

# First Life, from the global village to local communities

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## Abstract

We describe the developing of First Life ([www.firstlife.org](http://www.firstlife.org)), a “local social network” designed for fostering co-production (in the sense of the Nobel Prize Elinor Ostrom) and Do It Yourself initiatives, providing a virtual place connected via maps to the concrete reality and communities. It also aims at overcoming the so called “filter bubble” noted by Eli Pariser, that is the personalization of information from social media closes us in a private world reducing the opportunities for serendipity; second, at countering the reduction of social space by social media, leading to an urban desert, as Evgeny Morozov says, where public space is only what separates our home from the restaurant with good online reviews our Google Car is driving us to.

First Life is in a new map-based social network capable to:

- 1) offer a geo-referenced representation of open and crowdsourced data through an interactive map;
- 2) be focused on neighborhoods, the scale where we live our daily life;
- 3) exploit the potentialities of social networks to create a virtual community and make it real at a local scale.

The platform by itself is intended to involve the different actors in developing new services, from institutions to associations, from citizens to enterprises. People can not only get information passively but they can interact both with the map and other users, sharing on the map opinions and information about every aspect of the local reality they live in, being more active and aware of what is around them. Users can form groups which are linked to some place, to promote local forms of reciprocity and mutual-aid, to collaborate to take care of common goods or share private places. Thus, First Life can be used to visualize, integrate, share, comment urban data and make them point of collaboration for strengthening social cohesion in the real world. The local social network will make emerge the new social relations of the emerging urban collaboration class.

First Life harvests the knowledge and services which are now scattered around many websites often unknown to the wider public or accessible only via search engines, focusing thanks to the map on a local area. It reduces the overloading of information by filtering them on a locality principle. Thus, the platform will be populated with entities downloaded from open data (hospitals, shops, etc.) or added by users, which can create their own forms describing the fields of the entities and classifying them according to an ontology of social practices. For each entity shown on the map, users can add information and comments, blogs, pictures, or organize online events, like chats to discuss related issues. In this way we may say that raw data become information enriched with people perspectives and perceptions on places.

First Life is being used in four starting projects in Torino, involving associations of citizens and high school students, and also to support the municipality in collecting information about the use of space and the view that citizens have of the town.

## Introduction

Different streams of study converge in identifying our time as a phase of transition from a social system to another one whose contours are not yet well defined.

One of the various limits of the mainstream interpretations of the economic system after the financial crisis of 2007-8 is the overvaluation of the market. Among others, the economist Neva Goodwin (1996) is helpful to rebalance our view. She identifies the 'core economy' as the operating system of the whole economic mechanism. Household activities have been called "the core economy" by her: "... activities such as childcare, food preparation, care of elderly or ill persons in the home, maintenance of the home and of household vehicles and appliances, and household-based transportation" (Goodwin 2014). Goodwin, in the wake of Marilyn Waring's pioneering work (*If Women Counted*, 1988) considers that calculations of the weight of the core economy "have often fallen between 1/4th to 1/3rd of GDP, with some considerably higher (up to 50% of GDP) depending on the country studied, the methods used, and the implicit wage assigned to the core work".

For example in 1998 the total household work done in the USA was valued at \$1.9 trillion (Cahn 2006), compared to the US GDP that year of \$9.09 trillion (World Bank 2015), or about 21%. See also (Goodwin et al 2014: 71) for estimates of the core sector. Looking just at elder care, the 2002 figures for the informal care that keeps the elderly out of nursing homes was given a replacement price of \$253 billion (Stephens et al 2008), about 2% of the US GDP that year of \$10.98 trillion (World Bank 2015). An Australian study cited show how in that country its production is equivalent to 80 percent of Australia's GDP – and consider gross household product complementary to gross market product (Goodwin et al. 2014:102).

Those 'non-profit-economies' refer to a wide forms of relationships, including sharing, gift, family and friendship economies, that permeate all the different areas of what we use to understand as 'capitalistic' or 'profit based economies'.

The 2007-8 crisis and also a search for more proactive forms of intervention by citizen in all sphere of social life - from services provision to the production of knowledge and science – have been relevant to enhance the economic space grounded on innovative social interactions. This represents, reluctantly in contradictory forms, a second reason of downsizing of the market economy.

The consequences of failing to recognize and support this core economy are all around us: isolation, time poverty, low levels of trust and absence of engagement, a weak social fabric, uneven social participation, etc..

However, collaboration between citizens at the urban scale is an emerging phenomenon in the contemporary cities. Specialized governmental services dealing with health, education or crime rely more and more on an underpinning operating system that consists of family, neighborhood, community and civil society.

As a consequence, protection systems at the urban level should be rethought, taking into consideration and facilitate the presence of collaborative aspects in the urban life.

ICTs can play an important role, firstly to ease the engagement of people in these initiatives, increasing the spreading of knowledge and awareness about what is happening around them. Secondly, nowadays technology is fundamental for supporting informed decision-making processes. Notably, they can be considered as a yielding ground to the model of co-production. Co-production, as described by Elinor Olstrom and Edgar Cahn, asserts that service provision works well if users themselves contribute in some practical sense towards the service. As Parks et al.

(1981) state “the person being served (the client or consumer) is inevitably part of the production process”.

Co-production is central to the process of growing the core economy: it promotes a more equal relationship between government and citizens, people feel appreciated for what they can contribute, and this motivates them to discuss ideas about how to adapt solutions towards their needs or improve services in general. This mixing opens up spaces for the transformative power that digital technologies can bring to new social movements and the development of Do-It-Yourself services (Castells 2011). In general terms, these technologies enhance the basic personal resources that precede social action. Castells (2011) reports increases in the sense of security, freedom and personal influence due to the use of the Internet “... sensations producing a positive effect on individual well being”.

So far, it has been recognised the sense of community as a constitutional part of the so-called global village online. From this perspective, it is interesting to contrast the sense of alienation that urbanization can bring to people with the feeling of being part of a community via communication technologies such as social networks and mobile technologies. This apparent oxymoron derives from the fact that certain features of the global internet mirror village life – shared information, ‘word of mouth’ with online ratings, informal engagement, sense of continuity, trust among friends.

However, the scale of collaboration and sharing in the real world is mainly local, influenced by the urban lifestyles and social practice. Traditional social networks are so powerful in connecting people all around the world but they fail in taking into consideration the local reality where people live in. If rethinking ICTs on a local scale we can easily imagine the numerous possibilities to use these kind of technologies in urban collaborative initiatives or actions.

The use of map-based platform can help reconsidering the importance of the local, contextualizing the information in the real and daily aspects of our life in our cities.

In recent years, the Geoweb with the emergence of Volunteered Geographic Information systems (VGI) (Gootchild, 2007) is enabling individuals and interest groups to directly express their views about places. VGIs allow to create, disseminate and bring together geographic knowledge provided by people on the basis of their collective intelligence about the surrounding. In this way, top-down approaches to mapping gives way to bottom-up ones allowing people to exploit the map potential of creating their own reality.

It is against this background that projects such as Open Street Map (OSM) become of major relevance for social innovation. The OSM project, founded in 2004 at the University College London, is creating a free database with geographic information of the entire world. A plethora of spatial data such as roads, buildings, land use areas, or points of interest is entered into the project’s database. Similar to other community-based projects on the Internet (e.g. Wikipedia), any user can start contributing to the project and editing data after a short online registration. This simple approach has allowed the project to gather about 2.0 million registered members by February 2015. The emerging and spreading of OSM communities all around the world has enabled to access free geographical data directly create them. After OSM was born, and with it many other applications to crowdsource geographical information, lots of web maps are populating the internet. The purposes and complexity of these maps are really variable and probably the opportunities given by existing online map based platforms are not totally exploited yet.

Notably, the communicative power and the more and more availability of geographic information allow us to think at map-based web platform as important tools to support citizen collaboration and engagement with a context aware approach.

In this contribution we present a place-based social network focused on the local scale called First Life. First Life development is addressed at going beyond the state of the art technologies in location based services in order to ease and increase the engagement of people in collaborative activities and co-production. Every information added in First Life would aim at representing the social, economical and cultural environment where we live in. This is crucial to contextualize collaborative initiative and co-production activities, trying to make visible what is invisible in top-down cartography, and to support a sense of community which goes beyond the virtual reality.

The first section is a report of the current existing technologies for increasing awareness at a local scale; the second section will describe in more detail the aim and innovative aspects of First Life; the third section is an overview of the platform's architecture; the fourth section is about the project in which First Life is currently involved; the fifth section explain, through the description of two use cases, how to practically use First Life; finally, we will discuss limits and opportunities of the platform.

## State of the art in ICT for people

For some time already there has been a discussion of 'location-based services' for improving awareness and increasing participation amongst citizens, which are more and more designed for residents of a neighbourhood or specific locality. When cities become megacities the spatial dimension of neighborhoods starts playing a fundamental role in our daily life. As a consequence, being part of our neighborhood could make people understand the benefit of a more cooperative attitude in terms of increasing their well-being.

Firstly, we can consider the numerous community portals which list local businesses and services, and are produced often by local residents, such as through user-generated content, ranging from news to event listings (e.g. [www.lovecamden.org](http://www.lovecamden.org), <http://www.sansalvario.org/> etc.). Even if the content is shown in web pages without the use of maps, the geographical nature of the information shared changed becoming based on specific areas of the cities, such as neighborhoods. Thus, the general objective is to provide online information to those who are interested in getting to know what happens in a given part of the city.

Secondly, a recent approach has gone a step beyond information provision by enabling people to have a direct link to others who live around them. Sometimes people are also supported to engage with local businesses, associations and/or governing bodies. Examples of such approaches include the EU funded 'MyNeighbourhood' platform ([www.my-n.eu/da](http://www.my-n.eu/da)) and the 'Polly & Bob' platform in Germany ([blog.pollyandbob.com/](http://blog.pollyandbob.com/)). Discussions are enabled by blogs, discussion forums, event calendars, etc. In this case, simple Geoweb applications enable citizens to map POI and events. The general thrust is to encourage people to get involved within their own neighbourhoods and engage their family and friends to do the same. Data and functionality of existing City Information Apps (e.g. MyCityWay, Foursquare) are combined with tools that connect people locally. My Neighbourhood also experiments with basic gamification techniques to stimulate community building.

Whether in the first case the approach was mainly based on information, here the focus is on facilitating communication between people.

Finally, map based services have been used to push the attention at problems or things that have to be changed in the cities. It is worth mentioning Infalias' Improve My City and FixMyStreet, where problems are reported on a map and addressed to the local council. 'Changify' platform

([www.changify.org](http://www.changify.org)) is another example of this kind of platform, which particularly focuses on locals who wish to share things they love or would like to see changed in their neighbourhood. People come together when a local calls for a Changify walk to share something they care about. At the event they discover and work with local businesses to get further support for the issue. People socialise on things they care about by taking photos, exchanging ideas, solutions, skills or to get backing from local businesses, city councils, groups and brands. Changify aims at tapping the power of people and local business to prototype better cities. Current online neighbourhood portals are thus primarily directed towards strengthening community life with help of online technologies, thereby empowering citizens to communicate and discuss any issue of interest.

Many platforms are now based on maps with the purpose of having specific geographical information where a top down cartographical approach is giving the way to crowdsourcing and collaborative online work. Also Google maps, one of the most used map, which is completely general purpose is using contributions from users to improve the map. Recently, Google has also reopened the My Map service which allows to create thematic maps using Google base map. While completely open-source software for online cartography such as Open Street Map for collectively creating the base map and Ushahidi to gather geolocalized social information rely only on crowdsourced information.

Only with the last two platforms we could mention lots of maps created by the so-called neo-geographers (Hakley, 2008) all around the world.

The increasing interest in georeferencing information is involving social network too. FourSquare and the possibility to geolocate your tweets using Twitter or enabling the position in Facebook contents show as even social media nowadays needs to be more context aware.

## First Life a map-based citizen network

First Life is a new social network which reverses the paradigm of traditional ones since information it shows are not rooted on the personal life of users but on their collective way of living places. Since we believe in collaboration between people we decided to rely on Open Street Map as base map, which allow also First Life users to improve the base map through OSM.

Thus, First Life offers a map-based representation where citizens can add information and discuss about the local reality they live in and the places they care about. Also, we will integrate the map with the available open data (economical, demographical and so on) and with news and events from local newspaper or added by users.

POIs, bottom-up descriptions, stories, opinions, conversations and discussions are populating our platform. First Life would be able to get and show which social practices characterize the places around us using a proper ontology to organize this information.

The relationship between users in First Life will not be a friendship among people of the same circle (such as the case in Facebook or Google+), as this has been shown to be of little value for creating a local community based on proximity and heterogeneity. Rather, it will be a relationship among residents of the same local community, based on links of proximity and trust between people and local stakeholders. Users' local network of relationships will be the basis for assessing whether someone who is not yet personally known can be trusted. The aim of the social network is to bridge the virtual and the real world, rather than keeping the user closed in the bubble of the virtual one.

First Life wants to provide solutions to enable connected citizens to efficiently self-organise, opening up new opportunities for citizen-to-citizen coproduction.

It is not the first application based on a map, but it has peculiar characteristics. Google maps is the prototype of geo-referenced systems and as First Life uses the map as its main interface. But it is not much interactive. The user can comment on existing entities, can edit maps and save them, but they do not become available to every user as in First Life. Moreover, Google maps is completely general purpose. Finally, it is not a social network. In contrast, Foursquare is more a social network but mostly commercial activities are mapped. Similarly to our approach it is meant to create trust, e.g., by considering the times a person checks in a place and comment on it.

VGIs share the same idea of collecting information bottom-up via an interactive map. However they are mostly focused on data, such as OSM or Waze (<https://www.waze.com/it/>), and they do not have a social network component, even when they focus on urban crowdmapping such as Mappi[na] (<http://www.mappi-na.it/>), nor a strong interactivity. The same holds for Ushahidi (<https://www.ushahidi.com/>).

My Neighbourhood (<http://www.my-n.eu/>) and Every Block (<https://www.everyblock.com/>) have some georeferencing and map visualization, but they are not centered around this.

FixMyStreet (<https://www.fixmystreet.com/>) and similar systems have again an interface based on a map, with limited interaction besides adding information and commenting them (e.g., the problem has been fixed, or there are updates), and above all, they do not have a social network component.

Another important peculiar feature is the managing of time in relation with the geographic dimension. On the interface it is possible to specify the interval of time the user is interested in. This will allow the platform to show only the information relevant for that period of time, so that users can focus, for instance, on what is going on now, in some future day where they plan to do something, and that institutions can use to make analyses on a given period of time. This is not common in current georeferenced applications.

In summary, First Life is combining a range of new, innovative functionalities to harness the 'network effects' for the achievement of sustainable change in the cities through bottom-up social innovation.

## First Life's architecture

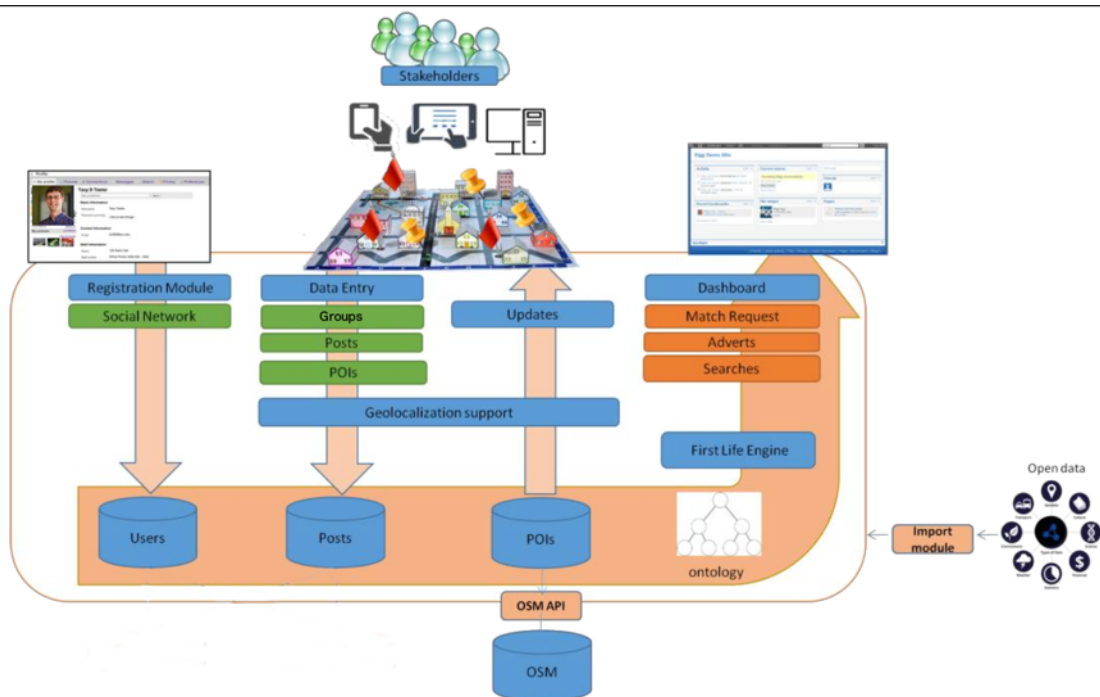
First Life's architecture is composed by the interactive geographical map based interface as a frontend and a backend for managing and searching geographical data. The backend also takes care of the social network, based on the BuddyPress plugin for WordPress. The interactive map is based on AngularJS, Ionic, Leaflet and OpenStreetMap. It shows by means of graphical markers the POIs of the area of interest and allows a user to insert new POIs directly from the map. Depending on the type of POI, the frontend offers different kinds of interfaces for visualising or inserting/modifying the data. For example, an interface for events allows to register to them while visualising them, or to specify date and time when creating the event. As discussed above, in the case of more complex POIs, the map interface will redirect the user to the specific application. Finally, this module offers the interface to manage the user profile in the social network and the dashboard summarizing the relevant information. The social networking functionalities are:

- 1) Profile of user.
- 2) Activity stream of user.
- 3) Connections with other users.

- 4) Dashboard with notifications.
- 5) Messaging.
- 6) Groups with their dashboards and members.

To reduce the amount of POIs visible on the map, they can be filtered using (a) categories using an ontology, (b) search by tags and (c) temporal dimension. The map is continuously updated by the backend to show new POIs and posts which are posted by other users in real time. The backend supports the filtering mechanism of the frontend, executing geo-referenced queries on the bounding box requested by the frontend. For this aim it uses a PostGIS database. Maintaining the information about the last query of the user, it sends to the frontend the updates when new information is created by other users on the bounding box the user is looking at. Concerning the maps, the module will rely on OpenStreetMap, using a dedicated tile server and the OSM interfaces to import and export data not related to users to the OSM database.

Figure 1. First Life architecture.



## How to use First Life

To use First Life the user has to be registered on the platform providing his real name. To register he/she can use also other accounts such as the one on Facebook and other social networks. After the login the user is presented with a dashboard with a summary of information such as:

Posts and activities concerning the groups the user registered into.

Posts selected from his/her areas of interest and from POIs he/she registered to.

Posts from people he/she is connected with.

Then the user can visualize the map, centre it on a place or automatically on the place he/she is and select the time interval of interest to get an overview of what is going on in the surroundings. The user can perform queries by selecting the categories of information he/she is interested in or by making searches with keywords. He/she can open one the POIs and look at the information there. If interested he/she can register to the POI or connect to the author of the POI or to other people who made comments on it. Depending on the kind of POI, the user can:

POIs in general: become follower to get the new posts and comments.

Events: register on the event, if allowed.

Groups: join the group, and, if already a member participate to the activities: posting information, etc.

Forums: participate to the debate.

Moreover, the user can create new entities, directly on the map, specifying the temporal interval they are relevant in:

Posts concerning something of general utility (e.g., no available parking at this moment).

POIs, whom he/she becomes the administrator and on which she can add posts subsequently.

Groups on specific issues, related to some place on the map.

Start discussions on specific issues through the forum.

The following are two cases of practical use of the platform, the first involving also the Public Institution and the second only based on the auto organization of citizens.

In the first case we have User 1 which is a citizen who wants to report a problem in the nearby of his/her home, for example the fact that there is a small park completely abandoned and full of rubbish. This report will be seen on the map of First Life as a marker and at the same time send to the council office responsible of taking citizens reports. The public officer who takes the report has the duty of verify it, after that the marker with that report change the status from reported to verified. The public officer is now in charge of solve the problem in the due time and then change again the status of the marker in solved posting the date in which the park will be cleaned. At the same time, other users saw the marker and User 2 and 3 add comments both agree about the fact that the problem of rubbish is important but also leaving that place unused is really a pity. So, User 4 came out with a proposal saying that since there are trees that gives a nice shadow adding some table and benches can be a way to put it to use for eating or studying outside. At that point the proposal will be sent to the local council which can discuss the opportunity of realize it or not and can answer the citizens directly posting comments via the platform.

Another case rely completely on the self organization of people. Some users decide to create a Group for organizing an event involving the commercial activities within the neighborhood. So participants at the group could be both User 1 who lives in the neighborhood and User 2 who lives in an other neighborhoods but is interested at the event or User 3 which is a library participating at the event. Each user will receive information about the group and will see all the spots where something will happen or which are the activities involved. In this way they could have a view of the events places but could also add information about the activities planned and comment if some other ideas come up. Clearly, during the event the map will be a useful way to get oriented and also to keep adding information.



## First Life at work

There are several projects with different purposes in which First Life is currently involved, but all having in common the search for a more inclusive, active and shared way of living the city. The preliminary assumption, as stated in critical cartography, is that maps are not only a representation of the territory but can make the territory they represent more real becoming a territory themselves (Casti, 2013). Since maps have this power, when addressed toward pushing people in making network and having care of the places they live in, the impact can be significant.

In this section we will list the activities we are now carrying on, while in the next section we will present the possible uses more specifically for co production initiatives.

So far, we have collected information about youngers points of views of the city through two projects called “Campus Luigi Einaudi and the Territory” and “TeenCarTo”.

The first one was organized within a seminar where university students were asked to map the surrounding of the campus thinking at what is important in their daily life as students. The map legend was defined collaboratively since it is the most evident channel to collect and visualize the information and it has to express their point of view. In only three exits scholars collected about 650 points of interest and some photos describing the area around the University Campus on the basis of how they experience and use urban spaces. The aim of this project was to make more evident the connection between the university Campus and its surrounding as a way for bridging the inside with the outside of the Campus. The presence of a University campus indeed strongly influence the nearby area. Showing what is correlated to the Campus presence, currently only in the way scholar live the neighborhood, is the first step to make people more aware of which nets are shaping the territory around them. Also, having the opportunity to update, add comments and post photos or descriptions on the map increase this network effect. Follow-ups of the project are working in progress and targets of users and themes will be extended.

Another project aimed at understanding point of views where First Life is used is called TeenCarTO (piano adolescenti). In this case, there is the commitment of the Turin city council which has asked for a map of what is considered a resource or a critical aspect in the city from the adolescents perspective.

The project is involving the high schools in Turin. Students will be asked to use First Life for adding POI answering to specific questions about how they live, imagine and criticise the city. The result will be an interactive map with georeferenced post and comments describing teenagers lifestyles. At the same time the social network functionalities will open to the opportunity to comment what is added by others students engaging in an exchange of point of views about places they live.

First Life has also being used to put in contact the local administration of a neighborhood in Turin, Mirafiori Sud, and the citizens. Crowdmapping Mirafiori Sud is a project started in 2013 which had a first experimentation using Ushaidi, mainly focused on mapping urban barriers in the area, and now it is based on First Life.

This project is about reporting problems and potentialities of the neighborhood and directly communicate them to the local council. The platform indeed is connected to a system for managing workflow that will be used by the public officer to handle citizens reports. Several meetings with the council officers has been done to validate the workflow provided by the platform. Thus, with

Crowdmapping Mirafiori Sud project we are providing an innovative tool both for citizens and Public Administrations. In this case too, using a map has numerous positive effects. First of all citizens only visualizing the map could know if the problem they everyday face for example inappropriate wall writings or abandoned garbage, have already been reported by other people and the council is taking care of that. Secondly, the possibility to communicate through the platform can help people not only to report problems but also to imagine solutions starting from what they consider the potentialities of the territory. Finally, it is a way to be constantly in contact with the public administration and monitoring their work. On the public administration perspective using First Life will ease and speed the management process allowing also communication between the different offices involved in a procedure. They will be also able to communicate with citizens both adding post or comment on the map and sending messages to interested people, i.e. who reports a problem, through email or phone number.

Since the Eco borgo Campidoglio Festival in June 2015, First Life has started an interesting collaboration with Eco Borgo Campidoglio a Turin no-profit association. Their objective is to strengthen the ties between Borgo Campidoglio inhabitants organizing festivals, events and collaborative activities within the neighborhood. During the festival which took place in June lots of people walked around the Borgo Campidoglio area stopping at the spots mapped on First Life where specific events were set up such as exhibitions, tailing of neighborhood stories and particular small shops and atelier showing their products.

First Life is planned to be also used for: accessing information about commercial activities and services; facilitating the coordination of working groups in different activities such as supporting local events or co production of services to help disadvantaged people; promoting activities of urban renewal such as street art or activities for promoting environmental sustainability; support the organization of local events.

## Conclusions

Our general approach is to find a way to reconnect people to the local reality they live in, realizing an online tool to be more active in the real world. This is an objective surely valuable and it is also quite recognized that ICTs could help the increasing of awareness and participation of citizens. However, this is a complicated and full of obstacles path.

Collaboration is the result of a cultural attitude that in the nowadays mainstream channel of communication receive not so much attention. At the same time, the Internet has given a tremendous and powerful space of information exchange where many grassroots movements and collaborative initiatives are finding their place in. However, all these information are now scattered all over the Internet and difficult to access.

Since collaboration is made by not only communication but also by real life practices, the center of our reasoning to start reorganizing important but difficult to access information such as bottom-up community initiatives, has been the locality where that practices happen.

Thinking locally is the first step to get people more aware of what there is around them, facilitating people who share the same interests and that care about the same places to be in touch easily. Showing this kind of information on a map is functional to add directly the spatial dimension of the information shared.

In conclusion, nevertheless many steps have to be done for actually increasing the engagement of people in real life collaboration, ICTs have the potentiality to push toward that direction hosting not only a global village but also the local community.

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## Webography

<http://www.firstlife.org/>  
[www.lovecamden.org](http://www.lovecamden.org)  
<http://www.sansalvario.org/>  
[www.my-n.eu/da](http://www.my-n.eu/da)  
[blog.pollyandbob.com/](http://blog.pollyandbob.com/)  
[www.changify.org](http://www.changify.org)  
<https://www.waze.com/it/>  
<http://www.mappi-na.it/>  
<https://www.usahidi.com/>  
<http://www.my-n.eu/>  
<https://www.everyblock.com/>  
<https://www.fixmystreet.com/>