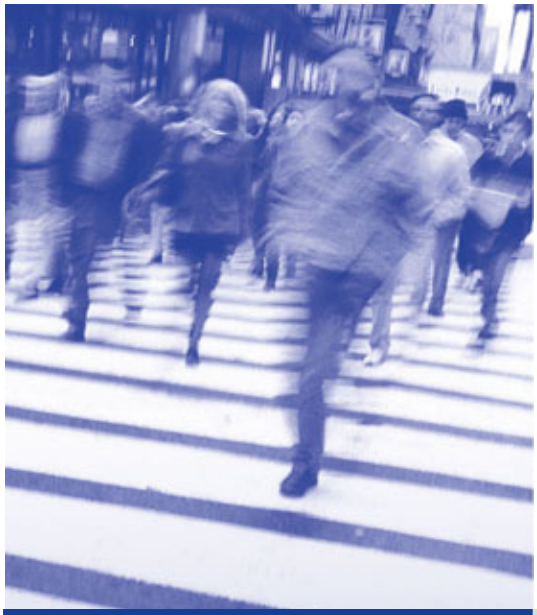

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# Measure Evaluation Results Template

Measure: FUN 8.2 - Location-enabled Mobile Search and Guidance

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Date: 12.12.2012 – level F

Model Version: 7.0

THE CIVITAS INITIATIVE
IS CO-FINANCED BY THE
EUROPEAN UNION

*Measure title:* **Location-enabled Mobile Search and Guidance**

| *City:* | **Funchal** | *Project:* | **CIVITAS-MIMOSA** | *Measure number:* | **8.2** |
|---|---|---|---|---|---|

# Executive Summary


Madeira Island receives tourists all year round from all over Europe and *Madeireans* increasingly opt for local leisure and tourist activities. The adoption of technologies like GPS is increasingly popular in leisure and sports activities. The provision of other geo-positioning based services rather than route/path indication is of high interest not only for tourists but also for residents, both being target groups for this project. This measure consisted of the development, implementation and promotion of a pilot project for creating and publishing walks/routes in Funchal, preferably to be performed on foot or using public transport. It includes a mobile phone application for Android and iPhone devices and an integrated mobile web access and desktop web portal. The application features GPS and multimedia support and follows a social media approach for sharing information. The service is called "Funchal Routes". This was a new service introduced by CIVITAS-MIMOSA aimed at supporting leisure activities which support sustainability and a changing mobility culture.

Measure implementation unfolded in 6 main stages: 1) Analysis and definition of requirements for services and the supporting technological solution/platform; 2) Design of an appropriate solution; 3) Request for proposals and selection of a subcontractor/supplier; 4) Development and Implementation; 5) Promotion and Dissemination of the new service, and 6) Evaluation.

The evaluation approach taken for measure 8.2 consisted of several phases: During implementation it involved internal / in-house testing at the developer and pilot testing with selected external users. For the final assessment/test/evaluation it consisted of defining and evaluating a number of indicators, which include: Counting the number of visits to the service platform on the web; counting the number of users and/or subscribers of the service; counting the number of downloads of the mobile application, and; running a questionnaire/survey for service quality. Due to the late conclusion of implementation, which was caused mainly by delays with the subcontractor in developing the core platform and applications, the quality of results of the applied evaluation was restricted by the fact that the final evaluation period with end-users following the service launch was short (2 months) when compared to initial planning (7 months).

The main tangible results from this measure are the integrated mobile (for Android and iPhone) and web applications which support the “Funchal routes” service, as described in Section A2. Findings from evaluation indicate that the degree of satisfaction among users who answered is high and 88.8% of them find the service convenient or very convenient. It is also interesting that 50% of the downloads of the mobile application are made to non-Portuguese phones, meaning that tourists are also using it. A less tangible, but equally important, result is the increased adoption of sustainable modes of transportation, in particular walking, as a result of the associated promotion of active mobility incorporating exercise, culture and leisure.

The main problems/barriers encountered have been related to those phases of the work with the subcontractor. As for the drivers we highlight that having started with an existing database structure contributed to improved definitions for source information. Lessons learned and recommendations include making sure that you involve key players from the beginning and make sure that they are enthusiastic or at least agreeable in relation to the proposed service and would pay for it if required. It is also very important to start prototyping and testing your service as soon as possible in order to ensure robust results and end-user acceptance. This service is suitable for integration with a bike rental service, which is to be tried in the future. It may also provide content to providers who can create related services following a mash up approach.

# A Introduction

## A1 Objectives

The measure objectives are:

(A) High level / longer term:

- Improvement of efficiency of urban transport systems.

(B) Strategic level:

- Supporting and promoting active mobility through local Culture & Leisure.
- Supporting and promoting sustainable modes of transportation / walking.

(C) Measure level:

(1) Provide pedestrian navigation for routes to sequential visits (or walks) to points of interest with related/contextual multimedia information about each point of interest or attraction;

(2) Provision of location/geographic based information accessible via web, both for smartphones and desktop/laptop computers (includes the indication of position of nearby attractions on a map given the geographic/GPS current location of the user;

(3) Design, editing and publishing of personal/favorite walking routes;

(4) Encourage shift towards more walking.;

## A2 Description

This measure consisted of the development, implementation and promotion of a pilot service/project for creating and publishing walks/routes, preferably to be performed on foot or using public transport. The service is called "Rotas Funchal" (Portuguese) or "Funchal Routes" (English). Once created and published, a walk can be printed on paper or downloaded to a mobile phone. Mobile and web access are integrated. A user / tourist is geographically guided on the path he is taking and receives multimedia descriptions of elements of interest (attractions) along the route. The website for desktop and mobile web access is http://routes.inmadeira.com. The desktop portal permits registering, editing and publishing of walks, while the mobile web version, accessed via the same address, supports navigation only. The free software for Android phones can be downloaded and installed from the "Google Play" website by searching for "routes Funchal" or "Funchal guide" (http://play.google.com/). The iPhone version of the mobile application was submitted in October 2012 to the App Store for approval.

# B Measure implementation

## B1 Innovative aspects

- **Use of new technology/ITS** – Creation and provision of a location/context based (i.e. geographic) information provision system aimed at supporting and promoting active mobility through local Culture & Leisure. Prior to this measure there was no such free service available in Madeira.

- **Targeting specific user groups** – This measure is aimed at both local residents and visiting persons, i.e. tourists who visit Funchal and local citizens in their leisure time.

## B2 Research and Technology Development

In line with the CIVITAS-MIMOSA DoW plan for M8.2, RTD work for this measure consisted mainly of the following work:

**i) Analysis and definition of requirements** for services and the supporting technological platform:

- Develop definition for the pilot service , serving both local citizens as well as visiting tourists;
- Identification of necessary modifications/improvements to the ISNOVA (*) knowledge-based platform;
- This part also includes both back office (for the supporting improved ISNOVA platform/engine) and front office analysis (for desktops and handhelds)

This service defines the core concept of "attraction". An attraction is an element of interest at a given location (e.g. a monument). The attraction is described by multimedia content (text, audio and photos) and is similar to a "point of interest" as usually defined in GPS applications. Possible categories of "attractions" are: museums, churches, gardens, historic monuments; scenic views such as mountain peaks covered with snow etc.

Figure 1 presents an example of a walk within the city, including five attractions. Such a walk will be defined by a general description and a text +photographic presentations for each attraction. The user and each attraction are identified on a map by its GPS position. When online GoogleMaps is displayed, otherwise a static image of Funchal's map is used.

(*) The ISNOVA knowledge-based (or database for a short definition) was the result of a previous EC co-financed Interreg project. The original ISNOVA platform was developed under an Open Source policy.

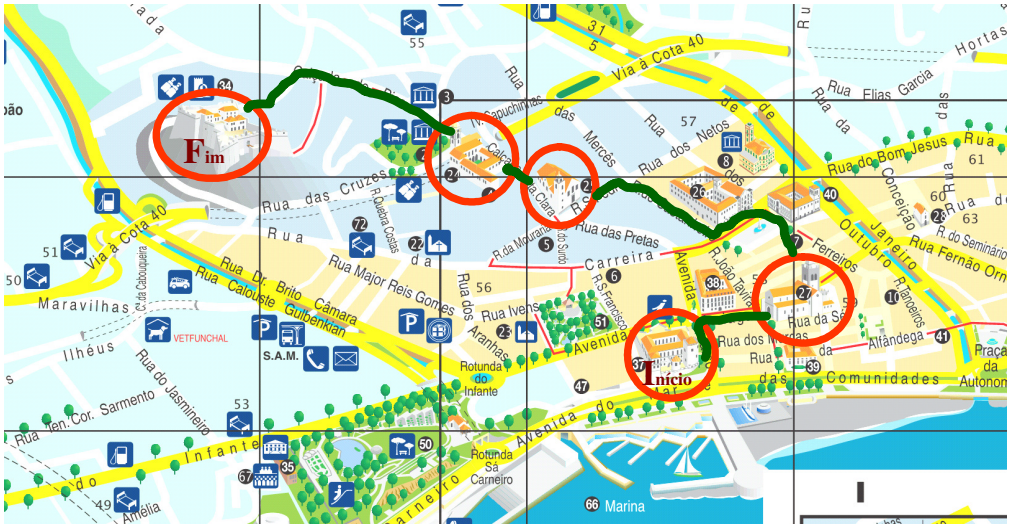


**Figure 1 – Example of a walk within the city centre**

**ii) Design of an appropriate solution** for a practical implementation. This is/was an iterative task as the final solution was the result of the gradual improvement of the system during the lifetime of the measure.

Figure 2 presents an early prototype interface for the web tool which supports the design/construction and provision of walks created by an end user (version as of May 2010).


**Figure 2 - Early prototype interface for the web tool**

The work related to the analysis and definition of requirements for the service and the supporting technological platform was made available as a "Request for Proposals" document.

## B3 Situation before CIVITAS

Before CIVITAS MIMOSA no such service or application was available in (even Google Maps was not fully available for Madeira when MIMOSA started in Funchal). "Funchal routes" was a completely new service introduced by CIVITAS-MIMOSA. Existing walking guides consisted in traditional paper based books (or single maps) with usual information such as itinerary, distance, difficulty degree, special equipment required, common weather conditions, etc. Existing GIS/GPS services at the time this project started were limited to software applications which could be installed on handhelds only for routing (mainly for car drivers) and all information was installed in the handheld by the provider. There was no mean to make a walk, record it, edit it and publish it on the Internet so that others may also try out, enjoy and provide feedback on proposed walks. One of the main disadvantages/problems of paper based walking guides is that often users/tourists have no precise information on their own location and sometimes they get lost.

## B4 Actual implementation of the measure

The dates/periods presented for each stage are the actual execution dates. When compared to DoW planning, Stages 1, 2 and 3 experienced a cumulative delay of about 3 months, while sub-stages 4.a, 4.b and 4.c experienced a cumulative delay of about 9 months, in a total of about 12 months.

**Stage 1: RTD - Analysis and definition of requirements for services and the supporting technological solution/platform** *(Dec 2008 – Mar 2009)*

- Work carried out consisted of the analysis and definition of requirements for services and the supporting technological platform to be implemented, based on the existing ISNOVA platform;
- Definition of the pilot services to implement and test;

**Stage 2.a: RTD - Design of an appropriate solution** *(Mar 2009 – Jul 2009)***:** Part of the work involved the identification of necessary modifications / improvements to the existing ISNOVA platform;

- Brainstorming sessions were conducted in order to clarify and prioritise requirements, namely to define which parts to implement first, to define interface functions and layouts and to define standards to be used/supported.

**Stage 2.b: Establishing partnerships with other local partners** *(Mar 2009 – Apr 2009)***:** Cooperation and establishing partnerships with other local partners (besides project partners). Entities contacted included the Regional Board of Tourism (DRT), the "Electricity Company" (Empresa de Electricidade da Madeira) and the "Cartography and Property Registration Service" (DRIGOT). A few meetings have taken place with these entities. Their main contribution was in standardising data structures for the platform database as well as providing maps and some of the initial content.

RTD analysis in stages 1 and 2 also included: i) a literature review regarding mobile telecommunications and how they suit an urban mobility shift towards sustainable/healthy transport modes and how they could also involve visitors/tourists (taking into account that Tourism is the main economic activity in Madeira), and; ii) A benchmarking of experiences in these areas.

**Stage 3.a: Request for tenders** *(Jun 2009 – Jul 2009)***:** Writing of a comprehensive and specific request for proposals, with a clear definition of objectives and requirements.

**Stage 3.b: Selection of a subcontractor/supplier** *(Sept 2009)***:** Following a request for tenders, selection of a subcontractor/supplier was made for the implementation work (related documents are available);

**Stage 4: Development and implementation - this was an iterative process, with different prototypes being compiled, tested and improved (Oct 2009 – June 2012):**

**Stage 4.a: Development and implementation of Backoffice phase 1** *(Oct 2009 – Aug 2010)***:** Development started in the beginning of October 2009, once the work contract for the development/implementation of the platform was signed by Expedita software house:

- The existing ISNOVA database content was expanded with new multilingual, multimedia and GIS capabilities in order to be able to provide the required support for the service(s). For

example., it was necessary to create audio descriptions of most objects/elements that will be accessible for the users;

- The first prototype of the web application was made available in May 2010 for interface testing only (this was an iterative process).

**Stage 4.b: Development and implementation of Backoffice phase 2** *(Sept 2010 – Sept 2011):* During this period, about 90% of the Joomla backoffice code was restructured/rewritten. Part of the core system of ISNOVA XDMS was converted from "Ruby on heals" to Mono. Also during this stage different options for development solutions for handheld platforms were tested, namely Appcelerator Titanium; PhoneGap and FeedHenry, in order to assure the best compatibility trade-off among major handheld systems (Android, Windows Mobile and iPhone). It should be pointed out that whenever possible, all code development was required to be Open Source.

Figure 3 corresponds to the main screen of the web tool which supports the design/editing and publication/sharing of walks created by end users (version as of June 2012).

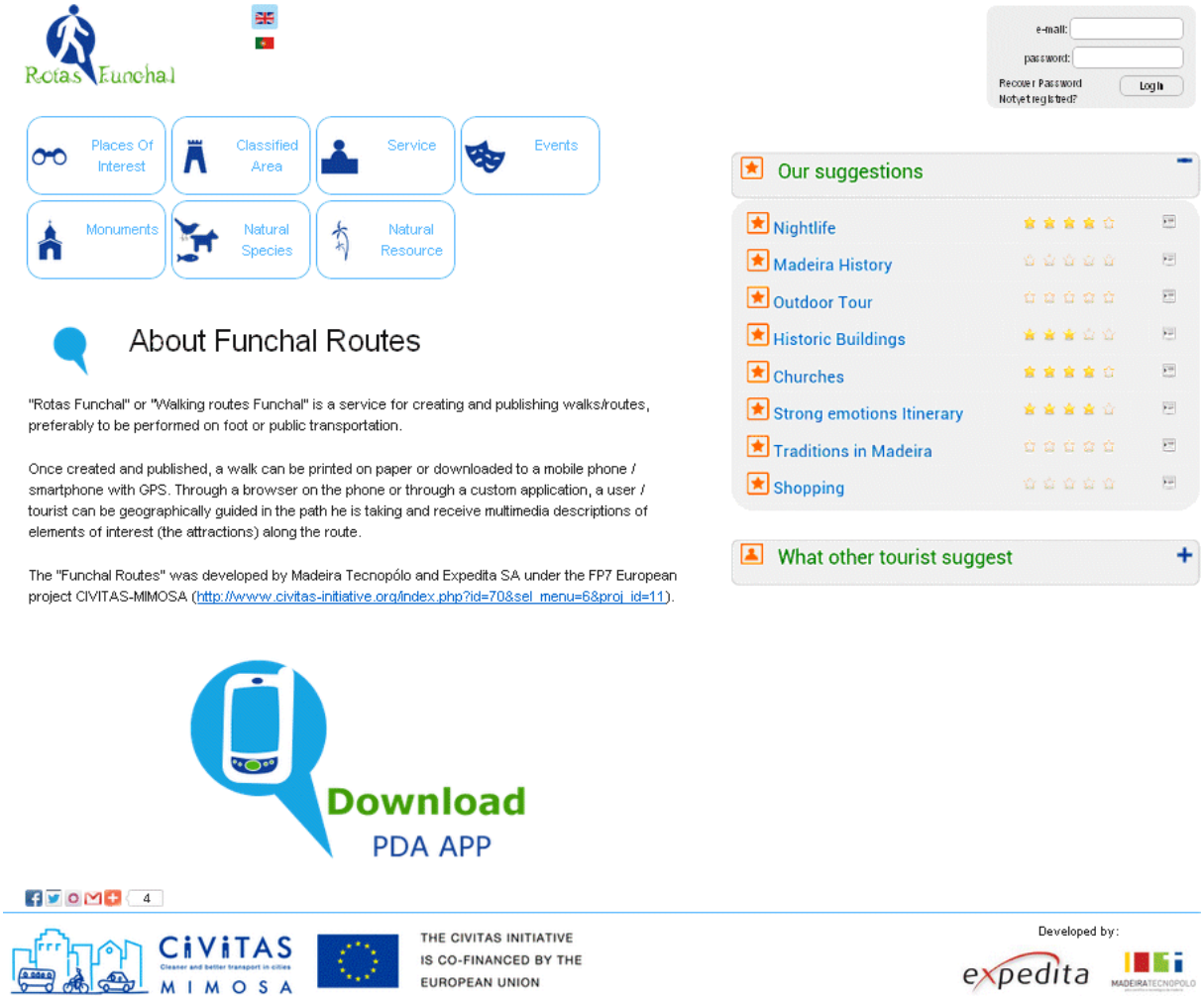


**Figure 3 - Main screen of the web tool**

Figure 4 presents the main view of a walk created with the web tool prototype (version as of September 2011). The walk created can be published and is available for viewing or for download by users of the mobile application.

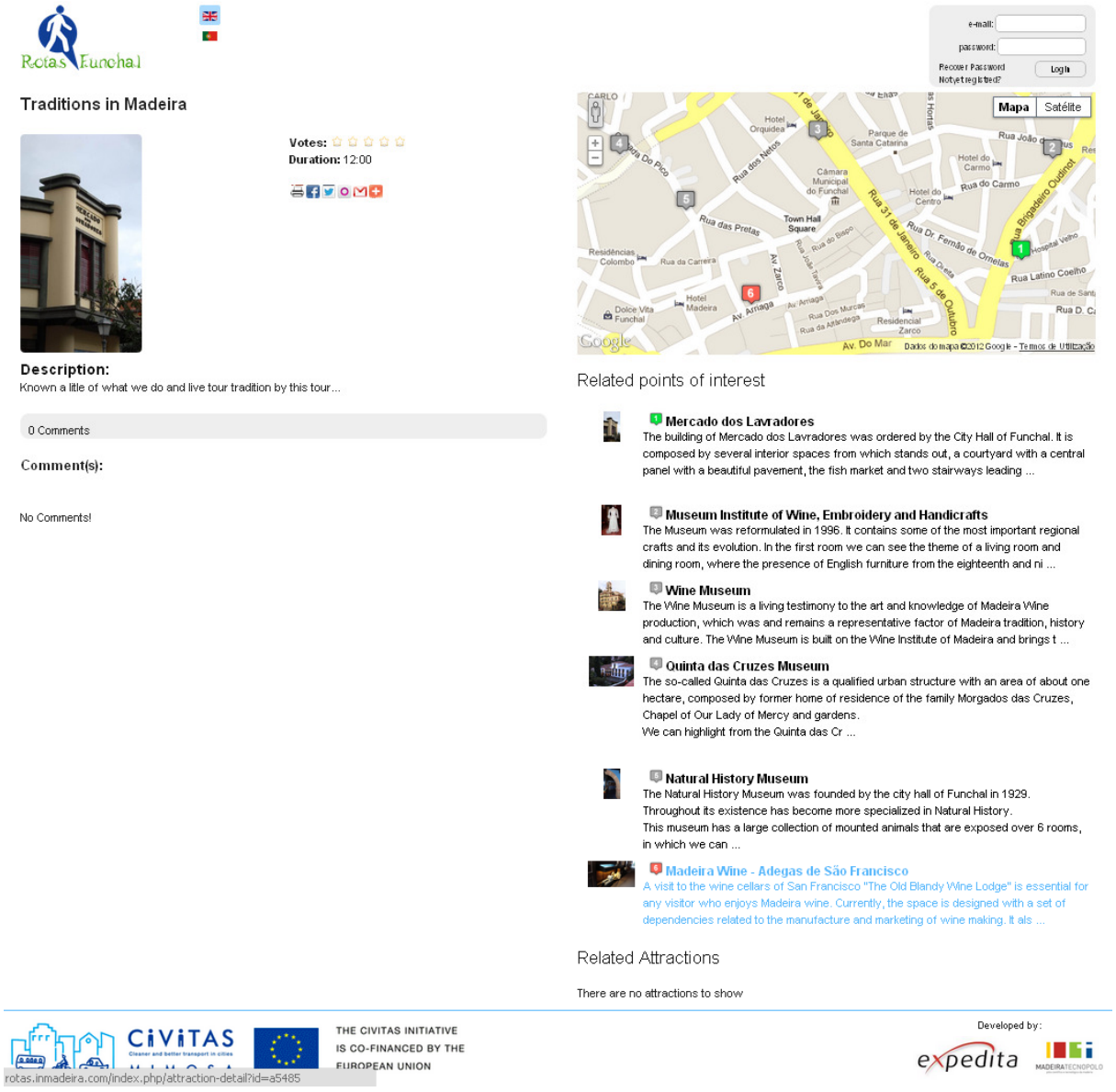


**Figure 4 - Main view of a walk created with the web tool prototype**

**Stage 4.c: Development and implementation of FrontOffice** *(Oct 2011 – Jun 2012):* Upon Expedita choosing FeedHenry as the most suitable development platform for mobile applications, the development of the application for mobile phones began. It included the definition of interfaces, integration with backoffice, content management and coding of functionalities. Successive prototypes have been produced, tested, debugged and improved.

The desktop website / webtool, which supports the design and publishing of users walks was also developed. The web site was also adapted for mobile web access. Mobile web access may be used for navigation in non Android/iPhone phones.

Figure 5 corresponds to mobile web access with a standard mobile browser. This type of access is mainly useful for mobile users who don't have an Android or iPhone or those not wishing to install the custom application.

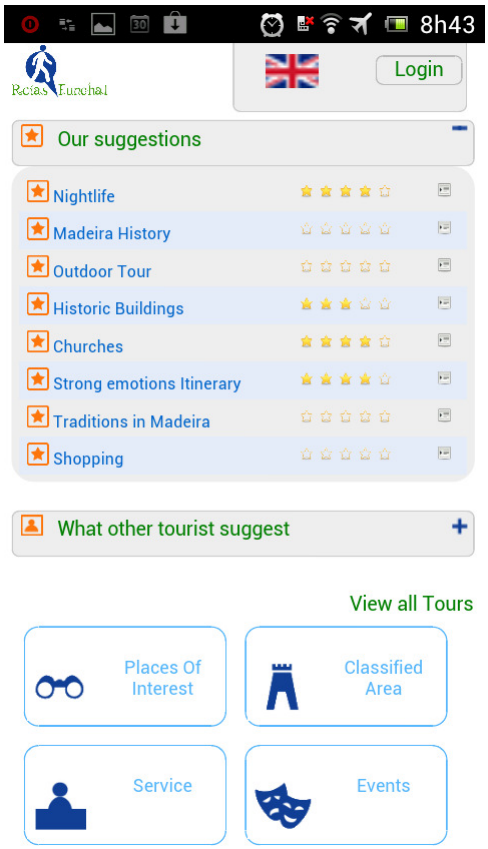


**Figure 5 - Mobile web access with a standard mobile browser**

Figure 6 illustrates the viewing of a walk called "Traditions in Madeira" (containing 6 attractions along the way) in the Android/iPhone custom mobile application.

Figure 7 Presents detailed information on an attraction (the Town Hall square) in the Android/iPhone custom mobile application.

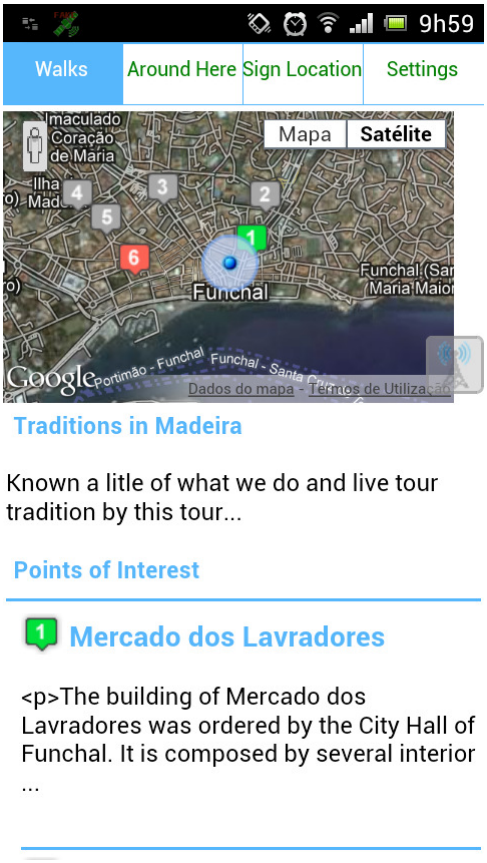


**Figure 6 - Viewing of a walk called "Traditions in Madeira"**

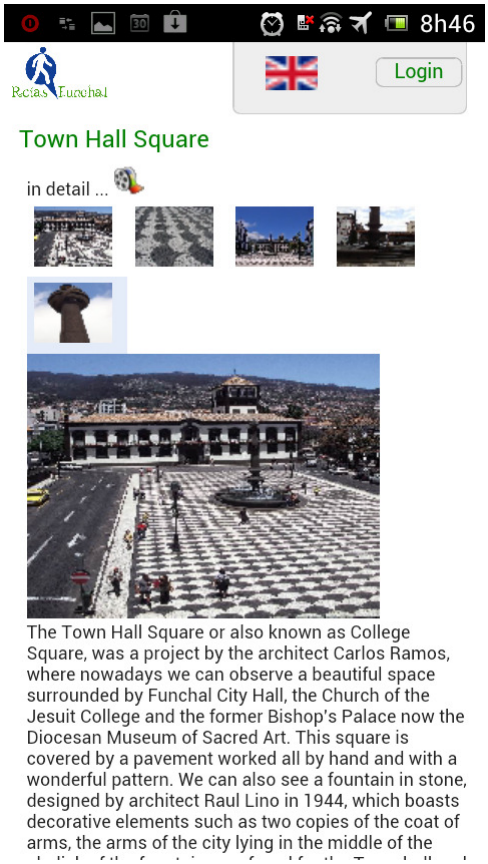


**Figure 7 - Detailed information on an attraction (the Town Hall square)**

## Stage 5: Promotion and Dissemination of the new service *(April 2009 – Oct 2012)*

The first version of the desktop website was launched on October 2011 and the Android app in Google Play was officially publicly launched on the 14th July 2012. As of October 2012 the iPhone version of the mobile application was pending approval from Apple in order to be made available at the App Store in November 2012. Full advertising and disseminating of the complete new service began in July 2012, including the integrated desktop website plus Android/iPhone custom application plus mobile web access. General advertising of this measure began in April 2009. Currently "Funchal Routes" is being disseminated through the following channels: Mobility Week 2012; Madeira Tecnopolo Homepage; CIVITAS MIMOSA Funchal Facebook pages; CMF's Mobility Microsite; Horários do Funchal news pages and Google Play. A notable promotion for the service was achieved when "Funchal Routes" was highlighted in the Regional Government Board of Education / SRE newsletter. This publication is particularly relevant because it directly reaches a large audience of many hundreds of readers across all regional government services.

## Stage 6: Evaluation *(April 2010 - Sept 2012)*

The evaluation approach taken for measure 8.2 involved defining and measuring/counting a number of indicators and running a questionnaire/survey. As a result of the delay in launching the full service

(the mobile application was only made available in July 2012), the period for final evaluation of indicators was shorter than planned and quantitative evaluation of some indicators has been revised/ reformulated in accordance with the resulting time limitations. Promotion/dissemination was also affected by the delays. Indicator 5 retained the same definition (and is now indicator 6). The initial definitions for the five DoW indicators were the following:

1. Visits to the service platform on the web: three months after the launch of the service, 2,000 hits to the web platform should be "detected" monthly;
2. News about the service: 5 articles / news pieces published during project lifetime;
3. Number of events promoting the service: register 4 events where the service was presented / promoted during project lifetime;
4. Number of users and/or subscribers of the service: evolution of the number of users and/or subscribers of the service 2 months after its launch: 100;
5. Acceptance level -> Service Quality: Achieve a satisfactory level of commitment to the service among all involved: run a questionnaire/survey;

With the reformulation a new indicator was added:

1. Survey on the "enthusiasm" among potential end-users/clients for an "Electronic guide service with geolocalisation of points of interest (attractions) in Funchal". This survey conducted among Expo-Madeira 2010 visitors resulted in 792 valid answers;

After reformulation, the 5 initial indicators from DoW were (re)defined to be assessed as:

2. Counting the number of visits to the service platform on the web, at http://routes.inmadeira.com. This site presents the service, provides web access to the existing walks (e.g. for printing) and allows users to login in order to create new walks or to edit walks previously recorded on-the-fly using their mobile phone. Once complete, users may share their walks for others;
3. Counting the number of articles / news pieces published during the project lifetime;
4. Counting the number of events where the service was promoted during the project lifetime;
5. Counting the number of downloads of the mobile application during the final evaluation period. This indicator provides the number of installations on Android phones of the custom mobile application (which is also available for the iPhone). The mobile application not only presents existing walks but also allows users to record their own walks on-the-fly;
6. The questionnaire/survey was aimed at evaluating service quality in order to achieve a satisfactory level in the evaluation/feedback of users of the service. The survey was/is available at http://www.surveymonkey.com/s/Y9893TF. This indicator was not changed, despite the number of respondents being lower than initially planned due to the short period for final evaluation. **Annex A** presents the survey.

## B5 Inter-relationships with other measures

The measure is related to other measures as follows:

- **Measure FUN 4.1** (Awareness-raising campaigns for sustainable mobility) – The dissemination of the measure 8.2 objectives and results was integrated with main events and promotion activities carried out under measure 4.1. During Mobility Week 2012, a large display was erected in the city centre featuring a description of the service and the corresponding access/download links. Measure FUN8.2 and its service "Funchal routes" is about sustainable mobility and awareness raising for sustainability issues like modal shift from private car to public transport, cycling and walking.

# C Impact Evaluation Findings

## C1 Measurement methodology

Evaluation involved assessing the Acceptance level, Public Awareness and Quality of the "Funchal Routes" service.The measurement methodology for measure 8.2 consisted of defining and measuring/counting a number of indicators and running a questionnaire/survey, as described in Section B4-Stage 6 (Evaluation):

- Public Support is measured by indicator 1 (Willingness of potential end-users/clients for using such a service).
- Acceptance level is measured by indicators 2 (Visits to the service platform on the web) and 5 (Number of downloads of the mobile application).
- Public Awareness is measured by indicators 3 (News about the service) and 4 (Events promoting the service).
- Quality of Service is measured by indicator 6 (Service Quality).

### C1.1 Impacts and Indicators

On a strategic level this measure aimed at supporting and promoting sustainable modes of transportation / walking as well as supporting and promoting active mobility through local culture & leisure. At a measure level this corresponded to developing and providing an info-mobility service, for both residents and tourists, which provides rich content electronic guiding, including GPS support and multimedia. Not only it provides electronic guiding but also allows users to design, edit and publish their personal/favorite walking routes. The impact/success of such a measure can be measured by indirect indicators/means such as for e.g. the number of users of the service. A more direct indicator is by surveying service users. Because most users of the service will be anonymous (because they can download the mobile application and use it right away) and only those wanting to create and publish walks have to register, all users are invited to provide feedback by filling an online questionnaire/survey. Selected indicators take those elements/restrictions into account. The first step was to evaluate the potential of such service and this corresponds to indicator 1. Visits to the service website (http://routes.inmadeira.com) (indicator 2) and number of downloads of the mobile application from Google Play (indicator 2) provide an indication of the popularity of the service. Indicators 3 and 4 are related to measure dissemination and indicator 6 collects Service Quality feedback from users, which they can do either from their smartphone or on the pc.

**Table C1.1: Indicators**

**Table C1.1:** *Specific impact indicators related to measureFUN8.2*

| Evaluation category | Evaluation sub-category | Impact | Indicator | Description and Source of data | Success quantification | Baseline | After Data collection |
|---|---|---|---|---|---|---|---|
| Society | Acceptance | Public Support | **1 –** Willingness of potential end-users/clients to use such a service (Core Indicator 14) | **Data unit:** Level of interest among potential users **Source:** Survey conducted among visitors to Expo-Madeira 2010 | Achieving at least 50% positive answers | N/a | 07/2010 |
| Society | Acceptance | Acceptance level | **2 -** Visits to the service platform on the web (Core Indicator 14) | **Data unit:** Number of hits/visits to service website during period July to September 2012. **Source:** as collected by Google Analytics for URL http://routes.inmadeira.com | Register a growing number of users of the service, measured by the number of visits to the service platform on the web. Note: This service also works in offline mode, when users use the application installed on their phone in offline mode | N/a | 09/2012 |
| | | Public Awareness | **3 -** News about the service (Core Indicator 13) | **Data unit:** Number of articles / news pieces published during project lifetime **Source:** as registered / presented | Achieve at least 5 publications during project lifetime, considering all major types of media (video, internet –web and facebook, newsletters, brochures, local media) | N/a | 09/2012 |
| | | Public Awareness | **4 -** Events promoting the service (Core Indicator 13) | **Data unit:** Number of events where the service was presented / promoted during project lifetime **Source:** as registered / presented | Achieve at least 4 events during project lifetime | N/a | 09/2012 |
| | | Acceptance level | **5 -** Number of downloads of the mobile application (Core Indicator 14) | **Data unit:** Number of downloads of mobile application **Source:** as collected by Google Play application account | Register a growing number of downloads of the mobile application, which also indicates a growing number of users of the service | N/a | 09/2012 |
| | | Quality of service | **6 -** Service Quality (Core Indicator 14) | **Data unit:** online questionnaire/survey. Due to the relatively small number of participants in the survey, sample size was not taken into account and all surveys have been included. The number of participants was 18 (10 answered via Survey Monkey and 8 answered by email). The survey is included in Annex A. **Source:** online questionnaire/survey in Survey Monkey, at http://www.surveymonkey.com/s/Y9893TF | Achieve a satisfactory level of evaluation/feedback from users of the service | N/a | 10/2012 |

Detailed description of the indicator methodologies:

As described in Section "Stage 6: Evaluation" above, assessment was influenced by the delays and most indicators had to be reformulated.

- **Indicator 1** (*willingness of potential end-users/clients for using such a service*) – Analysis of answers to question «Indicate the degree of usefulness that the following service could have for you: Electronic guide service with geolocalisation of points of interest (attractions) in Funchal » in the survey conducted among visitors of the CIVITAS-MIMOSA stand at Expo-Madeira 2010 (792 answers considered). Indicator 1 relates to measure objectives at level C (measure level).
- **Indicator 2** (*Visits to the service platform on the web*) – Count of the number of hits per month to the service website as collected by Google Analytics for URL http://rotas.inmadeira.com). Register a growing number of service users. This service also runs in offline mode for the custom mobile application with data stored locally, when used in this way no hits are counted. Indicator 1 relates to measure objectives at level C (measure level).
- **Indicator 3** (*News about the service*) – Count the number of articles / news pieces published during project lifetime. Achieve at least 5 publications. Indicator 2 relates to measure objectives at level B (strategic level).
- **Indicator 4** (Events promoting the service) – Count the number of events where the service was presented / promoted during project lifetime. Achieve at least 4 events. Indicator 3 relates to measure objectives at level B (strategic level).
- **Indicator 5** (Number of downloads of the mobile application) – Count the number of downloads of the mobile application as collected by the Google Play application account, which also relates to the number of users of the service. Indicator 4 relates to measure objectives at level C (measure level). Due to the delays, there was a limited time for final promotion/dissemination and for evaluation. As a consequence the relevance of the trend in the downloads is even more important than the total number of downloads.
- **Indicator 6** (Service Quality) – Run online questionnaire/survey in Survey Monkey (available at http://www.surveymonkey.com/s/Y9893TF). Achieve a satisfactory level of evaluation/feedback from users of the service. Indicator 6 relates to measure objectives at levels A and B (longer term and strategic level). Only 1 measurement was planned in DoW. The survey is included in Annex A.

## C1.2 Establishing a Baseline

Since this service did not exist prior to July 2012, there's no baseline data.

- **Indicator 1** (*Willingness of potential end-users/clients for using such a service*) – The survey related to this indicator was carried out in July 2010;
- **Indicator 2** (*Visits to the service platform on the web*) – N/A;
- **Indicator 3** (*News about the service*) – 0 articles / news pieces;
- **Indicator 4** (*Events promoting the service*) – 0 events;
- **Indicator 5** (*Number of downloads of the mobile application*) – N/A;
- **Indicator 6** (*Service Quality*) – N/A;

## C1.3 Building the Business-as-Usual scenario

Building a Business-as-Usual scenario does not apply to this pilot service due to delays. However, considering the results provided by indicators 1 and 5 we may conclude that there is great potential for the adoption of this type of service:

- Indicator 1 (willingness of potential end-users/clients for using such a service) indicated that 67% of the participants said that it would be Useful (44%) or Very useful (23%), which corresponds to 520 of the 792 participants. In a city with 150,000 inhabitants and many visitors/tourists it corresponds to some thousands of potential end-users/clients.
- Indicator 5 (Number of downloads of the mobile application), namely the percentages presented in Table C2.5.3 indicate that distribution of downloads/installations of Android mobile application per country is 50% from Portugal and 50% from other countries. That indicates very significant interest among tourists in using the service.

The service requires data connection and GPS enabled devices and is not addressed at a daily life usage scenario (It is rather more oriented for leisure time). Nevertheless, it is a fact that new handhelds/mobile phones reaching the market are usually GPS enabled and have Internet access. On the other hand an increasing number of persons/users are willing to install and use such "Electronic Guides" when visiting a new city or to present and promote their city to the others by sharing their own local experiences (in this case by sharing their own walks in Funchal). As detailed in Section D4.1 this service may very well be transferred to other cities/locations, without the need for major adaptations.

# C2 Measure results

The results are presented under sub headings corresponding to the areas used for indicators – society.

## C2.5 Society

**Indicator 1**: Society → Acceptance → Willingness of potential end-users/clients for using such a service

Acceptance and expected public support among potential clients/users of the service was evaluated by questioning visitors of the CIVITAS-MIMOSA stand at Expo-Madeira 2010. The question was part of a survey which resulted in 792 valid responses from participants. The specific question related to this service was the following: "**Please indicate how useful you find the following service to you:- Electronic guide service with geolocalisation of points of interest (attractions) in Funchal**". 67% of the participants said that it would be Useful (44%) or Very useful (23%). This corresponds to the yellow and "mist green" sectors in the chart of Figure 8.

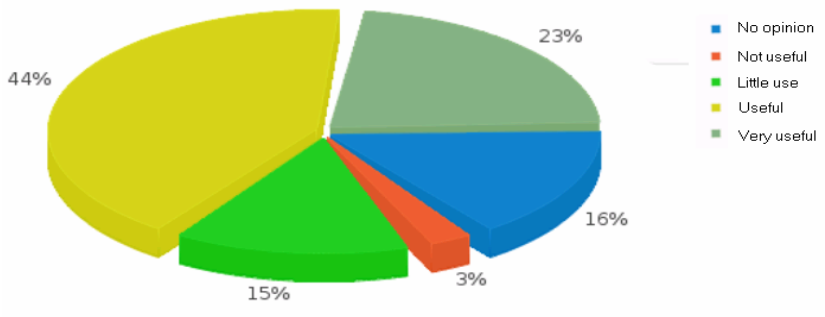


**Figure 8: View of the assessment survey evaluating the willingness of potential end-users/clients in using such a service. The survey was carried in July 2010 at Expo-Madeira**

From the collected answers the indication is that such a service is viable and interesting to both residents and tourists (considering that 50% of the installations of the mobile application are made by tourists, as presented in Table 2.5.3). Due to the late implementation it was not possible to collect data about willingness after implementation.

**Indicator 2**: Society → Acceptance → Visits to the service platform on the web.

The acceptance level of the service was evaluated by counting the number of hits per month to the service website, as collected by Google Analytics for URL http://rotas.inmadeira.com. An growing average number of users of the service during the initial period of operation, i.e., during the project lifetime, is considered a successful result for this indicator.

Statistics collected using Google Analytics for the evolution of visits to service website, http://routes.inmadeira.com/, during period 01/07/2012 to 26/09/2012 indicate that:

- The total number of visitors was 238;

- From July 2012 to September 2012, the average number of visits per day increased from about 10 to about 30;
- The average length of each visit was 4.5 minutes, which reveals a high interest among visitors in exploring the content of the website. The average number of page views per visit was 5.82;
- Over 43% of the visitors are returning and 57% are new visitors, indicating that many visitors revisit the website and that the website is gaining new users;

It should be noted that this service also works in offline mode, users can access the application installed on their phone in offline mode. In that case it is not possible to record and evaluate service usage. Since many users download the application and associated data for future use in offline mode, we can extrapolate that each download of the mobile application corresponds also to some frequency of usage of the application. For the average tourist spending two weeks in Funchal/Madeira, he/she may use the application a few times (2/3). For the average local resident using the application for leisure activities, it is more difficult to estimate and survey data is needed.

**Indicator 3**: Society → Acceptance → Public Awareness → News about the service

Table C2.5.1 lists the references for publications related with indicator 3 as a direct output of the measure.

**Table C2.5.1:** *Dates and references for publications related to indicator 3*

| No. | Publication / Event | Date |
|---|---|---|
| **2** | TV-Energia website (CIVITAS MIMOSA video for TV-Energia project) | April 2009 |
| **2** | MIMOSA project brochure (Portuguese, 2000) + presentation local consortium (3000) | June 2009 |
| **2** | CIVITAS-MIMOSA 4th newsletter | February 2011 |
| **2** | CIVITAS-Plus 8th newsletter | March 2011 |
| **2** | CIVITAS web-site online news articles | March 2011 |
| **2** | CIVITAS-MIMOSA Funchal Facebook page | August 2012 |
| **2** | Câmara Municipal do Funchal (CMF) newsletter | August 2012 |
| **2** | Madeira Tecnopolo (MT) website news | August 2012 |
| **2** | Regional Government Board of Education / SRE newsletter. This publication is particularly relevant because it directly reaches a large audience across all regional government services. It is distributed to 2,700 internal contacts plus 200 external contacts, including journalists for regional and national newspapers and other institutional/public entities. It is also published on Facebook and is available on the website (http://www.madeira-edu.pt/amarcar) with a recorded interview with the project manager from Madeira Tecnopolo. | September 2012 |

**Indicator 4**: Society → Acceptance → Public Awareness → Events presenting the service

Table C2.5.2 lists the references of events related with indicator 4 as a direct output of the measure.

**Table C2.5.2:** *Dates and references for events related with indicator 4*

| No. | Publication / Event | Date |
|---|---|---|
| **3** | International Mobility event in Lisbon / IMTT | April 2010 |
| **3** | Expo Madeira 2010 and 2011 (2 annual events) | July 2010 and 2011 |
| **3** | Funchal Mobility week 2009, 2010, 2011 and 2012 (4 annual events) | September 2009, 2010, 2011 and 2012 |

**Indicator 5**: Society → Acceptance → Public Awareness → Number of downloads of the mobile application

The acceptance level for the service was evaluated by counting the number of downloads of the mobile Android application from the Google Play website. An average growing number of downloads of the application during the initial period of operation i.e. during the last few months of project lifetime, is considered a successful result for this indicator. Figure 9 presents the statistics for total downloads/installations of the custom mobile Android application since it became available at Google Play, i.e., during the period from 14/07/2012 to 30/09/2012. That number steadily increased up to 120 downloads/installations in 2 months, showing a steady growth since the launch of the service. This growth is expected to continue considering that the measure/service is being disseminated.


*Figure 9:* ***Evolution of downloads/installations of the custom mobile Android application during period 14/07/2012 to 30/09/2012***

The distribution of downloads/installations of the mobile application per country as identified from the users/subscribers mobile phones is as indicated in Table C2.5.3.

**Table C2.5.3:** *Distribution of downloads/installations of Android mobile application per country*

| Country | Percentage of installations |
|---|---|
| Portugal | 50/00% |
| United Kingdom | 7.50% |

| | |
|---|---|
| Switzerland; Denmark; Ireland and Poland | 5.00% each |
| Germany; Finland; France | 2.50% each |
| Others | 15.00% |

The countries identified in Table C2.5.3 correspond to the main tourist markets visiting Madeira. For Germany we would expect a higher percentage (within the 5% range or higher), but the application has not been translated into German and this may influence users. We may conclude that tourists visiting Funchal become aware of this service/application and that they want to use it.

**Indicator 6**: Society → Acceptance → Service Quality

The quality of the service was evaluated by running an online questionnaire/survey, including "Funchal routes" service specific questions and more general questions related to mobility in Funchal. Achieving a satisfactory level of quality, satisfaction, commitment and intended impact in terms of more sustainable mobility behaviour is considered a successful result for this indicator. The survey was undertaken during the months of September-October 2012. The survey is included in Annex A. Due to the relatively small number of participants in the survey, sample size was not taken into account and all surveys have been included. The number of participants was 18 (10 answered via Survey Monkey and 8 answered by email). Both residents and tourists could participate. The most relevant findings were:

- Overall the degree of satisfaction among users who answered the survey is high and 88.8% of them find the service convenient or very convenient.
- The information provided is considered useful and accurate by all users.
- With this new service many users (62.5%) found new walking routes and 88.8% of them say they will recommend it to friends.
- 80.0% of users find the information delivered useful for planning their trips/walks.
- Some of the users (10%) state that they now walk or hike more frequently than before they started using this service, which is already a very good indicator that this type of service contributes to people changing their lifestyle towards more healthy behaviours.
- While the vast majority of users (88.9%) use the service while walking, it is interesting that 33.3% of users consider using it when driving, followed by cycling and using Public Transport.
- All personal information asked was optional and included Name, Occupation, Academic degree, Gender and Age group. The list of names indicates that those who provided their name are likely to be Portuguese, however the majority of participants didn't include their name and other personal details. It should be noted that 50% of installations of the mobile application have been made in non-Portuguese phones, most likely tourists in Madeira or preparing their visit to Madeira. Occupation categories included are transport technician, students, engineer and project assistant/manager. Those who answered about their academic degree stated they are graduated. Gender was distributed as 77.8% male and 22.2% female. All answers about age group are in the 18-60 range.

Before CIVITAS MIMOSA existing walking guides consisted in traditional paper based books and maps. Electronic guiding was non existent. There was no mean to make a walk, record it, edit it and publish it on the Internet so that others may also try out, enjoy and provide feedback on proposed walks. One of the main disadvantages/problems of paper based walking guides is that often users/tourists have no precise information on their own location and sometimes they get lost. Another increasingly relevant feature appreciated (or even required) by users is that they want to be able to record and share their experiences (walking, in this case). With "Routes Funchal" a new type of GPS and multimedia digital guide for Funchal was created, where users/tourists use, create/record and share existing or new walks with many other potential users/tourists in a one-to-one relation.

## C3 Achievement of quantifiable targets and objectives

Table C3.1 presents targets and ratings for proposed indicators. The explanation of ratings for indicators is presented in Section C2.5.

**Table C3.1:** *Targets and ratings for indicators*

| No. | Target | Rating |
|---|---|---|
| **1** | Achieving at least 50% positive answers on the survey/questionnaire regarding the willingness of potential end-users/clients for using such a service | ★★★ |
| **2** | Register a growing number of users of the service, measured by the number of visits/hits to the service website. It should be noted that this service also works in offline mode, when users access the application installed on their phone in offline mode. The offline usage can't be monitored. | ★★ |
| **3** | Achieve at least 5 articles / news pieces published during project lifetime | ★★★ |
| **4** | Achieve at least 4 events where the service was presented / promoted during project lifetime | ★★ |
| **5** | Register / present a growing trend on the number of downloads of the mobile application | ★★ |
| **6** | Achieve a satisfactory level of evaluation/feedback from users of the service (online questionnaire/survey) | ★★★ |
| **NA = Not Assessed O = Not Achieved ★ = Substantially achieved (at least 50%)** **★★ = Achieved in full ★★★ = Exceeded** | | |

The justification of the rating for indicator 1 resulted from the collected answers presented in Figure 9, from which we concluded that 67% of potential resident clients/users of the service consider it Useful or Very useful. Considering also that 50% of the installations of the mobile application are made by tourists from diverse nationalities (as presented in Table 2.5.3), this clearly indicates that citizens and tourists in general are willing to use such a service. The rating for indicator 2 resulted from statistics collected with Google Analytics (presented in Section C2.5 for indicator 2) which indicate, among other figures, that the total number of visitors was 238 during the evaluation period. The daily average number of visits to the "Routes Funchal" website, at http://routes.inmadeira.com/ tripled from approximately 10 visits per day in July 2012 to approximately 30 visits per day in September 2012. Also relevant is that the average number of page views per visit was 5.82. The rating for indicator 3 is justified by the list of publications presented in Table C2.5.1, some published before and others

published after the service was made available. A publication and special coverage in one major regional newsletter, the newsletter from Regional Government, including a recorded interview, was requested by the makers of the newsletter after they found "Funchal Routes" on the Madeira Tecnopolo's webpage on the Internet. The rating for indicator 4 is justified by the list of events presented in Table C2.5.2. During Funchal Mobility week 2012, the "Funchal Routes" service was promoted among residents and tourists as well. The rating for indicator 5 is based on statistics collected from the Google Play Store (presented in Section C2.5 for indicator 5) which indicate that total downloads/installations of the custom mobile Android application doubled from mid August 2012 (60 installations) to the end of September 2012 (120 installations), showing a steady growth since the launch of the service. As for indicator 6 (Quality of the Service) which was evaluated by running an online questionnaire/survey, the most relevant findings were that overall the degree of satisfaction among users who answered the survey is high and 88.8% of them find the service convenient or very convenient. With this new service many users (62.5%) found new walking routes and 88.8% of them say they will recommend it to friends. 80.0% of users find the information delivered useful for planning their trips/walks.

Our conclusion is that, despite becoming fully operational later than planned, in the two months following deployment and the beginning of service operation, "Funchal Routes" already demonstrated that it is delivering what it promised: an electronic guide for Funchal which is innovative, multi-platform, leisure & culture oriented, serving both residents and tourists.

**Some quick facts about this service:**

- Local citizens and tourists may create personalised journeys using a social-media approach to share their experiences.
- Easily accessible via mobile or computer, online and offline.
- Content is constantly being updated.
- Software system platform is easily transferable to other cities with low costs (depending on client requirements).
- Feedback from those using the service is positive: - It is a fun and effective way to encourage walking among all age groups.

## C4 Up-scaling of results

The service was designed and implemented with scalability and transferability in mind. It already covers all of Funchal and it can be adapted to and implemented in other parts of the island (e.g. for "levada walking", in the countryside, which is a hugely popular activity in Madeira for both residents and tourists). Section D.4.1 provides more detailed information on the scalability and transferability of the "Funchal Routes" service.

## C5 Appraisal of evaluation approach

As a result of the delay in launching the full service (the mobile application was only made available in July 2012), the period for the final evaluation of indicators was shorter than planned and quantitative evaluation of some indicators has been revised/reformulated in accordance with the resulting time limitations. Although some quantitative measures had to be reformulated (in particular indicators 2 and 5 had to be modified due to excessive initial expectations on the number of visits to

the website and on the number of downloads of mobile application) all indicators have been assessed and one new indicator was added (new indicator 1).

**Initial definition of the five indicators in DoW was the following:**

1. Visits to the service platform on the web: three months after the launch of the service, 2,000 hits to the web platform should be "detected" monthly;

2. News about the service: 5 articles / news pieces published during the project lifetime;

3. Number of events promoting the service: register 4 events where the service was presented / promoted during project lifetime;

4. Number of users and/or subscribers to the service: evolution of the number of users and/or subscribers to the service 2 months after its launch: 100;

5. Acceptance level -> Service Quality: run a questionnaire/survey.

**The six indicators actually assessed were:**

1. Survey on the enthusiasm among potential end-users/clients for an "Electronic guide service with geolocalisation of points of interest (attractions) in Funchal";

2. Counting the number of visits to the service website;

3. Counting the number of articles / news pieces published during the project lifetime;

4. Counting the number of events where the service was promoted during the project lifetime;

5. Counting the number of downloads of the mobile application during the final evaluation period;

6. Running an online questionnaire/survey aimed at evaluating service quality.

Considering the type of service developed and provided (implementation and promotion of a pilot service/project for creating and publishing walks/routes, preferably to be performed on foot or using public transport, which we called "Funchal Routes") and the existing limitations for running the evaluation as initially planned, we concluded that the most suitable approach was the one carried out. The outcome achieved gave evidence of highly probable acceptance, high satisfaction level and success of the proposed service which should be further assessed in future to improve usability.

## C6 Summary of evaluation results

The key results are as follows:

- **Willingness of potential end-users/clients for using such a service** – Survey carried out during Expo-Madeira 2010 indicated that 67% of potential clients/users of the service consider it as Useful or Very useful. This result clearly indicates that such a service is viable and attractive.
- **Visits to the service website** – Daily average number of visits to "Routes Funchal" website, at http://routes.inmadeira.com/ tripled from approximately 10 visits per day in July 2012 to approximately 30 visits per day in September 2012. Average number of page views per visit is 5.82.

- **News about the service** – The "Funchal Routes" service was presented 9 times on a paper or web publication. One of the most significant was being featured/highlighted in the Regional Government Board of Education newsletter, Facebook and website, in September 2012, distributed to many hundreds of readers.
- **Events presenting the service** – The "Funchal Routes" service was presented 7 times in thematic events related to CIVITAS and/or Mobility. The most significant was being featured/highlighted during Funchal Mobility Week 2012.
- **Number of downloads of the mobile application** – Downloads/installations of the custom mobile Android application doubled from mid August 2012 (60 installations) to the end of September 2012 (120 installations).
- **Service Quality** –The degree of satisfaction among users was high and they find the service convenient or very convenient. The information provided is considered useful and accurate. With this new service many users found new walking routes and will recommend it to friends. Users also find the information delivered useful for planning their trips/walks. Quantitative results of the answers to the survey are detailed in Section C2.5 Society - Indicator 6.

## C7 Future activities relating to the measure

Future activities include dissemination and final reporting activities. Dissemination is based mainly on online channels such as Facebook, partners websites and newsletter coverage.

- Deployment and dissemination/promotion of the service to the population / citizens;
- This service is suitable for integration with a bike rental service. This is something to be tried in the future.
- This service is suitable to provide content to other providers who may eventually create new related services in a kind of mash up approach.

# D Process Evaluation Findings

## D.1 Deviations from the original plan

The deviations from the original plan comprised:

**Deviation 1– Implementation/development delay:** As detailed in Section "B4 - Actual implementation of the measure", when compared to DoW planning, Stages 1, 2 and 3 experienced a cumulative delay of about 3 months, while sub-stages 4.a, 4.b and 4.c experienced a cumulative delay of about 9 months, in total about 12 months. The main reason for it was that subcontractor development pace has been slower than what was planned during the implementation / development phase and consequently failed to meet agreed deadlines/deliveries. These delays resulted in a delayed launch of the service, impairing evaluation and part of dissemination. Part of the delay in the core development of the platform was related to the change of the core system code/structure:

- Backoffice: At a certain time, about 90% of the initial Joomla backoffice code had to be restructured/rewritten. Also, part of the core system of the existing ISNOVA knowledge-base core code was converted from "Ruby on heals" to Mono technology.
- Frontoffice: At the beginning different options for development solutions for handheld platforms were tried, namely Appcelerator Titanium; PhoneGap and FeedHenry, in order to assure the best compatibility trade-off among major handheld systems (Android, Windows Mobile and iPhone).

**Deviation 2– Evaluation delayed/reformulated:** Due to the late conclusion of implementation, which was caused mainly by delays with the subcontractor in developing the core platform and applications, the quality of results of the applied evaluation was restricted by the fact that the final evaluation period with end-users following service launch was short (2 months) when compared to initial planning (7 months). Quantitative evaluation of some indicators has been revised / reformulated in accordance with the resulting time limitations. Although some quantitative measures had to be reformulated (in particular indicators 2 and 5 due to excessive initial expectations on the number of visits to the website and on the number of downloads of the mobile application) all indicators have been assessed and one new indicator was added (new indicator 1).

## D.2 Barriers and drivers

Descriptions of each concrete barrier and driver begin with the number and keyword of the MIMOSA process evaluation which categorizes them.

### D.2.1 Barriers

**Overall barriers**

The main overall barrier was subcontractor development pace which has been below what was planned and contracted for the implementation/development phase and consequently the subcontractor failed to meet with some agreed important deadlines/deliveries. The main barriers encountered were the following:

**Preparation phase**

- 10-Technological: When work for this measure began no other such applications existed in Madeira and even in big tourist cities applications were only beginning to be explored. It meant that no models/examples existed for this service and we had to create and validate an innovative approach. It meant that during the whole development cycle considerable effort had to be devoted to the verification and validation of the software system being created in order to ensure that it would meet specifications and fulfil intended purposes.

**Implementation phase**

- 10-Technological: The main problems/barriers encountered had a technical origin during development and implementation, which caused delays in the progress of the measure.
    - Backoffice: At a certain time, about 90% of the initial Joomla backoffice code had to be restructured/rewritten. Also, part of the core system of the existing ISNOVA knowledge-base core code was converted from "Ruby on heals" to Mono technology.
    - Frontoffice: At the beginning different development tool solutions for handheld platforms were tried, namely Appcelerator Titanium; PhoneGap and FeedHenry, in order to ensure the best compatibility trade-off among major handheld systems (Android, Windows Mobile and iPhone).
    - Using a development tool compatible with both Android and iPhone (FeedHenry was selected), this imposed some restrictions which prevent optimisation of an application for a specific platform.
    - Audio descriptions of attractions had to be abandoned in first public versions of the mobile application due to technical restrictions imposed by the development tool and its integration with mobile phone operating systems. The option for streaming of audio was also not feasible due to mobile network costs/bandwidth. This problem is expected to be solved in future versions of the mobile application.

**Evaluation phase**

- 7-Planning: Due to the late conclusion of implementation, the quality of applied evaluation results was restricted by the fact that the final evaluation period with end-users following service launch was short (2 months) when compared to initial planning (7 months).

## D.2.2 Drivers

**Overall Drivers**

- Being an innovative service, "Funchal Routes" follows a social media approach for creating and sharing/providing content. It combines location-based information (via GPS) and multimedia content in an attractive manner. It was developed under the framework of existing ISNOVA knowledge-base and this was also a key driver.

**Implementation phase**

As for the drivers that smoothed the decision-making process, one can state that:

- 10-Technological: Beginning with the existing ISNOVA knowledge-base provided a reference framework for multimedia data management and access to web services.
- 10-Technological: Putting the focus on a mobile application and complementing it with the desktop web application facilitated the process of interface/interaction design. Designing for mobile interfaces often contributes to simpler and more intuitive interfaces.

**Operation phase**

- 12-Other: Web information available offline (on paper): Although the full usage of the service requires some technological background, it will be possible to profit from it by "just" printing on paper available/suggested walks and using the printed material as a traditional paper guide. This additional function is likely to increase the usage of the service.
- 3-Cultural: Could be very attractive to some specific types of users: For users already familiar with technologically-oriented services (e.g. younger people) this type of guidance service may be much more attractive than a traditional guided walk using a paper guide or with a human guide.
- 10-Technological: The potential of location-awareness (via GPS) and multimedia content (text, image and audio): The potential usage of such a service is certainly beyond what is being implemented and explored in this measure. The combination of location-awareness (via GPS) and availability of contextual multimedia content (text, image and audio) may well be used in many other ways not envisaged by the work currently being carried out under measure FUN 8.2.
- 6-Positional: Some interesting synergies and derived services may result from the existence of this service, namely:
    - This service is suitable for integration with a bike rental service. This is something which is to be tried in the future.
    - This service is suitable to provide content to other providers who may eventually create new related services in a kind of mash up approach. A modular approach was applied during implementation (e.g. standard web-service based access to data sources).

## D.2.3 Activities

**Implementation phase**

- 10-Technological: **rewriting ISNOVA XDMS backoffice core code** – Rewriting / converting backoffice core code from "Ruby on heals" to Mono led to a more robust, safer and faster backoffice system.
- 10-Technological: **using FeedHenry for mobile application implementation** – The decision to use FeedHenry as the mobile application implementation/ development

tool allowed us to reuse and deploy the same source "code" for both Android and iPhone platforms. FeedHenry relies heavily on HTML 5 and JavaScript coding.

## D.3 Participation

### D.3.1. Measure Partners

- **Madeira Tecnopolo -** Responsible for the measure. Together with Madeira University, MT is part of Madeira's Technology and Science Park. Within Funchal's consortium MT was responsible for carrying two info-mobility related measures: FUN 8.1 - Mobility Services – SMS and FUN 8.2 - Location-enabled Mobile Search and Guidance.

- **Municipality of Funchal** – as a MIMOSA partner, participated in this measure by promoting the new service at some key events, namely by highlighting it in Mobility Week 2012.

- **Expedita SA** – was the company subcontracted to develop the "Funchal Routes" platform and applications. Expedita is a software house with 15 years of experience, focused on Tourism, Transportation and Leisure sectors.

### D.3.2 Stakeholders

Stakeholders include the Regional Board of Tourism (DRT), the "Electricity Company" (Empresa de Electricidade da Madeira) and the "Cartography and Property Registration Service" (DRIGOT). A few meetings have taken place with these entities. Their main contribution was in standardising data structures for the platform database as well as providing maps and part of the initial content.

## D.4 Recommendations

### D.4.1 Recommendations: measure replication

i) This measure and the associated service is easily transferable (and scalable as well) to other cities/locations. It was one of Funchal's measures selected for the Transferability Workshop, in Bologna (22-25 May 2012). Relevant transferability and scalability features are:

Transferability features:

- This service may easily be transferred to other cities/locations, without the need for major adaptations:
  - Links pedestrian mobility habits with culture & leisure;
  - Can be installed locally or can run on cloud technology;
  - Costs of replicating the service in other cities are low. Technology is already developed and applications are available on Open-source and easy to modify/adapt code;
  - Time span from planning to operation will be 3 to 6 months.

Scalability features:

- Additional types/categories of information may be added as necessary;
- The backoffice/database system of ISNOVA XDMS is able to automatically provide data to third-party providers by means of Web-services;
- It may be expanded in order to support an increasing number of users;

ii) In terms of user perspective/demand, a survey indicated that 67% of potential clients/users of the service consider it Useful or Very useful. Being an innovative service, "Funchal Routes" follows a social media approach for creating and sharing/providing content. It combines location-based information (via GPS) and multimedia content in an attractive manner. For users already familiar with technologically oriented services (e.g. younger people) this type of guidance service may be much more attractive than a traditional guided walk using a paper guide or with a human guide. This service is also suitable for integration with a bike rental service.

iii) This service is suitable for providing content to other providers who may eventually create new related services in a kind of mash up approach. A modular approach was applied during implementation (e.g. standard web-service based access to data sources).

## D.4.2 Recommendations: process

As for lessons learned and recommendations, the main issues have been: i) to ensure that the system/service delivers what users need and want and, ii) to start prototyping and testing as soon as possible:

- If possible try to implement the new service over something that already exists and is proven to work. If it's necessary to develop a platform from scratch or a new layer of service on top of existing layers, make sure that it's developed by people with previous experience in such work.
- Analyse and assess users/target needs throughout before designing a new solution in order to maximise client/end-user acceptance.
- Start prototyping and testing your service as soon as possible in order to ensure more robust results and allow time to improve the system. Early prototyping and testing ensures early detection and fixing of bugs during concrete usage, allowing early validation and improvement of user acceptance, namely this refers to User Interface, Functional components and Content provision/delivery.
- Rigorous subcontracting rules must be put in place in order to avoid or at least minimise the effects of substantial delays caused by such third party entities.

# Annex A

## Evaluation Survey/Questionaire for measure FUN 8.2 - "Rotas Funchal" service

"Routes Funchal" is a service for creating and publishing walks/routes which, preferably, may be performed on foot, bicycle or using public transportation. Once created and published, a walk can be printed on paper or downloaded to a mobile phone / smartphone with GPS. Using a browser on the phone or using the custom application, a user / tourist can be geographically guided in the path he is taking and receive multimedia descriptions of elements of interest (the attractions) along the route and depending on his location. Thank you very much for answering this survey.

### 1. How did you know about this service?

- [ ] email
- [ ] friend
- [ ] found on Internet
- [ ] Project leaflet

Other (please specify)

### 2. Are you a resident or a tourist in Madeira?

- ( ) Resident (Funchal)
- ( ) Tourist
- ( ) Resident (not from Funchal)

### 3. Which main transportation mode do you take when using this service?

- [ ] cycling;
- [ ] Public Transport
- [ ] walking
- [ ] driving by car

Other (please specify)

### 4. Please indicate the main reason why you subscribed this service?

### 5. How convenient / easy is this service to use?

- ( ) Very convenient
- ( ) Convenient
- ( ) Acceptable
- ( ) Not convenient enought
- ( ) Not convenient at all

Please indicate why did you choose that option?

**6. Do you walk or hike now more frequently than before starting using this service?**

- ○ More
- ○ The same
- ○ Less

Would you like to comment on that?

**7. Is the information delivered useful for planning your trips/walks?**

- ○ Yes
- ○ No

**8. How frequently are you using the service?**

- ○ daily
- ○ once a week
- ○ more than once a week
- ○ monthly

Other (please specify)

**9. You mainly use this service via phone web browser or phone standalone application?**

- ○ phone web browser (online)
- ○ phone standalone apllication (offline)
- ○ both

**10. Have you used the desktop web application?**

### 11. Is the information provided useful and accurate?

- ○ timely and accurate
- ○ timely
- ○ accurate
- ○ none

Would you like to add some comment or suggestion?

### 12. In the overall what is your satisfaction level with the service?

- ○ Very satisfied
- ○ Moderately satisfied
- ○ Satisfied
- ○ Dissatisfied
- ○ Dissatisfied at all

Do you to comment on your answer (optional)?

### 13. How likely are you to recommend this service to people you know?

- ○ For sure I will recommend this service to others
- ○ I will recomend it if I know of others who would like it
- ○ I may recomend it or not
- ○ Probably will not recommend
- ○ I Certainly will not recommend this service to others

Please indicate why did you choose that option?

### 14. In recent months have you used more soft transport modes (Public Transport, bicycle, walk)

- ☐ This new service has shown new routes which can be done by cycling
- ☐ This new service has shown new routes which can be done by walking
- ☐ This new service has shown new routes which can be done by Public Transport
- ☐ In recent times I became more aware of the relevance of sustainable transportation modes

Would you like to comment on that?

**15. Would it be of your interest to have a "Rental bike" service available in Funchal for the scope of this service?**

- ○ Yes, for sure
- ○ Yes, probably
- ○ Don't know
- ○ No
- ○ Not at all

Would you like to comment on that?

**16. In your opinion what are the three main problems for you when travelling in the city of Funchal?**

1)

2)

3)

**17. Do you think this service contributes to solve those problems?**

- ○ Yes, all of the above mentioned
- ○ Yes, some of the above mentioned
- ○ Don't know
- ○ Rather not
- ○ Not at all

**18. Please provide some general information about you (optional)**

Name

Occupation

Academic degree

**19. Gender**

- male
- female

**20. Age group**

- Age group (<18)
- Age group (18-25)
- Age group (26-35)
- Age group (36-45)
- Age group (46-60)
- Age group (>60)

Done

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