Project acronym: **Go-myLife**

Project full title: **Going on line: my social Life**

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D4.2 Platform Prototype 2

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Abstract
This report analyses the potential usage of the Go-myLife platform and its benefits both for end-users and stakeholders. It also describes the Go-myLife prototype implemented for the second trials, the functionalities offered by the platform and the user interface. It also describes the set of interfaces and tools to facilitate the integration of services and content from external sources and the creation of communities.

Keywords
Go-myLife architecture, Go-myLife platform, API, Go-myLife prototype.

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1 Introduction

1.1 Summary

The aim of this deliverable, *D4.2 Platform Prototype 2*, is to document the second prototype implemented during the second cycle of the project. As part of the documentation, the Go-myLife architecture is specified as well as its relationship with end-users and potential business models. The Go-myLife platform provides a set of tools and application programming interfaces (hereinafter API) for the inclusion of services and content from external providers and for the construction of communities. This deliverable also explains the functionalities implemented in the current prototype that will be tested during the final trials with end-users and that will be used for the tasks of the work package (hereinafter WP) 5, where the communities and the connectors to external sources will be developed.

1.2 Role of this deliverable

This deliverable *D4.2 Platform Prototype 2* is the result of the task *T4.2 Platform Prototype 2* of WP4. In this task the second Go-myLife prototype was implemented in accordance with the final architecture design specified in *D3.3 Final Platform Architecture and Design* and the findings and experiences gained during the trials of the first prototype. The output of the current task is a functioning second version that will be tested with end-users in the pilots that will be carried out in United Kingdom and Poland as part of WP6, *Evaluation and validation through scenarios.*

This deliverable aims to summarise the Go-myLife architecture as well as the tools and API provided for the building of the local life communities that will be carried out during WP5 – *Communities construction and customization.*

All technical partners have contributed to this deliverable.

2   Go-myLife architecture design

Go-myLife is a social networking platform based on location awareness and mobility, built around the interests and requirements of older people and integrated with other social networks.

In order to manage the social content of the platform, a social engine was required. After a deep analysis of different engines that was carried out in WP2 during the technical requirement analysis, we selected LibreGeoSocial framework as the basis for the Go-myLife Social Engine. LibreGeoSocial framework is an open source framework that allows the creation of geolocated social networks, managing all the content as nodes. Each content object (user, photo, video, etc.) is represented by its latitude, longitude and even altitude.

The Go-myLife Social Network Engine exports a REST API to manage all the functionalities (User Interface API). Representational state transfer (REST) is a style of software architecture for distributed systems consisting of a client-server approach where a client makes requests to a server to obtain the data. REST interfaces guarantee the technology independence in the development of both sides. This approach provides us with the necessary flexibility for the development of any client and the opportunity for the development of consulting services to create customized client applications on demand.

One key aspect of social networks is the number of participants. Limiting access to users of just one operating system or device would limit the number of potential participants and would therefore have gone against what we considered a success criterion of the project. Taking into account the need of a social platform to be accessed ubiquitously, the consortium therefore agreed that Go-myLife's end-product would be a web application which users could interact with and access from any device; including both desktop and mobile phone. Due to the fact that a REST interface was used to manage the content in the core of the platform, there were no restrictions in the implementation of the client application.

Go-myLife platform is not a standalone social network that isolates older people in a specific social network, but it interacts with and integrates existing content and communities. It therefore provides a rich and flexible platform, allowing older people to select the content and communities they want to interact with.

Around the Go-myLife Social Engine, a set of interfaces has been built to offer an easy and standardized way to integrate external content into the platform. In that way, existing communities can be part of Go-myLife through the Communities Integration API and can create a space where users can share content and interact amongst themselves. External information providers (both commercial and non-commercial) can integrate their geolocated content into the Go-myLife platform through the Service Integration API in order to provide relevant information around the user and thus offer a value-added service. The Go-myLife platform also offers a Data Analysis API to provide statistics and information on trends in order to help 3rd party service providers analyse their services and study their competiveness. Finally, connectors to existing online social networks can be built to facilitate bi-directional communication between the platforms.
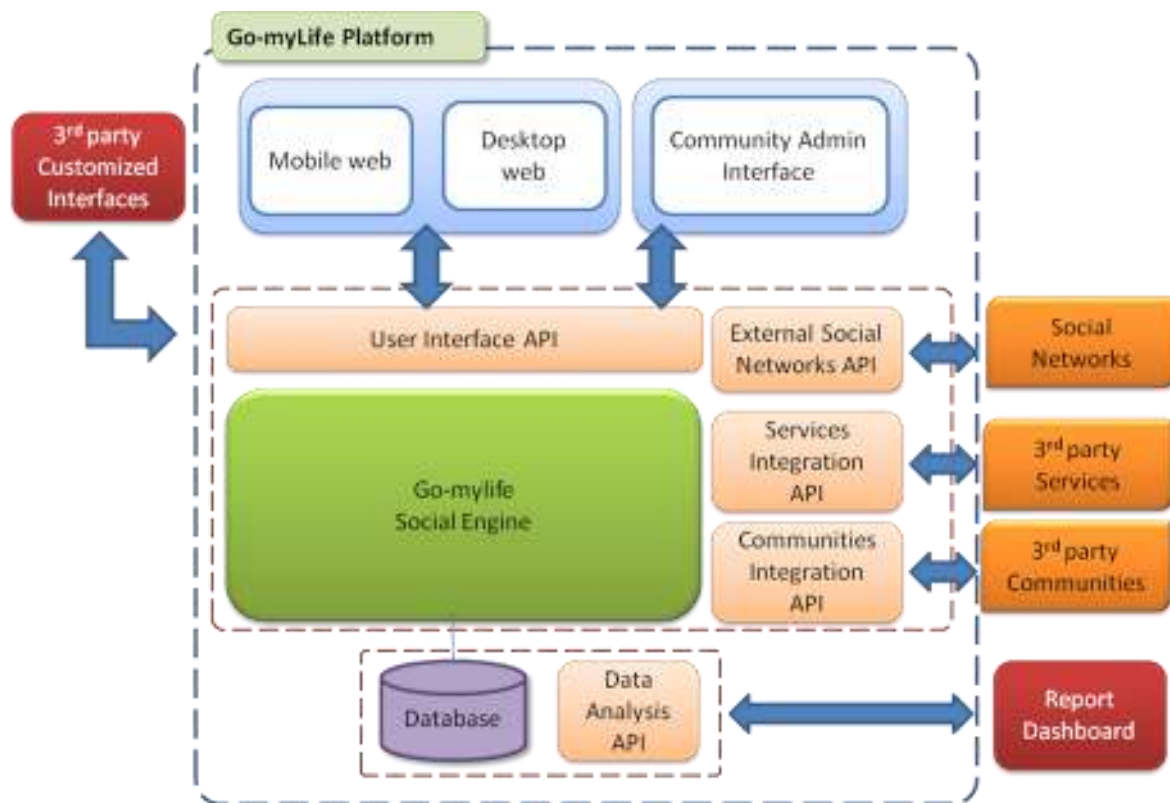
Figure 1 Go-myLife Platform Architecture

Hence, the Go-myLife platform architecture, as it is illustrated in Figure 1 is composed of the following components:

- Web client application: At the user interface level, a web application, that includes a Mobile web form as well as a Desktop web, was developed using Google Web Toolkit. The Web client application provides users with web-based access to the system to interact with their peers, share content, connect to other social networks and be active members in the communities.

- Community Admin Interface: a web interface that provides administrators with web-based access to capabilities that include:

  - Managing Communities
  - Managing News
  - Managing Photos
  - Managing Events
  - Managing Location

- User Interface API: an interface to manage the content stored in the Go-myLife Social Engine. This interface is called from the UI level to create the different functionalities offered in the client application.

- Go-myLife Social Engine: The Go-myLife Social Engine is the core of the Go-myLife platform and is responsible for the management of the content, its

relationships and privacy. It is based on the open source LibreGeoSocial framework.

- External Social Networks API: an interface to connect to existing online social networks and allow bi-directional communication between the platforms. As part of the scope of Go-myLife project, different connectors have been developed for interaction with each of these networks. All of them follow a schema, to guarantee their integration without unnecessary changes at the user interface.

- Services Integration API: an interface to integrate content from external information sources. This module allows an easy integration system for sources of information; it qualifies the contents and provides clients with a good abstraction model.

- Communities Integration API: an interface for the construction of the communities and the management of their content.

- Data Analysis API: an interface to analyse the data, obtain statistics anonymously and detect trends, to be offered through a Report Dashboard to 3rd parties.

- Database: is the database software used to store all the Go-myLife related data.

2.1 Go-myLife services and components for end-users

The architecture of the Go-myLife platform enables the end-users to receive personalized content, customized to their personal preferences and interests, related to the groups they participate in and the services provided around their actual location.

2.1.1 Local Life

Utilizing the Communities Integration API, public bodies, local clubs and associations will provide updated content to the platform. Additionally, via the Services Integration API, the communities integrated with the platform will provide their available services to the end-users, allowing each user to receive an integrated experience through their use of the platform.

The older person using the platform will be able to review the communities that potentially meet his/her interests and that he or she might like to be part of. He or she will also be able to access available local services and interact with them in an easier and more efficient way. Using the search functionality of the platform, the older person will almost instantaneously be able to gain information regarding the activities and news of their communities, and be able to browse available services so as to interact with them in a more intuitive way.

2.1.2 Around Me

The geolocation feature, whether the platform is accessed via desktop or mobile devices, provides the end-user with information regarding available services and content around his or her present location. When the user selects the option of being provided with the content and the services around him, a list of all the available communities and local

services (sorted into distinct categories) found within a predefined radius become available. In that sense, he or she can be informed about local news, be provided with a list of the clubs related to his or her needs or interests and have access to public or commercial services in the vicinity. This concept could resemble something like a car navigation system, though the Go-myLife platform provides access to content which is continuously updated and with which the user may interact in a more sensible way.

2.2 Go-myLife services and components for stakeholders

This section will describe the different components of the Go-myLife architecture that can be used by external providers to provide services and content for the Go-myLife platform.

2.2.1 Services Integration Interface

A Services Integration API will be provided to offer functionality to 3rd party service providers so that they may take advantage of the Go-myLife social network to offer services to Go-myLife users. Those services can be defined as consisting of two types: non-commercial and commercial. The non-commercial services are the ones that will help the user to find services that are not for commercial purposes, like the nearest hospital, pharmacies or toilets; and the commercial services are the ones for commercial purposes, like the nearest restaurants, bars or shopping malls.

The API consumes geolocated content information thus providing relevant location based information around the user. This new layer will be added to the Layer Manager of the Go-myLife Social Engine and its content will be managed as geolocated nodes.

The Go-myLife users can find those services directly by accessing the "Around me" functionality or indirectly by accessing a community that has access to those services.

2.2.2 Communities Integration Interface

The community functionality is especially important to the Go-myLife project, the whole ethos of communities is employed in the Go-myLife social network with the aim of improving the social aspects of the older generation.

The Communities Integration API enables 3rd party providers to build communities and send content directly, without the need to connect via Go-myLife user interface and add data manually. The interface can also be used for advertising and marketing purposes.

2.2.3 Data Analysis Interface

The Data Analysis API offers a suite of queries which may be used to provide any type of report, regarding the usage and the performance of the Go-myLife platform and additionally access directly anonymous data regarding the users. The Report Dashboard enables market analysis to be performed, as well as providing useful information on the usage of the Go-myLife platform and its various aspects. The reports generated may be predefined or customised, in order to fulfil the specific needs of the analysis. User data protection is a major concern of the Go-myLife platform, so multiple levels of security will be implemented in order to prevent inappropriate usage of the Data Analysis API.

2.2.4 3rd Party Customized Interfaces

As Go-myLife is open source software, if an entity wants to build a customized User Interface for their own use, using the Go-myLife Social Engine, they can do so using the User Interface API.

The User Interface API will allow both public and private entities to engage with Go-myLife users, making possible the use of any technology to build a new User Interface for accessing the Go-myLife Platform.

The added value of being able to offer customisable interfaces to third parties enhances the commercial viability of the platform, along with the opportunity to provide them with consulting and training services. High quality support tools and feedback services are also important for sustainability and future-proof investment.

3   Implemented functionalities in the first prototype

In previous documents, there was a description of functionalities that the final Go-myLife prototype must include. In this second prototype, there are several functionalities implemented, divided into sections and dependent on the media the user is accessing Go-myLife from (*Mobile* or *Desktop*):

Login/Register/Logout: Registration is mandatory for accessing Go-myLife, in order to protect the private information that the Go-myLife users share among themselves.

- Common functionalities (Mobile and Desktop)
  - Login using user name and password: when a user enters Go-myLife, a login page asking for his/her username and password is shown. Go-myLife remembers the user's session (until he or she logs out) so the next time the user enters the application, he will be directed to the main page.

Figure 2: Login form (Desktop)

Figure 3: Login form (Mobile)

o <u>Reset user password service:</u> the normal "forgotten password" link is also provided   as   seen   in   Figure   2

and

o Figure **3**.

◦ <u>Logout:</u> If the user wishes to logout, a logout icon is provided. In the Desktop version, this icon is accessible from everywhere. In the mobile version, however, the icon is only located in the main menu.

Figure 4: Logout icon in the down-right section of the main screen (Desktop)

Figure 5: Logout icon in the upright section of the main screen (Mobile)

- ○ Complete registration process: if the user is not registered on the platform, a *Register* button is also provided. When it is clicked, the login form is transformed into a simple registration form, without the need for any kind of navigation actions, maintaining the simplicity we wish to achieve. Parameters needed: user name, first name, last name, email and password.

Figure 6: Registration form (Desktop)

Figure 7: Registration form (Mobile)

Me: profile section where the user can view/edit his or her personal information

- Common functionalities (Mobile and Desktop)

    ○ <u>View and edit basic profile information:</u> the user can see and edit his or her personal information, such as email, full name and profile photo.
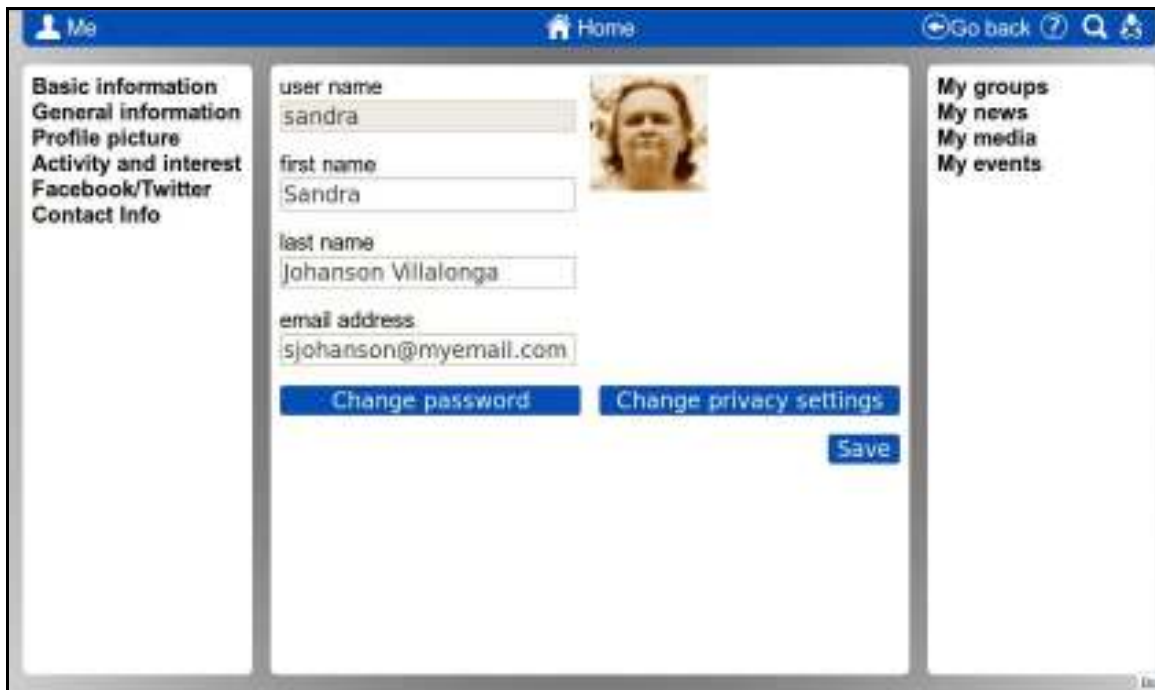
Figure 8: My basic profile info (Desktop) [1]

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[1] All pictures shown in the screenshots have a Creative Commons license with commercial use. This deliverable describes the second Go-myLife prototype implemented during the second phase of the project and that will be tested during the final pilots in UK and Poland. The Go-myLife prototype consists of the Go-myLife Social Network Engine, a set of APIs and web-based client applications to be accessed through the desktop or the mobile.

The Go-myLife Social Engine is based on the *LibreGeoSocial* framework and is the responsible for the management of the content, its relationship and its privacy. Over it, a set of APIs have been built in order to facilitate the integration of external content and the construction of communities.

The Go-myLife Social Engine offers its functionality through a REST API (User Interface API). Making use of it, we have built the web-based applications (desktop and mobile) where the users interact and share their content. Different social functionalities are offered in this final version: manage your contacts (My Network), share posts (News), share photos (Media), organize events (Events), exchange messages (Messages),

discuss in forums (Forums), search for content (Search) or update your profile information (Me).

But Go-myLife takes the social network one step further and provides information about who and what is around the user (Around me), where the end-users can find local services, friends or content uploaded by others. Through the Services Integration API, local companies or associations can integrate their services into Go-myLife in order to be found by the users.

Go-myLife also recognizes the relevance of existing social networks where people within the networks of the end-users may already have an account. Go-myLife doesn't want to create an isolated and exclusive social network for older people but it wants to offer the possibility to them to connect with existing external social networks. In order to facilitate the integration of these connectors into Go-myLife, we offer an External Social Networks API to allow the communication between the platforms.

During WP2, we learnt the importance of the local community for older people. In the Local Life section, we provide a space for local communities and neighbourhoods (Local Life). Go-myLife users can join these and interact with the rest of the members. Though the Community Integration API, these local associations can create their own communities, finding a new way to reach their users.

Finally, Go-myLife also offers a Data Analysis API to analysis the data, obtain statistics anonymously and detect trends to be offered through a Report Dashboard for 3rd parties, allowing the performance of market analysis, as well as providing useful information on the usage of the Go-myLife platform and its various aspects.

This final prototype will be validated during the trials to obtain a version ready for its commercialization.

Annex 1 Creative Commons images' references for the photo and author information.

Figure 9: My basic profile info (Mobile)

Figure 10: Edit basic profile info (Mobile)

○ Change password: the user can change his or her password, if required. If the user wants to change the password in mobile, it can be done in the screen "modify profile" (see Figure 10).

Figure 11: Change user password (Desktop)

    ◦ <u>Edit profile picture:</u> option to upload profile photo and set as user's avatar.
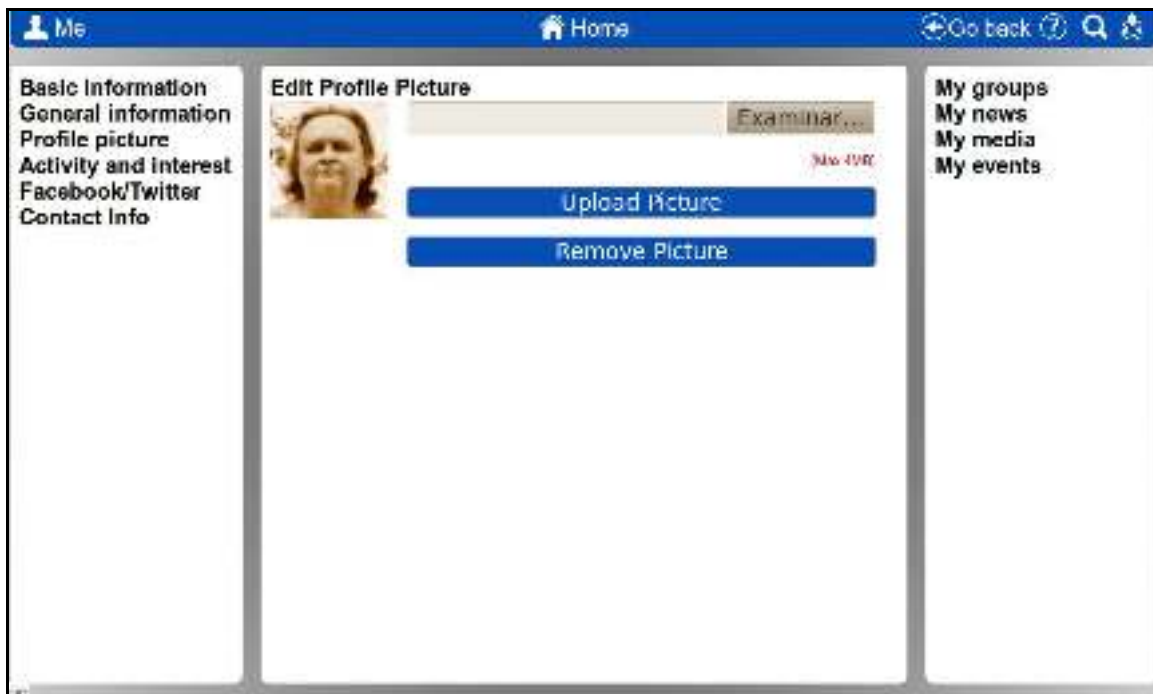
Figure 12: Profile picture manager (Desktop)

Figure 13: Profile picture manager (Mobile)

o <u>Login/Logout Facebook/Twitter:</u> we can login to and logout from Facebook/Twitter from Go-myLife to post news and photos on these social networks too. Figure 14 and Figure 9 shows the login/connect button and the message that shows whether the user is connected to Facebook/Twitter or not. When this button is pressed a new window will open to allow the user to fill in their accounts data.

Figure 14: Facebook/Twitter (Desktop)
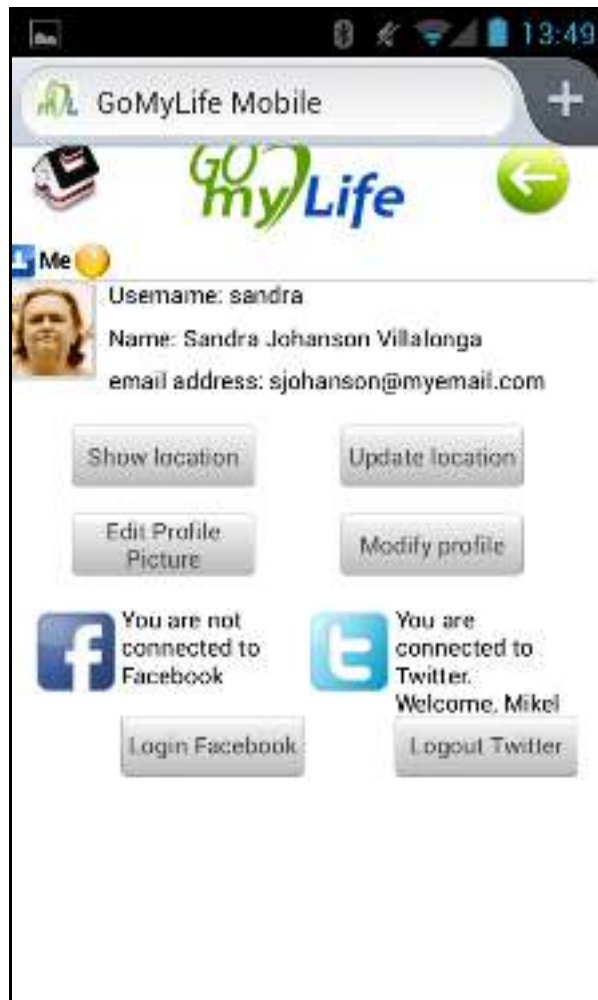
Figure 15: Facebook/Twitter (Mobile)

- ◦ <u>Show my location in a map:</u> The user can see his/her location on a map. If the user updates the position inside the social network the last updated position will be shown, if not, the last saved position is going to appear on the map.

Figure 16: User location (Desktop)

Figure 17: User location (Mobile)

- Desktop

    ○ <u>Show and edit my optional profile information:</u> personal information about the user, such as education, background or marital status for example, can be managed in the *General Information* section inside *Me.* Information about the user's activities and interests can be provided in a dedicated section called *Activity and interest.* Also, contact info about the user is available on the *Contact Info* link.

Figure 18: General information form (Desktop)
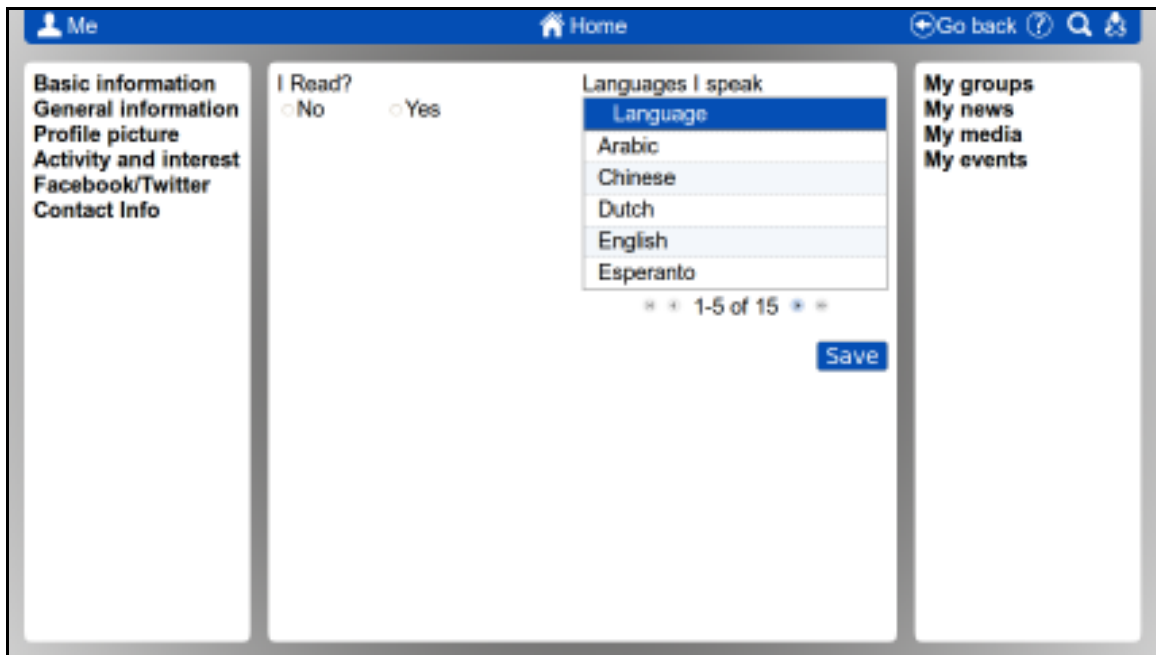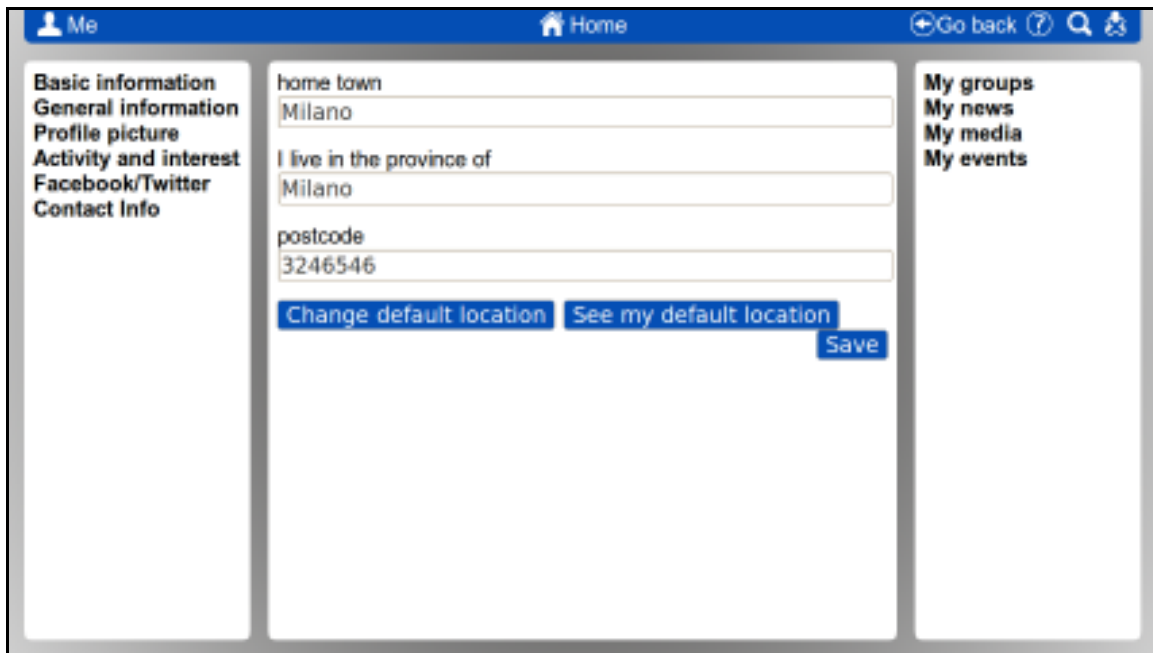
Figure 19: Activity and interest (Desktop)

Figure 20: Contact info form (Desktop)

User: the user can view information about other users or friends when he or she clicks on the "view" button from different sections inside the Go-myLife social network.

- Common functionalities (Mobile and Desktop)
    - ◦ <u>View user basic information:</u> The user can see the basic details (user name, full name, email) of a friend or other user.

Figure 21: User basic info (Desktop)

Figure 22: User basic info (Mobile)

○ Show user location in a map: Just as in "*Me*" section, the user can see a friend's or other user's location on a map. If that user or friend allows sharing the actual the last updated position will be shown, if not, Go-myLife won't show the position of the user. In desktop version, the screen is similar to Figure 16.
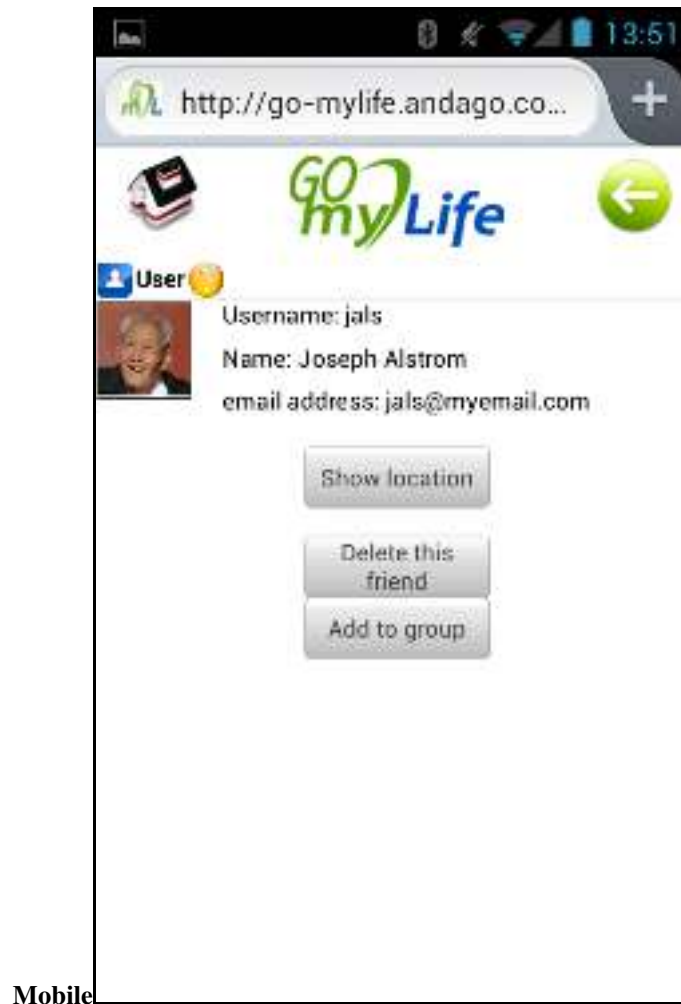
Mobile

- ○ Figure 22 Figure 22 but with the "send request" button.

- Desktop

  - ○ <u>View user profile optional info of the user:</u> the user can see contact info, general information and profile picture of a friend/other user. The screens are similar to the ones from *me* section (Figure 12, Figure 18, Figure 20 and Figure 20) but in this case the user only can see information and not edit it.

My network: section where the user will be able to arrange their contacts in groups such as close family, friends, neighbours, etc. The rest of the content of the application will be displayed within these groups. The *All friends/All* group is always provided and is non-removable. There is another non-removable *requests* group on the Desktop version to allow the user to see friendship invitations.

- Common functionalities (Mobile and Desktop)

◦ Select group: when the user clicks on "my network", a list of groups appears on the screen. As mentioned before, "All friends/All" is always shown.

Figure 23: My network group selection (Desktop)

Figure 24: My network group selection (Mobile)

○ <u>View users of a group:</u> when one clicks on a group, a list of the users in it is shown. The user has the option to see each member details.
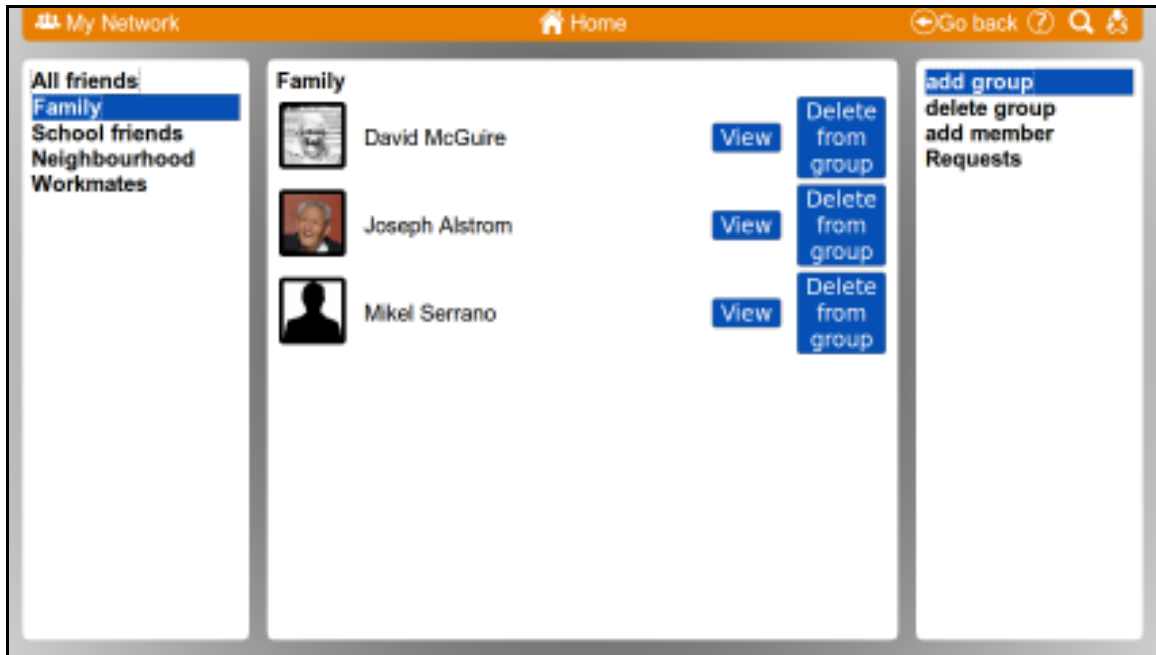
Figure 25: User group members (Desktop)

Figure 26: User group members (Mobile)

○ Delete users from a group: the user can delete users from a group with the "delete from group" button of the desktop version as seen in Figure 25. In the mobile version this action can be done with "Delete Member", see Figure 26.

○ View user's friends: when one clicks on "all/all friends" group, a list of all friends is shown. The user has the option to see each member details.
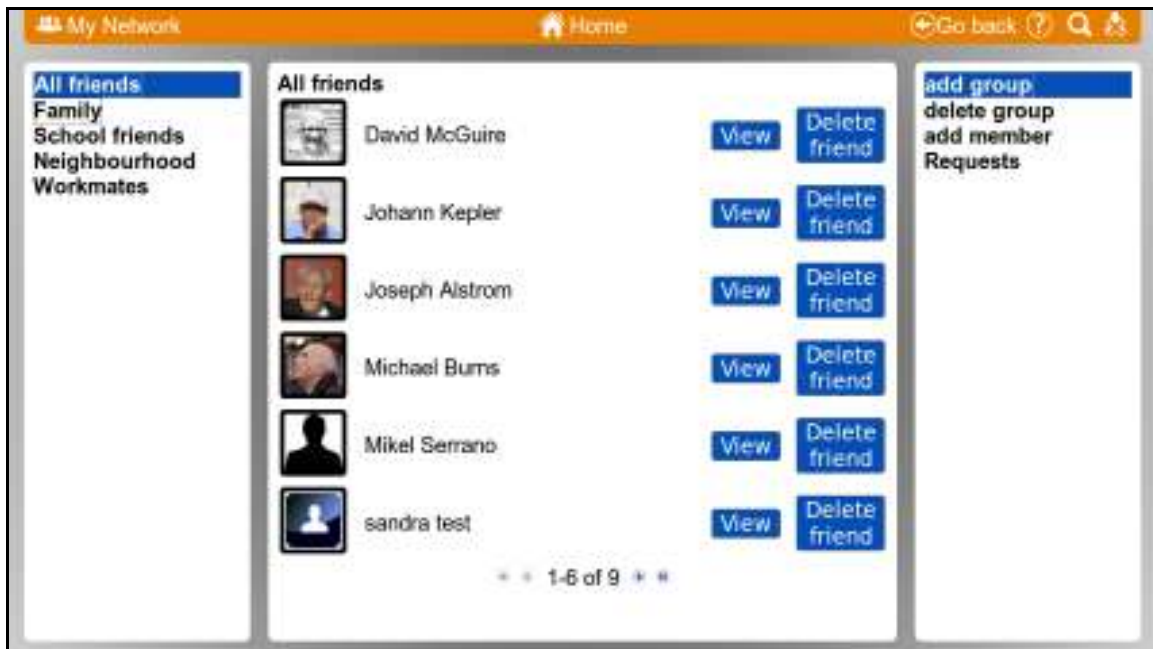
Figure 27: User friends (Desktop)

Figure 28: User friends (Mobile)

○ Delete a friend: the user has the option to delete the friendship relation with them. In mobile this can be done inside each member details (see Figure 22) and in desktop version using "Delete Friend" button (see Figure 27).

○ Show friendship invitations: the user can see pending friendship invitations and accept or reject them. In the Desktop version of Go-myLife the request shows the number of common friends.
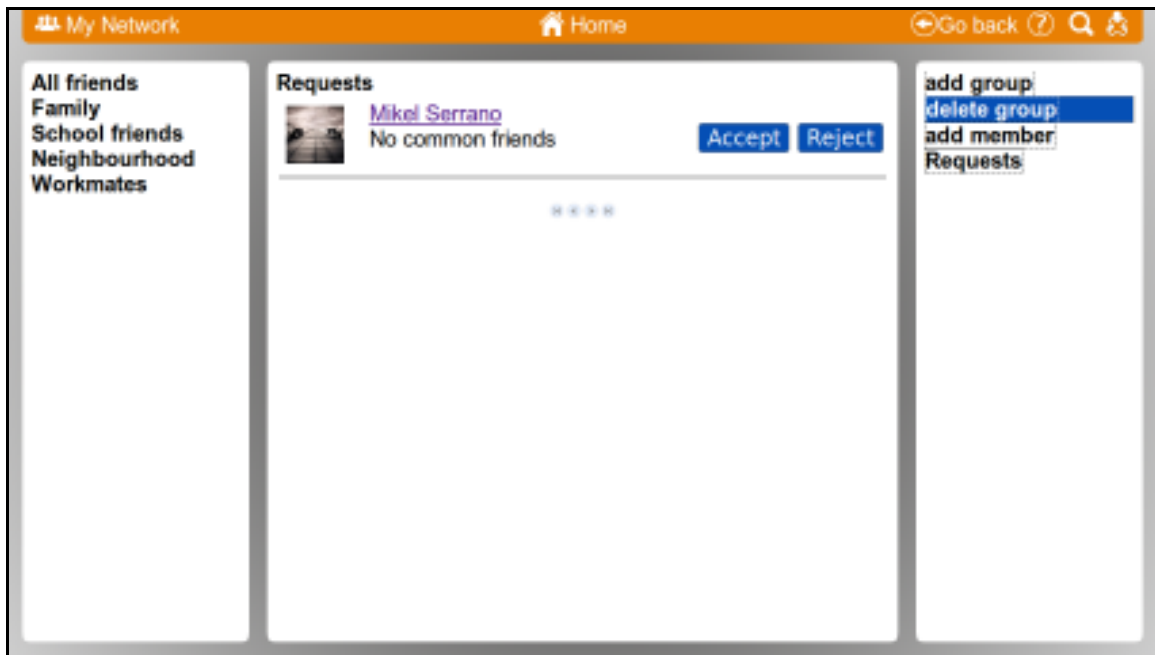
Figure 29: Friendship invitations (Desktop)

Figure 30: Friendship invitations (Mobile)

○ Create new user groups: in order to add a group, a user clicks on the corresponding link/button. Then, the interface shows a simple form where a name for the new group is requested.

Figure 31: The form for adding groups (Desktop)

Figure 32: The form for adding groups (Mobile)

- ○ <u>Add members to a group:</u> when a group is created, a user can add members to it by clicking on the *add member* link. The page will then allow the user to select the group to add members to and select friends to add as members of the group. In the mobile, when the user is viewing a friend information (see Figure 22) he or she can click on "add to group" button and select a group where the user will be added.

Figure 33: The form to add members into a group (Desktop)

○ <u>Delete group:</u> of course, groups can also be deleted by clicking in the *delete group* options and selecting the groups to delete.

Figure 34: Delete group list (Desktop)

Figure 35: Delete group list (Mobile)

- Mobile

  ◦ <u>Search for Friends:</u> in this mobile section, the user can search for new friends and send them a friendship request.

Figure 36: Search for friends (Mobile)

News: section where the user shares notes with their friends and will be able to view what their friends say and post comments to their friends' notes.

- Common functionalities (Mobile and Desktop)
  - View notes shared by friends/group of friends and share news with them: news shared by friends/group of friends is shown on the screen and the user can post new notes and share with them. In the desktop version of Go-myLife the user can select if he/she wants to add a location to the post by selecting the position or searching it. Posting with location in the mobile is different and the location is obtained with the browser/mobile geolocation tools when the user logged on into Go-myLife.

Figure 37: The News screen (Desktop)
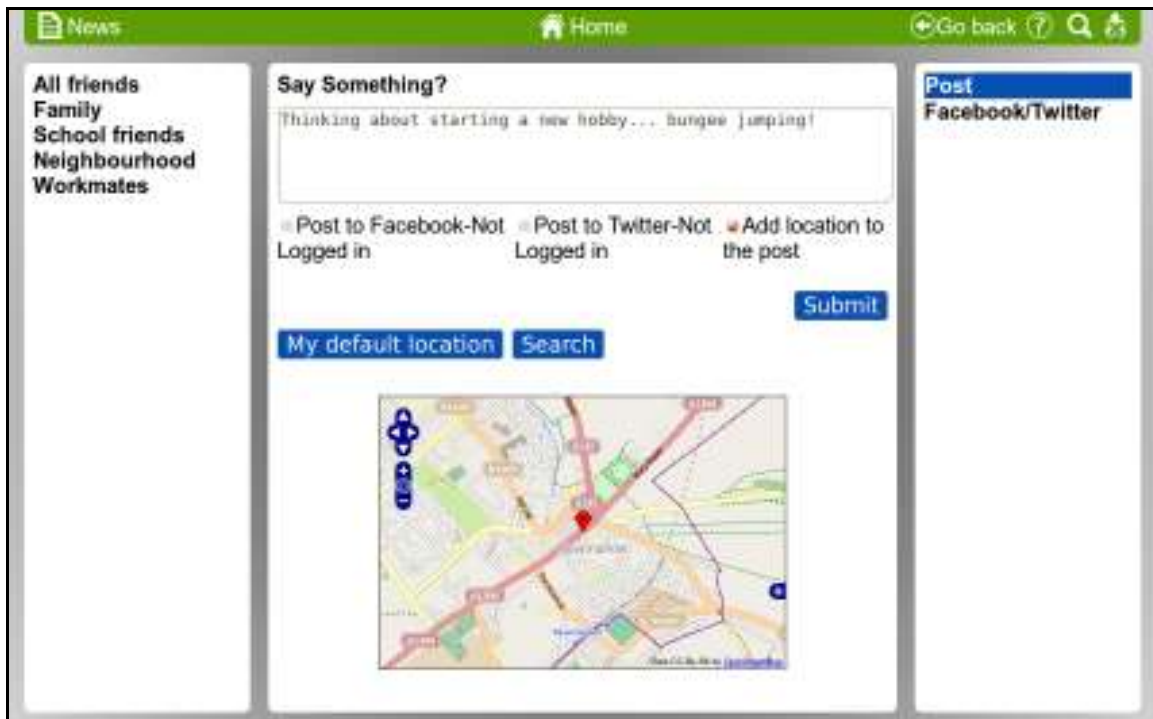
Figure 38: Writing a post (Desktop)
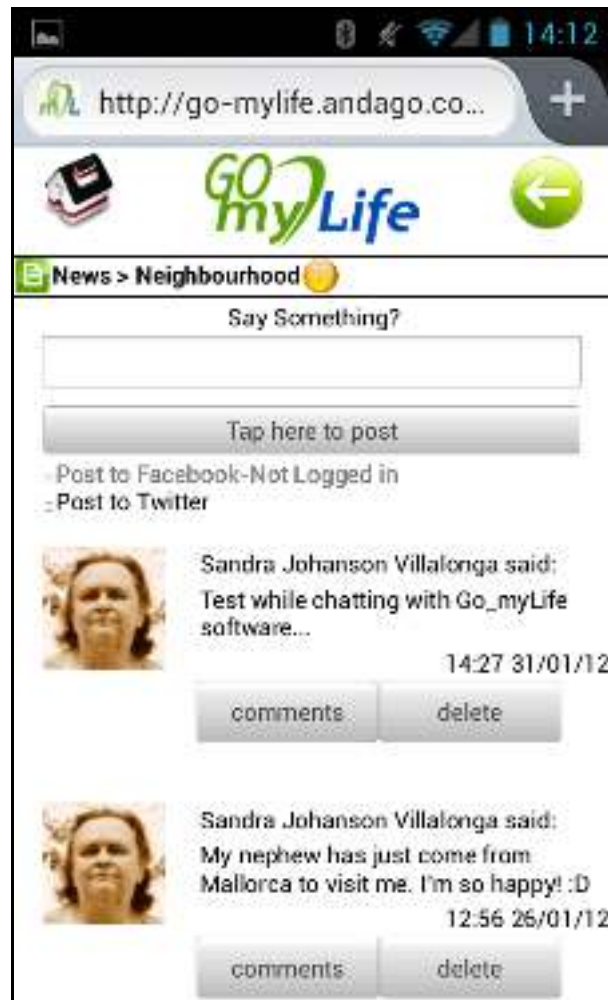
Figure 39: The News screen and the option to write a post (Mobile)

○ <u>Delete a post:</u> using delete buttons of the previous screens, a user can delete his/her own posts.

○ <u>Post on Facebook/Twitter:</u> the user can post the news he or she wants to share to Facebook or Twitter by clicking on the corresponding checkbox. This requires the user to have previously set their status to being logged in to Facebook in the "me" section. In the previous two figures, this checkbox appears under the text box. When the user enters on Facebook/Twitter, the post will appear there.

○ <u>View post details and post a comment on it:</u> by clicking on *view comments/be the first to comment/full publication* from the Desktop or on *"comments"* from the mobile device, details of the post appear: the post itself, date, comments, along with the photo and details of the writer of the post. The user has the option to post a new comment on the post.
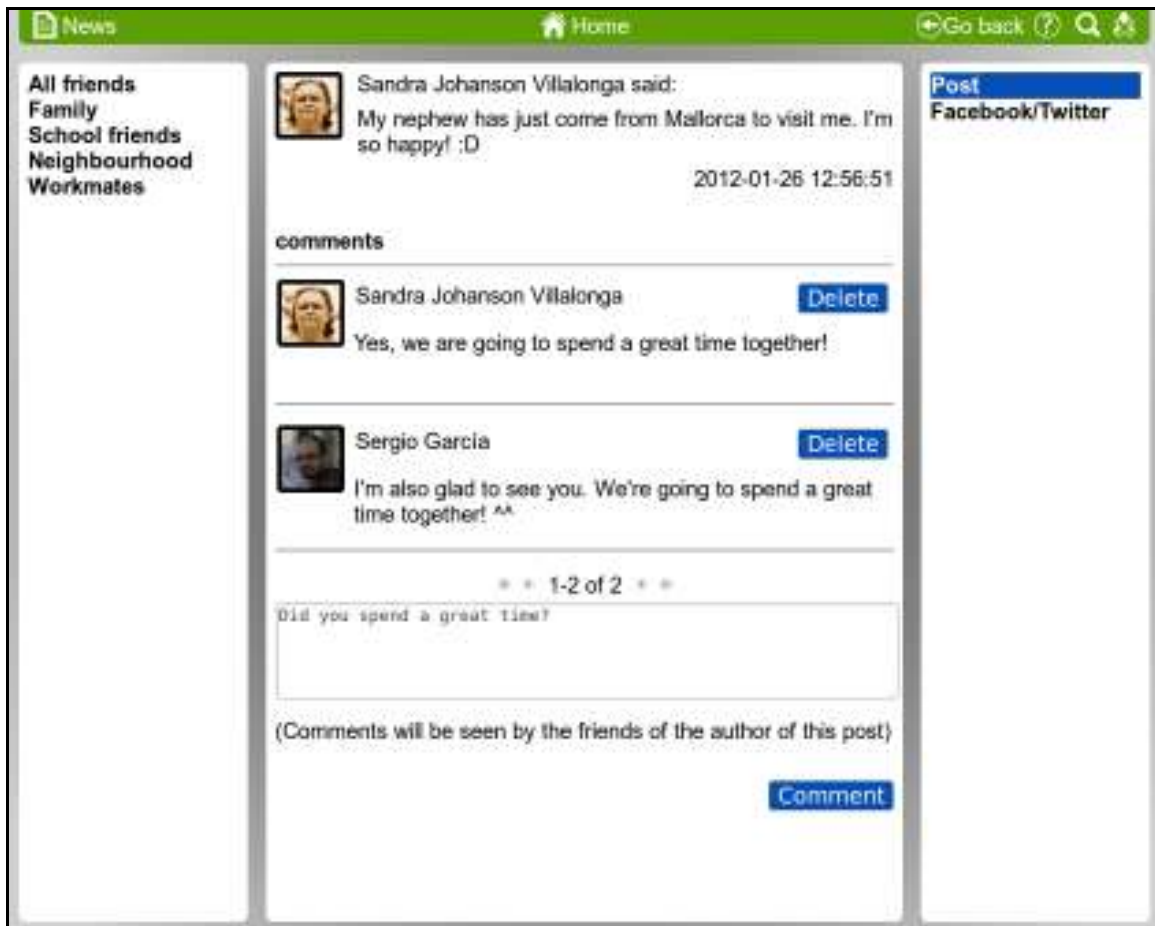
Figure 40: Posting a comment to a piece of news (Desktop)

Figure 41: Posting a comment to a piece of news (Mobile)

Figure 42: A commented piece of news (Desktop)
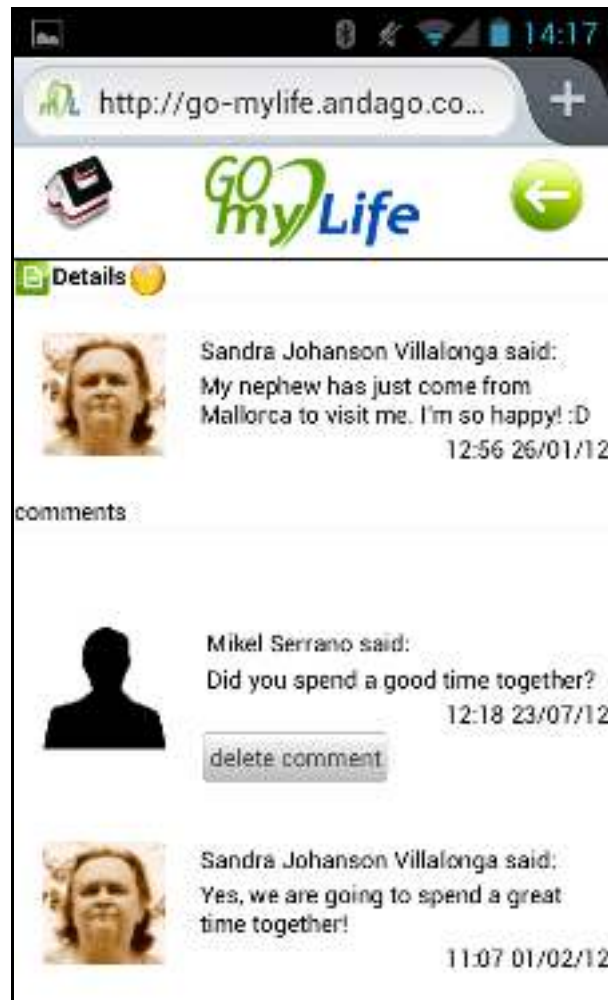
Figure 43: A commented piece of news (Mobile)

- ○ <u>Delete comments:</u> using delete buttons of the previous screens, a user can delete his/her comments and the comments posted in the posts written by him.

- ○ <u>View post location on a map:</u> similar functionality to user location that shows a map with the location of the post.

- Desktop

  - ○ <u>View the number of comments of the post:</u> as is shown in Figure 37, in the desktop version of Go-myLife, the number of comments on a post appears.

Media: section where the user shares photos with their friends and will be able to see photos shared by his or her friends.

- Common functionalities (Mobile and Desktop)
  - ◦ <u>View photos shared by friends/group of friends:</u> photos shared by friends/group of friends of the user are shown on the screen in thumbnails mode.
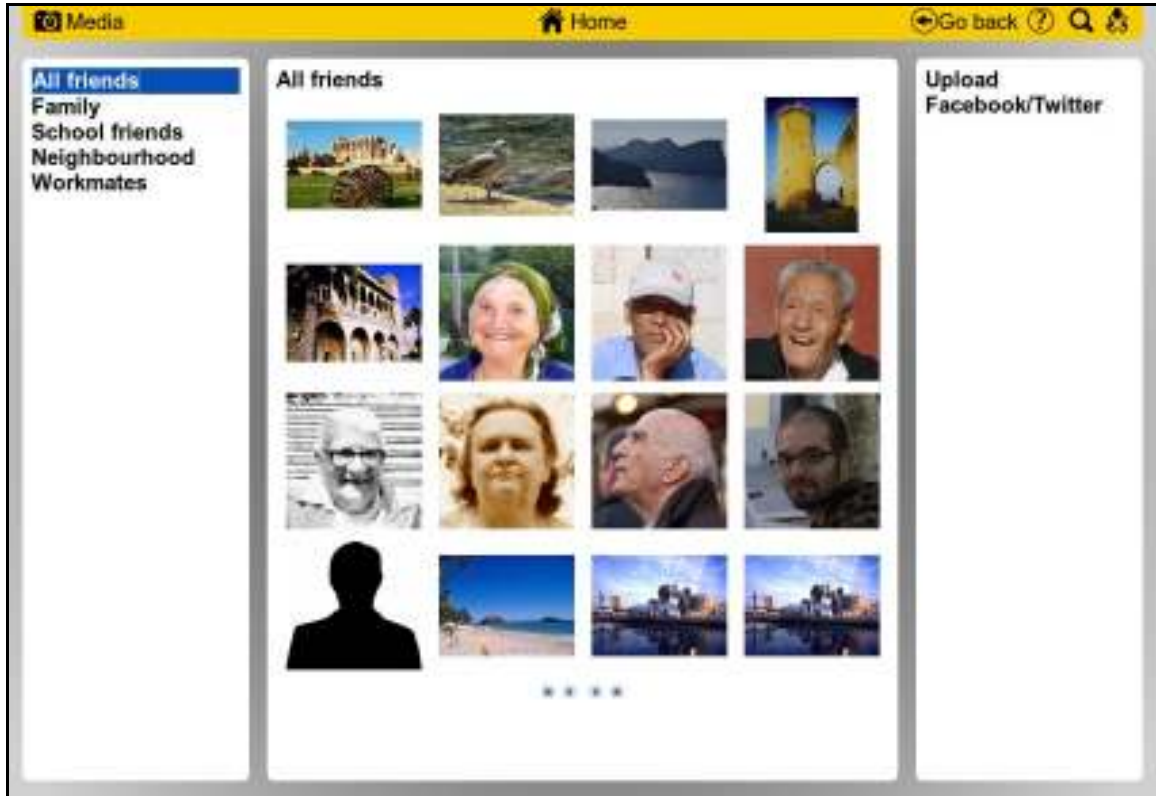
Figure 44: Main media screen (Desktop)

Figure 45: Media gallery screen (Mobile)

○ Upload a photo: when the user wants to share a photo with his or her friends/group of friends, he or she has to click on "upload" and a new window appears with file selection, photo title and description fields.
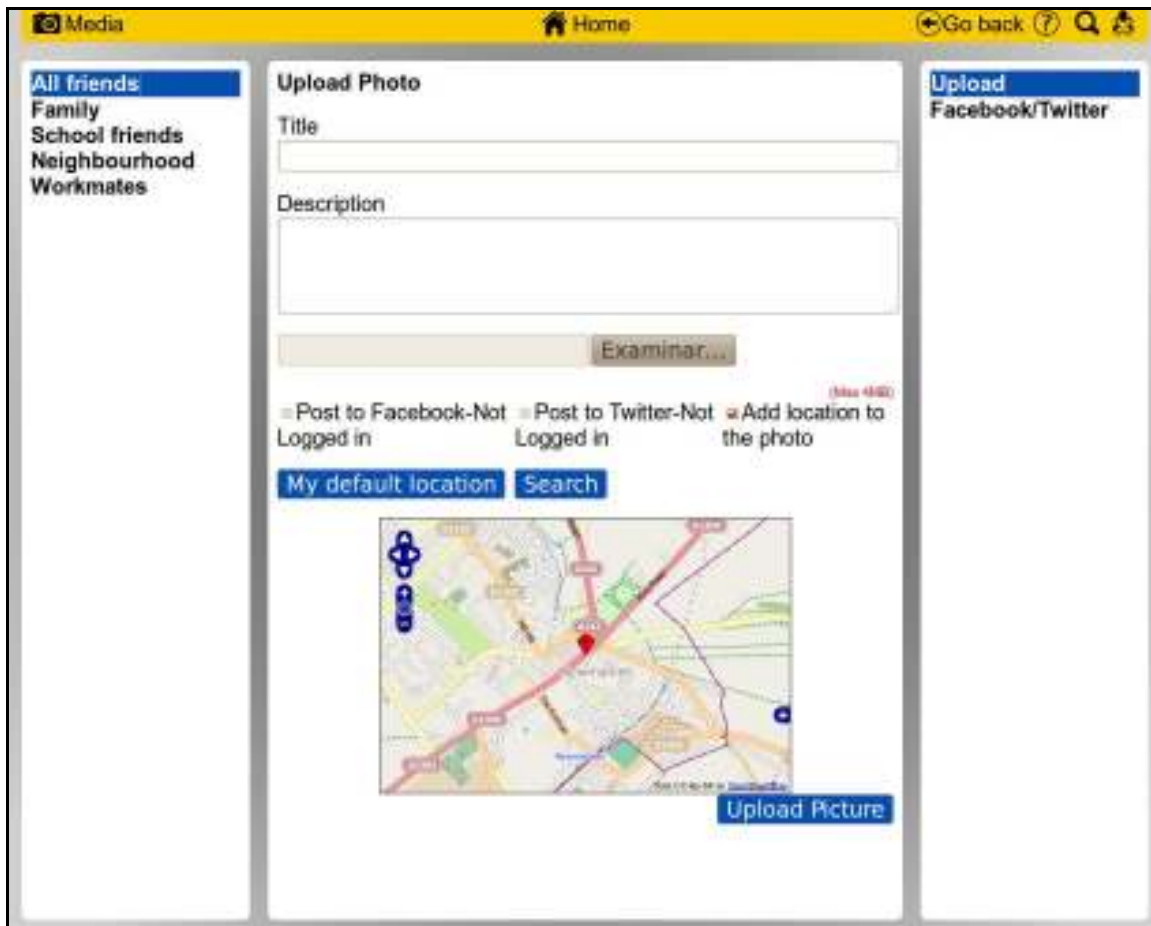
Figure 46: The Upload Photo screen (Desktop)

Figure 47: The Upload Photo screen (Mobile)

- ○ <u>Upload a photo to Facebook/Twitter:</u> as in the news section, when the user wants to share a photo and post it to Facebook/Twitter, he or she will check the Facebook or Twitter checkbox showed in the previous figures, click the button and the image will appear when the user logs onto these social networks.

- ○ <u>View photo details:</u> option to see details of the photo. In the mobile version the user will click on the photo thumbnail to see the photo larger and it's details. In the PC version of Go-myLife, clicking on a photo shows it larger in a new pop-up, with arrows to navigate around the collection Facebook-style. Apart from the option to see photo larger, photo info, uploader's name, uploader's profile photo, photo comments and the location of the photo on a map can be shown. To see photo comments in the desktop version the user has to click on comments link.

Figure 48: View of a photo (Desktop)

Figure 49: View of a photo details (Mobile)

○ View photo location on a map: in the mobile version of Go-myLife it is a similar functionality to user location that shows a map with the location, but in this case with location of the photo. In the mobile, the location can be seen in the photo details screen.

○ Delete a photo: using "delete" buttons of the previous screens, a user can delete his/her own photos.

○ Edit photo: using "edit" buttons of the previous screens, a user can edit title/description and location of the photo (edit location is only available in desktop version).
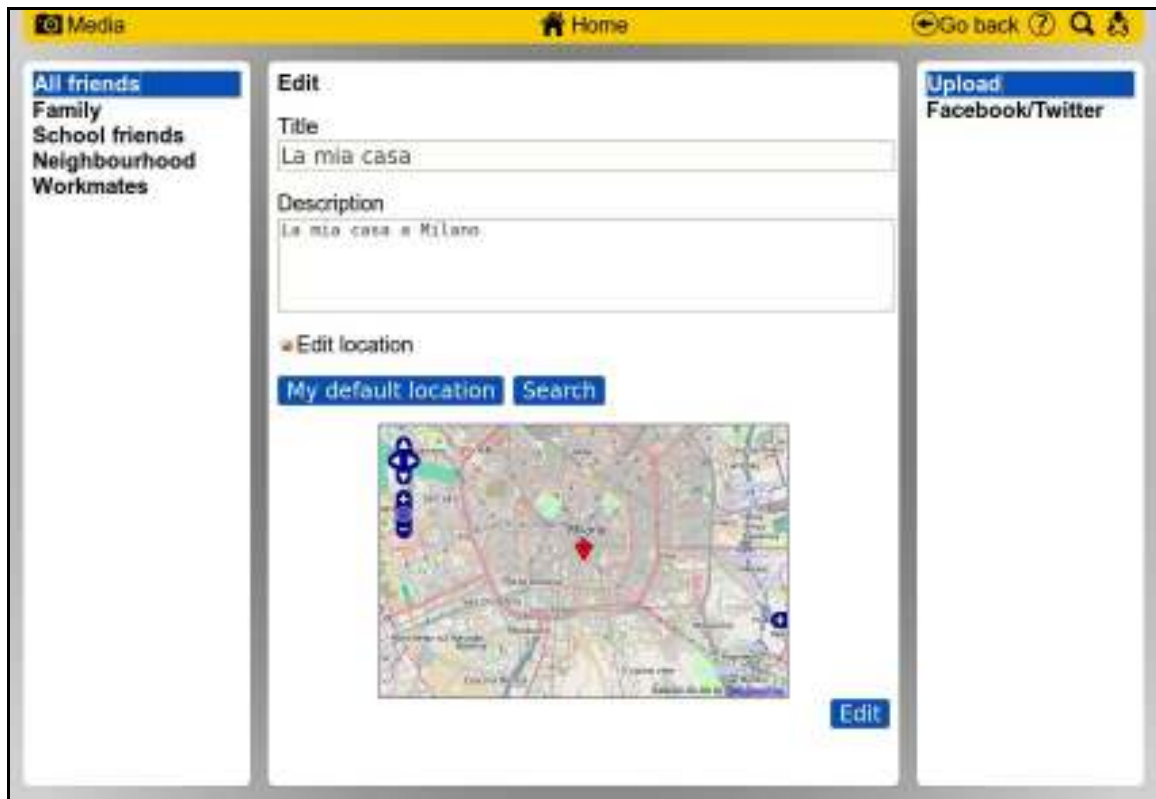
Figure 50: Edit photo (Desktop)

Figure 51: Edit photo (Mobile)

- ○ <u>Post a comment on a photo:</u> this functionality is similar to the one that appears on the news section. The user can post a comment on a photo.
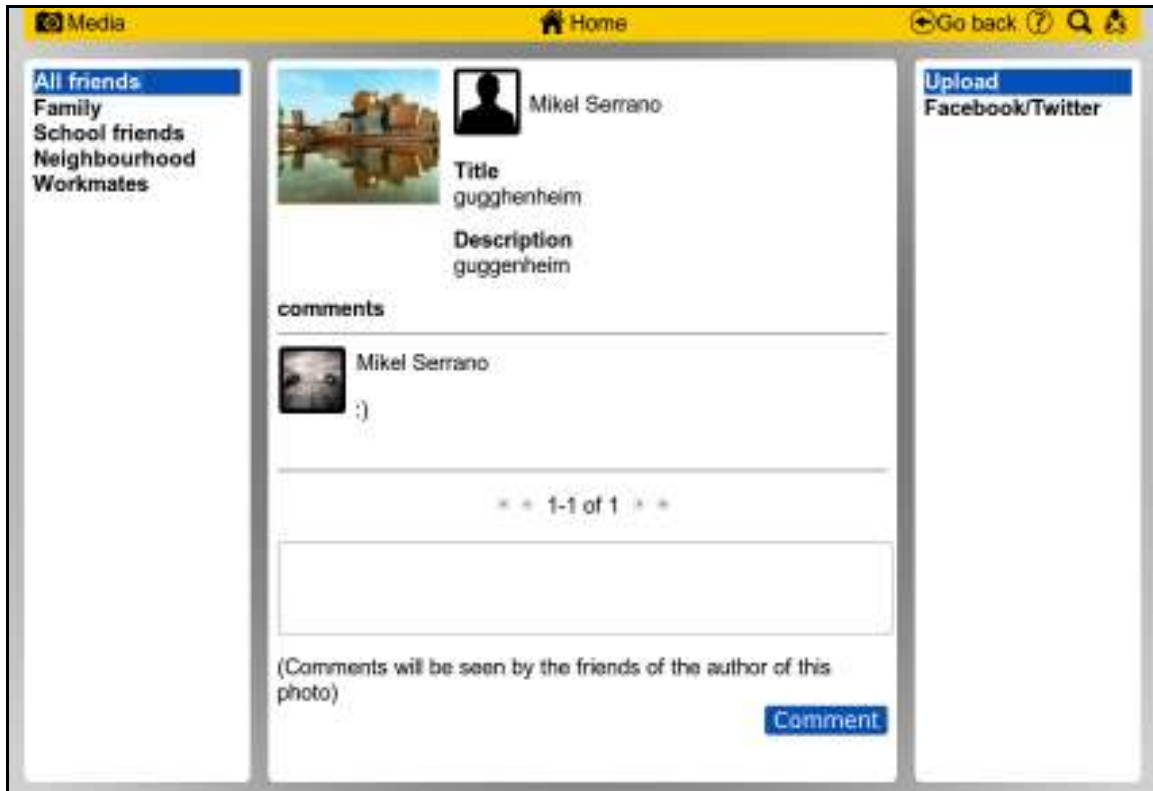
Figure 52: Photo comments (Desktop)

Figure 53: Photo comments (Mobile)

- ○ Delete comment on a photo: this functionality is similar to the one that appears on the news section. The users can delete their own comments or the comments of photos uploaded by them.

- Desktop

  - ○ Set as profile picture: if the user is the owner of the photo he/she has the option to set as profile picture.

  - ○ View the number of comments of the photo: as is shown in Figure 48: View of a photo (Desktop), in the desktop version of Go-myLife, the number of comments on a post appears.

- Mobile

  - ○ View photos of Panoramio: the user will see a group called "Panoramio" that shows photos around the user of this network based on their location.

Figure 54: View Panoramio photos (Mobile)

Events: section where the user views events they have been invited to and creates their own events.

- Common functionalities (Mobile and Desktop)

  - View events shared by friends/group of friends: this section shows a list of events shared by friends/group of friends where the user is invited and with the attending option selected.
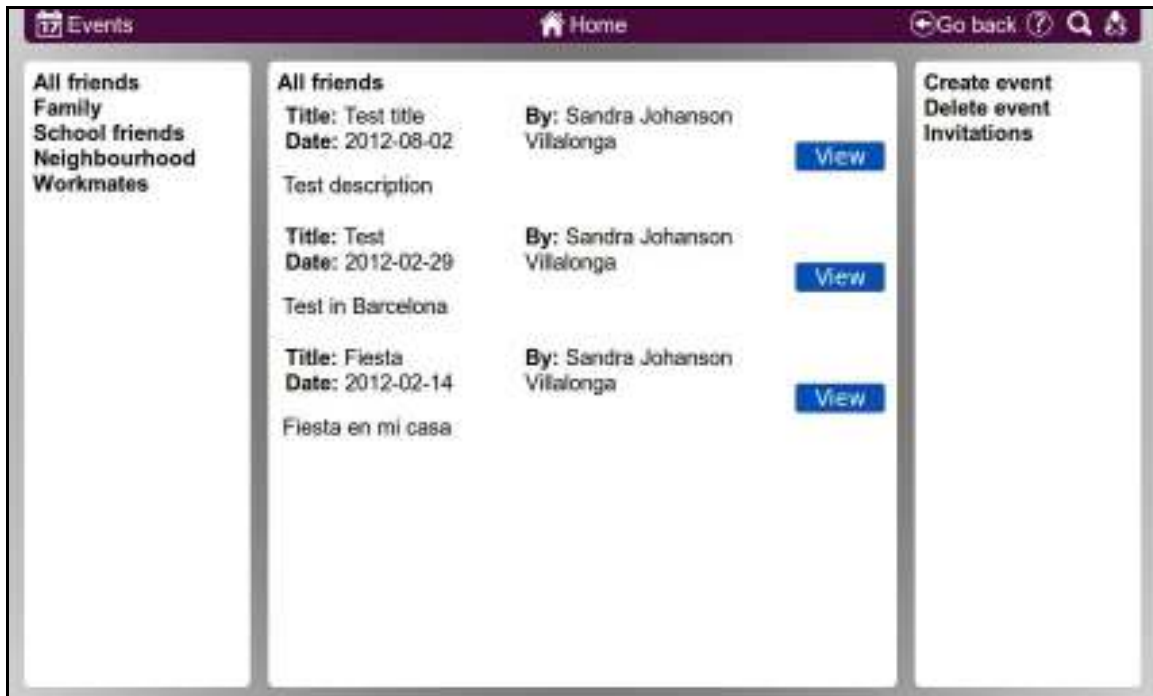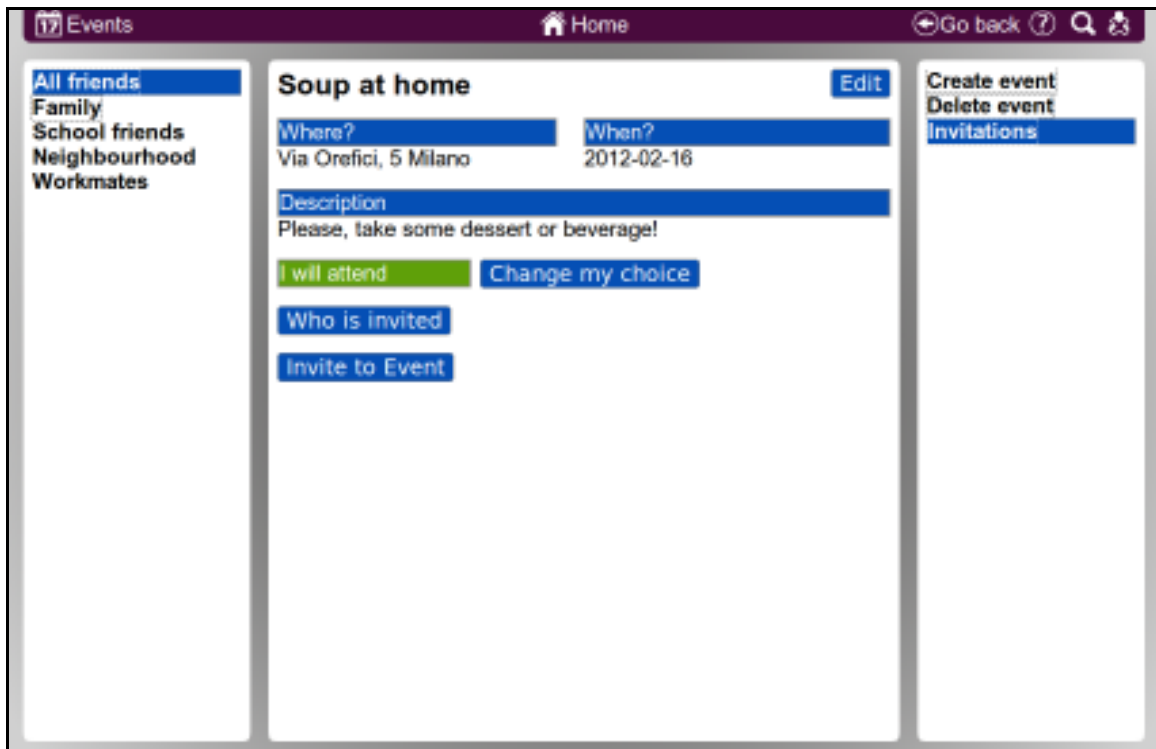
Figure 55: List of events (Desktop)

Figure 56: List of events (Mobile)

- ○ <u>View pending events invitations:</u> this functionality shows a list of events (as in previous images (Figure 55 and Figure 56), but in this case, it shows events the user has been invited to but not accepted yet. There is a link in the event section to see pending invitations on the desktop version and a button before the list of events on the mobile version.

- ○ <u>View event details:</u> in this screen the user can see the name, place, date, and description and change their response to the event (attending, not attending, and maybe attending). If the event is still pending, the user can choose the relevant option. Otherwise, if the user had previously responded, they can change their option here. Apart from that, if the user created the event, he or she has the option to edit the event data. Invited user's can see who is invited and invite friends to the event.

Figure 57: Event details (Desktop)

Figure 58: Event details (Mobile)

- ○ <u>Show members response to the event:</u> there is the option to see who has been invited, who will attend, who is not going to attend and who will maybe attend the event.
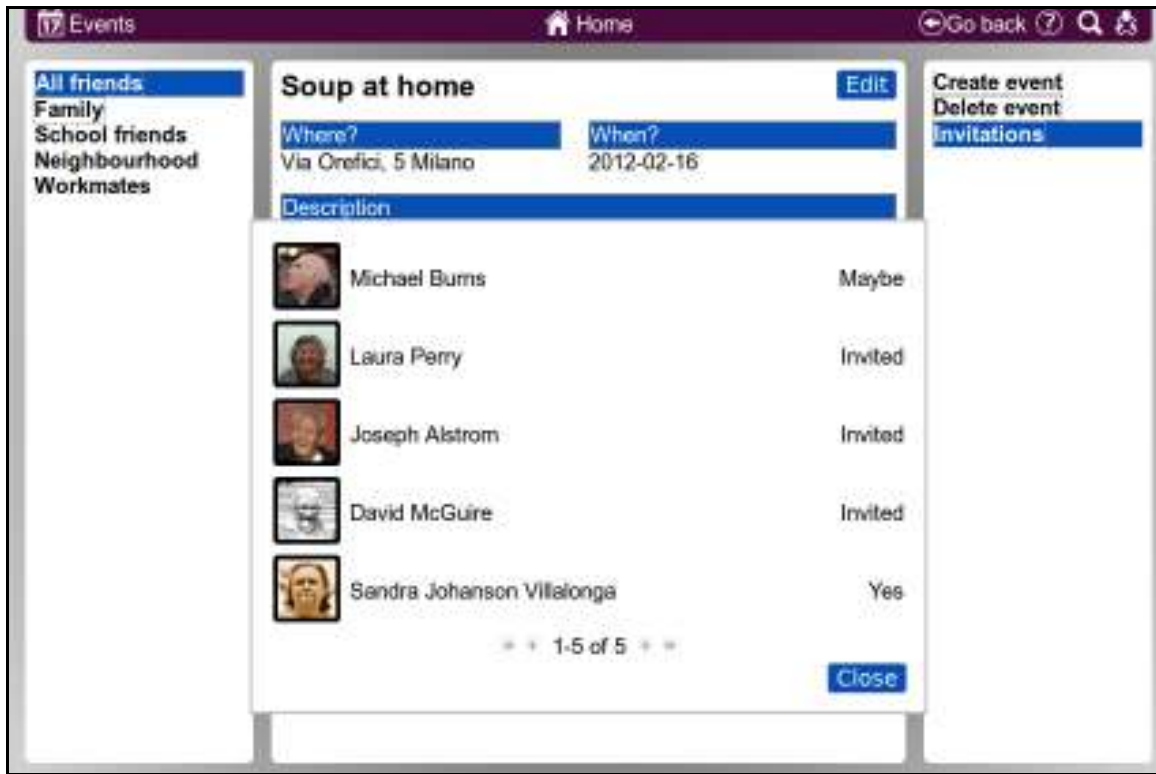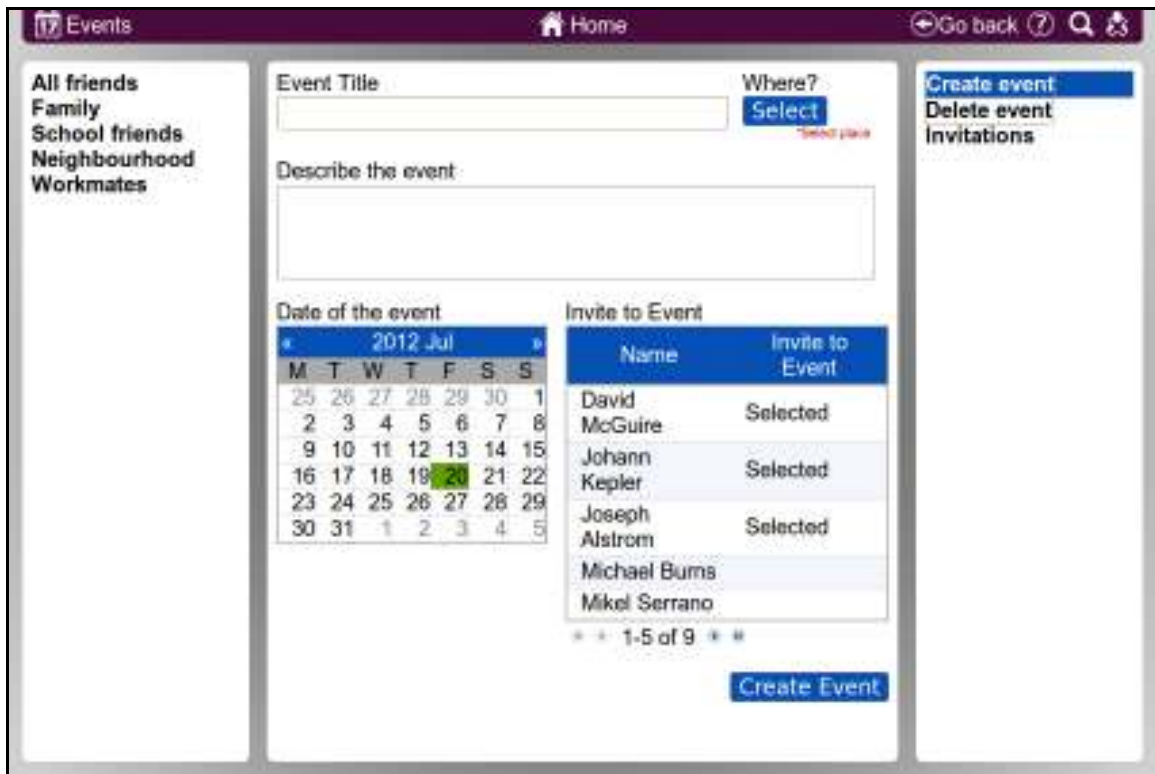
Figure 59: Users invited to the event (Desktop)

Figure 60: Users invited to the event (Mobile)

○ <u>Create a new event and invite friends:</u> in order to create a new event, the user needs the date, place, description, event name and a list of friends. In Desktop version, the user has to select or search a location in a map.
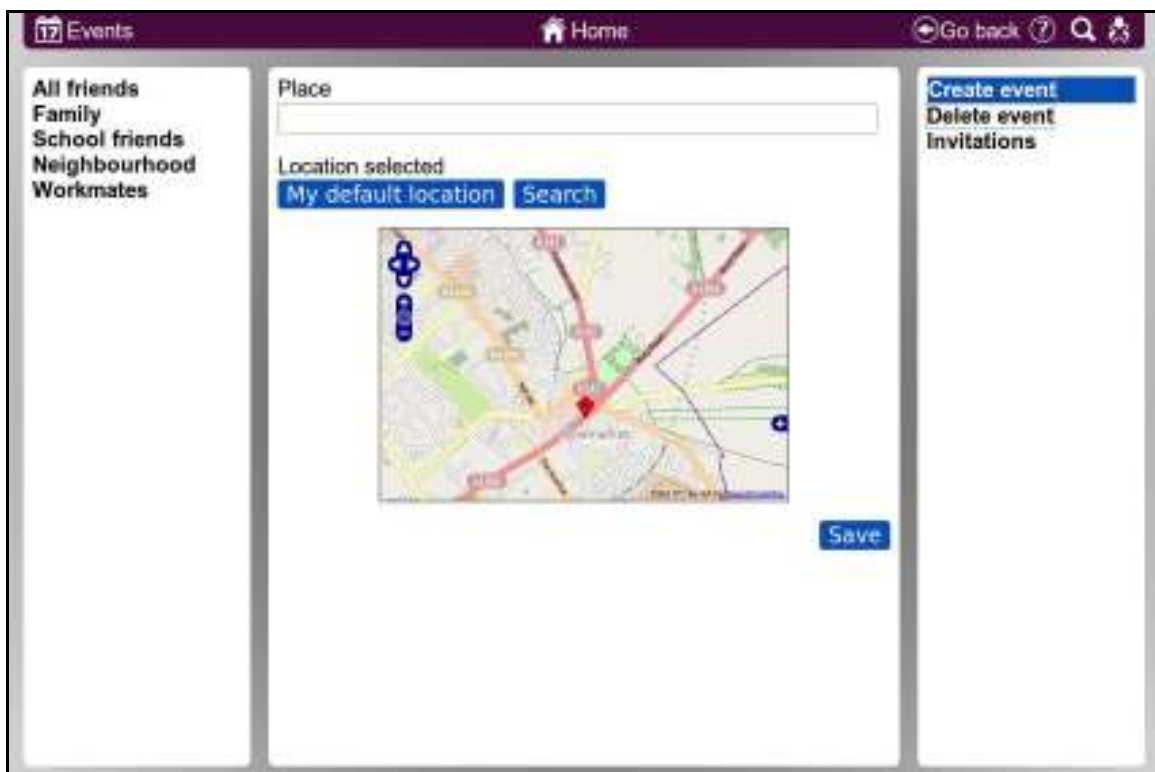
Figure 61: The screen for creating events (Desktop)

Figure 62: Creating event, place selection (Desktop)

Figure 63: The screen for creating events (Mobile)

Figure 64: Creating event, friends' selection (Mobile)

○ <u>Invite friends:</u> the users who are invited can invite friends to the event.
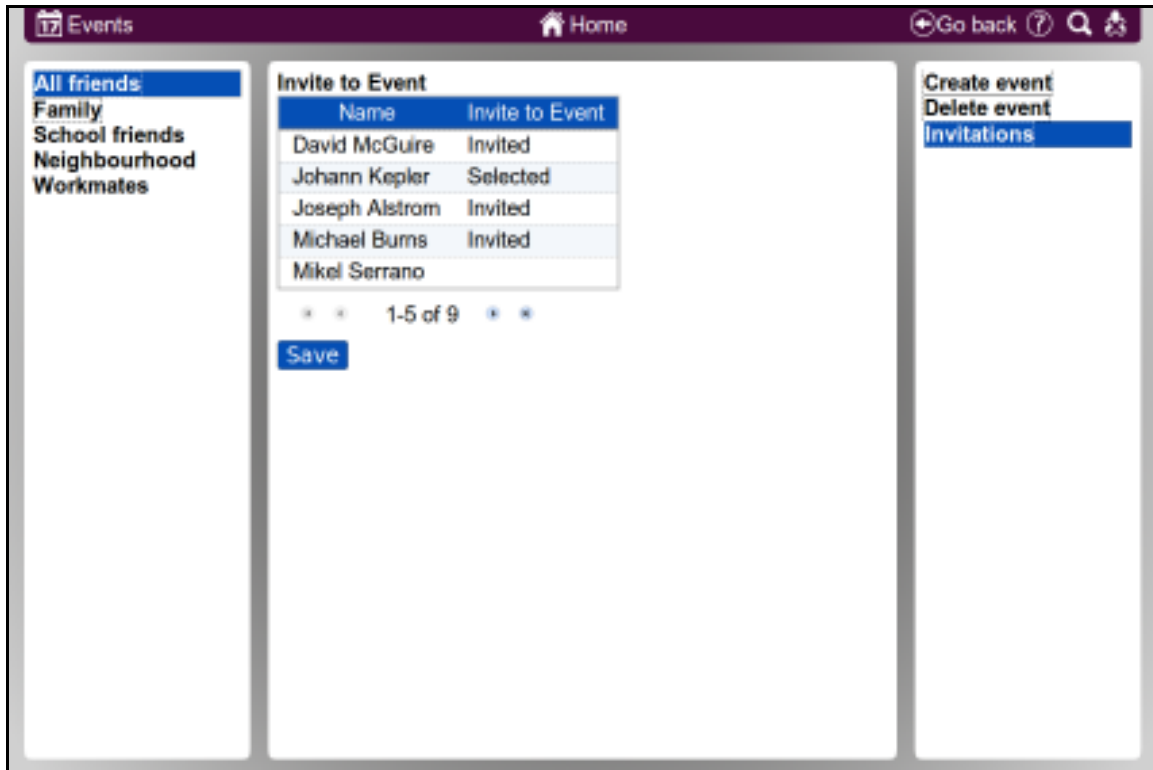
Figure 65: Invite friends to event (Desktop)

Figure 66: Invite friends to event (Mobile)

- ○ Delete event: the users can delete the events created by them. In the Desktop version of Go-myLife it can be done in the screen "delete event" selecting the events they want to delete. In the mobile version, in the events list screen, if the user created the event the button "delete" will be appear (See Figure 56).
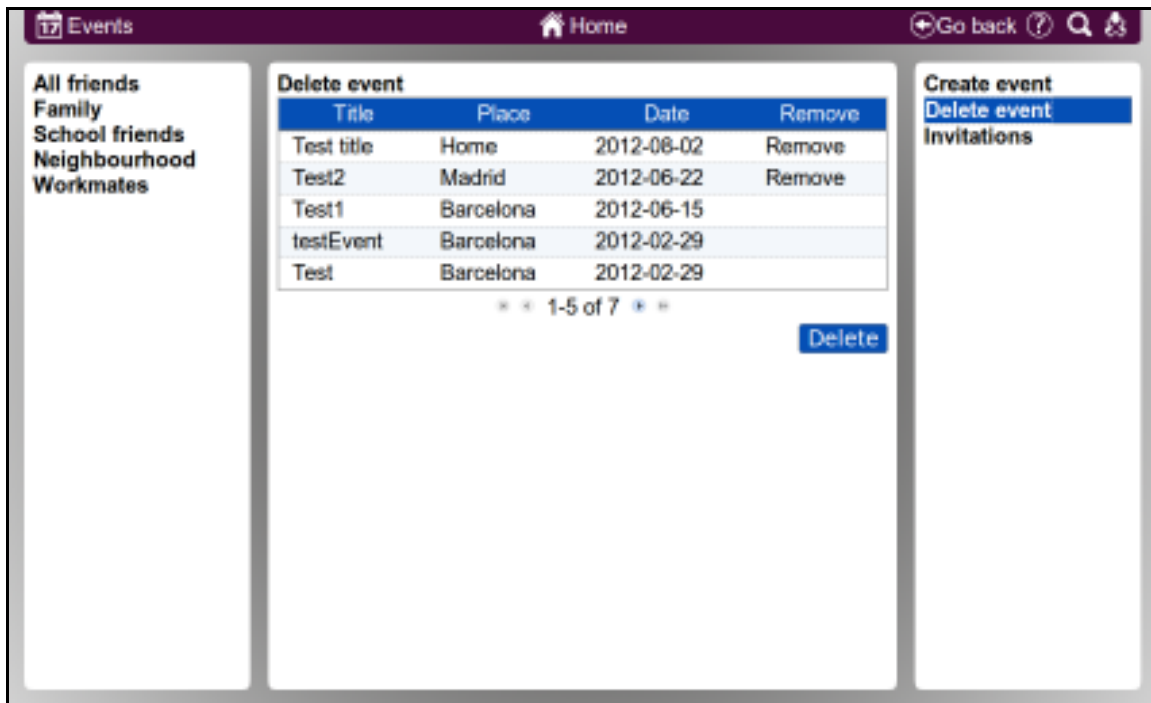
Figure 67: Event deletion (Desktop)

○ <u>Edit event:</u> the users can edit the events created by them. The editable fields are event name, description, place and date.
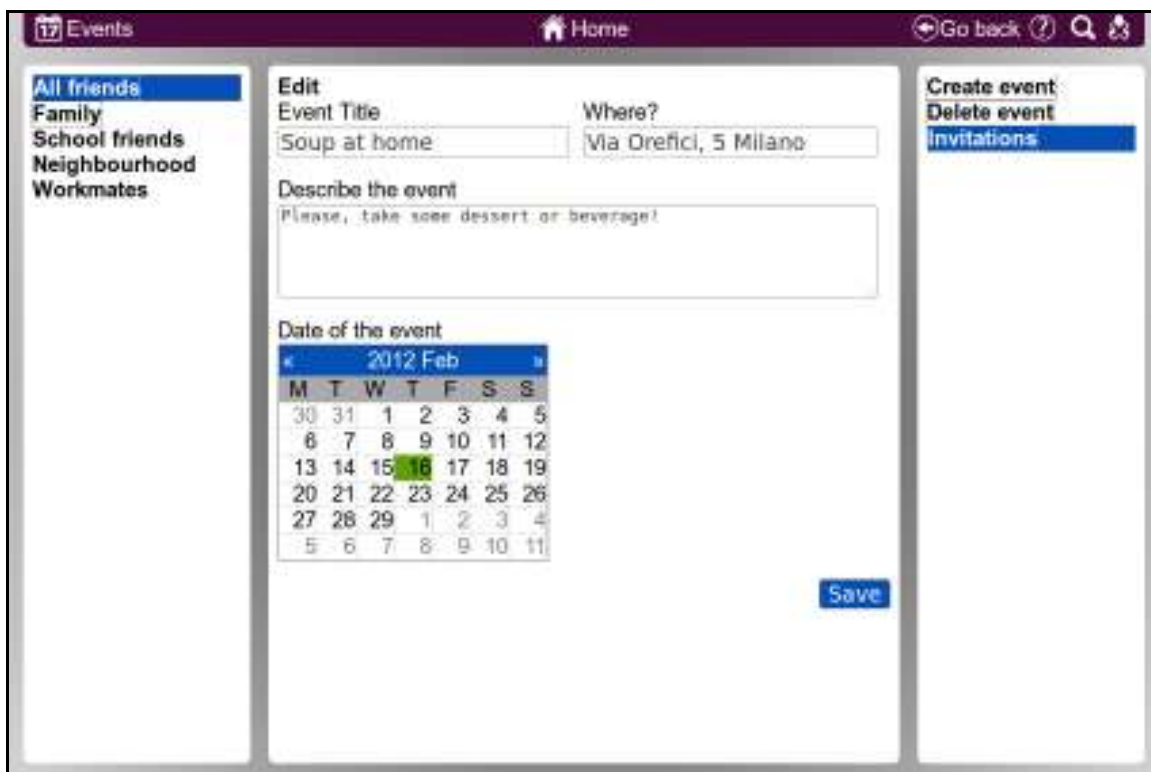
Figure 68: Edit event (Desktop)

Figure 69: Edit event (Mobile)

Messages: section where the users can exchange private message with their friends.

- Common functionalities (Mobile and Desktop)
  - ◦ Received messages: see the received and read messages list. The list includes message sender details, subject and date.
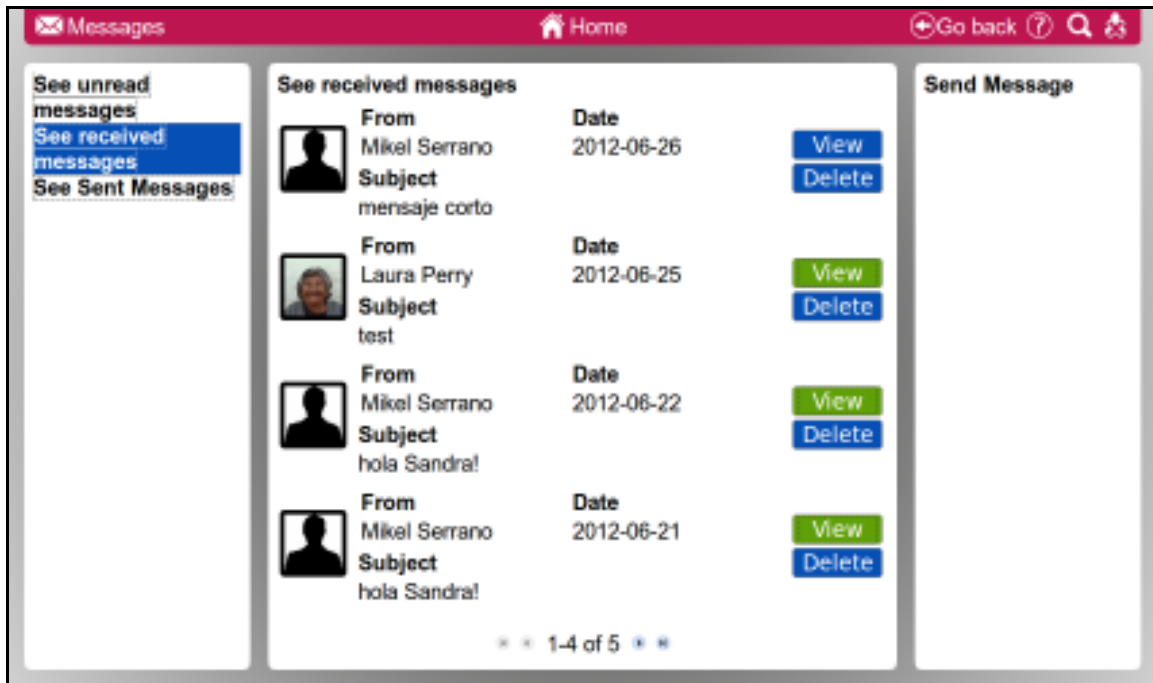
Figure 70: Received messages list (Desktop)
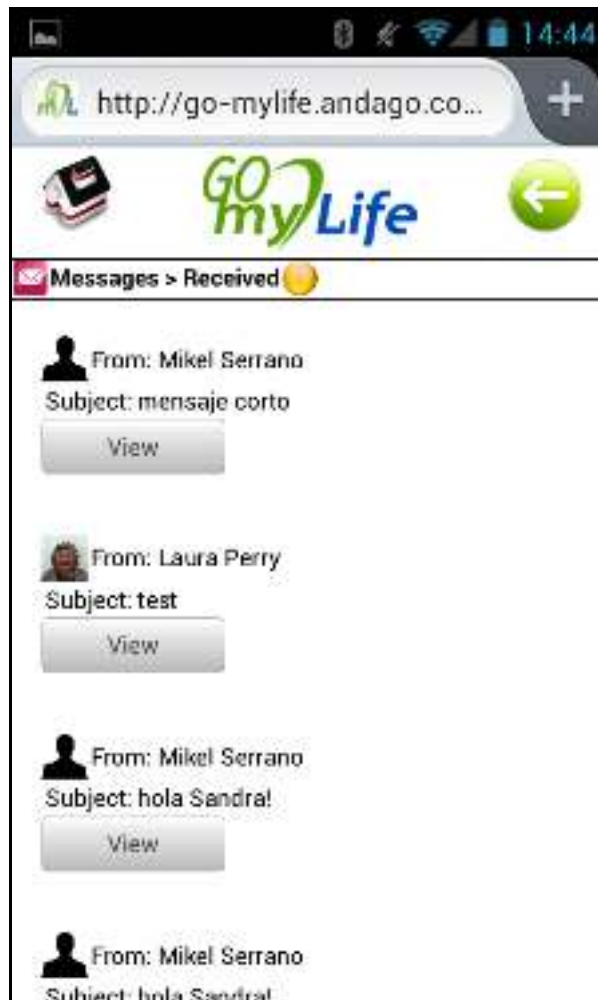
Figure 71: Received messages list (Mobile)

○ Unread messages: see the messages that the user hasn't read yet. The list includes message sender details, subject and date. Similar screen as received messages.

○ Sent messages: see the messages sent by the user. The list includes message receiver details, subject and date. Similar screen as received messages.

○ Message details: this functionality shows the message in new screen with all message data: message receiver/sender details, subject and message body. Here the user has the option to respond or delete a message.
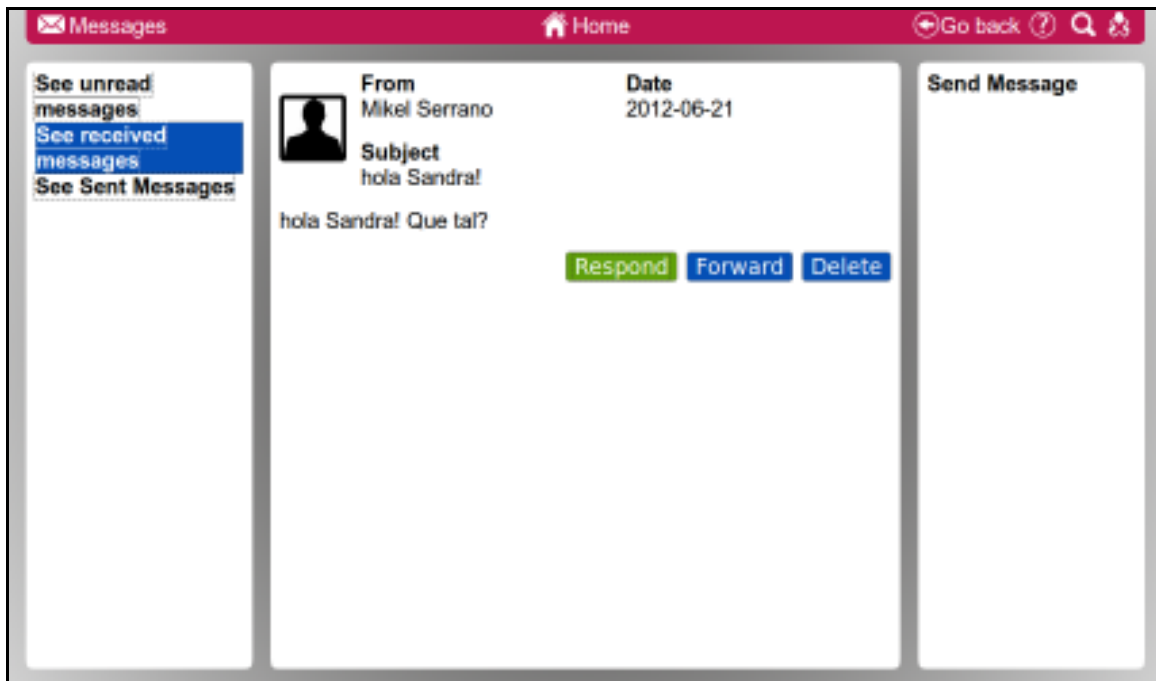
Figure 72: Message details (Desktop)

Figure 73: Message details (Mobile)

- ○ <u>Delete message:</u> delete a received, sent or unread message. It can be done inside the message details or in the unread/received/sent messages list (this one only inside the Go-myLife Desktop version).

- ○ <u>Send a message:</u> send a new message to a friend. Message form needs subject, message body and a receiver. The receiver will be a user friend and can be selected inside the same screen in the Desktop version and in a new screen in the Mobile version.

Figure 74: Send message (Desktop)

Figure 75: Send message (Mobile)

Figure 76: Message receiver selection (Mobile)

- ○ Respond: respond to a message. Clicking in "respond" inside the message details, the user will respond to a message. Similar to the sending message where the receiver will be the sender and the subject will be the same but editable. So, in this window, the user doesn't have to select the receiver friend.

Forums: section where the user can enter to a forum and start a discussion inside.

- Common functionalities (Mobile and Desktop)

    ○ Forums language selection: the user selects in which forums wants to enter according to his/her language.

Figure 77: Forums language selection (Desktop)

Figure 78: Forums language selection (Mobile)

○ Forums list: after the user selects the forums language, available forums list will be shown. For example: general, feedback...
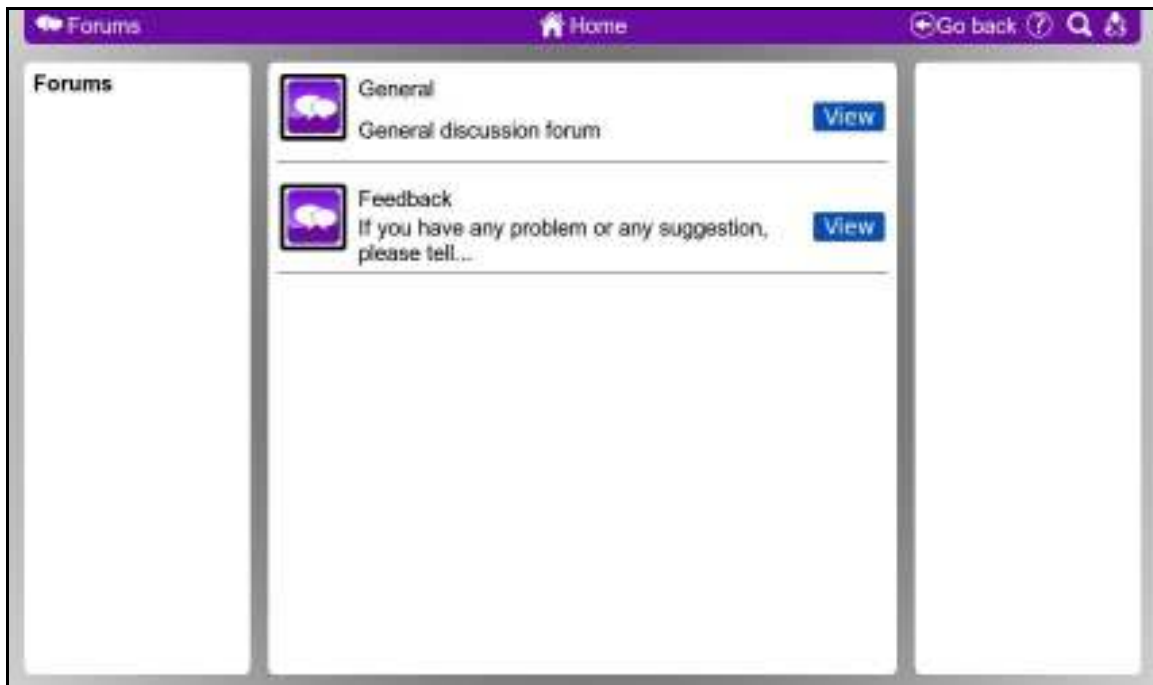
Figure 79: Forums list (Desktop)

Figure 80: Forums list (Mobile)

○ <u>Topics list:</u> after the user enters in the forum, a list of topics will appear on the screen. The numbers of responses are shown too.
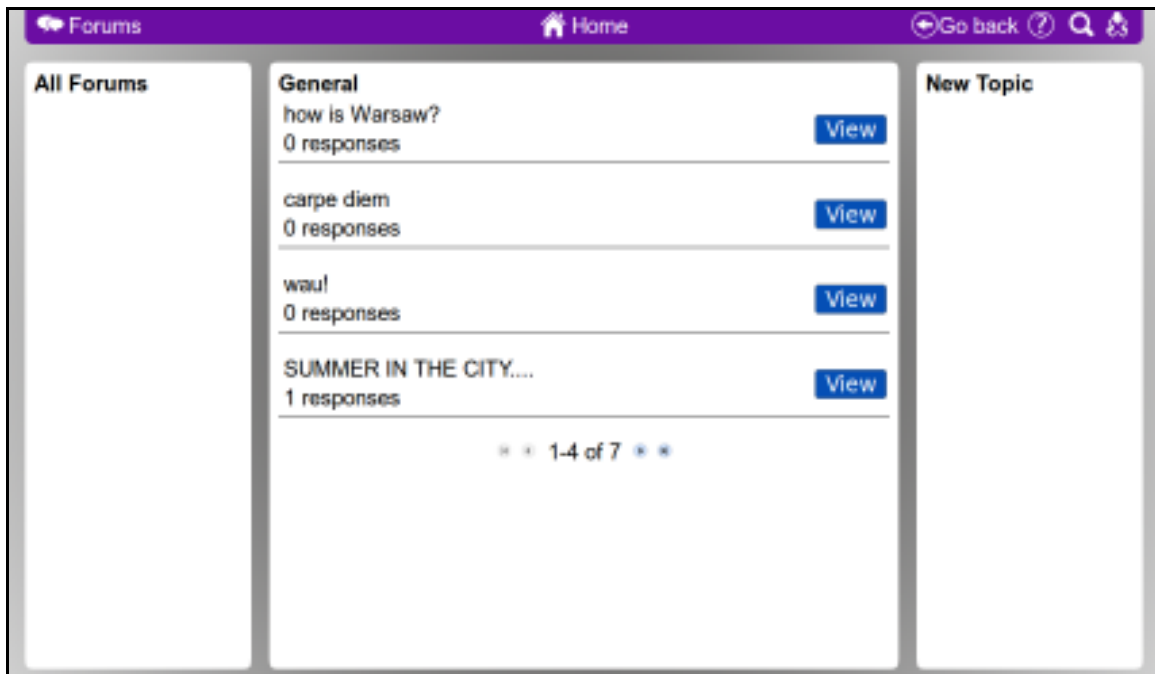
Figure 81: Topics list (Desktop)

Figure 82: Topics list (Mobile)

- ○ <u>New topic:</u> the user can post a new topic in the forum if he/she wants to ask a question or start a discussion. The option to create a topic anonymously is available to respect user privacy. The previous figure shows this option in the mobile version.
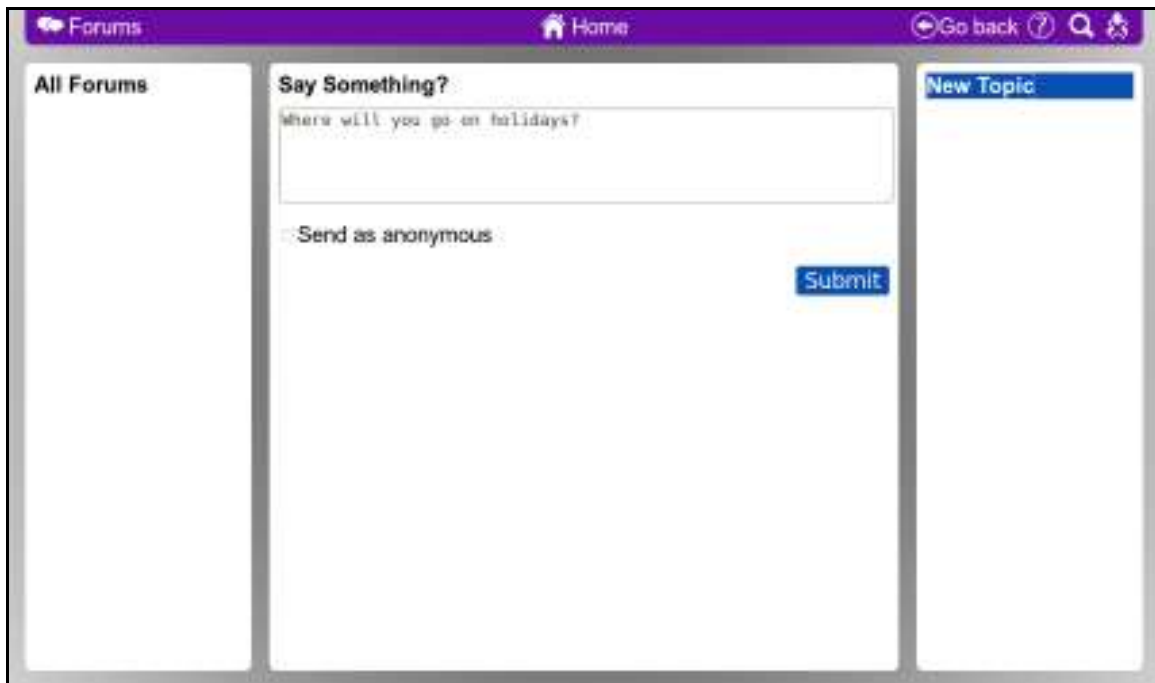
Figure 83: New Topic (Desktop)

- ◦ Topic details: the topic details screen is similar to the news details screen, but in this case responses are shown instead of comments. If the topic owner created the topic anonymously her or his profile picture and user name will not appear. The same with the users who post a response on the topic.
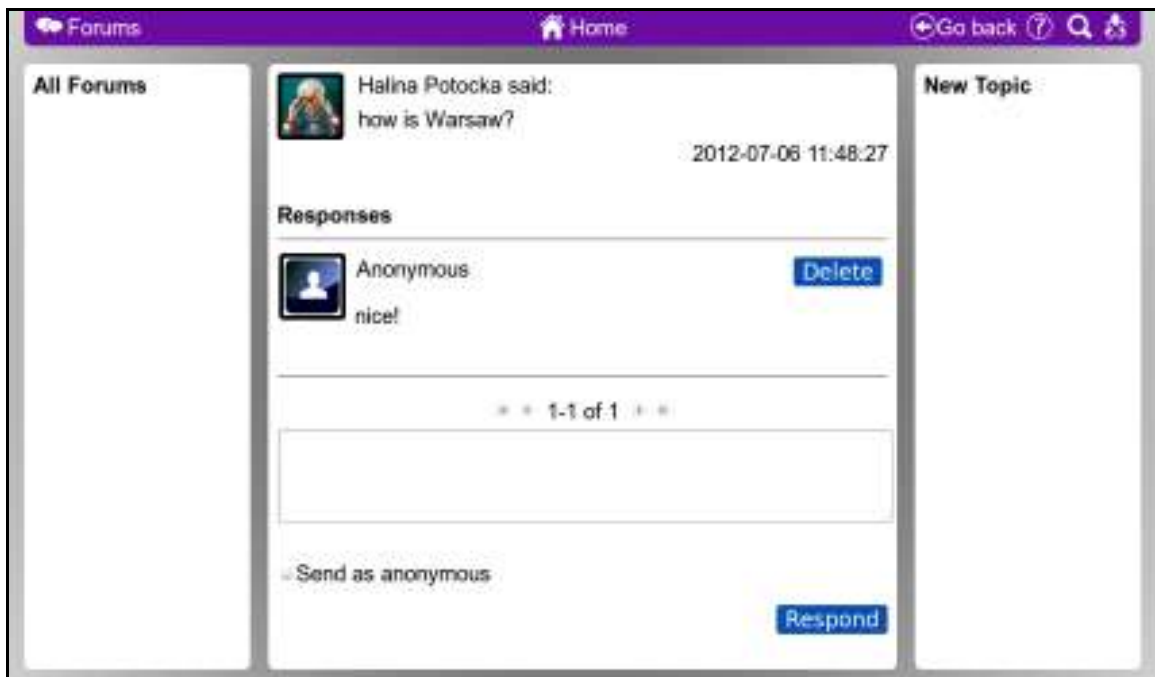
Figure 84: Topic details (Desktop)

Figure 85: Topic details (Mobile)

○ <u>Post a response:</u> post a response in the topic. Similar functionality as post a comment, but in this case the response could be anonymous.

○ <u>Delete a response:</u> response deletion. It can be done by the user who posted the response or by the user who created the topic.

Search (Desktop): section where the user can search friends and content within Go-myLife

- Desktop (this section and functionalities applies only to this device)

  ○ Search users using user name, first name or last name: this functionality offers a very simple search tool, composed only of a text field, a button and selecting the "Users" checkbox. The results are shown in a simple list. If a friend appears in the result query, the user will have the option to see his or her personal information with the "view" button. A button to send request is presented in the list if he/she is not already his or her friend, improving the ease of use of the platform.

Figure 86: Search results (Desktop)

  ○ Search content around a location (Notes, Photos, and Events): this functionality offers a search tool, composed of a text field, a button, a location and selecting the content with checkboxes (search users around a location is not available). The results are shown in a simple list and it is possible to see the details of the searched content: news details, event details and photo details.
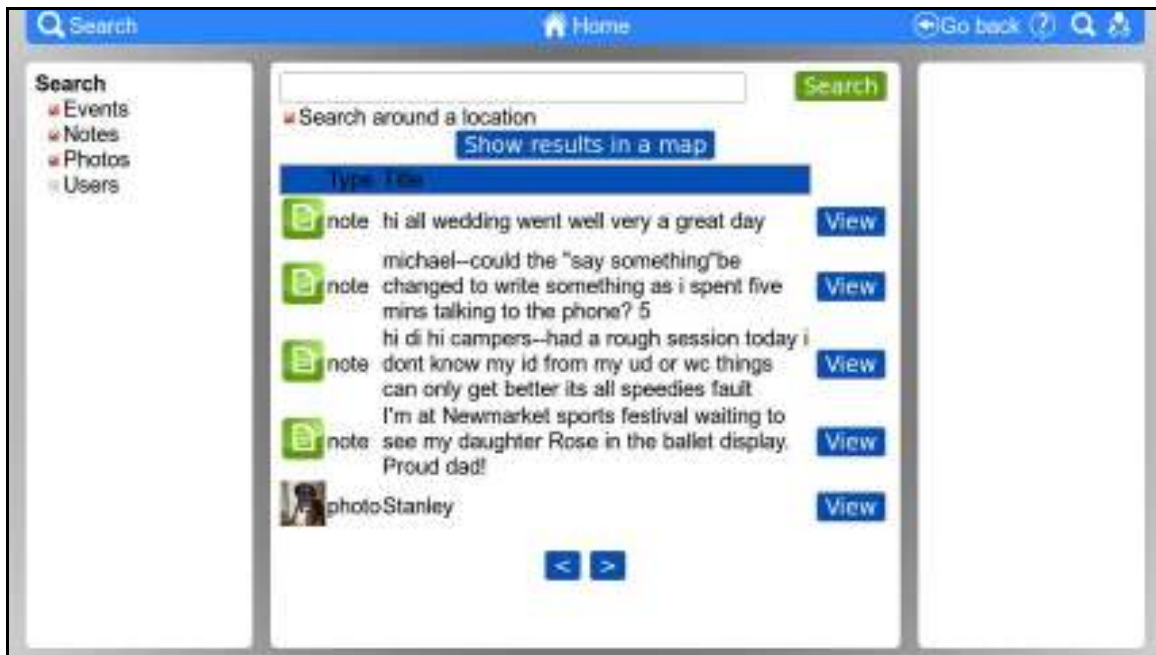
Figure 87: Search around a location (Desktop)

- ○ Search content (Notes, Photos, and Events): Same functionality as the previous one, but ignoring the location. The search process is made in all Go-myLife.

- ○ Show results in a map: this option is only available after searching content around a location. The users will have the option to see the results in a map.
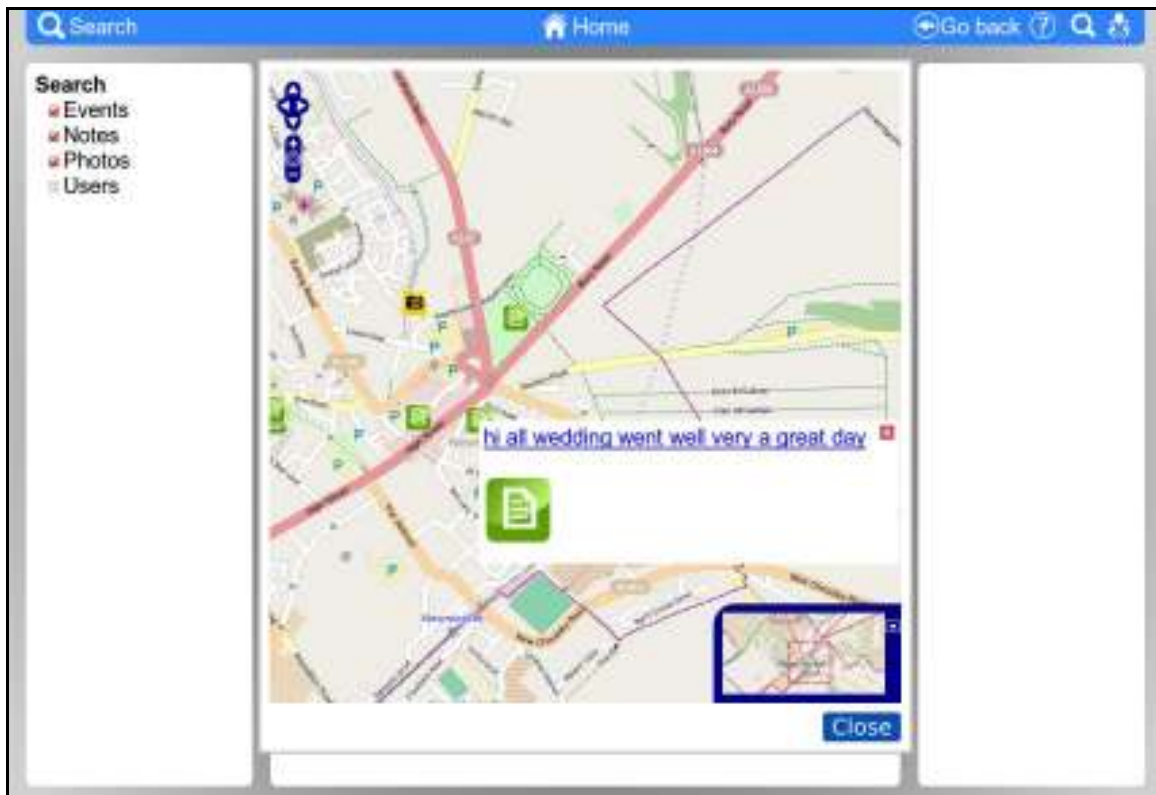
Figure 88: Results on a map (Desktop)

Around me (Mobile): section where the user can see photos, notes, events and friends around his or her location, around a specific location or search content without location. Similar functionalities like "Search" section of the Desktop version.

- Mobile (this section and functionalities are only offered on this device)

  ○ <u>View what is around you:</u> view photos, notes and events information and friends located around the user position (radius of 5km). The nodes and friends around the user appear on a list, and the user can view details of them or see their location on a map.

Figure 89: Search around me (Mobile)

  ○ <u>Update user position</u>: update user position on the mobile version to update and see what is around them. It can be done with "Update location" button (see Figure 89).

  ○ <u>Search content around a location (Notes, Photos, and Events):</u> this functionality offers a search tool, composed of a text field, a search button, a button to select the location and a three checkboxes. The results are shown in a simple list and it is possible to see the details and the location of each result.

Figure 90: Search around a location

○ <u>Search content (Notes, Photos, and Events):</u> Same functionality as the previous one, but ignoring the location. The search process is made in all Go-myLife.

Local Life: in this section the user can access local associations/groups to enable them to participate in the social life around his or her location

- Common functionalities (Mobile and Desktop)
  - ○ <u>View and search groups:</u> groups of people to which they can post news, photos and events. The users can search a group to join to it.
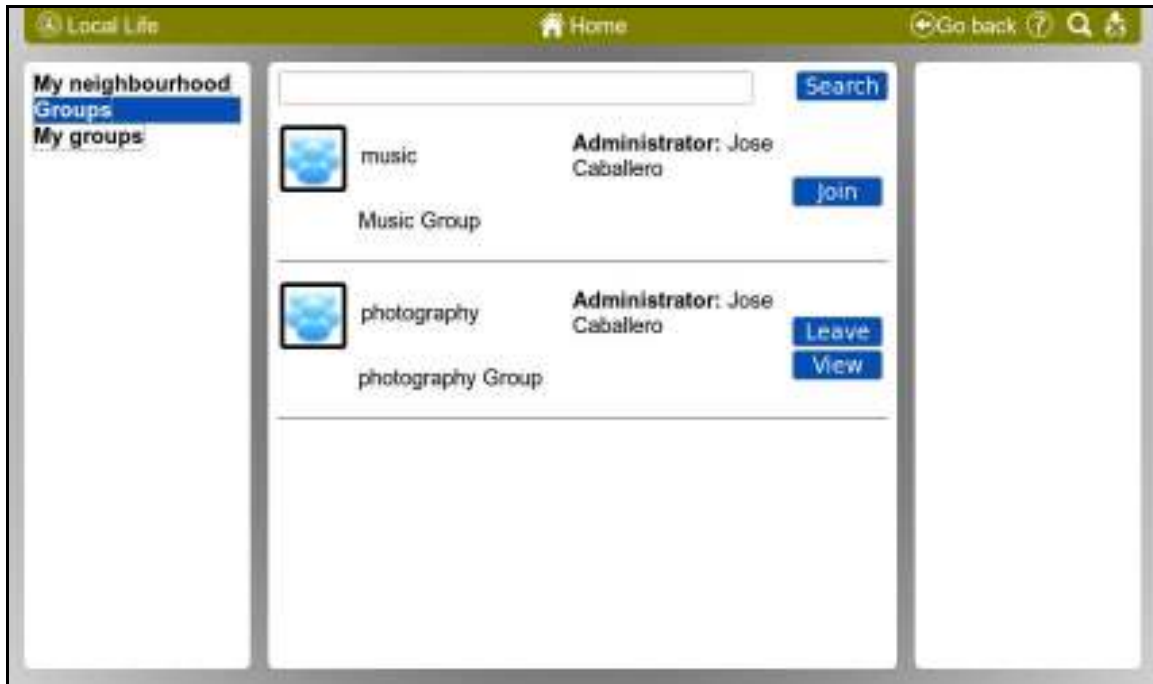
Figure 91: Local life groups (Desktop)

Figure 92: The Local Life groups (Mobile)

- ○ <u>View my groups:</u> groups of people to which they can post news, photos and events. The users can view and enter into the groups they are joined. Similar screen to Figure 91 and Figure 92.

- ○ <u>Join a group:</u> if the user is not a member of the group, he or she has the option to join it. Figure 91 shows the option to do it in the desktop version and the next screen shows it for the mobile version.

Figure 93: Join a group (Mobile)

○ Display information regarding these groups: when the user joins a group, the description of the group appears on the screen with the option to see the content added to it.

Figure 94: Group details (Desktop)

Figure 95: Group details (Mobile)

- ○ Leave a group: leave a group to which the user was previously joined.

- ○ View content of groups: if the user is a member of the group, he or she can view shared photos, events, news and the list of members of the group. The screens inside this section are similar to the ones that show those types of contents in sections that have been previously described (news, photos, events, list of users). In the *members'* part, the user can send a request to a user of the group that is not his or her friend when he or she sees a member details. In the Desktop version of Go-myLife, they can see the events of a day selecting the day in a calendar.
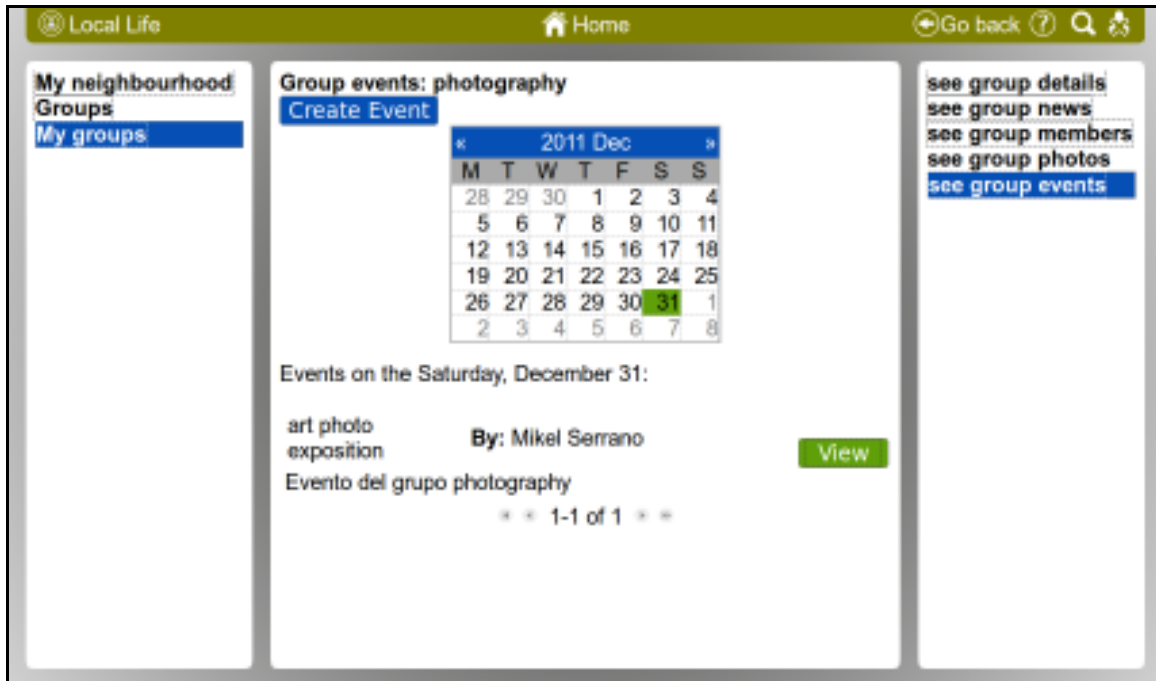
Figure 96: Group events (Desktop)
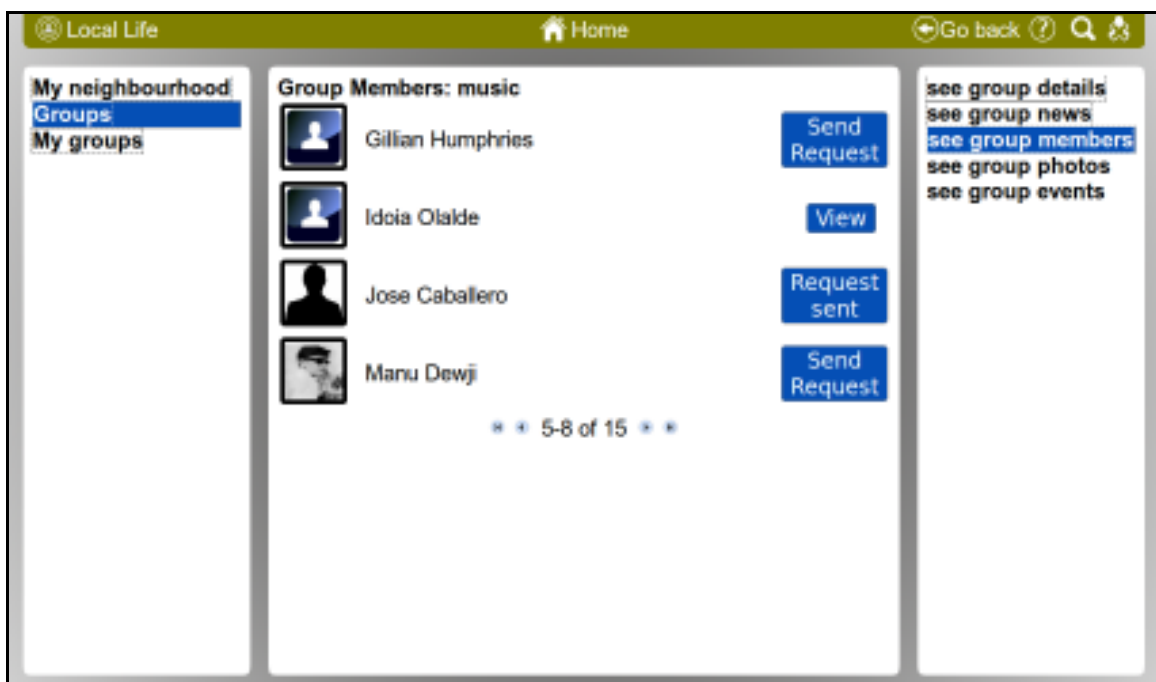
Figure 97: Group Members (Desktop)
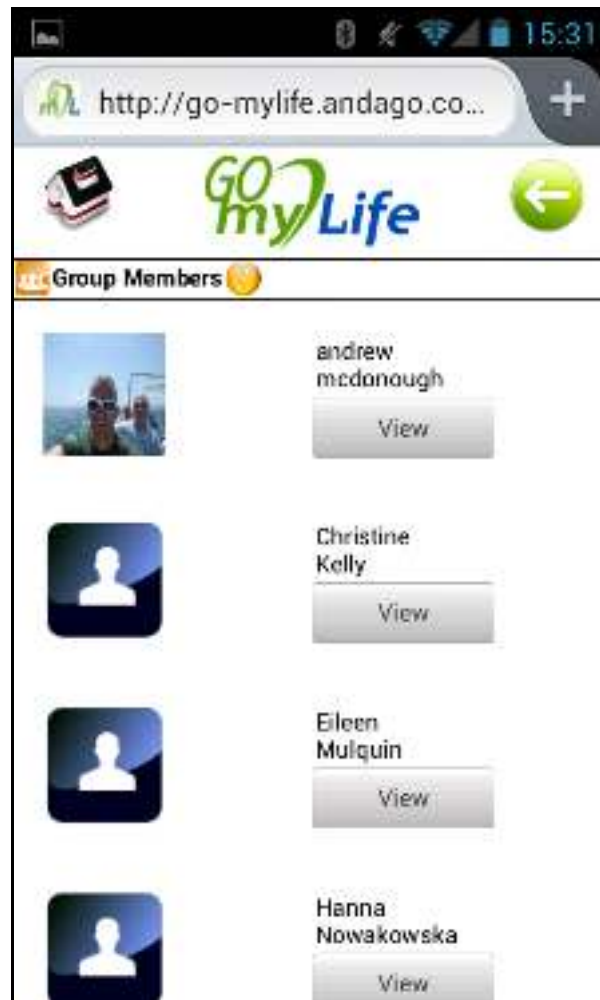
Figure 98: Group Members (Mobile)

- ○ Upload a photo, share news, create events, invite group members to event, edit content and make comment on the content of the group: these provide the same functionalities and similar screens as with the news, media and events sections.

- ○ Show location of user, photos and news in a map: displays a map with the location of the photo, post or user. (Screen with a map similar to Figure 17).

- ○ My neighbourhood: my neighbourhood screen shows the user's neighbourhood information and the option to see content posted there: events and news.

Figure 99: My neighbourhood (Desktop)

Figure 100: My neighbourhood (Mobile)

○ Change my neighbourhood: this functionality allows the user to change or select (if not) his or her neighbourhood searching around a location selected by him.
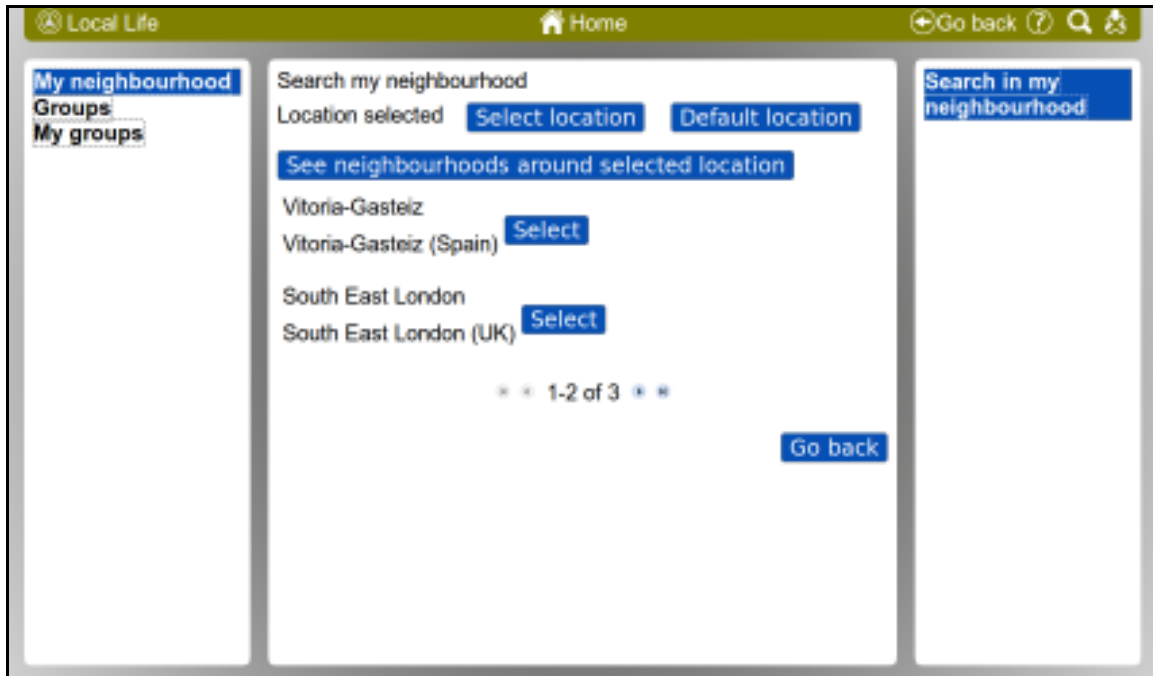
Figure 101: Change my neighbourhood (Desktop)
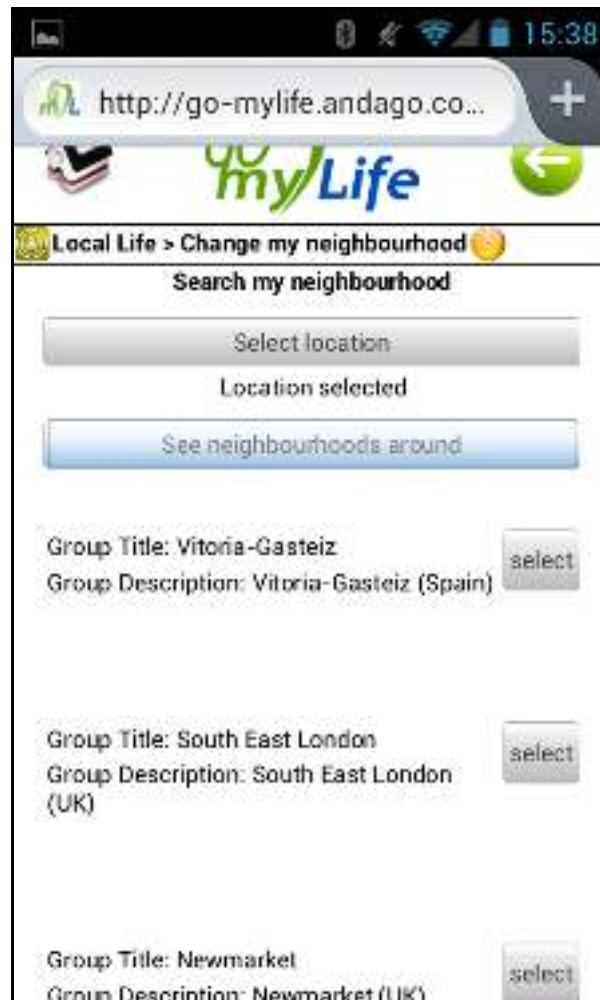
Figure 102: Change my neighbourhood (Mobile)

- ○ <u>Search in my neighbourhood:</u> functionality to search events and news inside my neighbourhood and view each detail. The screens of the results are similar as the ones in "search" and "around me" sections.

- ○ <u>My neighbourhood map:</u> this screen shows content of the user's neighbourhood in a map. Also, the user can search news and events to display them in a map.
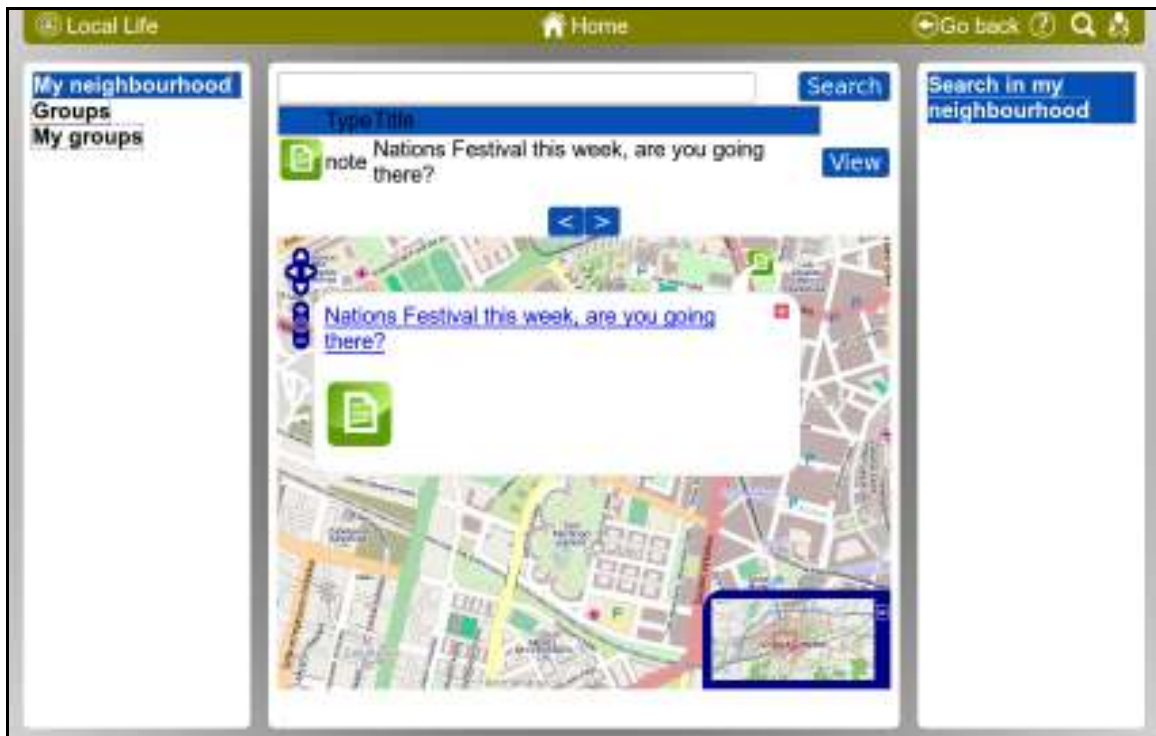
Figure 103: My neighbourhood map (Desktop)

Figure 104: My neighbourhood map (Mobile)

Language: the user has the option to change the language of the social network and see content information in the selected language.

- Common functionalities (Mobile and Desktop)

    ◦ Change language between Polish and English in login panel: change language by clicking on the flags of the login section. See Figure 2 and Figure 3.

- Desktop

    ◦ Change language in the registration panel: flags are located in the registration panel of the Desktop version to allow the user to select language (Figure 6)

Help: this part of Go-myLife guides the user during navigation inside each section of the social network

- Common functionalities (Mobile and Desktop)

  - <u>Help text (steps) is located inside each section of Go-MyLife:</u> In order to ensure ease of use the project has tried to ensure that the learning curve is as gentle as possible, and the steps and processes are similar to other social networks in order to help those users that have used them before. However, to further support ease of use, a Help button is provided on every screen. On clicking on this, a how-to tutorial regarding the current section appears.
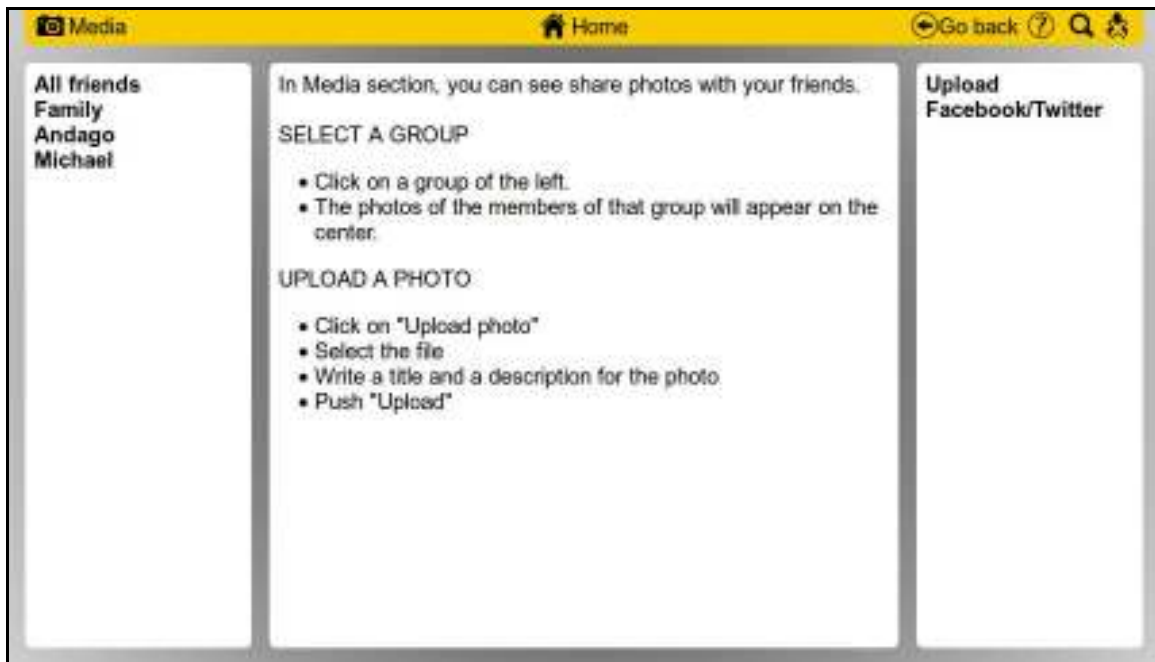
Figure 105: Help in media section (Desktop)
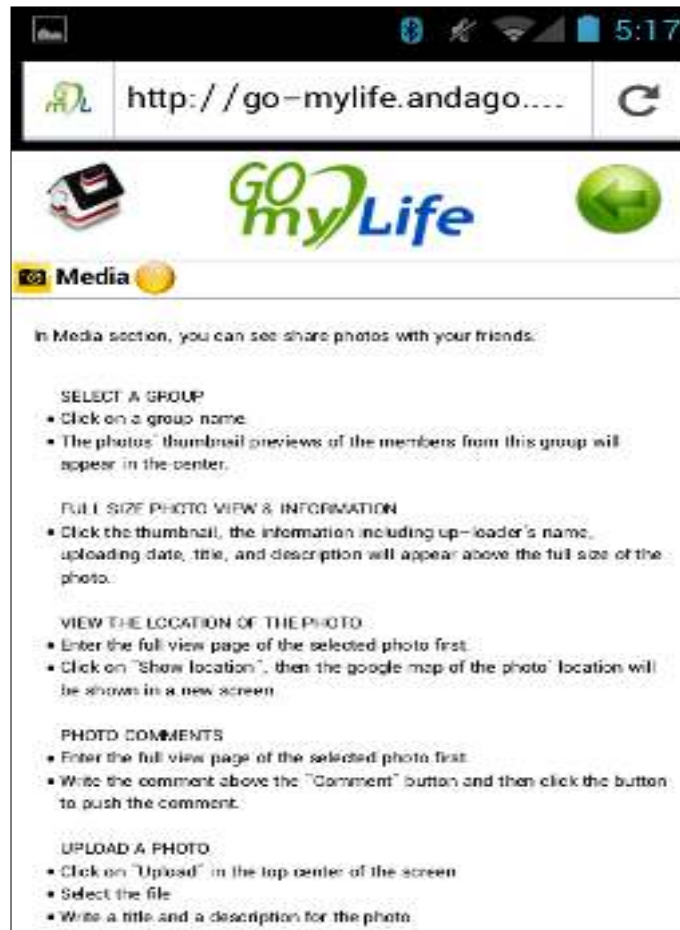
Figure 106: Help in media section (Mobile)

4 Prototype design

The prototype was designed taking into account three issues: the requirements, which describe the functionality of the site and are common to all major social networks; the work done by ZSI where the preferences of older people regarding graphical user interfaces were analysed; and the capabilities and limitations of Google Web Toolkit.

Regarding the requirements, the prototype was designed to conform to the characteristics of mainstream social networks such as Facebook or Twitter. The user can recognize the commonality of the different sections for adding and organizing friends, posting, reading and commenting on news; managing and setting up groups and so on. The fact that the similarities of the user interface to other networks eases the learning curve has been a reference throughout the whole prototype design process.

The work of ZSI on the behaviour and preferences of older people when using the internet has been very important to us in this task[2]. The results shows some interesting conclusions; some that seem self-evident and others not. With them in mind, we have planned a site with the following characteristics:

- Simplicity: the main interface is composed of two main spaces, the top bar and the content. The top bar contains the main mechanisms to navigate through the site and access all its features. It is implemented using different buttons designed for clarity using both images and text. The information and buttons provided includes a title with the name of the section and Home, Go Back, Help, Search and Logout buttons. This space will remain immutable in all sections, but the text will change depending on the language and the background colour depending on the section. This can be shown Figure 107 and Figure 108, where different sections are shown, but the top bar remains the same, unless the language is changed.

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[2] All the conclusions about those studies can be found in D2.3 Synthesis Report on target group analysis and user needs and requirements and D 2.4 Technical Requirements Analysis
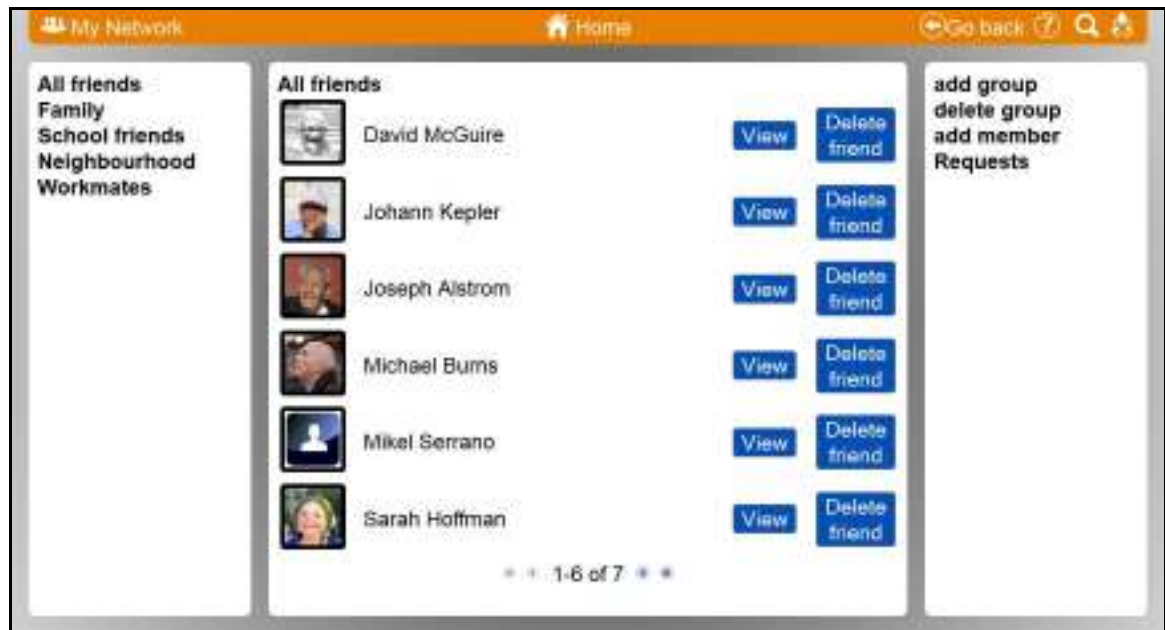
Figure 107: List of friends
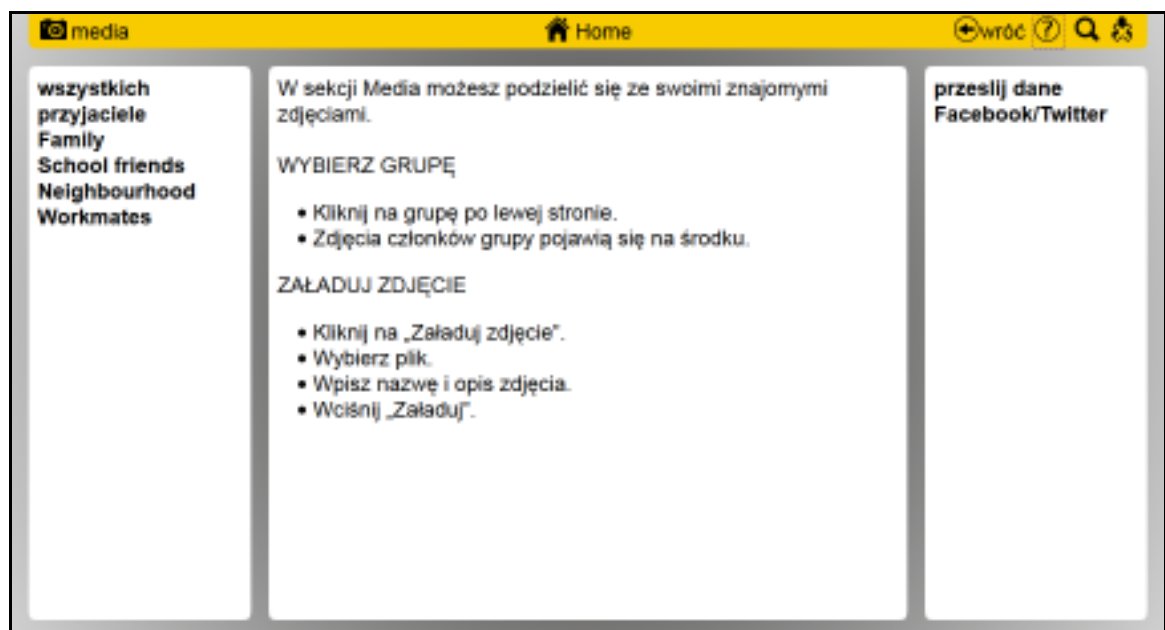
Figure 108: Help in Polish.

The content space will hold the different user information of each section. It is presented in two different layouts. In some sections, where we access information that can be organized into groups, a single panel layout filled with all of them is shown (Figure 109).

Figure 109: My Network screen, showing the different groups where friends are classified.

When users' information is shown, the content space will be organized in a three column layout in a thin-wide-thin distribution. The central column is where the main information will be held, while the first and last columns will contain the buttons for classifying or managing the main information. Figure 110 shows this distribution: the first column holds the classification buttons (in this case, the information is friends and the classification is done by groups), the central column shows the user data (in this case, the friends in a group), and, in the last column, the buttons to manage the information classification (in this case tools to add and remove groups, a link to add a member into a group, as well as the link to view your friendship requests).

Figure 110: My Network screen when the user has selected a group.

- High contrast colours: the webpage has been designed taking into account the possible visual problems of older people. We used high contrast colours in all overlapping elements such as fonts, headers or buttons.

- Colour consistency between sections: to achieve a better navigation experience, in the content space, the top bar background colour will change depending on the section visited, matching the one in the corresponding home page button, as can be seen in Figure 110 and Figure 111.
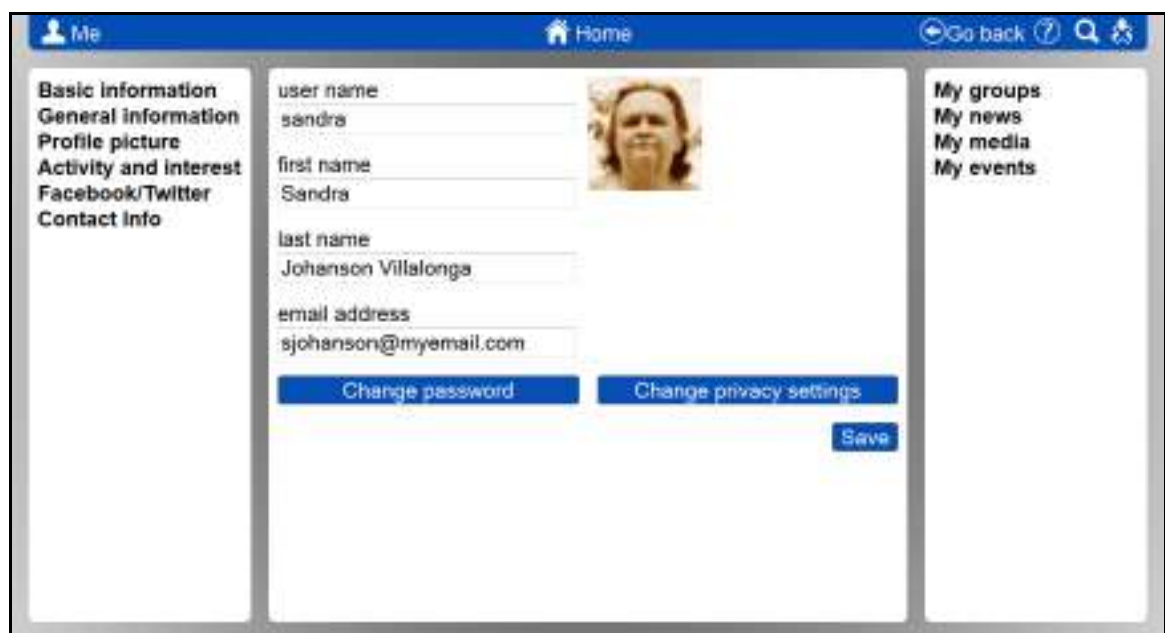
Figure 111: Me section, showing a blue navigation bar, in concordance with its button.

- Large fonts as default: The entire interface has been designed to use large fonts by default.

- Help texts in every section: one of the most important points regarding ease of use is that the learning curve must not be very steep, and that similarities with other social networks will help the users that have used them before. In addition, on every screen a Help button is provided. On clicking on this, a how-to tutorial of the current section appears in the central column (Figure 112).
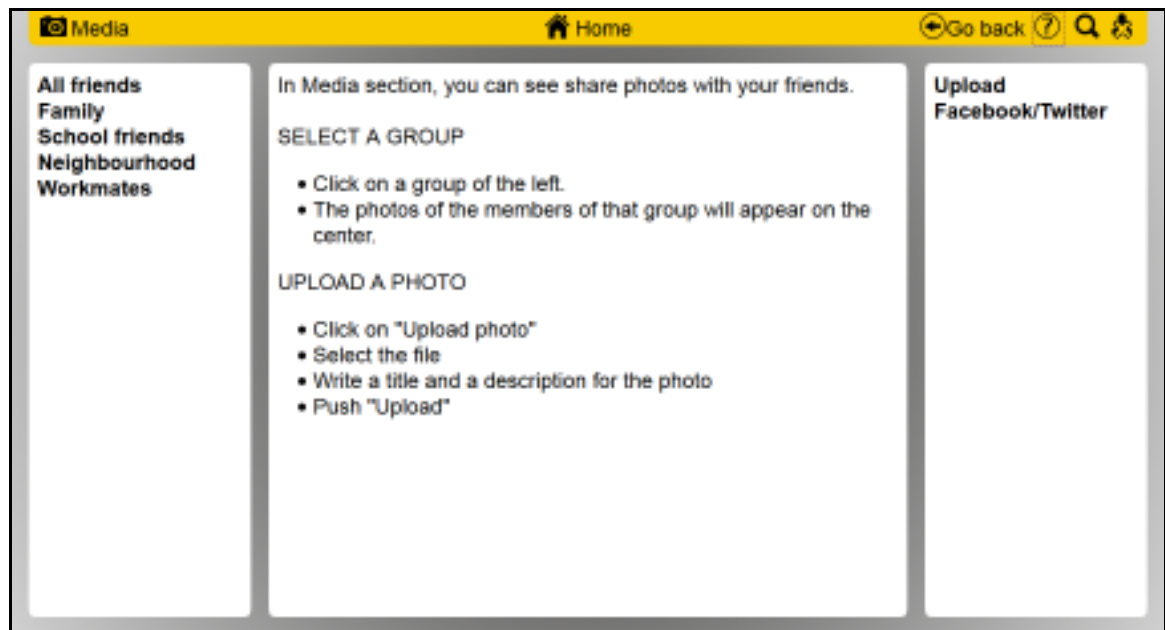
Figure 112: Help on the Media section

- No scrollbars: according to ZSI older people tend to prefer pagination when navigating in a webpage. Taking this into account, scrollable content, such as lists, has always been implemented as a set of pages, as is shown in Figure 113.
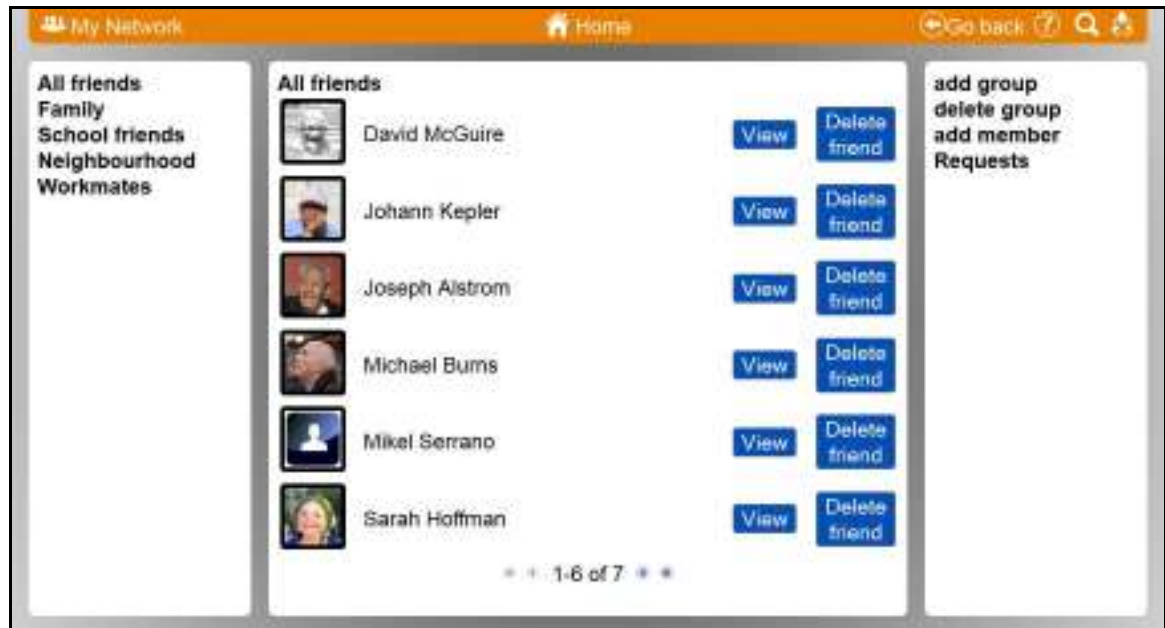
Figure 113: My Network section, showing a non-scrollable list.

- Easy completion of profile information: in order to address this, we provided separate sections when filling out profiles, classified by different aspects of the information (such as Contact Information or Activities and Interests). In some cases we also help by providing lists of choices for individual pieces of information.
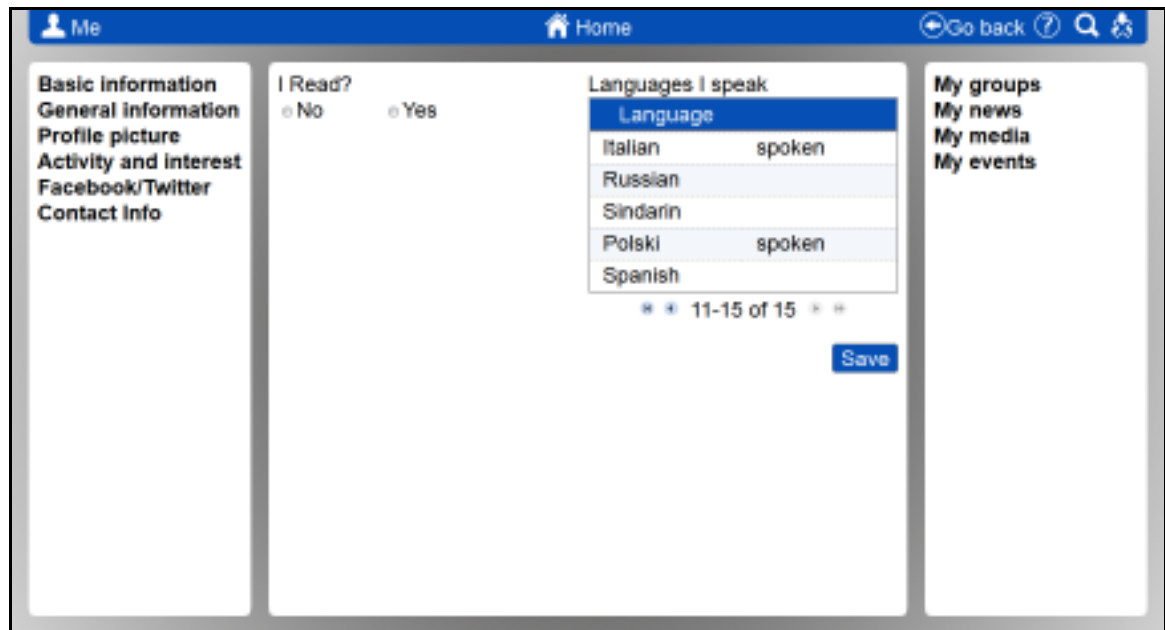
Figure 114: Easy profiling.

- Easy navigation: we provide an additional "Go back" button, which is more recognisable than the one on the browser, because of the additional text description. This, in conjunction with the top bar (that provides the title of the section) and the colour coding of each section, leads to a better understanding of the navigation.

Similarly to the desktop version, the mobile prototype was designed taking into account the requirements described in D2.4 Technical Requirements Analysis, although the mobile version of the Go-myLife platform has the restrictions of the limited screen size and resolution of the mobile devices. The mobile interfaces allow constant interaction of the users with their Go-myLife account, their friends and the available services around them, using geolocation services.

In order to ensure compatibility with present and future technologies, it was decided not to attempt a native application for each and every mobile device. Instead, HTML5 code was used, implemented via the Google Web Toolkit, to enhance interoperability between devices and operating systems.

Due to the small screen size of the mobile devices and the usage of gestures and on-screen keyboards, the functionalities provided have been adapted to these specifications. The login screen (Figure 115) allows selection between the available interface languages, password recovery and access to the help files.

Figure 115: Mobile Login Screen

The available spaces of the screen have been reduced down to two (Figure 116). The upper one remains the same throughout the different pages, including the home button that takes the user back to the Mobile Home Screen and the back button that allows navigation back to the previous section. The only exception is displayed on the Mobile Home Screen (Figure 116), where back button has been replaced with the logout button.

Figure 116: Mobile Home Screen

Menu icons are the same as with the desktop version, to reduce confusion and enhance memory.

The lower space of the screen embeds the breadcrumb navigation, along with the section icon and the help button placed on top and then the contents of each selected section (Figure 117, Figure 118).

Figure 117: My Network Mobile

Figure 118: Help Screen

Fonts sizes used have been chosen to take into account usage by older people with vision problems. Additionally, the mobile phone screen can be zoomed in or out using gestures, to accommodate the needs of each user. Scroll bars have been avoided, although due to the limited screen size, navigating through long pages using gestures is available whenever needed (Figure 119).

Figure 119: Scrollable List

5   APIs, SDKs and tools

Along with the Go-myLife web applications, we provide a set of APIs to facilitate the construction of communities and the integration of external services and social networks inside the Go-myLife platform.

5.1.1 User interface API

The user interface API, is a REST interface to manage the content stored in the Go-myLife Social Engine. This interface is called from the UI level to create the different functionalities that the client application offers. Calls to the interface are sent via HTTP protocol and using the petitions POST and GET with JavaScript's XmlHttpRequest2.

- GET method: with this method the data of a resource is obtained. Example: the call http://rest.gomylife.libresoft.es/social/user/data/?format=JSON gets the user's data in a JSON file. When the response is received, the client parses it and shows the corresponding data in the user interface.

- POST method: with this method the client sends POST parameters to the URL of the resource and the REST interface modifies the DB data or creates an entry of content on it. Example: the call https://rest.gomylife.libresoft.es/social/user/login/?format=JSON needs POST parameters username and password. For this method, the JavaScript's FormData object is used to reproduce <form> submission mechanism. So, a file and/or a set of key/values pairs are added to this object and sent using XmlHttpRequest2. In the previous example, keys "username" and "password" with corresponding values will be added and sent to REST interface to complete login functionality.

The user interface API is divided into different modules to manage the content:

Export management: module that allows clients to receive the information using different data formats. The received information could be JSON or XML file, included in the HTTP Response. To obtain information in XML file, the resource URL is used, and when the client wants to receive it in JSON format, the parameter "format=JSON" will be added to the URL. With this option, when the client receives the JSON file, it parses the information and it shows it in the UI.

Node management: REST API module to cover standard functionalities over the different nodes (node content types: user, photo, note, video, link, audio and event):

- Change node position
- Tag a node
- Remove node tags
- Change node availability dates

Certificates Management: REST API module that can be used to manage security certificates of the application:

- Redirect after accepting the certificate

User Management: REST API module to manage user's information and relationships with other users:

- Create new user

- Modify user data (registration data)

- Modify GML profile (user optional data)

- Log in

- Reset user password

- Get user data

- Get my data

- Get user groups

- Delete user

- Get friends

- Make a search into friends walls

- Get friendship invitations

- Get sent friendship invitations

- Set user position

- Near people

- Near friends

- Set user status

- Set user avatar

- Unset user avatar

- List all users

- Search users

- Start relation between users

- Finish relation between users

Notes management: REST API module for managing notes:

- Create a new note

- Get note data

- Delete a note

- List all notes

- List all user notes

Photos management: REST API module for managing photos:

- Upload a photo

- Modify an existing photo

- Get photo data

- Get photo image

- Get photo thumbnail

- Delete a photo

- List all photos

- List all user photos

Sounds management: REST API module for managing sounds:

- Upload a sound

- Get sound data

- Get sound file

- Delete a sound

- List all sounds

- List all user sounds

Videos management: REST API module for managing videos:

- Upload a video

- Get video data

- Get video file

- Delete a video

Links management: REST API module for managing links:

- Create new link

- Get link data

- Delete a link

Events management: REST API module for managing events:

- Create a new event

- Modify an existing event

- Invite users to an existing event

- Get event data

- Delete an event

- Change the attendee's subscription

- Get the user's pending events

Privacy management: REST API module that manages the privacy of the nodes and layers of Go-myLife network. The privacy options can be: private (only the user can see it), friends (the user's friends can see it), friends of friends (the friends of the friends of the user can also see it), public (everybody).

- Show privacy status (nodes, layers)

- Permission change (node, layer)

Layers management: REST API module to manage information about layers. The layers manager provides an interface to access the different information sources supported in the server, allowing users and applications to interact with nodes from several sources. These sources could be internal sources (with nodes stored in LibreGeoSocial server data base) or external sources (retrieving information through web services, for example: Panoramio). Both layers (external, internal) provide the same features using a unique interface.

- Get the layers list

- Make a layer search

- Make a search in the walls of friends

- Get layer's icon

- Get layer's info

- Get layer's category

- Create a layer

- Modify an existing layer

- Delete a layer

Walls Management: REST API module for managing user's walls. Internally, a wall is a layer of type wall, so the working is very similar. They use the same interface with special features. This interface is used to get user's wall or search nodes in that wall.

- Get the walls list

- Make a wall search

- Get wall's icon

- Change wall's icon

- Get wall's info

- Get wall's category

- Get user's wall

Groups Management: REST API module for managing groups. Groups are a type of layers to manage contents but having users joined to the group. The interface is almost the same as Layers API and is used to search and join to a new groups created in Go-myLife and according to the preferences of the user's profiles.

- Get the groups list

- Search groups

- Make a group search

- Get group's icon

- Change group's icon

- Get group's icon

- Get group's category

- Create a layer

- Delete a group

- Join to a group

- Part from a group

- Get user groups

Comments management: REST API module that manages comments on nodes. The comments are shown in nodes data (for example, comments posted on a note).

- Add new comment
- Delete comment

Private groups management: REST API module to manage private groups. Private groups are a type of layer that let a user to manage their friends. They can create a private group and add some them to it, so only these friends will see the content that the user added to it when they request for his wall. These types of groups can be only visible and managed by their creators, so their friends will never know in which private group they are included. The interface is almost the same as Layers API.

- Get the private groups list
- Make a private group search
- Get users from a private group
- Get private group's icon
- Change private group's icon
- Get private group's info
- Get private group's category
- Create a private group
- Edit a private group
- Delete a private group
- Join to a private group
- Part from a private group

Private messages management: The private messages system allows users to communicate between them in a confident way, similar to e-mail systems. The API conforms a basic interface that let users to manage the common tasks that involves a system of these features.

- Send a message
- Delete a message
- Get message
- Get the sent messages list
- Get the received messages list
- Get the don't read messages list

5.1.2 Services integration API

This section explains how to develop a new external channel, in order to integrate an external information source (such as Flickr, Panoramio, YouTube, etc.) into LibreGeoSocial layers system. A channel can be developed to integrate any information source and this will remain integrated in LibreGeoSocial.

All the contents managed by LibreGeoSocial are represented inside a layer. The layers are the abstraction used in LibreGeoSocial to classify the information. When a channel is developed it will be reflected as a new layer from the point of view of LibreGeoSocial server. The difference is that the social contents belonging to this layer won't be stored in the LibreGeoSocial database, so they will be requested from their original source every time the channel is loaded.

For the creation of a channel, a new class has to be created, that inherits from the class *GIC.Channels.GenericChannel* (Figure 120):

```
class <OwnChannel> (GenericChannel):
```
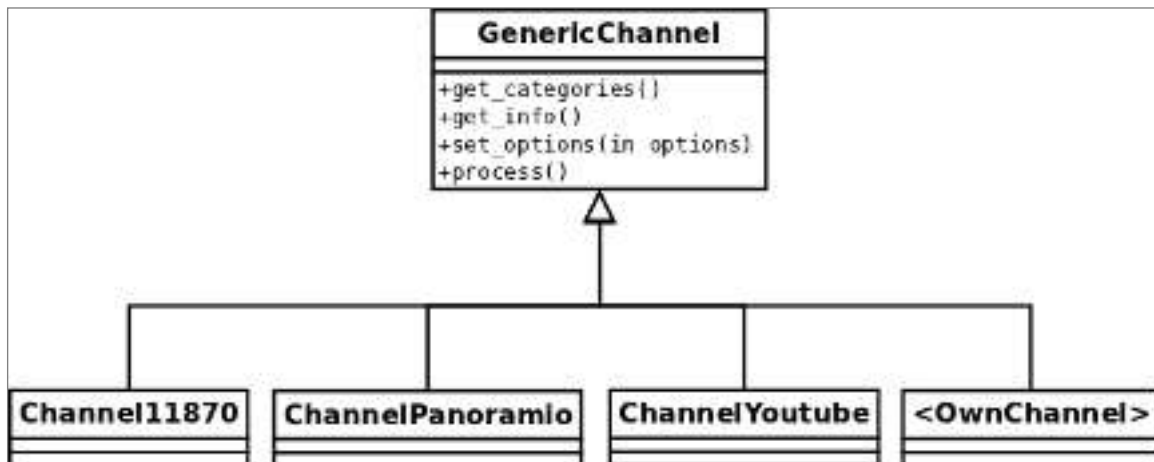

Figure 120: The External Channel Aggregator

Next, these are the methods of the API that have to be implemented:

- *get_categories():*

  Description: This function has to return information about the different categories (if supported) by the channel. For example, in a video channel categories could be: "sports", "movie", "music".

  Output: returns an array of dictionaries. Each dictionary will have the next keys for each category:

  - "id": identification number

  - "name": identification name

  - "description": description of the category.

  This information will be useful for users and it will be showed in the LibreGeoSocial layers description.

- *get_info():*

    Description: Returns the description of the channel. This information will be showed in the description of the channel in LibreGeoSocial.

    Output: a string with the channel description

- *set_options():*

    Description: This function configures the channel regarding the different options supported. LibreGeoSocial needs a set of mandatory options and this function will receive, at least, these fields (use them as your convenience). Other mandatory and/or optional parameters could be added, but it is not recommended to accessing the channel through the LibreGeoSocial Standard Layer System. This system tries to call all the layers with the same options; so, new layers could be added to the system without needing to make changes in the client (which always makes the same request, not worrying about the requesting layer).

    Input: a dictionary with the different options. This dictionary will be composed with pairs of options/values.

    Output: a pair of values with True/False if the options are correct and a returned message. This returned message could be used, for example, to refer a missing mandatory field: return False, "The parameter latitude is mandatory"

- *process():*

    Description: This function is the core of the channel and it will make the search/request returning the matching information.

    Output: The matched information regarding different options and the information source have to be returned regarding the LibreGeoSocial content models. Currently, the different information nodes can be returned through the LibreGeoSocial standard ones: notes, photos, audios and videos. So, this function returns a pair of values: the first value is a boolean (true/false) notifying if everything was right and the second one has to be an array of LibreGeoSocial nodes.

    In order to return LibreGeoSocial nodes in a standard way, the classes designed for this purpose have to be used. These classes represent the LibreGeoSocial standard nodes that are used to return information with internal templates. Using another node's models could not fit correctly with these templates. The classes to use LibreGeoSocial standard nodes can be find in: *GIC.Channels.Items*.

    Here is an example of how to return an information node in the standard layers system:

    ```
    from from GIC.Channels.Items import Note


    note = Note()
    ```

```
note.title = "Title information"
note.text = "Text information"


return (True, [note])
```

This "simple" API would allow developers to integrate different information sources quickly.

Finally, to install a channel into a LibreGeoSocial server, a directory has to be created inside the libs directory of the LibreGeoSocial server installation with the next convention: "channel<name of the channel>". Here is an example for a channel called Panoramio:

```
cd /var/www/libregeosocial/libs
mkdir channelPanoramio
```

Then, put the python file/template inside the directory, the file has to be named as the directory with the first letter uppercase:

```
cp /home/user/development/panoramio.py

./channelPanoramio/ChannelPanoramio.py
```

The class implemented by this file/template/channel also has to use a convention: "Channel<name of the channel>"[3]. For example:

```
class ChannelPanoramio(GenericChannel):
```

With the channel class correctly installed it will have to be inserted in the layers system. There is a python script to manage this task under *social.layers.LayersConsistency*. It should be invoked inside a Django instance:

```
$> python2.5 manage.py shell
shell> from social.layers import LayerConsistency
shell> LayerConsistency.main()
```

This script will search new channels in the system.

---

[3] The system is case sensitive. For the Panoramio channel the directory will be channelPanoramio and then, the class name will be ChannelPanoramio. The first letter is important, so this will be used by the layer system to detect and to instance channels automatically.

5.1.3 Communities Integration API

The Communities Integration API allows the interaction of third party providers with the Go-myLife social network. With this API, local communities or associations can create their own groups, share content with their members and manage it. The API is implemented using a REST interface and can be called over HTTP protocol, using GET and POST requests. In that sense, the administrator of the community may create, update or delete content related to a community.

To facilitate the creation and management of these local groups, a Community Admin page will be implemented. The potential third party administration must have available the access key, provided by the administrator of the Go-myLife platform upon verification, in order to access the Community Admin page.

The Communities Integration API allows content creation/update and reception of the posted content. The reception of the content is performed using a GET method, e.g. https://rest.gomylife.libresoft.es/social/group/<groupid>/<parameters>/?format=JSON and content creation and update using a POST method, e.g. https://rest.gomylife.libresoft.es/socia/group/<groupid>/<parameters>/?format=JSON . Calls to the interface are sent via HTTP protocol using the petitions POST and GET with JavaScript's XmlHttpRequest2. The *groupid* defines the specific local group, while *parameter* defines the action to be performed. The available operations are:

Communities' management: REST API to manage communities

- Get the communities list
- Create community (name, description, category, icon, availability, latitude, longitude)
- Get community data (name, description, category, icon, creation date, latitude, longitude)
- Get community members
- Show community elements
- Make a search inside a community
- Delete a community
- List all user's communities
- Join a user to a group
- Delete a user from a group

Community news management: REST API to manage communities' news feeds

- Get community news list

- Send news content (title, news_content, available_to, available_from, latitude, longitude, altitude)

- Delete news

Community photos management: REST API to manage communities' photos

- Get community photos list

- Send photo content (name, description, photo_file, longitude, latitude, available_to, available_from, altitude)

- Delete photos

Community sounds management: REST API to manage communities' sounds

- Get community sounds list

- Send sound content (name, description, sound_file, longitude, latitude, available_to, available_from, altitude)

- Delete sounds

Community videos management: REST API to manage communities' videos

- Get community videos list

- Send sound content (name, description, video_file, longitude, latitude, available_to, available_from, altitude)

- Delete videos

Community links management: REST API to manage communities' links

- Get community links list

- Send links content (title, text, url, longitude, latitude, available_to, available_from, altitude)

- Delete links

Community events management: REST API to manage communities' events

- Get community events list

- Send events content (title, text, url, longitude, latitude, event_to, event_date, available_to, available_from, altitude)

- Delete links

5.1.4 External Social Networks API

This API provides a connection to other social networks analysed in previous deliverables. It allows a bidirectional communication between the platforms. Different connectors are developed for the interaction with each of these networks. All of them follow the next architecture schema to guarantee its integration without unnecessary changes at the user interface:

The SocialConnectorManager is a factory class that creates all the instances of Social Connectors and manages them. With this API, the inclusion of new social networks in the Go-myLife platform will be easy because it is only necessary to implement the ISocialConnector interface for each social network. Implementing this interface allows the platform to obtain and post data to each specific social network, in this case, the data from/to Facebook and Twitter.

Using ISocialConnector interface, these options are possible: login/logout, update user status, get user information, get user profile picture, get user contacts, write to a contact, etc.

5.1.5 Data Analysis API

The Data Analysis API will provide a series of queries, available via the Report Dashboard, that allow anonymous usage and performance statistics. The Report Dashboard will offer predefined and custom queries to the certified users. Go-myLife platform reports will only be available to verified users and partners, via secure connection, so that to protect the data from non-authorized usage. Data Analysis API queries will provide statistics in relation to demographics, location, etc.

We will provide all these statistics with the Google Analytics tool integration in our platform. Google Analytics is built on a powerful, easy-to-use reporting platform, so that you can decide what data you want to view and customise your reports, with just a few clicks. Only with integrating little pieces of code in our Go-myLife implementation, this tool provides us a list of useful services: real time reporting, custom reports, custom variables, dashboards... We can define different profiles inside Google Analytics to see statistics and generate reports distinguished by Go-myLife Mobile or Go-myLife Desktop application. Next table shows analyzed data by Google Analytics in our platforms:

Analyzed data by default in Google Analytics
Number of total visits
Number of visits (period of time)
Number of pages visited
Pages per visit
Visit duration time
Users' Language
Users' Location (Country)
Users' Location (Continent)
Users' Location (City)
Users' Browser and version
Users' OS and version
Users' window resolution
Service provider
Mobile access statistics
Mobile Device Info
Mobile Device Branding
Mobile Service provider
Mobile Operating System
Mobile Input Selector
Visitors interaction Flow
Page views
Unique Page views
Page views per page (Most visited pages)
Avg. Time on/per Page
Landing pages
Exit pages

Apart from the statistics offered by default, Google Analytics has a section called "Events". Events are user interactions with content that can be tracked independently from a web page or a screen load. With events we can manage a control of most active actions in Go-myLife: search content, post a new comment, upload a photo, etc. When set up Event Tracking, you can define some components:

- Event Category: the primary divisions of the types of Events you have on your site, for example: Registrations events, events placed in the section "My network", etc.

- Event action: a descriptor for a particular Event Category. You can use any string to define an Action, for example: New post (when the user posts something), Marital Status (when the user fills this field in his or her profile), etc.

- Event label: a descriptor that you can use to provide further granularity. In our case we can put the ID of the user who executes an action, the searched value in a search action, the "Marital status" field value introduced by the user in the profile ... This label is the key to provide specific information of the most active users (anonymously using the users IDs), most searched content or obtain most filled demographic data of the users.

Next table shows the defined events in our platform:

Events				
Category	**Action**	**Label values**	**Desktop**	**Mobile**
Registrations	Register	userId (my user ID)	OK	OK
Logins	Log on	userId (my user ID)	OK	OK
Demographics	Gender	Male or Female	OK	-
Demographics	Marital Status	Married, ...	OK	-
Demographics	Children?	True or False	OK	-
Demographics	Grandchildren?	True or False	OK	-
Demographics	Home town	Vitoria, ...	OK	-
Demographics	Province	Alava, ...	OK	-
My network	New private group	Work, ...	OK	OK
My network	New relationship	userId (my user ID)	OK	OK
Messages	New message	userId (my user ID)	OK	OK
News	New post	userId (my user ID)	OK	OK
News	New comment	userId (my user ID)	OK	OK
Media	New photo	userId (my user ID)	OK	OK
Media	New comment	userId (my user ID)	OK	OK
Events	New event	userId (my user ID)	OK	OK
Events	Attend	userId (my user ID)	OK	OK
Forums	New topic	userId (my user ID)	OK	OK
Forums	New response	userId (my user ID)	OK	OK
Search	Content	Barcelona, ...	OK	OK
Search	Users	Mikel, ...	OK	OK
Search	Type	Event, Photo, Post or User	OK	OK

6 Conclusion

This deliverable describes the second Go-myLife prototype implemented during the second phase of the project and that will be tested during the final pilots in UK and Poland. The Go-myLife prototype consists of the Go-myLife Social Network Engine, a set of APIs and web-based client applications to be accessed through the desktop or the mobile.

The Go-myLife Social Engine is based on the *LibreGeoSocial* framework and is the responsible for the management of the content, its relationship and its privacy. Over it, a set of APIs have been built in order to facilitate the integration of external content and the construction of communities.

The Go-myLife Social Engine offers its functionality through a REST API (User Interface API). Making use of it, we have built the web-based applications (desktop and mobile) where the users interact and share their content. Different social functionalities are offered in this final version: manage your contacts (My Network), share posts (News), share photos (Media), organize events (Events), exchange messages (Messages), discuss in forums (Forums), search for content (Search) or update your profile information (Me).

But Go-myLife takes the social network one step further and provides information about who and what is around the user (Around me), where the end-users can find local services, friends or content uploaded by others. Through the Services Integration API, local companies or associations can integrate their services into Go-myLife in order to be found by the users.

Go-myLife also recognizes the relevance of existing social networks where people within the networks of the end-users may already have an account. Go-myLife doesn't want to create an isolated and exclusive social network for older people but it wants to offer the possibility to them to connect with existing external social networks. In order to facilitate the integration of these connectors into Go-myLife, we offer an External Social Networks API to allow the communication between the platforms.

During WP2, we learnt the importance of the local community for older people. In the Local Life section, we provide a space for local communities and neighbourhoods (Local Life). Go-myLife users can join these and interact with the rest of the members. Though the Community Integration API, these local associations can create their own communities, finding a new way to reach their users.

Finally, Go-myLife also offers a Data Analysis API to analysis the data, obtain statistics anonymously and detect trends to be offered through a Report Dashboard for 3rd parties, allowing the performance of market analysis, as well as providing useful information on the usage of the Go-myLife platform and its various aspects.

This final prototype will be validated during the trials to obtain a version ready for its commercialization.

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