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D7.1 – SIMPATICO WEB Site

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Table 1 - History

Statement of originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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Glossary

PA	Public Administration
Citizenpedia	Collective knowledge database

Table 2 - Glossary

Executive summary

A seamless interaction with the public administration (PA) is crucial to make the daily activities of companies and citizens more effective and efficient, saving time and money in the management of administrative processes. In particular, online public services have an enormous potential for reducing the administrative burden of companies and citizens, as well as for creating saving opportunities for the PA. This potential is however far from being fully exploited.

Online services made available by the PA typically rely on standardized processes, copied from their offline counterparts and designed only from the public sector organizations' own perspective. These results in online services fail to adapt to the specific needs of citizens and companies.

In SIMPATICO we address the above issues by proposing a novel approach for the delivery of personalized online services that, combining emerging technologies for language processing and machine learning with the wisdom of the crowd, makes interactions with the PA easier, more efficient and more effective.

SIMPATICO combines top-down knowledge of the PA with bottom-up contributions coming from the community. These contributions can be of different types, ranging from the qualified expertise of civil servants and professionals to problems and doubts raised by citizens and companies that find online services difficult to use.

SIMPATICO approach is able to take into account both explicit information sources coming from citizens, professionals and civil servants, and implicit ones, extracted from user logs and past user interactions.

SIMPATICO's 'learning by doing' approach will use this information and match it with user profiles to continuously adapt and improve interactions with the public services. All the collected information on public services and procedures will be made available within Citizenpedia, a collective knowledge database released as a new public domain resource.

In this context the web site aims to increase project visibility and stakeholders involvement, attract new potential users and inform other research institutions and public administrations on the progress of the project.

This document briefly describes the SIMPATICO website and its organization. The website has been designed in order to maximise both the impact and outreach of the results of the project. The team is reporting here its first version but the web site is intended to be as much as possible a flexible and dynamic tool so it could improve during project lifecycle.

1 Project website description

The SIMPATICO project website, <http://www.simpatico-project.eu>, has been originally designed to quickly address key questions that external visitors to the website are expected to have including, namely:

- What is the project about?
- What is the project delivering, and why?
- What cities are participating in the project?
- Who is participating in the project?
- What additional detail is available?
- Who can be contacted for more information?

The SIMPATICO project website is one of the main tools for disseminating information about the consortium and the achievements of the project, providing visitors with comprehensive information about its context and objectives.

The selected approach was to use a single page oriented web design.

The main SIMPATICO web site, that is deployed in English, will be followed by three other web sites managed at local level in each test site that will be in local language to be more accessible on field.

Most significant news from those web sites will be translated in English and reported on the main one.

1.1 Website organization

The current website is organized in several sections:

- Home: homepage of the project. It contains a slider bar with images from the 3 pilot administrations, a news section and the link to SIMPATICO social media accounts:
 - Facebook (<https://www.facebook.com/simpaticoproject/>),
 - Twitter (<https://twitter.com/H2020Simpatico>),
 - Google+ (<https://plus.google.com/communities/107679769963105218124>).
- Brief: general information on the project, its objective and its approach.
- Pilots: brief description of pilot sites mainly focused on services going to be deployed.
- The Consortium: list of partners together with a map showing their locations in Europe.
- Publications: In this are all public documents, articles and any other available published (at central level), material will be available for download as well as public deliverables.
- Calendar: A calendar of main project public events is provided.
- News & Events: This section will be fed with news related to project activities or coming from similar frameworks.
- Contact: Here it is possible both to register to receive more information and/or to simply contact the project team.

1.1.1 The home page

The home page starts with the section shown in Figure 1 where the project is clearly identified in terms of main objective, approach and pilot sites. That with the aim to give an immediate feeling of the entire project context.

On the right latest news and posts are shown.

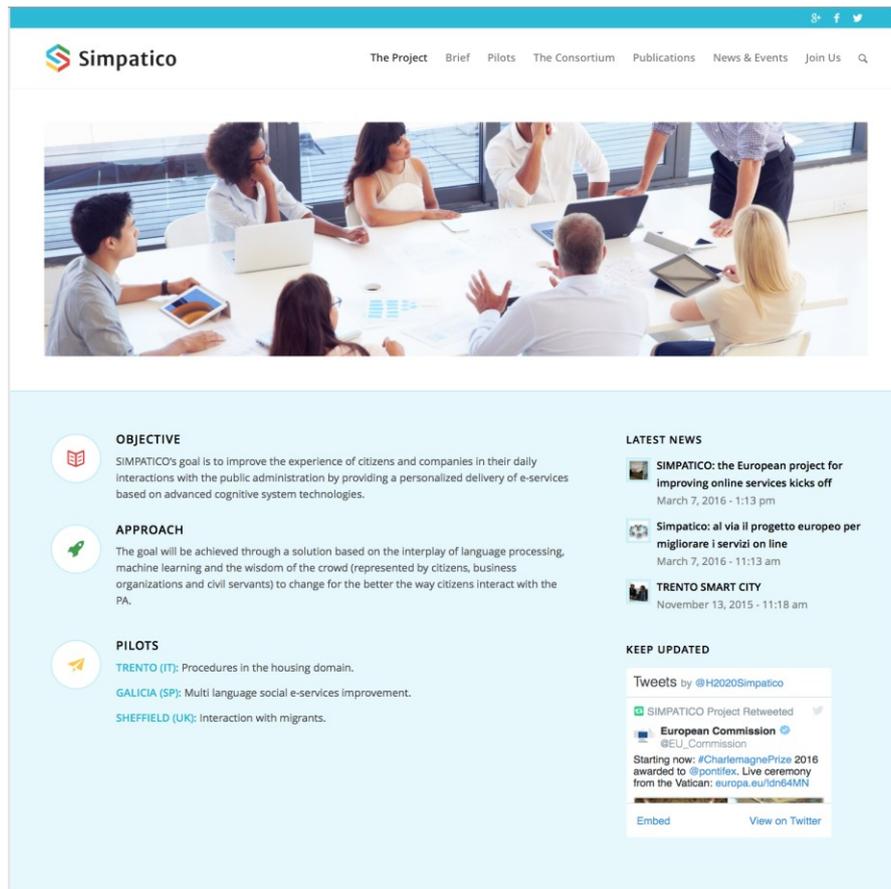


Figure 1 – Home page top

After these first key information about the project, the web site provides clear answers to the questions related to how the project works and what are expected achievements (see Figure 2).

How it works

SIMplifying the interaction with **Pub**lic **Ad**ministration **Th**rough information technology for **C**itizens and **c**Ompanies

By integrating language processing, machine learning and human computation SIMPATICO can deliver personalized services that are much more understandable, efficient and effective, thus increasing business competitiveness and citizen inclusion.



Expected Achievements



1. Increase in efficiency and effectiveness of public e-services;
2. Better inclusion of endangered collectives of citizens;
3. Decrease of the administrative burden for companies and professional to facilitate economic development.
4. Support in measuring the engagement of civil servants, citizens, professionals and other stakeholders
5. Validation of the SIMPATICO Platform both for its innovative value, usability and quality of experience

[Learn More](#)

Figure 2 – Home page mid

The following part of the home page is dedicated to Innovation: it proposes main KPIs to be used to measure project achieved results (see Figure 3).

Innovation

In modern European societies, the different administrations are a key element for a sustainable economic growth. In particular, the current economic situation has forced administrations to take a very active role in promoting innovation at every level of society and economy, since innovation is recognized as the main source of economic growth.

SIMPATICO proposes three main effectiveness indicators to validate its results in the long term:



KPI 1

A new generation of citizen-centric e-services.



KPI 2

User empowerment for both citizens and businesses by advancing to active users.



KPI 3

Citizenpedia: a collective knowledge database on public services and procedures.



European Commission



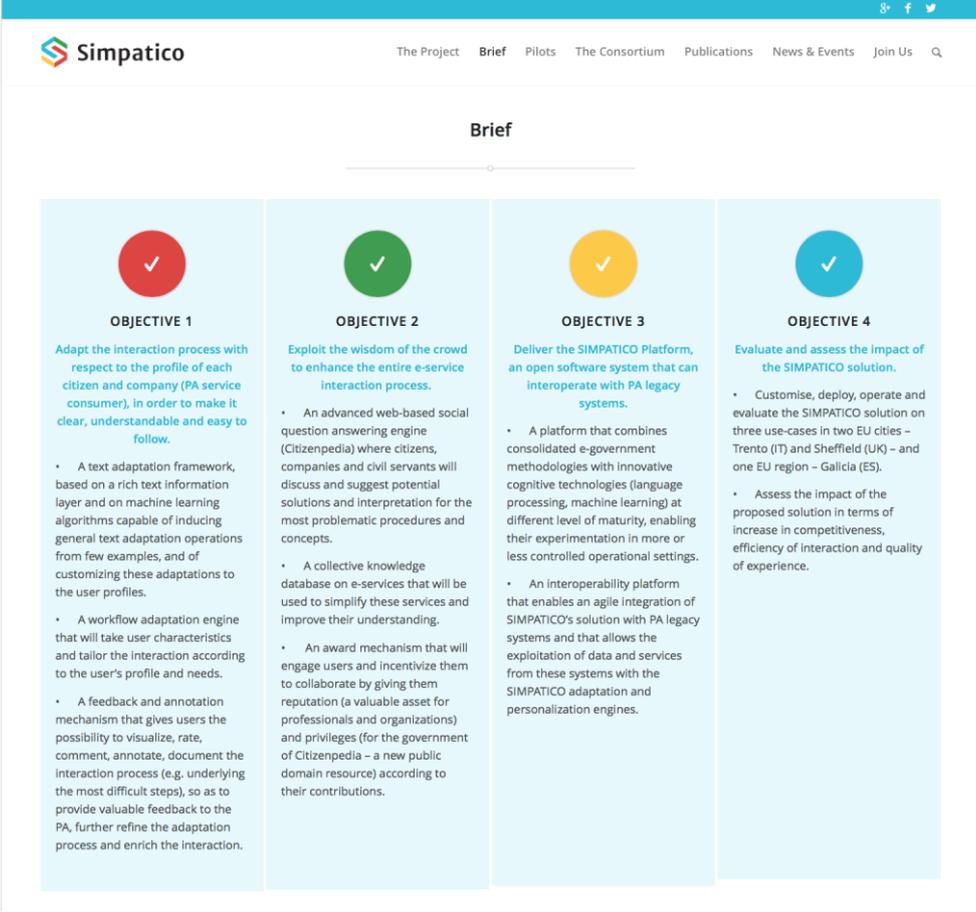
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Figure 3 – Home page bottom

1.1.2 The Brief section

In this section project objectives are shown in detail, also identifying functional approaches going to be followed in the project deployment.



The screenshot shows the 'Brief' section of the SIMPATICO website. It features a navigation bar with the SIMPATICO logo and links to 'The Project', 'Brief', 'Pilots', 'The Consortium', 'Publications', 'News & Events', and 'Join Us'. Below the navigation bar, the word 'Brief' is centered. The main content area is divided into four columns, each representing an objective. Each objective is marked with a checkmark in a colored circle (red, green, yellow, and blue respectively).

OBJECTIVE 1

Adapt the interaction process with respect to the profile of each citizen and company (PA service consumer), in order to make it clear, understandable and easy to follow.

- A text adaptation framework, based on a rich text information layer and on machine learning algorithms capable of inducing general text adaptation operations from few examples, and of customizing these adaptations to the user profiles.
- A workflow adaptation engine that will take user characteristics and tailor the interaction according to the user's profile and needs.
- A feedback and annotation mechanism that gives users the possibility to visualize, rate, comment, annotate, document the interaction process (e.g. underlying the most difficult steps), so as to provide valuable feedback to the PA, further refine the adaptation process and enrich the interaction.

OBJECTIVE 2

Exploit the wisdom of the crowd to enhance the entire e-service interaction process.

- An advanced web-based social question answering engine (Citizenpedia) where citizens, companies and civil servants will discuss and suggest potential solutions and interpretation for the most problematic procedures and concepts.
- A collective knowledge database on e-services that will be used to simplify these services and improve their understanding.
- An award mechanism that will engage users and incentivize them to collaborate by giving them reputation (a valuable asset for professionals and organizations) and privileges (for the government of Citizenpedia – a new public domain resource) according to their contributions.

OBJECTIVE 3

Deliver the SIMPATICO Platform, an open software system that can interoperate with PA legacy systems.

- A platform that combines consolidated e-government methodologies with innovative cognitive technologies (language processing, machine learning) at different level of maturity, enabling their experimentation in more or less controlled operational settings.
- An interoperability platform that enables an agile integration of SIMPATICO's solution with PA legacy systems and that allows the exploitation of data and services from these systems with the SIMPATICO adaptation and personalization engines.

OBJECTIVE 4

Evaluate and assess the impact of the SIMPATICO solution.

- Customise, deploy, operate and evaluate the SIMPATICO solution on three use-cases in two EU cities – Trento (IT) and Sheffield (UK) – and one EU region – Galicia (ES).
- Assess the impact of the proposed solution in terms of increase in competitiveness, efficiency of interaction and quality of experience.

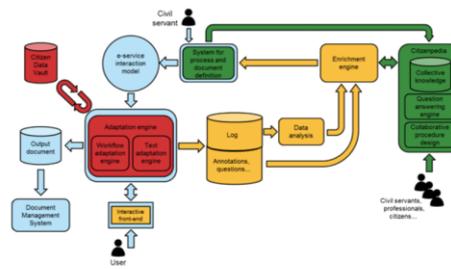
Figure 4 – Brief page top

SIMPATICO conceptual architecture with its “Layers Approach” is explained in this section in order to contextualise the previous described objectives.

SIMPATICO Conceptual Architecture

The SIMPATICO approach is realized through a platform that can be deployed on top of an existing PA system and allows for a personalized service delivery without having to change or replace its internal systems: a process often too expensive for a public administration, especially considering the cuts in resources imposed by the current economic situation.

The SIMPATICO Platform can be seen as a layer between the users and the internal PA legacy system. Its different components will integrate and adapt the interaction process, offering a better experience to the user.



The Layers Approach

The first layer of SIMPATICO (in red) is the adaptation layer. It provides the adaptation capabilities of the e-service through an engine that adapts the e-service interaction according to the characteristics of the user. Its main elements are the following.

The second layer of SIMPATICO (in yellow) is the user interaction and feedback analysis layer. It introduces a feedback loop in the interaction process where direct and indirect feedback is gathered from users and applied to further refine the adaptation process. Its main elements are the following.

The third layer of SIMPATICO (in green) is the human computation layer. It introduces a second loop in the interaction process where the collective knowledge gathered from all stakeholders is used to improve the interaction process.

Figure 5 – Brief page mid

1.1.3 The Pilots area

Being the three pilot sites a core part of the project, a dedicated section has been planned and there, users can find basic information related to main needs present in each pilot site.

Pilot sites are intended to provide several complementary applications of SIMPATICO approach and related solutions.

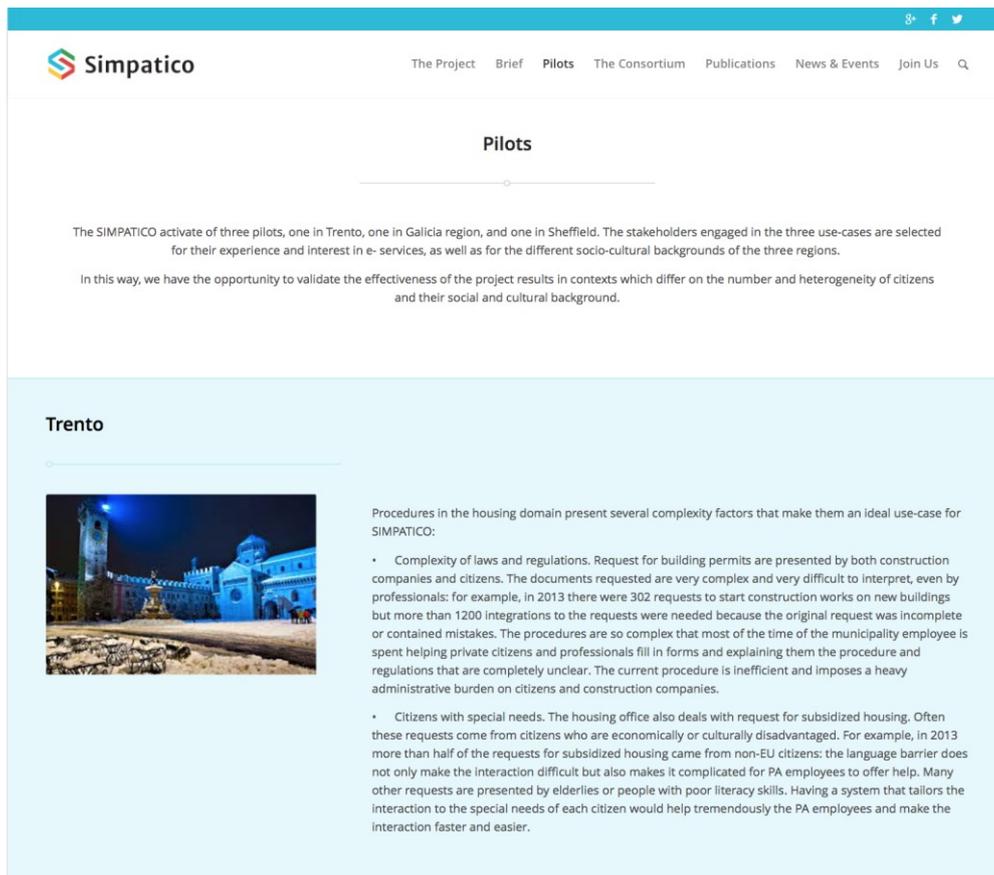


Figure 6 – Pilots top

Galicia



The socioeconomic indicators for Galicia show a number of particular needs that make it especially suited for e-services improvement. Among these are:

- A sparse distribution of the population, especially in the rural centre of the region, where people often migrate to the richer coastal areas and other Spanish regions. This has resulted in large rural areas with a low population density, where the access to public services is harder.
- An aging population: Galicia is third from bottom in Spain in aging perspectives as noted by the EU (just 1,1 children per woman compared to the 1,4 average in Spain, while the zero growth threshold is 2,1). Latest data also show a big gap in the use of e-services in the Galicia region between the segment of population older than 55 with respect to rest of people: while 66.63% of the people between 30 and 39 years has used e-services during the last year, this rate is only 13.81% for people older than 55 years.

Sheffield



Although a significant volume of information is openly available on the Council's website (<http://www.sheffield.gov.uk/>), current interactions between migrants and Sheffield City Council are mostly done in person or over the phone. The reasons behind this fact include the lack of personalised content online, e.g. for migrants from specific countries or in particular cases, based on previous interactions; the migrants' inexperience with the UK system and lack of knowledge of the English language; the perception and lack of trust from migrants regarding providing information into online forms; the inherent complexities of the processes, particularly in cases requiring long term engagement with the migrants. The volume of face-to-face/phone interactions with citizens whose native language is not English, and thus requiring interpretation or translation, is very high. This option was used by 1500 citizens in 2014 alone, resulting in enormous costs to the Council: in 2014, the costs with translation and interpretation exceeded 386,000 Euros. In addition, the need to rely on human interpreters and translators severely delays the interaction process.

Support and advice for issues concerning children of migrants living in the UK thus present several complexity factors and potential benefits that makes this an ideal use-case for SIMPATICO.

Figure 7 – Pilots mid

In this section, a brief description of innovative components characterising SIMPATICO project is also presented.

Components

Text adaptation

SIMPATICO learns from interactions with users what their needs are and, among different simplification possibilities, find the ones that best suits a specific users, or induce novel forms of simplification if the existing ones are not adequate. These new strategies will combine standard adaptation rules with information automatically leveraged through user interactions (e.g. logs), information provided by civil servants and knowledge provided by citizens. This user-centred self-evolving approach will consider user profiles, exploit rich linguistic information, provide advanced machine learning to allow self-adjustment, initiating a new research direction in the field of text adaptation.

Citizen data vaults

SIMPATICO tackles interoperability, network latency, data availability and security issues impeding a more widespread adoption of CDVs. It will address the perceived liability for public entities which fail to deliver services because of the absence of data vault services. Its CDV enables citizens to use it as a single point of access to their data when interacting with the public administration. It is composed of personal information items fed by authorized data sources (e.g. civil registry) and supplied automatically by the CDV to the open services consumed by citizens.

Human computation

SIMPATICO fosters citizens' involvement, by providing Citizenpedia, a hybrid of Wikipedia and a collaborative question answering engine, and sharing improvements on public resources in a semi-automatic basis. Public servants are able to moderate comments and suggestions of citizenships to prevent crowd's wisdom bias. An award mechanism that engages users and incentivize them to collaborate by giving them reputation (a valuable asset for professionals and organizations) and privileges is designed.

Process design

The Collective knowledge gathered with the use of the platform (user annotations, questions & answers in the Citizenpedia, logs, user profiles in the Citizens data vault), fosters two alternative process management approaches that can be adopted depending on whether the knowledge is well structured or not. SIMPATICO will adopt an ACM process design notation when the knowledge does not show a clear structure, whilst a BPM notation will be preferred.

Information extraction and text analysis

This project applies state of the art text processing techniques to perform adaptations in order to cope with specific characteristics of public service contents. Traditional NER are extended to recognize additional entities, e.g. laws, official documents and norms. Besides, user comments are likely to be highly informal in structure and vocabulary. Text clustering will be used for organization and classification of final user comments and opinions.

Advanced information search and recommendation mechanisms

In order to improve user experience whilst consuming e-services, SIMPATICO is powered with advanced search/recommendation mechanisms that will take into account the context, i.e. the area of the page and specific contents that the user is currently looking at, the user's profile and his/her previous interactions with the system.

Browser extensions

This project creates a cross-browser extension which enables users accessing to e-services to leverage from the adaptation and collective intelligence properties provided by SIMPATICO. The novelty is in the creation of an extension for enhancing accessibility and democratizing access to legacy e-services by personalizing the content and workflows of the webpages supporting an e-service through the interaction with SIMPATICO back-end.



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Figure 8 - Components

1.1.4 Consortium

A map showing the wide spread consortium in the European framework is provided followed by logos and links for each partner.

In the bottom part of the page all project references are provided.



The screenshot shows the SIMPATICO website with the following content:

- Navigation:** The Project, Brief, Pilots, **The Consortium**, Publications, News & Events, Join Us, Search.
- The Consortium Section:**
 - Map:** A map of Europe with colored markers indicating partner locations in Italy, Spain, and the UK.
 - Description:** "The SIMPATICO consortium counts on a highly competent international team consisting of an internationally well recognized research Institute (FBK), two prestigious universities (DEUSTO and USFD), a large company (ENG), three innovative SMEs (HIB, SPA, BENG) and three public administrations (TRENTO, GALICIA, SCC), for a total of ten organizations from three countries."
- Partner Logos:**
 - Fondazione Bruno Kessler (FBK)
 - ENGINEERING
 - Business Engineering
 - COMUNE DI TRENTO
 - Deusto (Universidad de Deusto)
 - iberia
 - XUNTA DE GALICIA
 - The University of Sheffield
 - SPARTADIGITAL
 - Sheffield City Council
- Project Sheet Section:**
 - SIMPATICO:**
 - Project reference: 692819
 - Funded under: H2020-EU.3.6 – SOCIETAL CHALLENGES – Europe In A Changing World – Inclusive, Innovative And Reflective Societies
 - Title: SIMplifying the interaction with Public Administration Through Information technology for Citizens and cOmpanies
 - Start date: 01.03.2016 End date 28.02.2019
 - Project details:**
 - Total cost: EUR 3 628 718,75
 - EU contribution: EUR 3 628 718,75
 - Coordinated in: Italy by FBK
 - Topic(s): EURO-6-2015 – Meeting new societal needs by using emerging technologies in the public sector
 - Call for proposal: H2020-EURO-6-2015, RIA – Research and Innovation action
- Footer:**
 - Logos for European Commission and Horizon 2020 European Union funding for Research & Innovation.
 - © Copyright - SIMPATICO - 692819
 - Social media icons for YouTube, Facebook, and Twitter.

Figure 9 – The Consortium

1.1.5 Public Repository

Public Documents: this is an area containing the links to public documents that each visitor can download. There will be three sub-areas: public deliverables, articles and scientific publications.

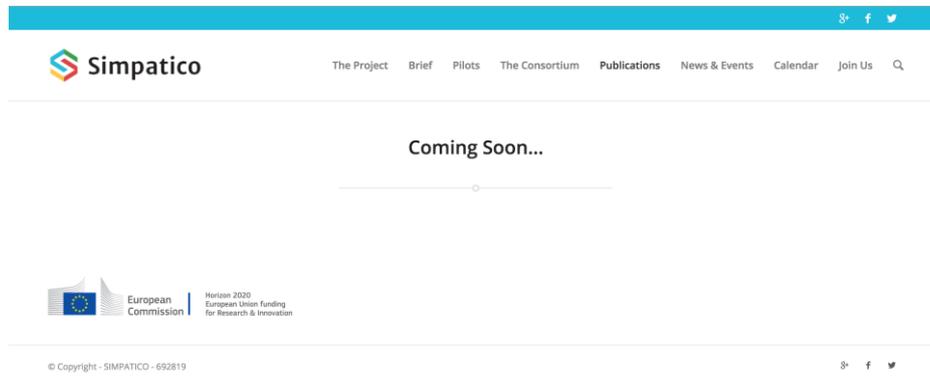


Figure 10 - Repository

1.1.6 News and Events section

In this section news related to the overall project as well as main local news are going to be presented in English for international users.

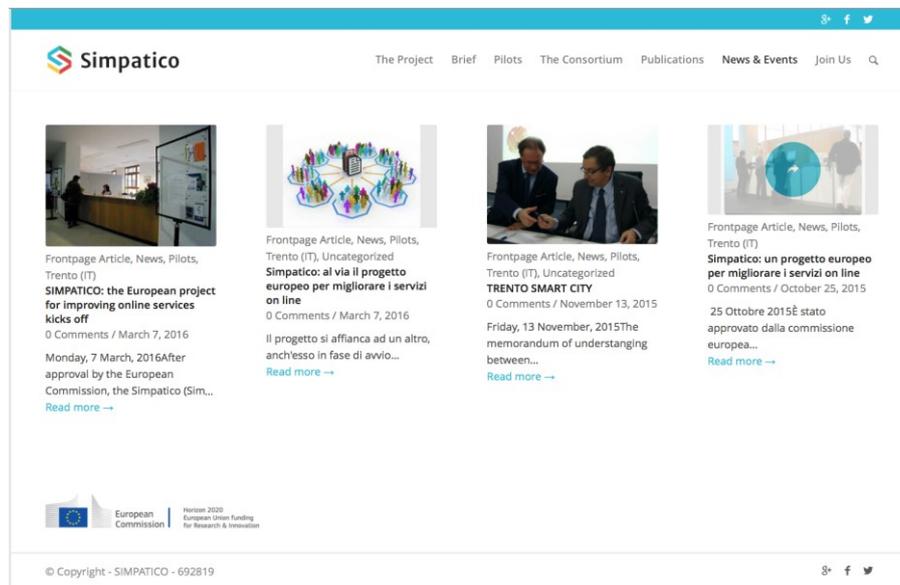


Figure 11 - News

1.1.7 Calendar

A Dissemination calendar (linked with google calendar¹ project one), is provided to identify incoming events and project workshops.

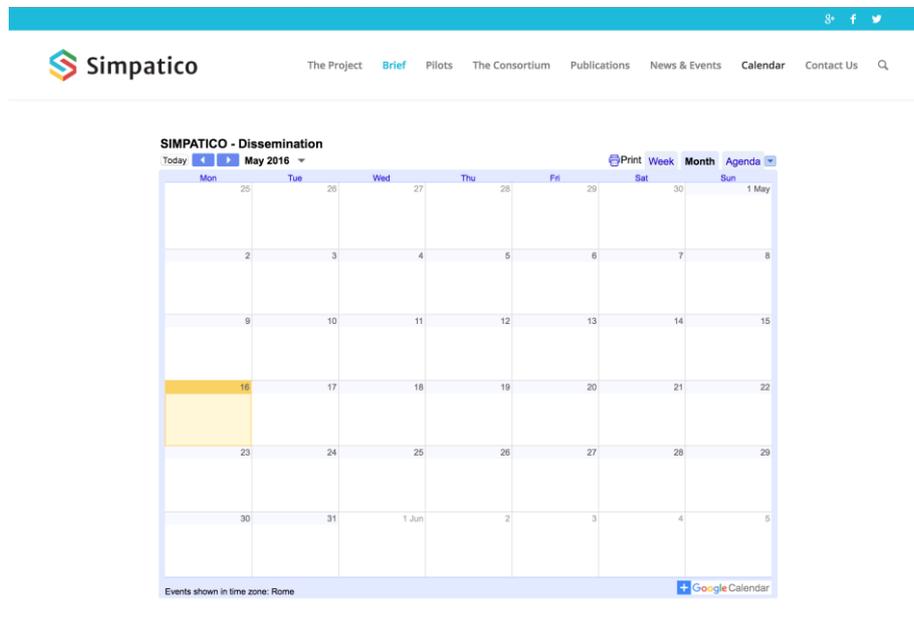


Figure 12 - Google Calendar

¹ Google Calendar:

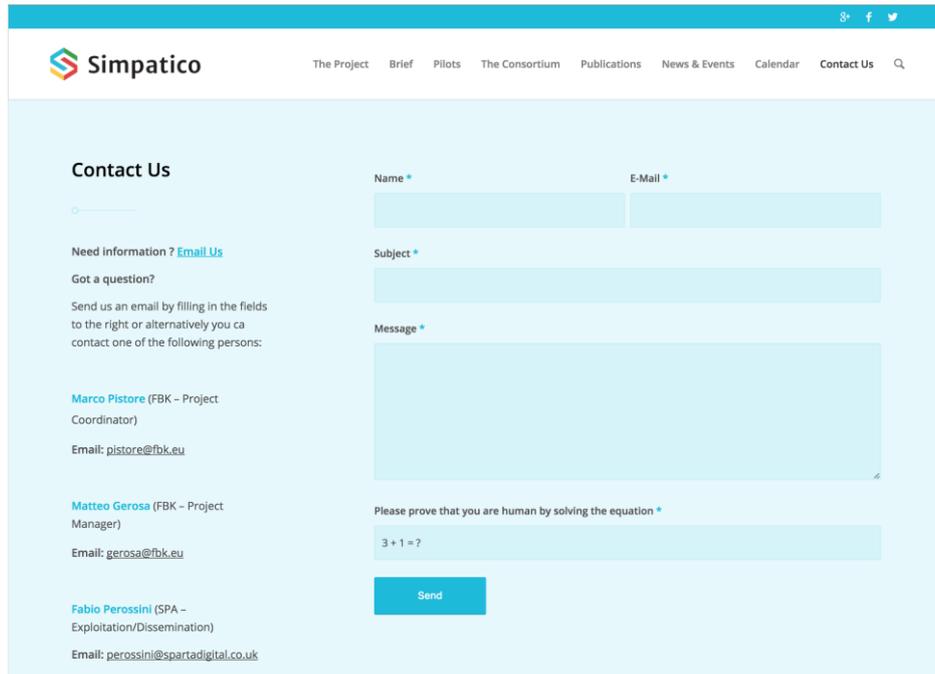
<https://calendar.google.com/calendar/embed?src=7rod5d1fsdafor9g17be2ujh4k%40group.calendar.google.com&ctz=Europe/Rome>

1.1.8 Contact Us

In this section a contact form is available to ask specific questions.

On the left side specific links to contact project managers are provided.

In the Contact Us page, we have left a number important email addresses to allow users/readers to get in touch with the Project. In order to prevent spam bots to capture the email addresses, which is very common that bots search through websites looking for <emailaddress>@<host>.<com>. We encoded the email address in HTML to obfuscate the bots. This approach readily resolves this issue.



The screenshot shows the 'Contact Us' page of the Simpatiko website. The page has a light blue background and a white header with the Simpatiko logo and navigation links: 'The Project', 'Brief', 'Pilots', 'The Consortium', 'Publications', 'News & Events', 'Calendar', and 'Contact Us'. The main content area is divided into two columns. The left column contains the 'Contact Us' heading, a search bar, and a list of project managers with their names, roles, and email addresses: Marco Pistore (Coordinator, pistore@fbk.eu), Matteo Gerosa (Project Manager, gerosa@fbk.eu), and Fabio Perossini (Exploitation/Dissemination, perossini@spartadigital.co.uk). The right column contains a contact form with fields for 'Name *', 'E-Mail *', 'Subject *', and 'Message *'. Below the message field is a CAPTCHA question: 'Please prove that you are human by solving the equation *' with the equation '3 + 1 = ?' and a 'Send' button.

Figure 13 – Contact form

2 Statistics

In order to get a better understanding of the usage of the SIMPATICO project website and wiki, both were registered with the free Google Analytics² facility. This enables powerful reporting on the website and wiki access statistics, giving a very clear picture of information such as:

- How many users are visiting the site;
- What links and pages are most popular;
- What websites users are coming from;
- Where visitors are coming from geographically.

Google Analytics is expected to help the consortium determine the effectiveness of its web tools and targeted dissemination activities.

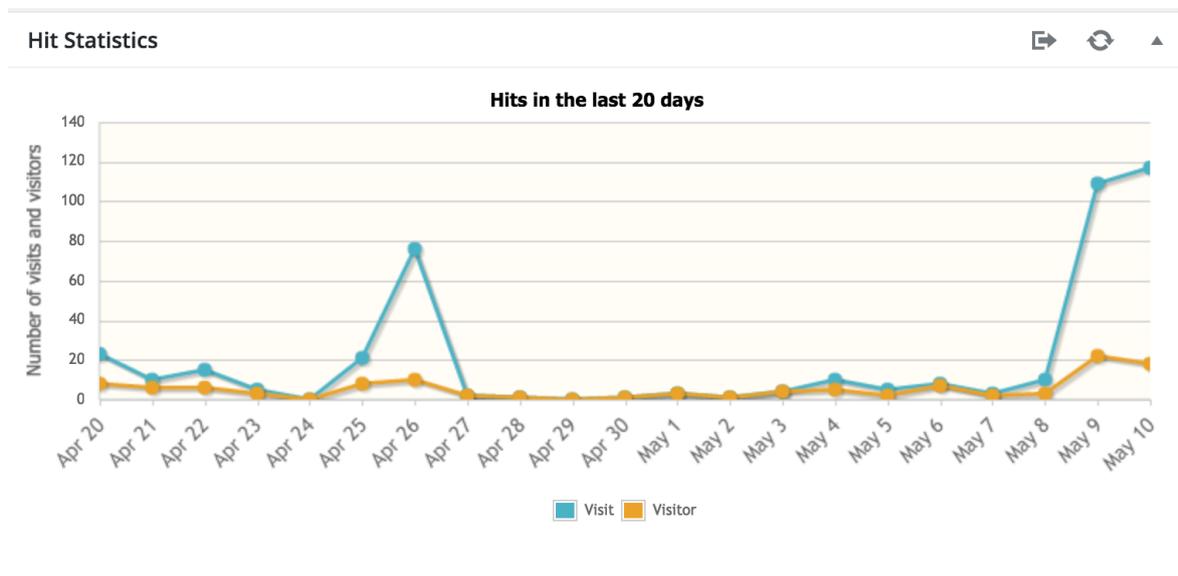


Figure 14 - Hits



Figure 15 – Visitors/Visits

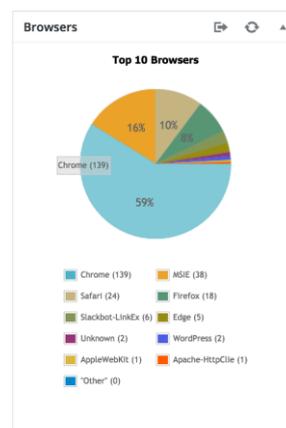


Figure 16 - Browsers

² Google Analytics: https://www.google.com/intl/it_it/analytics/