Project acronym: **Go-myLife**

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

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D6.2 Legal, economic and technical evaluation of results

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Abstract

This document provides an evaluation, at the very end of the project, regarding the legal, economic and technical issues that have arisen during the project implementation, and particularly on those issues that need to be dealt with in any subsequent commercial roll out.

Keywords

Older people, online social networks, evaluation, data protection, Intellectual Property rights, economic and social impact.

Table of Contents

1 Introduction

This deliverable provides a legal, socio-economic and technical evaluation of the Go-myLife project research results. It has been produced near the end of the Go-myLife project to take into account the way the project has evolved and the issues that this has thrown up. The aim is to provide a clear picture of the readiness of the product to be rolled out more extensively, the legal issues that need to be resolved in order to make this possible and the likely socio-economic benefits that could potentially result.

2 Legal Issues

The purpose of this section is to outline the key issues that were considered during the project and that will need to be addressed, should Go-myLife develop into being a commercially sustainable service, in order to ensure that the service does not inadvertently fall foul of the law, with the financial and reputational penalties that this might bring.

The section will also cover at a high level the basic legal issues relating to Intellectual Property law and their relevance to the potential commercialising of the service.

2.1 Issues relating to the service

There are two sets of legal issues that were identified at the beginning of the project that could potentially relate to the ongoing Go-myLife service

- Privacy laws and the use of personal data
- The duty of care

2.1.1 Privacy laws and the use of personal data

2.1.1.1 The law on Privacy

Clearly there are some differences between the laws of different countries, but there are some key European regulations that need to be complied with.

The key issue here is how personal data is collected, how this data is used, and whether users have given properly informed permission for the use of their data.

Under the European Data Protection Directive, which was implemented in 1995, collecting and processing the personal data of individuals is only legitimate in one of the following circumstances:

- Where the individual concerned, (the 'data subject'), has **unambiguously given his or her consent**, after being adequately informed; or
- if data processing is needed for a contract, for example, for billing, a job application or a loan request; or
- if processing is required by a legal obligation; or
- if processing is necessary in order to protect the vital interest of the data subject, for example, processing of medical data of a victim of a car accident; or
- if processing is necessary **to perform tasks of public interests** or tasks carried out by government, tax authorities, the police or other public bodies; or
- if the person collecting the data or a third party has a legitimate interest in doing so, so long as this interest does affect the interests of the data subject, or infringe on his or

her fundamental rights, in particular the right to privacy. This provision establishes the need to strike **a reasonable balance** between the data controllers' business interests and the privacy of data subjects.

In addition, the processing of personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, and the processing of data concerning health or sex life is specifically prohibited unless one of the exception criteria is met.

Looking at this from the point of view of Go-myLife, any person or organisation that processes personal data (a Data Controller) must respect the following rules as set out in the Directive:

- Personal Data must be processed legally and fairly;
- It must be **collected for explicit and legitimate purposes** and used accordingly;
- It must be adequate, relevant and not excessive in relation to the purposes for which it is collected and/or further processed;
- It must be **accurate**, and updated where necessary;
- Data controllers must ensure that data subjects can rectify, remove or block incorrect data about themselves;
- Data that identifies individuals (personal data) must not be kept any longer than strictly necessary;
- **Data controllers must protect personal data** against accidental or unlawful destruction, loss, alteration and disclosure, particularly when processing involves data transmission over networks. They shall implement the appropriate security measures;
- These protection measures must ensure a level of protection appropriate to the data.

So this set of regulations sets the baseline to which Go-myLife needs to comply.

The European Commission is proposing to update these regulations and to make them apply consistently throughout Europe.

One of the areas it is specifically focused on is Online Social Networks.

(See http://ec.europa.eu/justice/data-protection/document/review2012/factsheets/3_en.pdf)

Here, the Commission is proposing:

- A strengthened right to be forgotten so that if an individual no longer wants their personal data to be processed, and there is no legitimate reason for an organisation to keep it, it must be removed from their system.
- Data controllers must prove that they need to keep the data rather than the individual having to prove that collecting your data is not necessary.
- Providers must take account of the principle of ‘privacy by default’, which means that the default settings should be those that provide the most privacy.
- Companies will be obliged to inform users as clearly, understandably and transparently as possible about how their personal data will be used, so that they are in the best position to decide what data they share.

The proposals will make it easier for an individual to access their data and give them a right to data portability, which means it will be easier to transfer personal data from one service provider to another. They will also make sure that when users give their consent for

companies to use their personal data, that agreement is given explicitly and with their full awareness.

Information about existing and proposed European data protection legislation can be found from the mini website: http://ec.europa.eu/justice/data-protection/index_en.htm

2.1.1.2 How this issue was dealt with in the pilot

All participants in the workshops and in the pilot had to sign an agreement to participate in the project, which included information about how their data would be used. The form used for the workshops is included as an example in Appendix 1.

More importantly, the service was designed to enable users to stay in control of their privacy and their personal data. It was seen as an important feature by our users, who, as older people, tended to be particularly conscious of the importance of privacy. It was also a key differentiator of the service from Facebook.

However, while some important steps were taken, there are some further steps that need to be taken in the next version of the product to make it fully consistent.

The situation at present

When a user posts in the areas of "News" and "Media", the only people who can see what they post are their friends, people whom they have already agreed should be their friends.

When they comment on a post or photo that their friend has made, then, before they post, they are reminded that their post will be seen by the friends of their friend, rather than by their own friends.

When they post to one of the Forums, then they are reminded that their posts are completely public to all users of Go-myLife and they are also given the opportunity to post anonymously.

What still needs to be done

However, when a user posts in the Local Life area of the site, we have not yet put in place notices to alert the user that their post would be seen more publicly, and this would be a useful addition in order to keep them aware of who can view their posts.

Specifically, in the Local Life area, any post that a person makes in the "my neighbourhood" section will be seen by anyone who has chosen to be a member of that neighbourhood and any post that a person makes to one of the groups they have joined can be seen by any member of that group.

Of course, it is true that one could consider that this is obvious and therefore that there should be no need to make the situation explicit. It also should not normally matter as users should only be posting messages of relevance to their neighbourhood or their group in those areas, rather than messages of a more personal nature. However, by providing this sort of information throughout the site, it will help our users to have real confidence that the service takes their privacy seriously.

Our users said how much they appreciated being knowing exactly who could see their posts and so this is an area where Go-myLife needs to continue to focus.

The issue of advertising

The other issue regarding the use of data where Go-myLife has a strong and explicit stance is that we do not intend to use the data that our users provide to allow targeted advertising to them. Of course, the fact that we already know that they are active older people allows us to ensure that advertising can be targeted to a certain extent. However our users can understand that and are very happy with the position we have taken.

This does not mean that we will never change this. People's attitudes do change over time and also some people may be quite happy to allow the data they generate to be used to allow more appropriate goods and services to be advertised to them. However, any change would have to be made very carefully, with a great deal of testing with our users, in order to ensure that our users continue to trust the service.

2.1.1.3 How privacy could be handled in the future roll out of the service

Clearly future users cannot be given a paper form to sign, but the privacy and data protection information must be easily findable and easily understandable and, specifically, uses should be required to accept the conditions as part of the registration process

2.1.2 The "Duty of Care"

This issue relates to the idea of a general duty of care that applies to all who could be foreseeably affected by one's conduct. This concept was first applied in the U.S. legal system in 1916 and became incorporated into UK law in 1932, and is a widely accepted legal concept throughout the world.

Collins dictionary defines it as: "the legal obligation to safeguard others from harm while they are in your care, using your services, or exposed to your activities".

Wikipedia explains that: "in tort law, a **duty of care** is a legal obligation imposed on an individual requiring that they adhere to a standard of reasonable care while performing any acts that could foreseeably harm others. It is the first element that must be established to proceed with an action in negligence. The claimant must be able to show a duty of care imposed by law which the defendant has breached. In turn, breaching a duty may subject an individual to liability. The duty of care may be imposed *by operation of law* between individuals with no *current* direct relationship (familial or contractual or otherwise), but eventually become related in some manner, as defined by common law (meaning case law).

"Duty of care may be considered a formalization of the social contract, the implicit responsibilities held by individuals towards others within society. It is not a requirement that a duty of care be defined by law, though it will often develop through the jurisprudence of common law."

For Go-myLife it would specifically relate to harm that could potentially result should a user of the service take action based on inappropriate recommendations provided by the service, or by not being appropriately alerted to the possible consequences of their actions.

Initially the Go-myLife project planned to utilise the context aware features that can be provided through the sensors on the smartphone as well as from the social profile and the social interactions taking place through the platform. This was one reason why the service was developed to be accessed over the smartphone from the very beginning. The intention was that sensed data in the smartphones would be sent to servers in the platform that would analyse the data after combining per-user and per-group information. The idea was that inferred context would be created in an attempt to reconstruct the real-time status of the users.

The potential danger here is that any failures or limitations in this process might result in the user being provided with inaccurate information that might have led them into danger or have resulted in actual damage.

However, in the event, this aspect of the project was not pursued. The only information about context that has remained as part of the service is that information about the user's geographic location could be linked to their posts. Even here a privacy policy was followed that allows the users to decide either as a default, or each time they log on, whether or not to allow Go-myLife to tag their posts with their location.

The only danger of the location based service is that other users of the service might find out whether the person was at a particular time. This potentially might allow other people to find out that they are not at home and thus, theoretically could open them up to the danger of being robbed. However, this is equally a problem should users post their future plans, such as going out for an evening or going on holiday.

The key point here though, is that, unlike Facebook, Go-myLife postings can normally only be seen by one's own friends, i.e. people we know and trust. The only situations where other people can see what we post are when we comment on someone else's post or post in the Local Life area or post to the forum area, and, apart from in "Local Life", users are reminded that other people will be able to see their post.

So, at the present stage of Go-myLife, this should not cause a problem. However, as new functionalities are developed for the service, it is important that these are properly tested and that users are provided with appropriate warnings.

2.2 Issues relating to Intellectual Property

Here a completely different type of legal issue is considered; one that relates to the development of the Go-myLife commercial service. The focus is on Go-myLife, as the service has developed to its present stage, and the concerns that need to be addressed going forward in order to ensure freedom from legal challenge.

The Go-myLife Consortium has entered into various agreements about the use of IPR at different stages of the project. This report first looks at the key issues that need to be dealt with and then reviews how far the existing agreements are sufficient to deal with them and what else needs to be done.

2.2.1 Intellectual Property right issues and Go-myLife

Intellectual Property ("IP") covers the ownership of things created by the mind of a person or group of people. The subject matter of IP is very wide and includes literary and artistic works, films, computer programs, inventions, designs and brands.

Intellectual Property Rights are legal rights which can be exercised by businesses to exploit, and to prevent others from exploiting, their products, tools, materials, content or brands (i.e. their Intellectual Property).

There are a number of different types of rights relating to Intellectual Property. Those that could potentially relate to Go-myLife are:

- Trade Mark Rights
- Patent Rights
- Copyright

A further issue to be considered is any third party Intellectual Property that is incorporated within the service.

2.2.1.1 Trade marks

Trade marks need to be registered in order to be properly protected. If they are not registered, then the only protection comes from the **goodwill** generated through use. The "Go-myLife" name and logo can be considered a trade mark. The name and logo have not been trademarked but they will have accumulated a certain amount of goodwill because it is the name of the AAL project and because it has been featured in various high-level conferences and events.

Clearly the use and rights to the trademark need to be considered within any plans for the development of the service beyond the timeframe of the AAL funded project,

2.2.1.2 Patents

Patents are potentially available for inventions that are:

- novel
- which involve an inventive step
- are capable of industrial (i.e. business) applications
- and which are not excluded

The criteria above are not easy to satisfy and the application process can be lengthy and sometimes costly. However, once awarded the patent gives the owner a monopoly over the use of the invention.

Software as 'such' is not patentable as it is excluded. However when a computer program produces a technical result and the patent is aimed at the result rather than the program, it may be patentable.

It would be difficult to argue that anything about Go-myLife is patentable, given that the only parts of the service that are significantly novel are some aspects of the business model.

Given the length of time involved in achieving a patent and the difficulty in describing any aspect of the service in a way that would enable it to be patentable, the recommendation is that it is not worth pursuing this aspect of intellectual property rights.

2.2.1.3 Copyright

Copyright is the exclusive right of the author or creator of a work to exploit the work in a number of ways:

- To copy the work
- To issue copies of the work to the public
- To rent or lend the work to the public
- To perform, show or play the work to the public
- To communicate the work to the public
- To make an adaptation of the work

Copyright can relate to written material in its widest sense (including, for instance software), music, visual works of art, plans, designs, photographs and other creative productions.

Copyright arises by virtue of the act of creation, and requires no act of registration to exist.

Copyright cannot arise in an idea alone – the idea must be reduced to some written or recorded form before copyright protection arises.

The owner of copyright is usually the creator, although if a copyright is created by an employee as part of their work the copyright is normally owned by the employer.

However, in some countries the law is such that if a work is commissioned, then the copyright might still belong to the person or company commissioned to create it, unless this is specifically covered in the contract.

2.2.1.4 Layers of copyright

It is important to realise that single works can be comprised of a number of separate copyright works (e.g. computer games comprise graphics, sound effects, music, software, narrative, level designs, etc.)

For Go-myLife the different layers for which copyright could be relevant are:

- The name and logo
- The software
- The interface design for both smartphone and PC
- The set of features
- The business plan for exploitation

2.2.2 The issues

Here we consider the different IPR issues relating to Go-myLife and review how they were dealt with during the project and make recommendations as to what needs to be done to enable exploitation of the project results in the future.

2.2.2.1 Trade Mark Rights

The trade mark consists of the name and the logo. The first issue is therefore one of copyright.

The name was chosen as the name of the project when the proposal was first put together. The logo was designed by employees of Atos, but was chosen by all the consortium members from among a number of alternatives. So each of the consortium partners could have a claim to a share in the copyright of the name and the logo.

If any of the Go-myLife partners should wish to continue to develop the service under the Go-myLife name and/logo, then they would need to be sure that the rights to use that name/logo for the locations and range of usages that they might require is properly assigned to them by all of the partners.

Separately, that partner would need to register the name and logo as a trademark, again with the agreement of all of the consortium partners.

An alternative approach would be to choose a new name and branding. “Go-myLife”, while it does have some relevance to the nature of the service, is not necessarily the most appropriate name. Choosing a new name and logo, would avoid any issues with the trademark and would allow a range of possible names and logos to be tested on customers to identify which would be most attractive to potential users.

It would be best if this decision was made before there were more than a few hundred users at most. This is because even if the trademark was changed later, the new company might be accused of building the new brand on top of the existing one and this could open the new business open to claims for damages by other members of the consortium.

2.2.2.2 The software

Even though the software was largely developed by Andago, all partners contributed to the definition of the requirements and provided bug reports and other feedback to allow Andago to develop the software into its final form.

2.2.2.3 The interface design for both smartphone and PC and the set of features.

This was put together by Andago and Atos in particular, but was informed by the research into how older people interact with technology and by a review of the usability of Facebook and online social networks by older people carried out by ZSI, with the support of IS Communications. It was then modified as a result of feedback from the pilot users managed by IS Communications and Poland. All partners had the opportunity to provide feedback during the process, so here again all have had a hand in its development.

2.2.2.4 The business plan for exploitation

This was put together by 451 group, but with significant input from IS Communications and specific input from the other partners as to how they planned to exploit the product.

2.2.3 Share of rights between consortium members

Because the product was built collaboratively, all of the companies and organisations that are part of the Go-myLife Consortium can be said to have played some role in the development of each of these different aspects of the service.

Given the fact that most partners contributed to some extent to each aspect of Go-myLife that is potentially copyrightable and given that each of those aspects depends on each of the others, it is recommended that each partner be assigned an equal share of the Intellectual Property developed as part of the project.

2.2.4 Third Party IP

The only issue of relevance here is the use of the LibreGeoSocial software, which was used within the Go-myLife product. While this is an open source product, it is important to ensure that all future use of Go-myLife complies with the terms of the licence under which it will be used.

Libregeosocial software is managed in accordance with FLOSS (Free/libre/open-source software. The Wikipedia definition, which is linked to from the Libregeosocial site, is as follows:

"Free/libre/open-source software (**FLOSS**) is software that is both free software and open source. It is liberally licensed to grant users the right to use, copy, study, change, and improve its design through the availability of its source code. This approach has gained both momentum and acceptance as the potential benefits have been increasingly recognized by both individuals and corporations.

"In the context of free and open-source software, *free* refers to the freedom to copy and re-use the software, rather than to the price of the software."

The key point here is that, should any partner wish to utilise the Go-myLife software in any future product or service, it is able to freely do so, but needs to ensure that it still complies with the terms of the FLOSS licence, i.e. that all enhancements are made freely available for use by others.

2.2.5 The agreements in place regarding IPR

There are two documents that have been agreed by the Consortium and that cover issues of IPR. These are the initial Project Proposal and the Consortium Agreement that was agreed soon after the project was initiated.

2.2.5.1 The Project proposal

The project proposal stated that, should the project be funded, the Consortium Agreement needed to carry out the project, would deal with IPR issues. It also said that an IPR team would be set-up to take care of IPR issues according to the Consortium Agreement and would address the following issues:

- Ownership (joint or single) and use of foreground and background. Ownership of foreground and background will be associated to those who have contributed to its production.
- Protection of industrially or commercially critical foreground.
- Dissemination of foreground.
- Granting of access rights to foreground and background (interpretation of access rights needed for the purpose of the project or for Use.
- Agreement with subcontractors to rights on foreground."

Specifically, the project proposal said that access to foreground will be on royalty-free basis for carrying out of the project; and under fair and non-discriminatory conditions for use. Access to background needed for the generation of own foreground under the scope of the project, was to be granted on a royalty-free basis; while for use, upon bilateral agreement between the Parties concerned under fair and non-discriminatory conditions.

In other words, the project proposal made it clear that in carrying out the project, all project partners would have access to all IPR generated by the project itself on a royalty free basis, and would subsequently be able to use that jointly created IPR for their own benefit under fair and non-discriminatory conditions.

It also allowed for project partners to list in an Annex to the Consortium Agreement any background IPR to which they would not grant access. However, in the event, no such background IPR was listed by any of the partners. So it is clear that none of the partners can claim ownership of any background IPR in the product.

The project proposal also made it clear that the Consortium Agreement could be expanded over the course of the project to take into account the increasing clarity as to how the project could be commercially exploited and the roles that the different partners might play in it.

The proposal envisaged that at the end of the pilot project, an exploitation agreement, satisfactory to all partners, would be established to cover the commercial exploitation of the ***Go-myLife*** project results. The project proposal, put forward by all partners, stated:

"It is envisaged that at the end of the pilot project, an exploitation agreement, satisfactory to all partners, will be established to cover the commercial exploitation of the ***Go-myLife*** project results. This agreement will cover, but not limited to, aspects like ownership share of project results, copyright aspects, licensing, and access rights."

This section also dealt in depth with how best to handle the software licencing. However, the decision to build Go-myLife on the libregeosocial software, brought with it the obligation to keep Go-myLife and any further developments of it as free and open source software. So this issue has been de-facto dealt with.

2.2.5.2 The Consortium Agreement

The Consortium Agreement that was developed as part of the project simply covered the issues of IP between the consortium members to allow the members to be able to carry out their work on the project. It was agreed that the issues of IP relating to any commercial

exploitation of the project could be dealt by the development of an exploitation agreement at the end of the project.

2.2.6 Exploitation agreement

No exploitation agreement has so far been made by the partners, although there is still time for this to be done, should it be required. Should an exploitation agreement be set up, it would need to cover a number of issues:

In relation to Go-myLife, there are three areas where Intellectual Property Rights need to be considered:

1. **Between project participants**
   In order to ensure there is clarity about ongoing ownership and Intellectual Property Rights between the different partners as the project comes to an end, especially in relation to any of the consortium partners that might wish to commercialise the results.
2. **Establishing a solid foundation for the future**
   In order to ensure that any partner wishing to commercialise Go-myLife will not need use other people's IP without first having clear legal agreements in place that would provide sufficient foundation for ongoing usage.
3. **Protecting the IPR**
   In order to ensure that the consortium (and its members) does not lose the rights of its IP to a competitor or that someone else does not misuse or spoil the product

Therefore the Exploitation Agreement needs to specify:

- How copyright IPR is shared between consortium members
- How the value of those rights can be negotiated with any consortium member or outside body that intends to exploit them commercially
- How those rights can be protected from misuse by others

To implement the last two points the agreement would need to include which consortium partner can act on behalf of the others to negotiate and get the best deal possible, as well as the method as to how a speedy and binding agreement can be reached. It would be important to make sure that one or two partners would not be able to prevent a decision being made, either by refusing to agree to a settlement that the others are happy for, or by not responding in a timely fashion.

Such an Exploitation Agreement is an essential pre-requisite for any commercialisation of Go-myLife. If these points are not clarified, then any successful exploitation of the product by any of the Consortium members runs the risk of other members taking punitive legal action to gain a share of any profits.

3 Economic and social impact

Early on in the life of the project deliverable D7.1 looked at the potential "Social impact and economic benefits" of Go-myLife. The aim of this deliverable was to help to shape the service in order to ensure that the potential social and economic benefits could be realised.

However, there were other factors that needed to be taken into account in terms of shaping the service. In particular we needed to use the background research into user requirements and the work with our pilot users on defining a service that was most useful to them. Because of this, the service as it has been developed is not quite as was initially envisaged.

This part of the report aims to review those initial ideas in the light of the service as it is now and in terms of what we have learned over the course of the project implementation. We will start be reviewing how what we have learnt during the course of the project has changed our understanding of how older people are likely to use the service and then look at how this has changed our understanding of the likely social impact and economic benefits of the project and then look at the implications of this more generally to:

- Families
- Health and Social Care organisations
- Public services
- Clubs and societies
- Businesses

In doing this, we will be referring to section 4 of the report, relating to "The potential value of Go-myLife for key stakeholders"

3.1 How people use the service

Initially, our assumption was that the most important relationship that Go-myLife would support was with family members and we didn't recognise enough the value of the support that older people get from their friends.

However, both through the research that was undertaken and from our work with the members of the pilots, we found that (D2.3 section 2.5.2):

"However, the findings suggest that friendships contribute to the psychosocial well-being of older people in more positive ways than family relationships do. As peers often share a similar life situation (e.g. retirement) it is likely that an online SN for older people will display a high degree of emotional support and trust."

"The work of Wright (2000) and Hampton (2009) emphasizes the positive effects that online social networks have on the social life of their community members. Given the increased importance of local proximity in social networks of people as they get older, this means the Go-myLife platform should include services and measures supporting interactivity in local neighbourhoods; in particular, to create offers that provide alternatives to traditional service provisions, such as online local neighbourhood groups.

"Summing up the findings reported in section 2.3 {of that same deliverable} central to a 'good life' in old age is the value attached to inter-dependence: being part of a community where people care about and look out for each other; a determination 'not to be a burden', especially on close family; and an emphasis on mutual help and reciprocal relationships (Godfrey, Townsend et al. 2004)."

This was backed up time and time again through the pilot, in seeing how the users related to each other. For instance, during the pilot, one of our users hurt her knee and talked about it online. As a result, one of the other members of the pilot posted an offer to help with their shopping.

This not only is a way of providing practical support, but it also deepens the relationship. It is also easier for the recipient to accept the support, because it is from a friend, and enables the person offering the support to recognise their value to society.

Another time, one of the regular users stopped posting for a few days and the others became concerned that there might be something wrong. They used the site to ask each other if anyone knew whether the person was alright. Fortunately the person then posted, but it is very

likely that if they hadn't heard soon, one of them would have paid them a visit to check how they were. The person who hadn't posted was also surprised and pleased at the interest that had been shown in them.

One other way in which our experience of working with the pilot users brought about a change in our understanding of the possible economic and other benefits of Go-myLife was regarding the issue of privacy. Our assumption was that anonymised data collected from the way a person used the site, could be used to target them with advertisements or with targeted messages from service providers. However, it soon became clear that while advertisements in general were quite acceptable to our users, privacy was a very important characteristic that they wanted from Go-myLife and a clear differentiator from other social networks such as Facebook.

Of course, a certain amount of targeting is possible, just from the fact that the users will all be active older people, and our users were very happy with this. But, while it is possible that this would change over time, it seems sensible to assume that the use of anonymised data to allow precisely targeted advertising and messages to the users might be a step too far.

One hypothesis that we were proved correct on, is that Go-myLife could encourage larger numbers of older people to venture into the online world and to go online more often. We deliberately chose a mix of people to take part in the pilot and some of our users had never used the Internet before, or had only used it rarely and with support from others. Our experience was that even these members of the pilot, used their growing confidence with Go-myLife as a stepping stone to downloading apps onto their smartphone and to starting to see the Internet as a valuable source of information. Even those of our users that were already confident users of the Internet, found Go-myLife was a reason to go online more often and for a time there was a competition as to who would be the first person to post an item of news or a photo each day.

3.2 Benefits for stakeholders

3.2.1 Families

Initially it was envisaged that Go-myLife would not only help people keep in touch with their friends, but also with family members. It was thought that one of the benefits would therefore be that it would provide family members greater peace of mind about their older relative's condition and would help them to become more easily aware of any needs that the older person would have.

In fact, the research and the pilots that have been conducted as part of this project, have indicated that active older people are much more interested in the way that Go-myLife can help them keep in touch with their friends and peers. It is important for them that Go-myLife is kept as an older people's social network and that, in general, their family members are not included. In this way they will feel more able to post honestly about their lives.

Of course they can post also to Facebook and twitter through Go-myLife and this is one way that they could potentially share their news with their family members. However, the indications that have been picked up through the project is that older people are reluctant to post on Facebook because they are not sure who will see their posts – and this is likely also to prevent them from posting very much on Facebook via Go-myLife. Of course this may not necessarily represent the reactions of many older people, and this might change even for our existing users, but this is a sensible starting point.

In general, in the initial considerations of the project team, we probably placed too much importance on the role of the family in providing support to older people and not enough on the value of supporting and strengthening older people's friendships with their peers.

Of course the very fact that the older person is part of a rich and supportive local online social peer network, should itself provide significant peace of mind to family members.

3.2.2 Health and Social Care organisations

In the initial project vision, it was felt that Health and Social Care professional could use the site to keep in touch with their clients so that they could keep an ongoing sense of their client's activities and be able to send reminders to them about appointments and so on. However, this would have to be handled very carefully, as it is unlikely that many older people would welcome having their social lives being scrutinised too closely by professionals.

In its overview of the value of Go-myLife to health and social care organisations, D7.1 included the value of Go-myLife in supporting self-support communities and the idea that people with a similar long term health condition would be able to provide support to each other. Clearly this is very consistent with the results of the project.

However, given that research and work with users led us to make the clear focus of the service on helping older people manage an active social life, it would not make sense to make the setting up of such self-support groups an early priority. It is really important for users to see Go-myLife as being a way of widening their horizons and helping them to enjoy a fulfilling retirement, and too early a concentration on using it as a way of helping manage the challenges they are facing would go against this.

Of course, once significant numbers of activity groups have been established on Go-myLife, it would be very sensible for users to also add in their self-support communities. It would feel less problematic to have self-support communities if they also had walking groups, tai chi groups and others on Go-myLife.

Local peer-support groups could easily be set up as local groups within the Local Life section of Go-myLife. Potentially, where the group has a much wider geographic spread, it could be supported via the Forum area of the site, although this would not support the same sense of intimacy as a local group could offer. These peer support groups could become a very important way of helping older people manage their health and other conditions.

Such local groups or forums could well be facilitated by a health or social care professional, but they would need to ensure that discussions and postings were very interactive, and very much take a back seat. They should also not expect their clients to invite them to be friends and to share with them the rest of their social lives. The focus always has to be on these being peer-support groups, with the support coming from other older people.

In general Go-myLife should provide significant self-support opportunities, not only in groups set up for that purpose, but, as has been already described, as part of the normal activities of its users on the platform.

3.2.3 Public services

The value that we originally saw that Go-myLife could provide to public services remains just as relevant in spite of the changes that have been made to the service, and so it is worth including it here.

Online social networks make it easy for people to help each other with information and services, without the need for frequent meetings. People have the chance to find people they share a common need or issue with and build their own peer support groups. By "friending"

the members of their support group they can get to know each other in a wider and richer way and this itself will enable them to provide better and more informed support to each other and feel greater satisfaction in doing so. The role of the public sector service provider then becomes simply that of a facilitator and expert sign-poster to relevant information and wider support.

In a similar way, Go-myLife can add significant value to community based public sector service activity, through enabling older people to take part in online groups based around community events so that they can get involved in organising, publicising and taking part. It can also provide a helpful environment to help students in adult education classes and other group learning activity to keep in touch and work together in between classes.

As we have seen, Go-myLife, by making it easy for older people to get involved in online social networks is likely to increase the numbers of older people online and to get them to use the internet more often. Many users set their online social network as their home page and most log on their social network frequently – often several times a day.

If public sector service providers can get their older users to "Like" them, then this would give them the opportunity to send targeted messages and reminders to their online social network news feed where they can be prominently seen by their users. Another way of doing this would be to pay for targeted messages on the social network home pages of their users. This would be very inexpensive and easy to do using the advertising systems set up within online social networks such as Facebook.

Finally, by helping older people to be active members of online social networks, Go-myLife can make it much easier to engage them in the democratic process and to consult with them on service design.

3.2.4 Clubs and societies

Here again, D7.1 identified a number of key benefits to clubs and societies that Go-myLife could bring, that are still very relevant. However there are some other potential benefits that have been identified over the course of the project.

In D7.1 it was pointed out that:

"Clubs and societies can have their own page on an online social network and promote themselves through affordable advertising to those people most likely to be interested in their activities.

"Joining such a group online is much less of a barrier than actually attending a meeting and allows the older person to use the postings of group members to get a good sense of what the organisation is like and whether it would be something that they would be likely to enjoy. It can therefore form a very good first step into more active involvement.

"It is also very acceptable for clubs and societies to post short and frequent updates to an online social network, whereas frequent emails can be seen as spam and intrusive. The difference is that an update on a social network is just one of many items to glance through, whereas an email is directed specifically at the recipient and requires a mouse click to open it before the message can be seen."

However, the concept was still rather top down. The fact is that much of the benefit to clubs and societies for older people will come out of the ability of the members to be able to post photos and comments up themselves regarding the activities of the organisation. This will help members to feel more involved and to get more out of their membership. It will also allow members who are absent for a number of months through poor health or other reasons,

to still keep actively involved, which should make it easier for them to come back to the group once they are able to.

3.2.5 Businesses

While the view now is that there will be less of a place for the use of anonymised data to allow precisely-targeted advertising, this does not mean that businesses will not have an important role within Go-myLife.

Businesses, particularly local businesses, would be able to engage very interactively with their existing or potential customers. A business could set up its own local group within the Local Life section of the site and encourage people to join the group by providing them with special offers and useful and engaging content. It could use the group to get feedback about how it could improve its offer to older people and gain ideas about how to attract more customers.

For businesses this would provide a unique opportunity to build strong one-to-one relationships with a customer base that can be very loyal.

3.3 Conclusion

When the project was first being set up, it was already clear that Go-myLife could provide many benefits to a whole range of stakeholders and not just to its direct users. Deliverable D7.1 provided a detailed description of the wider socio-economic benefits of the service. Now, having delivered the prototype service, it is clear that while the detail might have changed, D7.1 continues to hold true in terms of the wider value that Go-myLife could bring.

4 Technical

Here in this last section we review how well Go-myLife performed technically and how appropriate the platform is for wider roll out.

4.1 Overall

On the whole, throughout the pilot, the service has worked reasonably well. Specifically a Stress Test was held in the UK towards the end of the project, when users attempted to post as many times as possible within a specific half hour period. Deliverable D5.3 covers this in detail in section 5 of the report, but the conclusion was:

“In general, the Stress Test has shown the weaknesses of the system, but also that it is probably good enough at this present stage of development to cope with at least two or three times the present number of users.”

One problem is that downloading or uploading content is slow. The service does provide a message saying “Getting data” or “sending data” while this is happening, so this helps the user to know that something is happening. However, on the smartphone, particularly in an area of poor coverage, sometimes the service does not move beyond the “getting data” message and so there is always some uncertainty about whether the actual service will load.

It is worth pointing out, though, that one of the answers to the questionnaire used in the stress test, the majority of users said that the delay in getting data was not an important problem for them.

There have also been some short periods when the service was down. Usually this was for scheduled maintenance or upgrade and we were able to alert the users to this in good time, However there was one time when the service was down unexpectedly. It was unfortunate timing because it happened on Friday evening with an extra holiday in Spain on the Monday, so there was no-one in the office to fix it promptly.

The problem was made worse by the fact that the service runs on two servers, one of which is with Andago and the other is with the Universidad Rey Juan Carlos, where the LibreGeoSocial software platform was developed. Andago holds the server that manages the Go-myLife front end, whereas Universidad Rey Juan Carlos holds the server running the LibreGeoSocial platform. So the problem had to be dealt with by both Andago and the university. Because of this it took nearly ten days to sort the problem out.

Sometimes the service has not worked because of browser issues. Experience has shown that there is a need to clear the browser cache when there is any update of the service, or if there is a major browser update. However, this was not known initially and was a cause of frustration on the part of the pilot users, as the service seemed to fail several times and it was a process of trial and error before this was sorted.

It does help that now the log in page carries a suggestion that, if there are problems with logging into the service, the user should first clear the cache. However, this itself is an ongoing issue as it brings extra complexity into the service. To be effective, the service should just simply work, without any need for periodic browser "spring-cleans" to be carried out by the user.

4.2 The tension between technical and usability requirements

The project started off as a way to develop and test out the sorts of services that could be offered as part of an older persons' social network. A specific focus was on location based services.

However, having undertaken the detailed background social research, we realised that the first and key issue is how to design a social network that older people actually both want to, and are able to, use. Only once there is an online social network that older people are using as part of their daily lives, would it be sensible to test the other services that could be provided.

There would be no point in spending time developing services that are of no interest to the potential users. More importantly, it would not be possible to test the viability of location based services as part of an online social network unless our users were confidently and frequently using the basic services.

We also realise was that an extra barrier to the use of location based services is the fact that few older people are confident users of smart phones. So to benefit from location based services, not only did we first have to ensure that our users were fully engaged with the service as a whole and were using it as part of the way they manage their daily social activities, but we also had to support them in understanding and using the basis location based services provided on a smartphone.

For these reasons it was decided that the most important thing to get right were to get an appropriate core set of functionalities and the usability of the service, so that the users would find it valuable and useful.

However, at the beginning of the project a number of decisions were made regarding the technical side of the project, based on the original design of the service:

- The service should be web based and be built on HTML5
- The service should focus on location based applications
- The smartphone version should be based on the android operating system

These were very sensible decisions from a technical viewpoint, but turned out to have had a negative impact on the actual usability of the service for the initial pilot users.

4.2.1 HTML5

The service was designed to run on both PCs and smartphones. Typically, this has usually been done by building a browser based version and a smartphone app for each of the main operating systems. The problem was that designing a number of separate versions would have taken a lot of work. It also seemed, particularly at that time, that this would build in unnecessary complexity, because there were many different smartphone operating systems and it seemed that there was a strong likelihood of this continuing and therefore of the long term need to build and continue to update apps for many separate platforms.

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.

The one obvious problem with this is that web browsers did not follow a single standard, and that therefore web applications needed to be built to take into account the characteristics of each of the different browsers. However, it was clear that browsers were becoming increasingly standards based and that all the main browsers were converging on the developing HTML5 standard. Because of this, the decision was made to build the service on HTML5. The thought was that this would mean that the identical service could be accessed via whatever browser or appliance the user wanted and thus it would be simple to develop the service and that any updates would only have to be made once for all users to be able to utilise them.

With hindsight there were several problems with this:

- Because of the different screen sizes and other characteristics of PCs and smartphones, a different interface had to be designed for both, with differing functionalities. This meant that we still had to build two different interfaces, and both will continue to need to be updated separately
- HTML5 has taken longer to adopt than was anticipated. Microsoft Explorer, still the main browser used, particularly with less confident users, is still lagging behind. Only Explorer v10, is more or less compliant with the HTML5 standard.

The Go-myLife Consortium was not alone in following this path. Even Mark Zuckerberg was reported in September 2012 as saying that Facebook's mobile strategy relied too much on HTML5, rather than native applications. http://techcrunch.com/2012/09/11/mark-zuckerberg-our-biggest-mistake-with-mobile-was-betting-too-much-on-html5/.

In the long term, should Go-myLife have a continuing future, it is clearly right that the software should be based on HTML5. However, this decision has caused problems in the pilot and will be a problem for the initial roll out.

Initially the service could only be accessed via Firefox or Chrome browsers. In the pilot this meant that all users had to download another browser onto both their PC and smartphone, which was an added barrier in what was already a complex process.

On the smartphones, this led to a whole range of other difficulties. In order to download Firefox, the user had to first register with Google Playstore. This required them to have a gmail email address, and so one had to be set up for all of the users. So the fact that the service initially couldn't be accessed over the browser supplied on the smartphone led to the initial pilot users being faced with a product that seemed far more complex than it really was.

The technical team continued to work to widen the options and the service can now be accessed over the browser on android phones and over Safari. It is also accessible now over

Explorer 10, although this is really only available with Windows 8 and the vast majority of our target users would be using older versions of Explorer.

Also, from a usability point of view, it would have been better for an HTML5 compliant web app to have been designed for the smartphone, rather than requiring the browser to be used to access the service. It would have made the service more intuitive if the users could just have tapped on an icon on their phone rather than first having to get the browser working and then to go to the Go-myLife url.

4.2.2 Location based service

Because the initial proposal had been to exploit the location based applications made possible by the GPS and other functionalities of mobile phones, the decision was made to choose a social networking engine to use as the basis for the service that was focused on enabling location based services and to make sure that the functionalities offered had, as far as possible, a location based aspect.

Because of this, many of the functionalities of Go-myLife were designed to allow geo tagging. The problem with this, from the point of view of new users, is that it added an extra complication to the process, without adding any real benefit. While it did demonstrate the technical viability of offering location based information as part of the pilot, the downside was that it, again, made the service seem unnecessarily complex. From the point of view of engaging with users, it would have been better to have kept much of geo-tagging aspect as part of a later implementation.

4.2.3 The focus on the android smartphones for the pilot

The decision to start with the android operating system was made for all of the correct technical reasons. When the project was started there were only two main smartphone operating systems Android and Apple iOS. In comparison with the Apple operating system, Android:

- Is a much more standards-based and open operating system
- Is much easier to work with to develop new applications because Apple maintains a rigid control of its ecosystem
- It is the system on by far the largest number of types of phone
- It is offered by a wide range of device manufacturers

However, this provided an added challenge for the pilot in that the very flexibility of the Android operating system makes it more difficult for less-confident users to learn how to use it.

Before the second pilot stage was completed, Go-myLife was developed to become perfectly usable on iOS. Technically it was much easier for the software developers in the project to develop the functionalities for android and then to port them to iOS.

However, because the pilot was based on android, the pilot users needed extra support on becoming confident users of their smartphone, before they could properly start to use Go-myLife.

4.3 Conclusions as to technical readiness

At present, the service is significantly more usable than it was for the initial pilot users.

However there are still two major problems with usability that will hinder the next stage of roll-out:

- It still is not accessible over any but the very latest version of M/S Explorer and so the great majority of users would need to download and get used to a new browser.
- On the smartphone, it still needs to be accessed via the browser, rather than being a HTML5 compliant web app, and so requires users to take an extra step to access it, unlike, for instance, Facebook.

On the positive side, the way the service has been designed will allow it to be more easily managed longer term and will make it easy to add further services based on location and context awareness.

Appendix 1 User consent form for workshops

Go-MyLife - Declaration of Consent

Initial workshops

Name of participant:

Name of contact: Michael Mulquin

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Project Aims

Go-myLife aims to support older people in using online social networks to stay in contact with friends and family. We greatly appreciate your participation in these two workshops, which will help us find out the important issues we need to concentrate on.

Storage of personal data

During the course of the workshops, personal data will be collected by means of observation and interviews. This data will be used to develop and to evaluate Go-myLife's technology and services.

The data will be used only within the project framework of Go-myLife, and will not be made accessible for any third party. It will not be stored after the end of the project.

The data will not contain the names or addresses of participants and will be edited for full anonymity before being processed (e.g. in project reports).

Audio-visual material

Videos and photographs taken during the course of the workshop may contain the pictures of participants. Go-myLife may use these videos and photographs in public forums, on websites or in conferences in order to provide information about the project. If any participant does not wish for their image to be used in this way, then this will be complied with. Should subsequently any workshop participant be unhappy with any use of their image, they may ask for the removal of photographs or videos from public forums and websites. Subject to technical feasibility, Go-myLife agrees to remove the requested items without delay.

Instructions and advice

Workshop participants are welcome to discuss any questions and problems with Michael Mulquin, the Go-myLife representative, at any time.

Code of Conduct

Participation in Go-myLife is meant to be as agreeable and pleasant as possible for all those involved. Therefore, all participants agree to respect the following rules:

- Racism and discrimination: racist comments, discrimination on the basis of sex, age, or disability, publication of racist or sexist pictures are strictly banned.
- Go-myLife may not be abused for political, religious or advertising purposes.
- Infringements of copyright laws are not permitted.

- A participant can only publish their own text and pictures. Publishing pictures from the account of another person is not permitted without that person's consent.

All participants' conduct towards other users should always be appropriate and never offensive or depreciating.

Consent

After having stated these general conditions and rules, we are looking forward to two enjoyable workshops and positive project results. We would like to thank you in advance for your participation in the Go-myLife project.

The undersigned declare that they understand and consent to the use of their data as specified above and will comply with the code of conduct.

They also declare that they are willing/not willing for their image in photos or videos to be used as specified above

Both parties receive a copy of this declaration of consent.

Participant's signature:

Place: Date: **Fehler! Verweisquelle konnte nicht gefunden werden.**

Michael Mulquin's signature:

(On behalf of Go-myLife)

Place: Date: **Fehler! Verweisquelle konnte nicht gefunden werden.**