem is the competition with the existing social networks and mobile applications: people know them better, use currently them and are not likely to change. For this reason, we did not use a competitive approach, but rather we tried to be inspired from them: we studied their liked features and considered them in our design phase.

Our proposal has been studied in order to involve users and to encourage their participation.
Once (and if) there will be an active community, we do not exclude the possibility to extend our application to a larger target, realizing the dream of the so called “Smart City”.

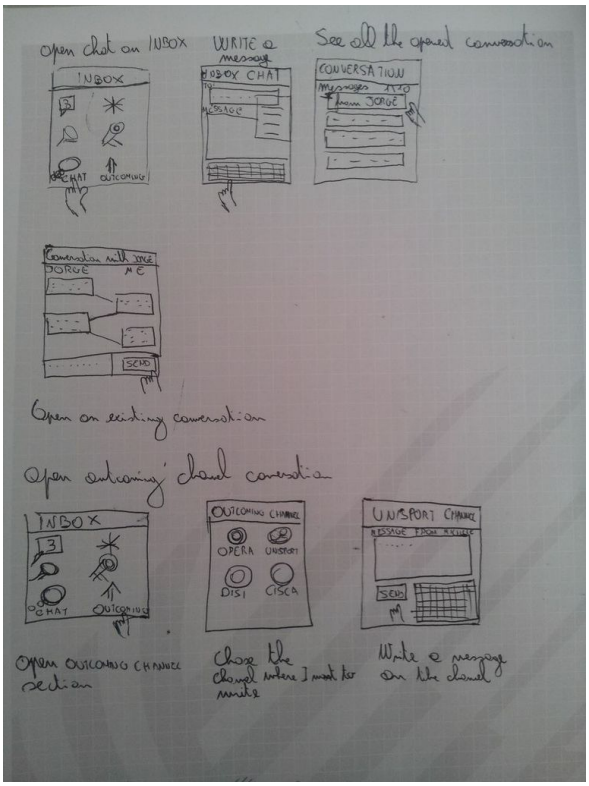
7 Appendix

In this section we put all the tools developed during the work. Such as handmade prototypes, storyboard of "UniNet" and the questions used to interview the student.

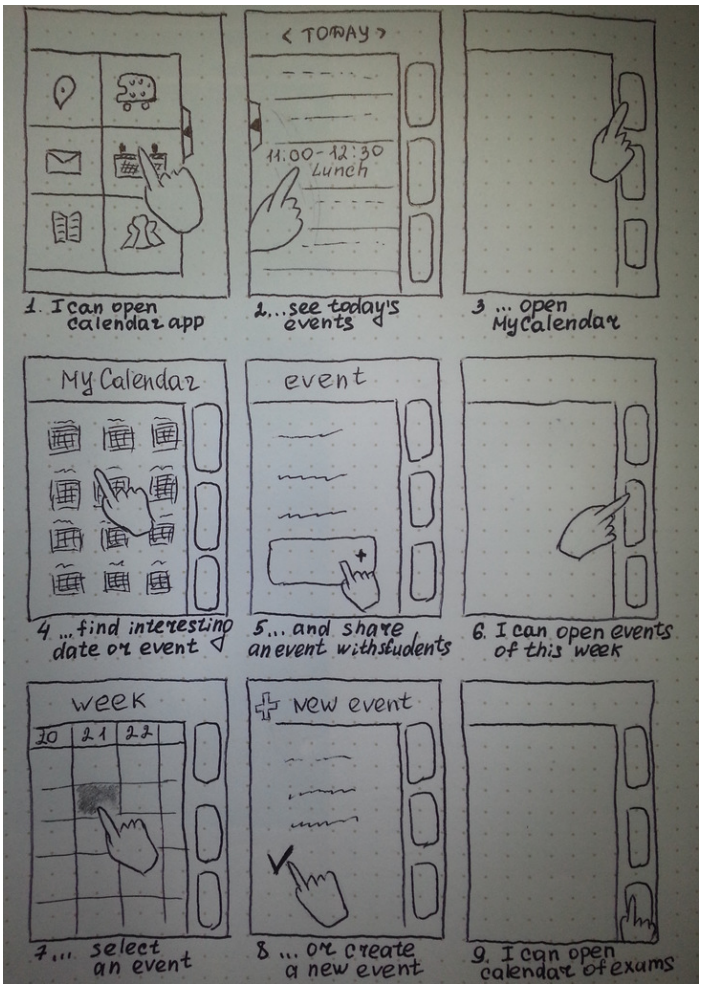
Initial handmade storyboard - (It represents a general view of our platform):



Handmade storyboard Inbox – Chat – Outbox channels:

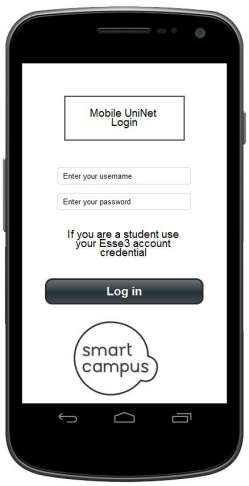


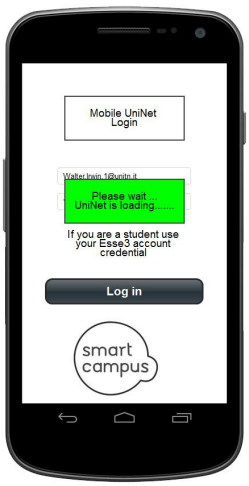
Handmade storyboard MyCalendar:

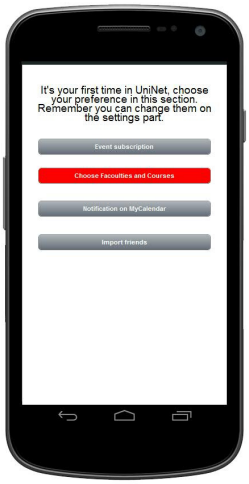


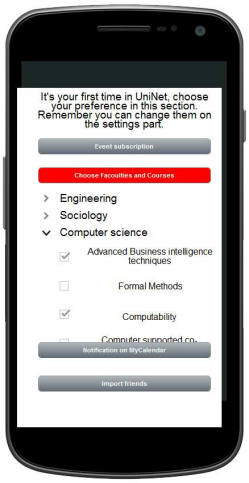
More detailed prototypes of our application:

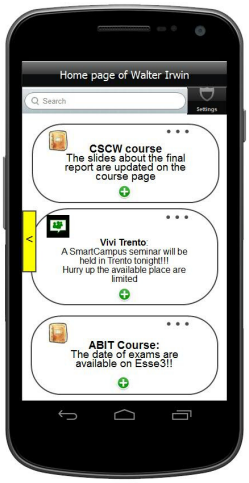
General structures and app “MyCourses”:

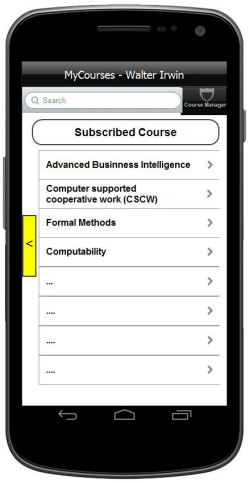


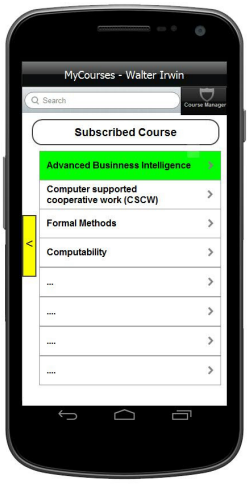


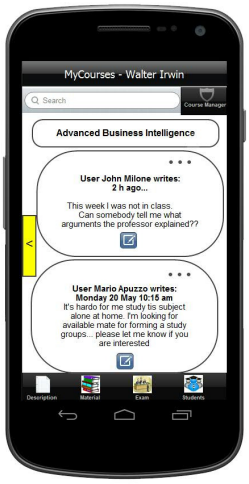




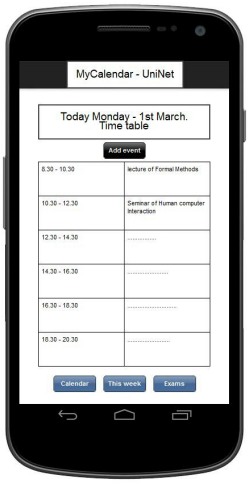


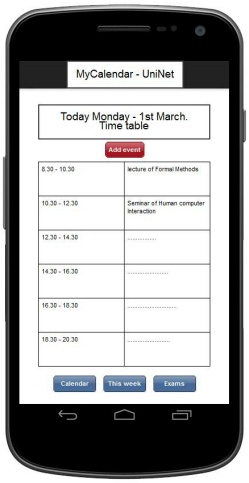


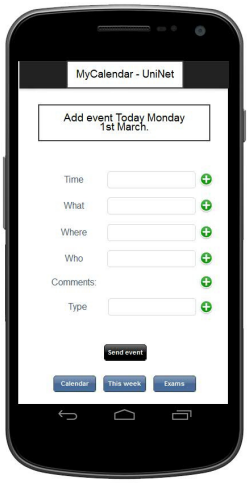


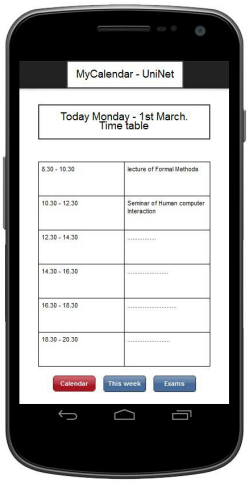


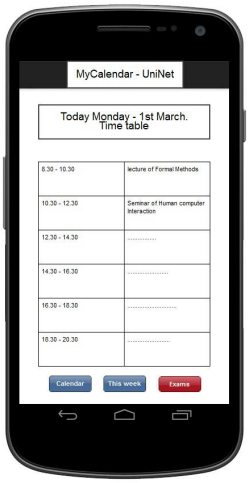
MyCalendar Prototype:

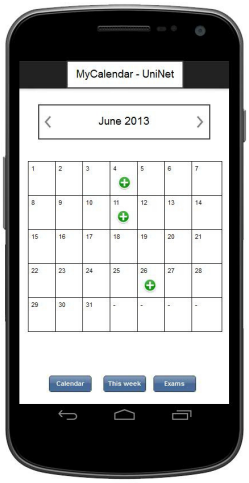


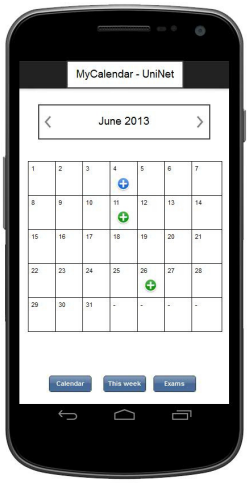


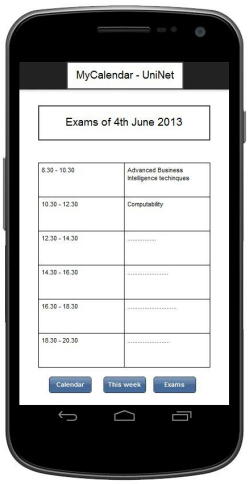












Prototype of new version of Inbox:

Prototype of MyFriends:

Question submitted to the students. (We interviewed 12 students coming from 7 faculties)
This represents the general framework followed.
The interviews took place in a quite location with the help of the Smartphone Galaxy S2, it was used to show the SmartCampus app to the students.

How do you get in touch with your friends, when you don't see them personally?
Do you have Facebook?
If so, why? How do you use it?
If not, why? What don't you like?
Do you use other social networks?
If so, what?
Do you have a smartphone?
If so, why?
If not, why? Are you planning to buy one?
If you have a smartphone, do you use social networks in it?
If so, what's the different between mobile and web versions?
What do you think about Facebook mobile?
What do you think about Twitter mobile?
What do you think about Foursquare?
What do you think about LinkedIn?
What do you think about the SmartCampus idea?
Try Viaggiatrento. What do you think about it?
What do you think about Vivitrento?
What do you think about MyPeople?
What do you think about Inbox?
What do you think about LifeLog?
What do you think about MyCV?
What is your total opinion about SmartCampus?
If SmartCampus had a social network, how would you like it? What would you want to be able to do? Which features do you think are needed to convince people to participate?

Answers of the interviews.

The first part of the interview:

	Female, Italian, studies environmental engineering	*Female, Italian, studies environmental engineering*	*Female, Italian, studies biotechnology*
How do you get in touch with your friends, when you don't see them personally?	Facebook, Skype, sms (only for quick messages)	sms, e-mail, phone calls, Skype (not so much)	Sms, Facebook, phone calls
Do you have Facebook? If so, why? How do you use it? If not, why? What don't you like?	Yes. 1) above all to play games 2) to keep in touch with people I don't meet often 3) to share links	No. 1) I'm afraid of writing too many personal data on the Internet 2) I would feel forced to accept friendship requests from people that I know, but with whom I don't want to share personal material. I prefer systems in which requests can come only from people who asked you personally your e-mail or id (Skype, Messenger)	Yes. 1) to keep in touch with people I don't meet often 2) to chat and send messages 3) to see what are the others doing 4) to share photos and, rarely, links
Do you use other social networks? If so, what?	No	No	No
Do you have a smartphone? If so, why? If not, why? Are you planning to buy one?	No It would be useful, but I can live without it. Let's say that I don't have very strong reasons to need the Internet when I'm outside	Yes, an old-generation one. Honestly I didn't know it was a smartphone. I have chosen it for the qwerty keyboard.	Yes. I bought it because it allows to do lots of things, it has a qwerty keyboard, lots of useful apps and the internet connection. I'm satisfied with it.
If you have a smartphone, do you use social networks in it? If so, what's the different between mobile and web versions?	/	I don't use social networks, but if I did, I think I would use it outside sometimes, maybe to post phrases or photos about particular situations	Yes, I use Facebook mobile. I do almost the same things I do in the web version (share photos, send messages), except to send attachments and open links
What do you think about Facebook mobile?	Very useful, it has the same features of the website. Comfortable and intuitive, it also has the additional function to find interesting places close to you.	If I used Facebook, it would be useful to have it in the smartphone. It seems not so different from the web version. It's a bit hard to understand how to consult friends' profiles. In general I find it harder than Twitter, but because it has much more features, and I'm not used to it.	The Blackberry version's not so good: very slow, sometimes I don't get notifications, there are no attachments in messages, no covers in profiles and the screen is very small. The Android version is more comfortable, with its bigger screen. I think Facebook is made for the touch screen. Useful, it has all the features and its use is immediate
What do you think about Twitter mobile?	It is not immediate to understand how to post a new tweet. In general, not intuitive. It is only possible to write short sentences; I would never use it	I wouldn't use it, it seems less useful than Facebook. I don't get the sense, above all if one has already Facebook. About the app, it is quite intuitive, I got how to do everything	Not interesting, I don't understand why I should use it: I have already Facebook, and if I want to write something I do it there, because there are more people who read it. I don't get how to send messages. Not intuitive and very few features.

			Why it is written "tweet" instead of "post"? I don't like the lack of friendship and the fact that everybody could follow me
What do you think about Foursquare?	Very useful and easy to use, I would exploit it	Useful. I would use it to find places where to go, but not its "check-in" function. If I want to meet friends in a certain place, I decide it with them	Nice idea the possibility to add photos to places. It's a good reference. I like the number of the place, the maps, the tips (and the possibility to open them all). I also like the game aspect. Intuitive and easy: I will install it
What do you think about LinkedIn?	Right now I don't need it, but when I'll look for a job I will sign up. The app is well-done, but LinkedIn is the kind of thing that you fill in one time and then let it go	I don't know how many people use it. I think I will create an account when I will look for a job. But I won't need the app to do this: PC is better	The home (news feed) seems a useless function, since it contains only updates of friends (who, for some strange reason, are not called "friends"). Why do groups exist? Why to send message? Why to use LinkedIn on the phone? It makes no sense as a social network, it's just a list of CVs
What do you think about the SmartCampus idea?	Nice and useful idea	Very useful	Very interesting. If all the students were able to participate, it would be really useful to have information
Try Viaggiatrento. What do you think about it?	The timetables are very useful, above all if they really work for strikes of buses and trains. The journey planner is useful too, but it could be improved by adding some paths not indicated in Google Maps (such as the slope to Mesiano)	I like it. Journey planner is very useful, as well as "info in tempo reale" and "invia segnalazioni". It could be useful to know also the cost of trains	"Info in tempo reale" is very good and useful, and can replace very efficiently the book. Instead of being dependent from transport means, they depend on you. Maps sometimes are not perfect, but anyway well-done and useful
What do you think about Vivitrento?	Good. It would be useful to have addresses and maps of places, which doesn't happen for all of them. "Alloggi" are a bit confusing	Places and in general lists are well-done. The search function works very good and, for example, allows to find easily a movie. Stories seems a useful project too	I don't like the fact that places are listed in alphabetical order: a popularity ranking like the one in Foursquare would be better. Some places and events have no information. Movies are really useful. I don't get the usefulness of stories
What do you think about MyPeople?	The personal profile is really poor	What is the meaning of groups? I don't understand how to share material, and, anyway, sharing would be limited if done with a smartphone. I wouldn't share things with my colleagues using the phone	The profile seems useless, since there's nothing that can be done except to change name. What is "topic" meant to be? And what are groups? Creating a studying group could be useful, but using the phone for this is not comfortable. I would continue using Facebook. Also, I don't see how to send a message
What do you think about Inbox?	What kind of messages can be received in the inbox? What is "starred"? How can I read messages, if I can't send them? External subscription is a good idea, but doesn't work.	I can't understand exactly the meaning of functions, it's a bit cryptic. I don't get what I have to do	I like above all the external subscriptions, and the possibility to read news of the faculty. I don't have problems in understanding its functions. It would be nice to add attachment and manage contacts. Also, Inbox and MyPeople

	What is search? What should I search? In my opinion is not intuitive		would be better if joined
What do you think about LifeLog?	What is "grab experience"? What am I supposed to do? Why the title? It's not the kind of app I would use every day: if I have to write a diary, I don't use the phone. How can I share it?	Is it a kind of game? Who can read things I write? I don't think it's very useful. I wouldn't write a diary on the smartphone. What is its connection with the campus? it's an enrichment, but not fundamental	Who can read the diaries? I like a lot the QR code reader, very useful, excellent. Grab Experience should be called "new diary" and put inside Diary, otherwise it is not immediate. But what is the meaning of writing a diary on a phone? But I would use it, maybe for the QR code and to write short notes
What do you think about MyCV?	I don't get why I should write a CV in an app for students. What's its meaning?	I don't think I would fill it, I don't want to share my CV with students	Only few things can be written. Why should students be interested in my own CV? I'm not interested in their
What is your total opinion about SmartCampus?	Yes and no. It could improve in some things. I would use it only for buses and trains timetables; for the rest there exist other dedicated apps (like Foursquare)	A very good idea. Even things that seem pointless are so because it's a new project and not yet active. I like the fact that there are lots of things and you can do whatever you want. Some parts could be improved to be more intuitive; others could be simpler and clearer (like Inbox).	If SmartCampus will be well-developed, it can be great. ViaggiaTrento is useful, ViviTrento too (except to stories), MyCV can be removed, External Subscription is very good and the diary so so (it is not so much related to university, also).
If SmartCampus had a social network, how would you like it? What would you want to be able to do? Which features do you think are needed to convince people to participate?	I would basically allow students to keep in touch with their colleagues and create groups to share material. But I don't have a smartphone, so I would able to use it only if it existed a web version too. SmartCampus should also give something new (but I don't know what), otherwise why not to use Facebook?	I would add all the things that the other social networks have. To be motivated to use it and contribute, I would like to have the possibility to divide colleagues into different categories, and share what I want with who I want. I would like a friendship system like that of Facebook (and not like Twitter), and I would like to chat. But actually there exist lots of tools to do this. Students have already found their own ways to keep in touch, so why should they change them? In my opinion SmartCampus should focus on new things, instead of creating a social network.	Rather than a new social network, I would like an integration with Facebook (for example, to share material or import contacts). Also, I would interface the system with university tools such as Esse3, something for the canteen, links of important webpages. That's what students would like.

The second part of the interview:

	Female, Italian studies Languages	*Female, Italian studies Languages*	*Female, Italian studies Economy*
How do you get in touch with your friends, when you don't see them personally?	Facebook , WhatsApp.	Facebook, WhatsApp, SMS.	Facebook, WhatsApp.
Do you have Facebook account? If so, why? How do you use it? If not, why? What don't you like?	Yes I do. I use it just for working, I'm a singer and i use it to create events and share the photos of my past events.	Yes, I can message to my friends, worlwide as well, for free.	Yes, because it is easy to use, all my friend have it. It allows me to organize my time very fast and it permits me to keep in touch with the people I don't see everyday.
Do you use other social networks? If so, what?	No.	Yes, I use few times Twitter.	No.
What kind of information do you prefer to publish?	Photos, invitation to my events.	Sentences, photos and video from YouTube.	Songs, photo of my cat, how I fell.
Do you have a smartphone?	Yes.	Yes.	Yes.
If you have a smartphone, do you use social networks in it? If so, what's different between mobile and web versions?	No at all , because using them with the mobile version is time wasting,	Yes I use everyday Facebook for short periods. I use it very briefly with my mobile. I prefer use the online version for long chat and for video posting.	Yes I use FB only with it. If I hadn't a smarthphone I wouldn't spend a loto of time on it.
What do you think about Facebook mobile?	I don't use it because is not so functional as the online version.	Good interface and well structured.	Is time wasting (I use it very often), but the version mobile doesn't allow me to see some part that with the online version I see better.
What do you think about Twitter mobile?	I don't find it so useful.	For me is difficult to understand how to use it.	I don't find it really interesting, have an account but nothing attracts me.
What do you think about Foursquare?	I think it has a lot of privacy problems since you can share where you are	Interesting and easy to use, good design, it is designed to lead the user to invite a person to use it whenever this person wants.	I never use it but I find it very useful specially if you want to know opinion about something that you want to visit.
What do you think about LinkedIn?	It's useful but it is not trustworthy becasue you can write false information.	Easy to use, it links you automatically to what probably you are looking for (job, companies, people).	It's very professional but sincerely I don't use very much it becasue I 'm studing and working as well.
What do you want to have that not exist?	I don't want to share extra information about where my post and other things come from (mobile or online version)	I want to know if somebody is dangerous for me or for my life (more security check)	I want to recieve suggestion about new people that I can know because they have the same interests.
Comment after some testing on smartcampus.	**Vivitrento**: Maybe who organize the events is interested in updating it. I leave them the possibility to do it even if they are not joint in the SmartCampus. **Inbox**: Fantastic!!! Because you can see the notification from University. "In our	General comments: I think that SmartCampus is divided in to many part. Maybe with 1 app is more faster to understand what I can exploit the functionalities. All the app need a little tutorial in order to	**Vivitrento:** I would give the possibility to add events and other things by other people out of the smartcampus. I would make it more interactive and more expressive. (Example adding more information about the place and events.)

	faculty (Facoltà di lettere Università di Trento) the screens with notification are not present” **Lifelog**: I wouldn't use it for privacy reason. I would keep the diary in my telephone but I 'm not sure if it could be useful. **MyCv**: Since it reports the information present in “Esse3” system it is trustworty, better than LinkedIn.	understand well how tu use them. I would add a search engine that allows me to search something globally in all the app, so if I had not a clear idea the system can suggest me what app I can use.	**Inbox:** Good, but I would add also an outcoming channel to ask information. Or better a chat to talk with other people of the campus. **MyCv:** Useful at all. **ViaggiaTrento**: I would add the possibility to share and to give opinion about trip that i have done to help other people who want to do it as well. In general having 6 app is too dispersive. I would converge all the functionalities in one app as happen in MyPeople wich allows me to share the data come from all the apps (i.e. LifeLog, MyCv)

The third part of the interview:

	Female, Russian, studies embedded systems	*Male, Russian, studies economics*	*Male, Russian, studies computer science*
How do you get in touch with your friends, when you don't see them personally?	Facebook Twitter VKontakte WhatsApp	VKontakte WhatsApp iMessage	e-mail Facebook
Do you have Facebook account? If so, why? How do you use it? If not, why? What don't you like?	Yes. I often use this network because a lot of my friends are registered there. This is very good that I can customize privacy of information about me, for example, I am able to decide who can see my photo and who cannot. But it will be better if privacy settings would be organized more obviously for quicker use. 1) community with friends 2) read friends' news and publications 3) add notes and photos about my journeys	Yes. Sometimes I use Facebook because it is easy to find students from university of Trento. But only a few of my friends use Facebook in my country, so I don't need this network.	Yes. I like this network. Currently, it is the best social network what I know. I prefer to create groups (for my hobby) on the Facebook because a lot of people use this network and it is easy to manage a community. 1) community with friends 2) creating and supporting groups
Do you use other social networks? If so, what?	VKontakte Instagram	VKontakte. I always use this network. A lot of my friends prefer it too.	No.
What kind of information do you prefer to publish?	I like to add information and photos about my travels.	I don't like to share information about me. Sometimes I add new photos into VKontakte.	I don't like to share information about me except my professional experience, for this kind of information I prefer to use LinkedIn.
Do you have a smartphone? If so, why? If not, why? Are you planning to buy one?	Yes. It is necessary for me! I like to travel and with smartphone travelling becomes easy for me. When I visit a new city or country I use maps and I am always with Internet.	Yes. I live in Trento for a few months and I don't know this city very well. So, I need maps and Internet. And smartphone helps me in my studies too. I use dictionary and other things.	Yes. I need smartphone for community. I prefer to be well informed when I far off of my laptop.
If you have a smartphone, do you use social networks in it? If so, what's different between mobile and web versions?	Yes, of course I use social networks in smartphone. 1. Mobile Twitter is better than the web version. It is quicker and more convenient for adding new photos. 2. I don't like mobile Facebook so much. Sometime it is slower than the web version. But I use mobile version only for short messaged if it cannot wait when I will be available near my laptop. I	Yes, I use social networks in smartphone. For example, I read sport news in Twitter mobile. And when I far off of my laptop I often use mobile VKontakte. I like both: mobile and web VKontakte. L	Yes, I use Facebook mobile. If I am far off of my laptop I can read messages and if it is important then I answer immediately.

	prefer web version for reading news and for watching friends' photos.		
What do you think about Facebook mobile?	I prefer to read news and updates from my friends on a laptop, but I send and read messages from Facebook mobile very often. I don't like so much mobile version because it is slower than web page.	I don't like this application. I think it to contain a lot of unnecessary information (it is about network in general and it is about application also). I don't like the design of the page and I don't like the organization of settings.	I like mobile Facebook. I think it is a good and useful application.
What do you think about Twitter mobile?	I like Twitter! This mobile application is handy, laconic and I can add my photo very fast. I prefer to read short news from my friends via Twitter. I have shared my profile with my friends only.	I use mobile Twitter only for reading sport news. I don't use Twitter to communicate with friends and I don't write anything in this network.	I have an account in Twitter but I don't use it.
What do you think about Foursquare?	I don't need this application.	I am familiar with this application and I don't like it. I don't want use it.	I downloaded this application and I would like to use it. I don't want to "check-in" but I can get useful information and feedback from other guys about different places.
What do you think about LinkedIn?	I created an account but I don't need this application now. I don't use it. Probably, when I'll look for a job it'll be useful for me.	I don't know about this application and I don't want to use it know.	It is a good application where I described my professional experience. For example, there I have more formal community with my colleagues than in Facebook with my acquaintances.
What do you think about the SmartCampus idea?	I think it is interesting.	I like this idea.	It is a good idea.
Try Viaggiatrento. What do you think about it?	This is a good application. In my opinion it can be very useful for students.	I like it. It is a good option for planning journey and timetable.	It is good and useful. I'd use it.
What do you think about Vivitrento?	I like it. I can find parties, exhibitions and other interesting for me events. I think I would be able to use this application.	I want this application! I don't know where I can get information about different types of events in Trento but this application will solve my problem. It is very good!	It is interesting and useful. But it should provide better descriptions and representations, for example, if it is EVENTS -> MOVIES why there is not a lot of information? Price, photo, etc are missing. And the same situation with other events.
What do you think about MyPeople?	I think I won't use it.	If it will be possible to create a group with all students from Rezidenza San Bartolomeo it will be great!	Why should I use it? I have Facebook and it is enough for me.
What do you think about Inbox?	I don't understand how it works.	I don't want to use it.	Why should I use it? I have e-mail. I think integration might be a good idea. When this application will be complete it will be interesting to know how it'll work.
What do you think about LifeLog?	What is it? How can I share it? It is not clear for me.	What is it? I think I don't need it.	I understood how it works but I don't have an idea how I can use it in my life.
What do you think about MyCV?	I have LinkedIn account. I don't need this MyCV	I don't want to share my CV with other students.	Why should I use it? I have a well-organized profile in LinkedIn. Why

	application. If necessary I can give you my LinkedIn's link.		students should share their CVs with other students? For example, if I would look for a job how this application can help me? Will there be more employers than in LinkedIn?
What is your overall opinion about Smart Campus?	I like SmartCampus but some parts don't work.	SmartCampus is a very good idea. It is interesting and useful.	It is a good idea but it is badly implemented.
If SmartCampus had a social network, how would you like it? What would you want to be able to do? Which features do you think are needed to convince people to participate?	I don't have time to use another social network. Now I use more than one, because some friends prefer one network, but other friends prefer another one and it is a problem for me. I would like to use one social network where I can find all of my friends.	I really like this idea. For example, if in this network I can find everyone from Rezidenza San Bartolomeo it will be very good for me.	I don't need another social network. In my opinion, if students use more than one social network they might not be able to use them all with the same frequency and probably one of the social networks will become a dominant one. So, is it possible to organize SmartCampus better than Facebook?

The fourth part of the interview:

	Male, German, Sociology	*Male, Mozambique, Computer Science*	*Female, USA, studies Law*
How do you get in touch with your friends, when you don't see them personally?	Facebook	Facebook WhatsApp Instagram	Phone calls In person Facebook
Do you have Facebook account? ***If so, why? How do you use it?*** ***If not, why? What don't you like?***	Just use Facebook, only to get in touch with people. To stay in contact with people and just to message in a less complicated way, exchange cellphone numbers I only use Facebook because Is more convenient to stay focused in one platform. Not to be mixed up with other types of social networks. Just focus on one. Since I only use Facebook, can't really compere Facebook and other networks but what I don't like that much is the privacy issue. You don't really know who have access to your data. You don't know how this data would be in 10 years or 20 years, but this issue is not only Facebook related.	Yes. I use it for fun. To be updated about everything. To work, sell and buy things. To be in touch with most of my friends.	I use Facebook to check the photos and went talking about my photos I have to see that all the photos I have online are appropriate because of my job. To send messages to family members that are far away, that I don't get to see often and I don't want to call because I don't know them well. Get in touch with friends that are far away or I don't know them that well. The great advantage is that is word wide. The disadvantage is that becomes an obsession, always checking what everyone is posting and keep receiving notifications.
Do you use other social networks? ***If so, what?***	No.	No.	No.
Do you have a smartphone? ***If so, why?*** ***If not, why? Are you planning to buy one?***	I don't have a smartphone but I have an iPod touch and I use via wireless lan. Sometimes I use the Facebook app. But I only use to check messages. When I receive messages I read them and maybe write back but I don't use extensively. I'm very conservative so I use the traditional way that's why I don't use any other mobile devices to get access to social networks.	Yes. Help me in everyday task.	Yes.
If you have a smartphone, do you use social networks in it? ***If so, what's different between mobile and web versions?***		I do the same things as I would do in the computer, because is also the same. The interface is not very different. There are no significant differences. But in the cellphone I can't delete posts that I made. I have to do it on the computer. It is better to use the computer.	The main difference is that you don't do the same things on a mobile as you would do in a computer. On a mobile you are constantly connected to the internet. And on a computer you need a wi-fi connection and there are no automatic notification, meaning that you have to open the computer and the browser, and on a mobile you can have

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			on your hand and it goes everywhere you go.
What do you think about Facebook mobile?	I prefer to read news and updates from my friends on a laptop, but I send and read messages from Facebook mobile very often. I don't like so much mobile version because it is slower than web page.	In the mobile I get real time update; if some tries to talk to me I get the notification on the phone. On the computer I have to open the browser to see notification.	I don't use Facebook on the phone because, you have everything on your phone so you are constantly checking things, and constantly attached to a phone, and losing the capability of talking to people personally.
What do you think about Twitter mobile?		I don't know anything about twitter, and I don't find anything interesting about it, is just like Instagram. I wouldn't you it; I can do the same things on Instagram and Facebook.	Is a mechanism that you receive to receive live tweets, messages of people constantly interacting and know what they are doing at the moment I wouldn't use it. I'm a private person, I don't need to tell people what I'm doing at the moment.
What do you think about Foursquare? ***Did you ever you use it?*** ***If yes would you use?***		Is more to check in places; You share with your friends where you have been, where you now; is much related to tracking; track your friends. I don't see many advantages here because I can do the same thing with Facebook. I know that you can gain points for the "checkins" that you put but I don't know why. I wouldn't use.	I don't know anything about foursquare I wouldn't use it. Face book have the same functions. I wouldn't waist my time on it.
What do you think about LinkedIn? ***Did you ever you use it?*** ***If yes would you use?***		Is more related to work. You put your profile, on the platform so that people can see your cv; Is very interesting, and a bit similar to Facebook, there is "like". I never used, but I would use it.	Its similar to Facebook but in a professional and work related. I would use. Because there is a purpose, in USA is not all about what you know but in whom you know. So it's nice to increase contacts.
What do you think about the Smart Campus idea?		It is very interesting; you have almost everything here that you need; you can plan a trip.	It's a good application for Trento.
Try Viaggiatrento. What do you think about it?	Trying to see my current position, it works but takes too long to load. The concept of the application is great, is really cool I don't know how to find the bus stop that I'm supposed to go. It finds my position, but if I would like to go to piazza fiera I don't know at first glance, what I'm supposed to do to go there.	I have everything related to the life of Italy in here, I can plan a journey, have real time information about the bus and train schedule. Check for roads and location. It's very nice. I would use it.	The journey plan is useless, because you already have google, where you can do it and you don't need to start familiarizing your self with a new app. About the real time info app is great. It is useful.
What do you think about Vivitrento?	Is very interesting because you have access to events and you have all information about it. But it would probably make sence to put a button to show it on the map and the next step	This one is very interesting. You can check on places to go. You can find the entertainment in here This one is very good. I would use it.	The most useful app. To see events, see things of interests, happy hours, movie time. Trento may not be the best place for a student to have a social life, because there are

	would be to find out your current position and with which bus or train you can go there, this would be awesome. To put together with Viaggia a Trento. This would be really awesome I don't understand stories.		not many things going on here, but there are some and this application helps bringing all together in one location. Information on the library when you need to go study, lodges. Very helpful. It organizes Trento into an app. I would use.
What do you think about MyPeople?	Should be some kind of social network I don't know how to connect with this people. Do I have to create an account? Does it connect with Facebook? I don't know how it functions work.	I don't understand very much, but its nice because you can create groups and share things with them I would use it.	Don't like it that much. I'm not the type of person very connected with social networking. I wouldn't use it. It would be a waist of my time.
What do you think about Inbox?		I can't create messages. I wouldn't use it because I don't see why would be useful. If I already have my inbox The inbox be improved.	It's useless because I already have my gmail account where I can organize many accounts. And I already have my inbox.
What do you think about LifeLog?	I don't like that; I wouldn't use.	Its interesting; you can record your experiences, what you did and what you are going to do. You can put some photos and videos. Maybe I would use it, not sure.	This would be the most useless application. Because we already have twitter, Facebook, foursquare, LinkedIn, etc. and you already have your contacts there. If they don't connect to the other programs and you have to re-establish your network to share your information than its not worth while, and you have to have the SamatCampus application to use it. Then you will only be connected with people in Trento.
What do you think about MyCV?	I would use. I don't know how it works. I don't know what is the concept behind it. How can you send this CV? Lifelog – I wouldn't use.	It's a very interesting kind of CV I would use it because is very easy to share the CV with a friend. If a friend ask for the CV for a job opportunity you can just share and is also very well organized in bullets. Instead of having a bunch of pages of CV you can you this. If someone wants to read it the person don't need to read everything,	Its not worth using. The importance of CV is to have your information in a document that you can send to colleges and friends that can help you in your professional career and this is not putting anything on a document. It maybe easier to access but I think that is important to have in a formal format that you can send to people. Maybe if it was like this but you could attach a document to send and even via email or something.
What is your overall opinion about SmartCampus?	Impressive, is used in android. I don't know why myCVs are loading because I didn't do anything. I don't know how to go back to main menu. Without doing anything is already loading or updating and takes a long time. And again I don't know how	It's a very good application. Nice for day-by-day usage and also for traveling.	Its nice. I liked the vivi a Trento application and the real time info of the buses. I think that the rest need improvements.

	to go back. I like it, but they probably should change somethings, Keep a data stream about the things you are looking for. Look for an event and see people commenting on it. I like the colors and buttons.		
If SmartCampus had a social network, how would you like it? What would you want to be able to do? Which features do you think are needed to convince people to participate?		Could be more interactive; share marks, lists of exams, dates; would be nice to share more studying related things in things as vivi a Trento. Could have more information about workshops, seminars, and job opportunities. Could be improved in the university perspective. For students I don't see many interesting things. Students are more focused on the studies and for some students, this places and events are time consuming and most of the students don't attend.	To have connectivity with other apps Maybe pull all those social networking and putting them in to this app. If the app had a wider connection, and even with other universities in Trento the MyCV application could be more helpful for example.

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