



Project Title: Sensing and predictive treatment of frailty and associated co-morbidities using advanced personalized models and advanced interventions

Contract No: 690140

Instrument: Collaborative Project

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Topic: PHC-21-2015: Advancing active and healthy ageing with ICT: Early risk detection and intervention

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Project Web Presence

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Change History

Ver.	Date	Status	Author (Beneficiary)	Description
0.5	08/03/2016	draft	Kosmas Petridis, Hariklia Zografou (HYPERTECH)	First draft website version.
0.8	23/03/2016	draft	Kosmas Petridis, Hariklia Zografou (HYPERTECH) Maude Luherne, Nathalie De Craecker (AGE)	Updated website version. Creation of social media channels. First draft deliverable report.
1.0	30/03/2016	final	Kosmas Petridis, Hariklia Zografou (HYPERTECH) Vasilis Megalooikonomou, Andreas Kanavos, John Ellul (UoP)	FrailSafe website launched. Deliverable report finalised.

EXECUTIVE SUMMARY

The deliverable “D8.5: Project Web Presence” reports the creation and launch of the FrailSafe official website. The site is based on a usable content management system (also in the form of a Wiki to serve as the internal file repository of the project), and supports a blog of research and personal experiences, where partners can put articles about intermediate results, demos, events, press releases, newsletters, participation to special events, organisation of FrailSafe workshops, etc. The deliverable also illustrates the social media channels created to promote the FrailSafe execution and results.

The website is publicly available at the following address: <http://frailsafe-project.eu/>.

DOCUMENT INFORMATION

Contract Number:	H2020-PHC-690140	Acronym:	FRAILSAFE
Full title	Sensing and predictive treatment of frailty and associated co-morbidities using advanced personalized models and advanced interventions		
Project URL	http://frailsafe-project.eu/		
EU Project officer	Mr. Ramón Sanmartín Sola		

Deliverable number:	8.5	Title:	Project Web Presence
Work package number:	8	Title:	Dissemination and Exploitation

Date of delivery	Contractual	01/04/2016 (M3)	Actual	31/03/2016
Status	Draft <input type="checkbox"/>		Final <input checked="" type="checkbox"/>	
Nature	Report <input type="checkbox"/>	Demonstrator <input type="checkbox"/>	Other <input checked="" type="checkbox"/>	
Dissemination Level	Public <input checked="" type="checkbox"/>	Consortium <input type="checkbox"/>		
Abstract (for dissemination)	This deliverable reports the FrailSafe official website launch and the creation of the corresponding social media channels to promote the FrailSafe execution and results.			
Keywords	FrailSafe, website, frailty, wiki, repository, social media			

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1 Introduction

The deliverable “D8.5: Project Web Presence” reports the creation and launch of the FrailSafe official website. The site is based on a usable content management system and supports a blog of research and personal experiences, where partners can put articles about intermediate results, demos, events, press releases, newsletters, participation to special events, organisation of FrailSafe workshops, etc.

The website also includes a restricted area, in the form of a Wiki, which acts as the internal repository of the project enabling file sharing and exchange among the project partners.

The deliverable also illustrates the social media channels created to promote the FrailSafe execution and results.

The FrailSafe website is expected to **grow as the project evolves**, in order to reflect the **progress performed** and the **results produced** throughout the project execution. The website but also the social media channels are going to be **maintained and updated regularly**, in order to **attract new visitors** and **engage relevant stakeholders but also the general public** to the FrailSafe activities.

The website is publicly available at the following address: <http://frailsafe-project.eu/>.

2 Website Sections

In the following paragraphs, the main FrailSafe website public sections will be presented, namely:

- Front page
- Project overview
- Media
- Results
- News/Blog
- Contact

2.1 Front Page

The **front page** of the FrailSafe website includes a **synopsis of the project primary scope and objectives** in order to **attract visitor to navigate** through the available sections and **engage relevant stakeholders but also the general public** to the FrailSafe activities. The upper part of the main page is illustrated in Figure 1 below.

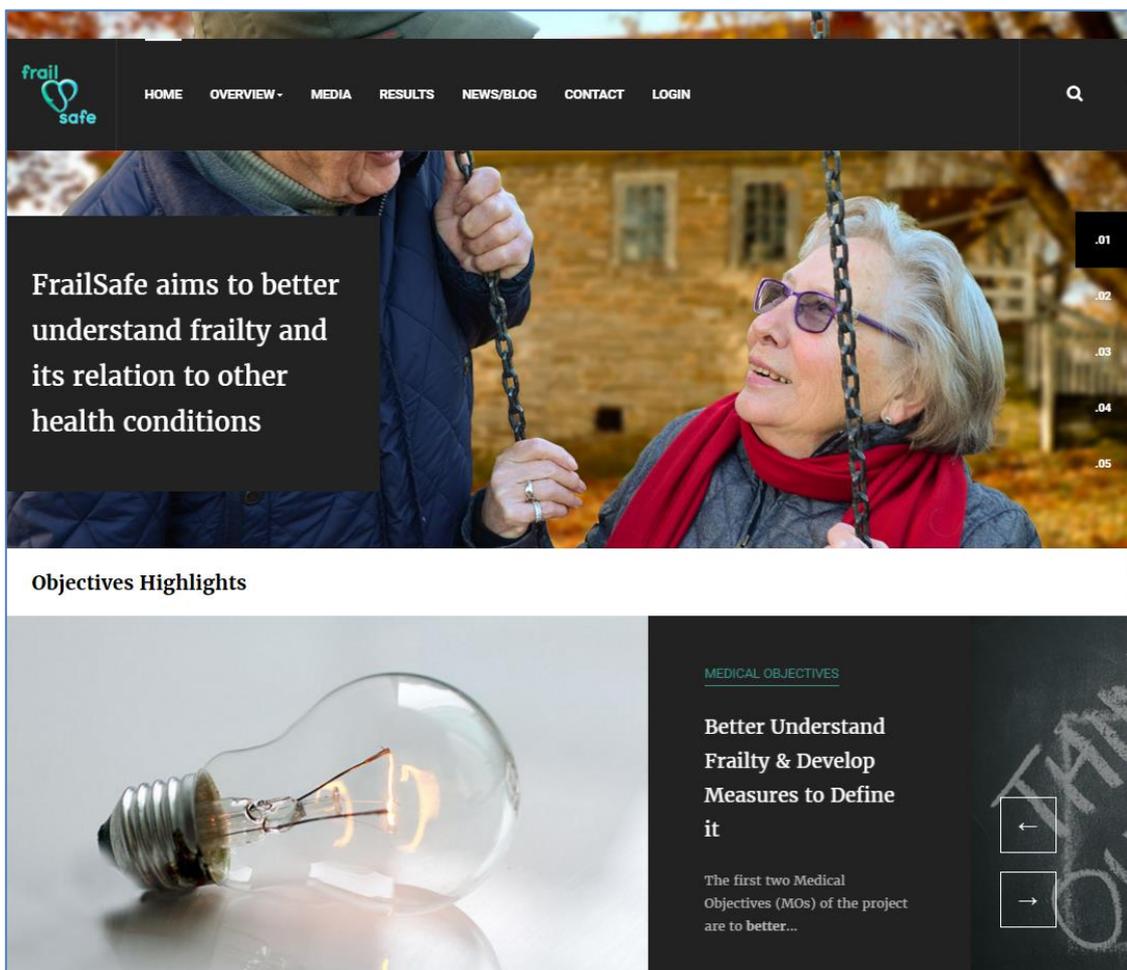


Figure 1 FrailSafe website front page

The **top menu bar** includes the main public section of the project website, which, as already mentioned, will be presented in the next paragraphs (Figure 1). It also contains the link to enter the private part of the website (“Login” option, see Chapter 3). A handy **search functionality** is also available for visitors to allow easy discovery in the website content.

The **main slideshow** of the page (Figure 1) currently consists of five (5) relevant and representative images accompanied with corresponding key project messages, e.g. “*FrailSafe aims to better understand frailty and its relation to other health conditions*”, “*Identify measures of frailty through advanced data mining approaches*”, and so on.

Next, the **medical objectives** of the project are highlighted in a respected slider (Figure 1) including a distinct slide for each article present in the “Medical Objectives” subsection (see Chapter 2.2).

When user moves down in the main page (Figure 2), a text is displayed summarising the **aim of FrailSafe**, accompanied with key links expressing the excellence of the project, the involved partners etc.

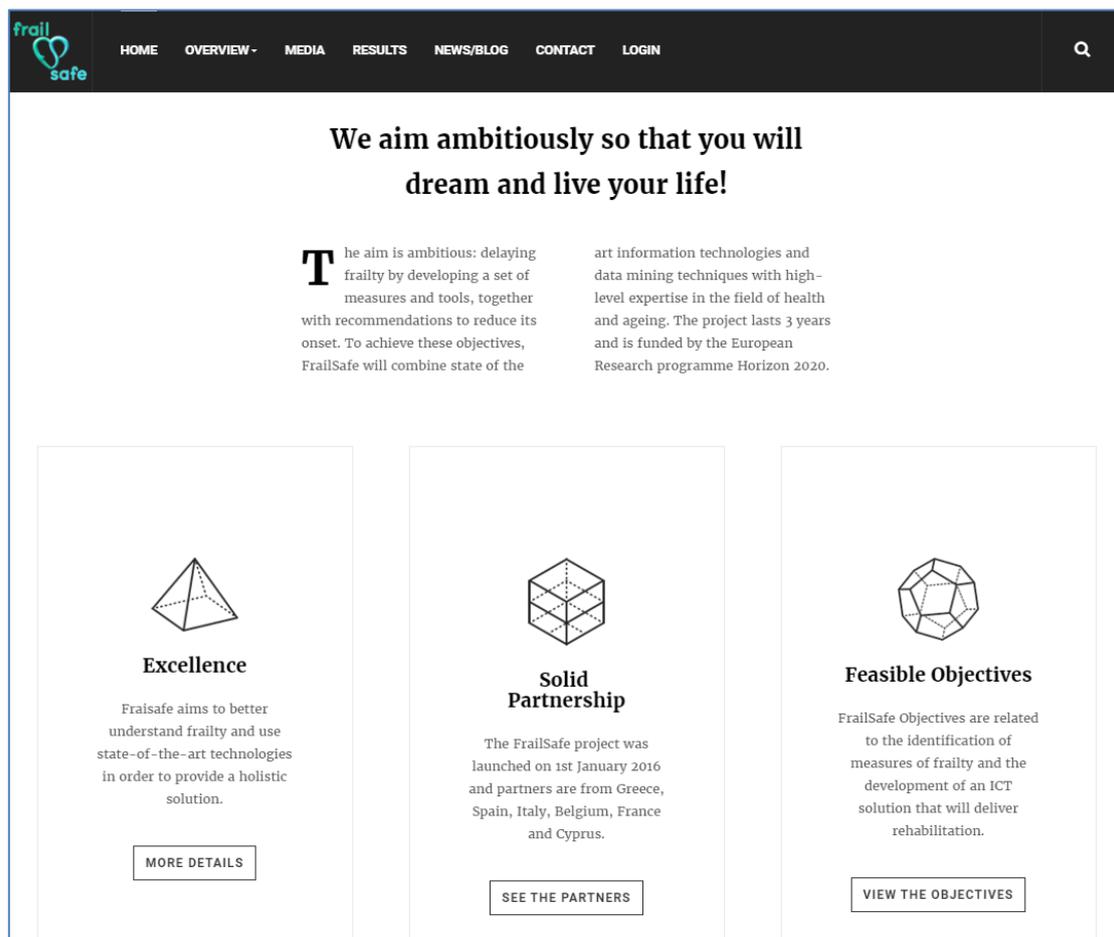


Figure 2 Aim of the project and key links

Then, the main **technological objectives** of the project are highlighted in a dedicated slider (Figure 3). Available slides present the hardware concepts, user model creation, data management, augmented reality game, monitoring and management of FrailSafe. Each slide links to the “Technological and Other Objectives” subsection of the website (see Chapter 2.2).

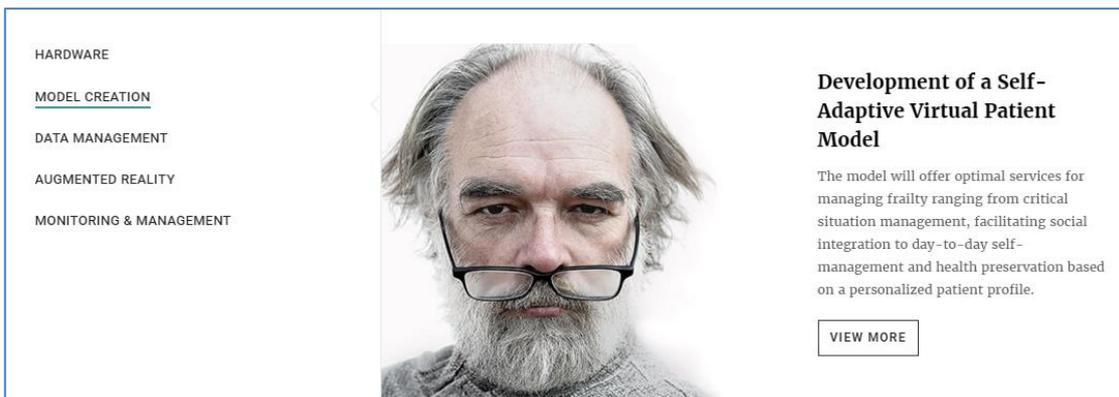


Figure 3 The technological objectives slider

By scrolling down, visitor is able to see a banner illustrating **indicative ageing facts** (Figure 4) as well as a list of the recent project news and top stories, the current hottest article, the FrailSafe Twitter feed and project contact info (Figure 5).

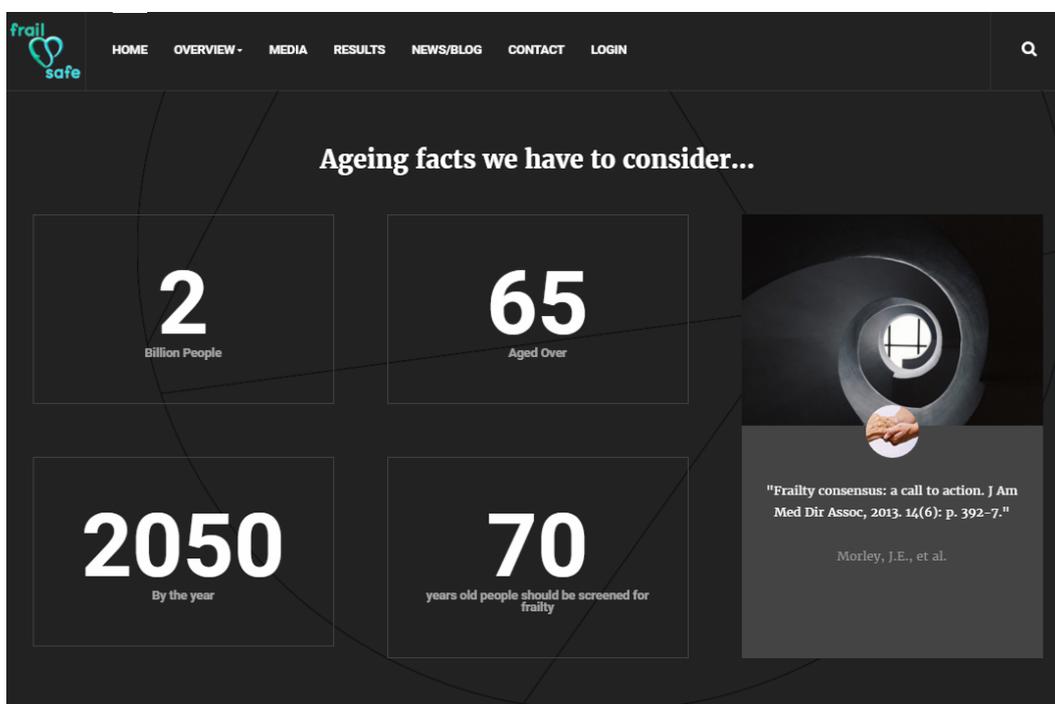


Figure 4 Banner illustrating indicative ageing facts

Finally, the **footer** (Figure 6), which is **available in every page of the website**, contains a link to the contact form (“Get in touch” option, see Chapter 2.6) and corresponding links to the main sections of the website. Visitor has also the ability to register to the **newsletter** that will be circulated regularly during the project execution.

To achieve compliance with an important FrailSafe Grant Agreement regulation, the website footer also includes the **EU emblem** accompanied with the following text: **“The project leading to this application has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 690140”**.

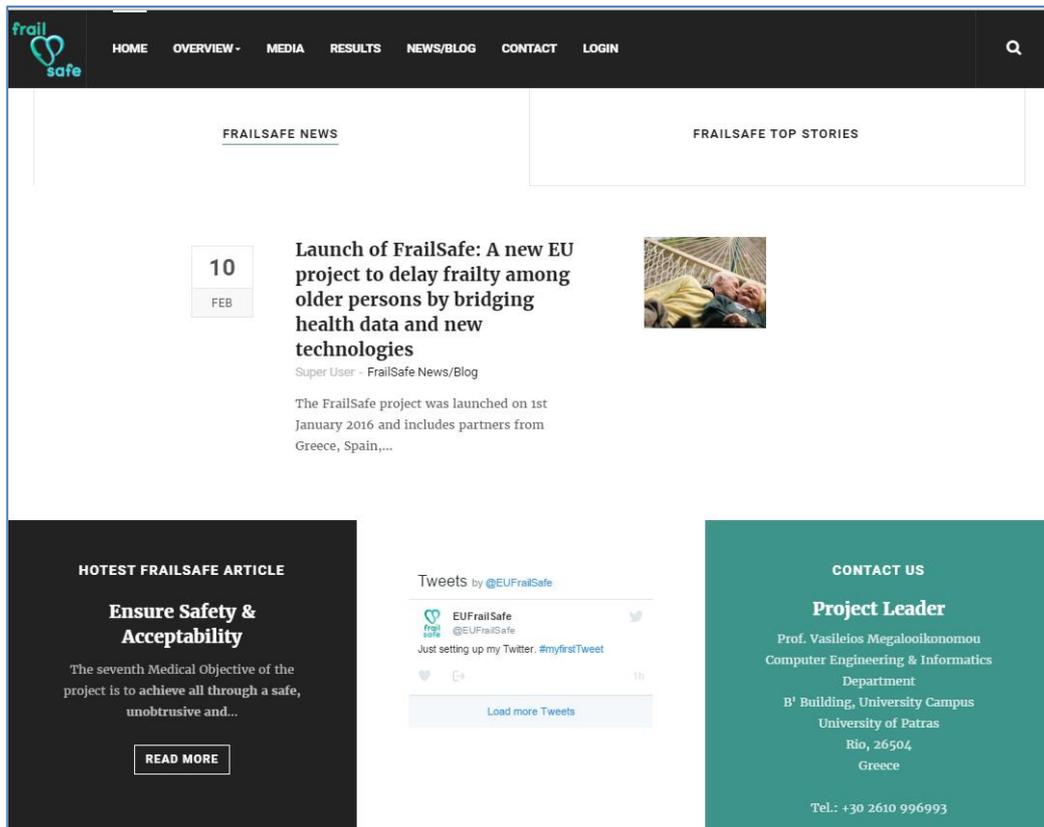


Figure 5 FrailSafe news, top stories and articles, twitter feed and contact info

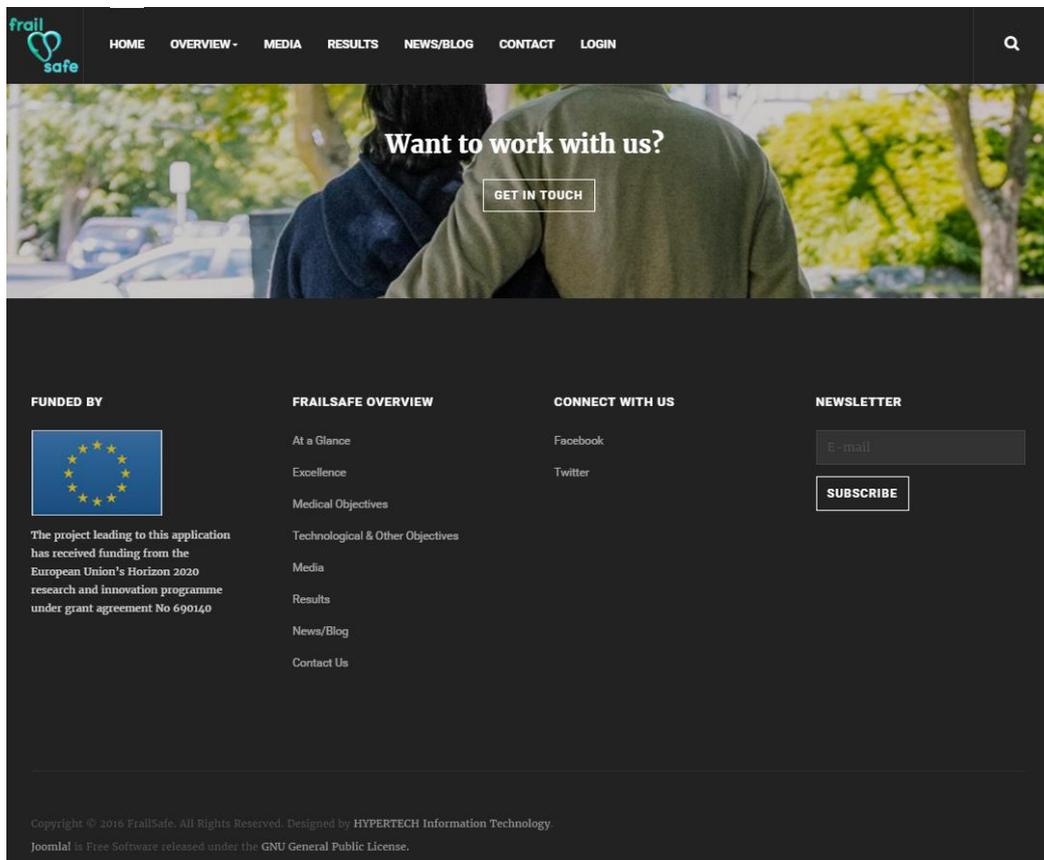


Figure 6 FrailSafe website footer

The FrailSafe main page is expected to be **updated regularly as the project evolves** in order to reflect the progress performed and include, for instance:

- Photos from the field trials with older people,
- FrailSafe demos,
- links to the Virtual Community Platform (to be developed at a later stage),
- the FrailSafe project film (to be produced during the third year of the project) etc.

2.2 Project Overview

The “Overview” top menu section (Figure 7) is divided in the following subsections:

- **At a glance**, including an introduction to the project and the list of partners (Figure 7).

The screenshot shows the FrailSafe website's 'Overview' section. The navigation menu includes 'HOME', 'OVERVIEW', 'MEDIA', 'RESULTS', 'NEWS/BLOG', 'CONTACT', and 'LOGIN'. The main content area is titled 'At a Glance' and features a dropdown menu with options: 'At a Glance', 'Excellence', 'Medical Objectives', 'Technological and Other Objectives', and 'Partners'. Below the menu is a large word cloud graphic with 'frailty' as the central word, surrounded by terms like 'interventions', 'measures', 'social', 'physical', 'cognitive', 'parameters', 'monitoring', 'risk', 'frail safe', 'real-time', 'feedback', 'augmented reality', 'serious games', 'platform', 'physiological', 'behavioural', 'contextual', 'model', 'dynamic', 'pharmaceutical', 'non-pharmaceutical', 'evidence-based', 'recommendations', 'motor', 'cognitive', 'anti-frailty', 'personalised', 'treatment', 'programmes', 'guidance', 'education', 'safe', 'unobtrusive', 'acceptable', 'system', 'ageing', 'population', 'reducing', 'cost', 'health', 'care', 'systems'. To the right of the word cloud is a section titled 'An Overview' with a detailed paragraph about the ageing population and frailty. Below this is a section titled 'FrailSafe Partners' featuring two partner cards: 'University of Patras' (Greece, Academia) and 'Brainstorm Multimedia' (Spain, SME).

Figure 7 The “Overview” section options & the “At a Glance” page

- **Excellence**, presenting key frailty facts that FrailSafe aims to deal with.
- **Medical Objectives**, as defined in the FrailSafe Grant Agreement, which are related to the **identification of quantitative and qualitative measures of frailty and the associated co-morbidities**. Medical Objectives are illustrated as separate articles (Figure 8). FrailSafe website allows published articles to be **tagged with relevant keywords**, enabling **classification** and **easy search and discovery** (Figure 9). **Popular tags** are presented in a dedicated widget available at the right sidebar of the website pages (Figure 9).

Medical Objectives

FrailSafe Objectives are divided into Medical (MOs) and Technological Objectives (TOs). Medical Objectives are related to the identification of quantitative and qualitative measures of frailty and the associated co-morbidities. The MOs of the project are summarized in the following points:

Better Understand Frailty & Develop Measures to Define it

The first two Medical Objectives (MOs) of the project are to better understand frailty and its relation to co-morbidities (MO1) and develop quantitative and qualitative measures to define frailty (MO2).

Use of Measures to Predict Short and Long-term Outcome

The third Medical Objective of the project concerns the use of measures developed in order to predict the short and long-term outcome (MO3).

Real Life Tools Development for Assessment Support

Login

Username

Password

Remember Me

LOG IN

Forgot your username?
Forgot your password?

Latest Articles

LAUNCH OF FRAILS SAFE: A NEW EU PROJECT TO DELAY FRAILTY AMONG OLDER PERSONS BY BRIDGING HEALTH DATA AND NEW TECHNOLOGIES

Tags Popular

frailty measures
pharmaceutical interventions
non-pharmaceutical interventions
recommendations

Figure 8 The “Medical Objectives” subsection

Medical Objectives

Real Life Tools Development for Assessment Support

TOOLS ASSESSMENT PHYSIOLOGICAL PARAMETERS BEHAVIOURAL PARAMETERS

The fourth Medical Objective of the project is to develop real life tools for the assessment of physiological reserve and external challenges (MO4).

FrailSafe will sense both physiological and behavioural parameters of the individual in an unobtrusive manner both

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Latest Articles

LAUNCH OF FRAILS SAFE: A NEW EU PROJECT TO DELAY FRAILTY AMONG OLDER PERSONS BY BRIDGING HEALTH DATA AND NEW TECHNOLOGIES

Tags Popular

frailty measures
pharmaceutical interventions
non-pharmaceutical interventions
recommendations

Figure 9 A Medical Objective article

- **Technological and Other Objectives**, also as defined in the FrailSafe Grant Agreement. These objectives concern the development of an ICT solution that will deliver **rehabilitation**, and ultimately lead to **prediction, prevention and self-management of frailty symptoms**.
- **Partners**, supporting a dedicated presentation page for each FrailSafe partner (Figure 10).

University of Patras

UoP will participate in the project through three units (a) the Multidimensional Data Analysis and Knowledge Discovery (MDAKM) Laboratory (mdakm.ceid.upatras.gr) of the Dept. of Computer Engineering and Informatics (CEID), (b) the Wire Communications Laboratory (WCL) in the Department of Electrical and Computer Engineering and (c) the Department of Neurology in the University Hospital of Patras. In addition, the Geriatric and Gerontology Society of Southwest Greece (GGSSG) will participate as subcontractor.

The **MDAKM lab** is directed by Professor Vasileios Megalookonomou. The group has expertise in signal processing, data pre-processing and representation, feature extraction and dimensionality reduction, pattern and association discovery, similarity analysis, clustering, classification, prediction, data modelling and simulation, knowledge discovery, knowledge representation and management. The lab is engaged in the analysis of spatiotemporal data obtained from a wide range of modalities and the development of database and intelligent information systems with data mining and decision support capabilities that are used in neuroinformatics for biomarker discovery and computer assisted interpretation of brain data. In particular the research group has been involved in analysis of brain data in normal and disease states such as Alzheimer's, ADHD, epilepsy, etc. The group has also expertise on the management and analysis of spatiotemporal data collected from sensors. The group includes three faculty members, 3 postdoctoral researchers, 8 PhD students and 5 MSc students.

WCL is part of the Telecommunications and Information Technology Division that belongs to the Electrical and Computer Engineering Department (ECE) of the University of Patras, Greece. It was established in 1967 and began its activities in 1969. WCL throughout the years has developed substantial research and teaching expertise in the fields of Telecommunications and Networks, Information Processing, Artificial Intelligence, and Electroacoustics. Such wide range of activities has been organised around seven (7) separate Research Groups with distinct research topics: Artificial Intelligence Group, Audio and Acoustics Technology, Communication Networks, Teletraffic Engineering and Applications, Communications and Telematic Applications, Digital Transmission and Coding, Network Architectures and Management, Pattern Recognition, and Visualization and Virtual Reality. The research activity of WCL, as it is carried out by its research groups, is multifarious and covers both basic and applied research. The research is being carried out in the context of European, National and industrial projects.

The **Department of Neurology** in the University Hospital of Patras, Greece is a 28 bedded ward, which admits directly either from the accident and emergency department or the out-patient clinic. Stroke, multiple sclerosis, peripheral

Partners

- UNIVERSITY OF PATRAS
- BRAINSTORM MULTIMEDIA
- SMARTEX
- AGE PLATFORM EUROPE
- CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS/INFORMATION TECHNOLOGIES INSTITUTE
- MATERIA GROUP
- GRUPPO SIGLA
- HYPERTECH
- UNIVERSITY HOSPITAL OF NANCY AND INSERM U1116 NANCY

Login

Username

Password

Remember Me

Figure 10 Partner presentation page

2.3 Media

The “Media” section is expected to be enriched as the project execution proceeds. It is planned to contain at least the following indicative subsections:

- **Dissemination material:** project presentations, leaflets etc.
- **Image galleries**, e.g. with photos taken from the field trials with older people
- **Videos:** the FrailSafe project film (to be produced during the third year of the project), videos presenting the field trials etc.

2.4 Results

Similarly to the above, the “Results” section is also expected to be enriched as the FrailSafe results evolve. It is assumed to be divided at least to the following indicative subsections:

- **Public deliverables** of the project
- **FrailSafe demos**
- **Scientific papers** published in refereed journals and international conferences

2.5 News/Blog

The “News/Blog” section spots the FrailSafe news and updates. As in the “Medical Objectives” section, news items are illustrated as separate articles with **tag support**, enabling **classification** and **easy search and discovery** (Figure 11). The **latest news articles** as well as the **popular tags** are presented in corresponding dedicated widgets available at the right sidebar of the website pages (Figure 11).

The “News/Blog” section is expected to include at least the following indicative subsections:

- **News and announcements** related to the project but also to frailty in general
- **Blog** of research and personal experiences, where partners could place relevant articles
- **Events and webinars**, either organised by FrailSafe or by third parties
- **FrailSafe newsletter**, planned to be published every six months

The screenshot shows the FrailSafe website's News/Blog section. The navigation bar at the top includes links for HOME, OVERVIEW, MEDIA, RESULTS, NEWS/BLOG, CONTACT, and LOGIN. The main content area features a large image of an elderly couple in a hammock. Below the image is the article title "Launch of FrailSafe: A new EU project to delay frailty among older persons by bridging health data and new technologies" and a brief description. The right sidebar contains a Login form with fields for Username and Password, a Remember Me checkbox, and a LOG IN button. Below the login form are links for "Forgot your username?" and "Forgot your password?". The sidebar also features a "Latest Articles" section with a link to the current article and a "Tags Popular" section with tags for "frailty", "measures", "pharmaceutical interventions", and "non-pharmaceutical interventions".

Figure 11 The “News/Blog” section

2.6 Contact

The “Contact” section includes the contact details of the project. The page also allows visitor to fill in a contact form and get in touch with the FrailSafe consortium (Figure 12). All visitor requests are forwarded as email messages to the project coordinator.

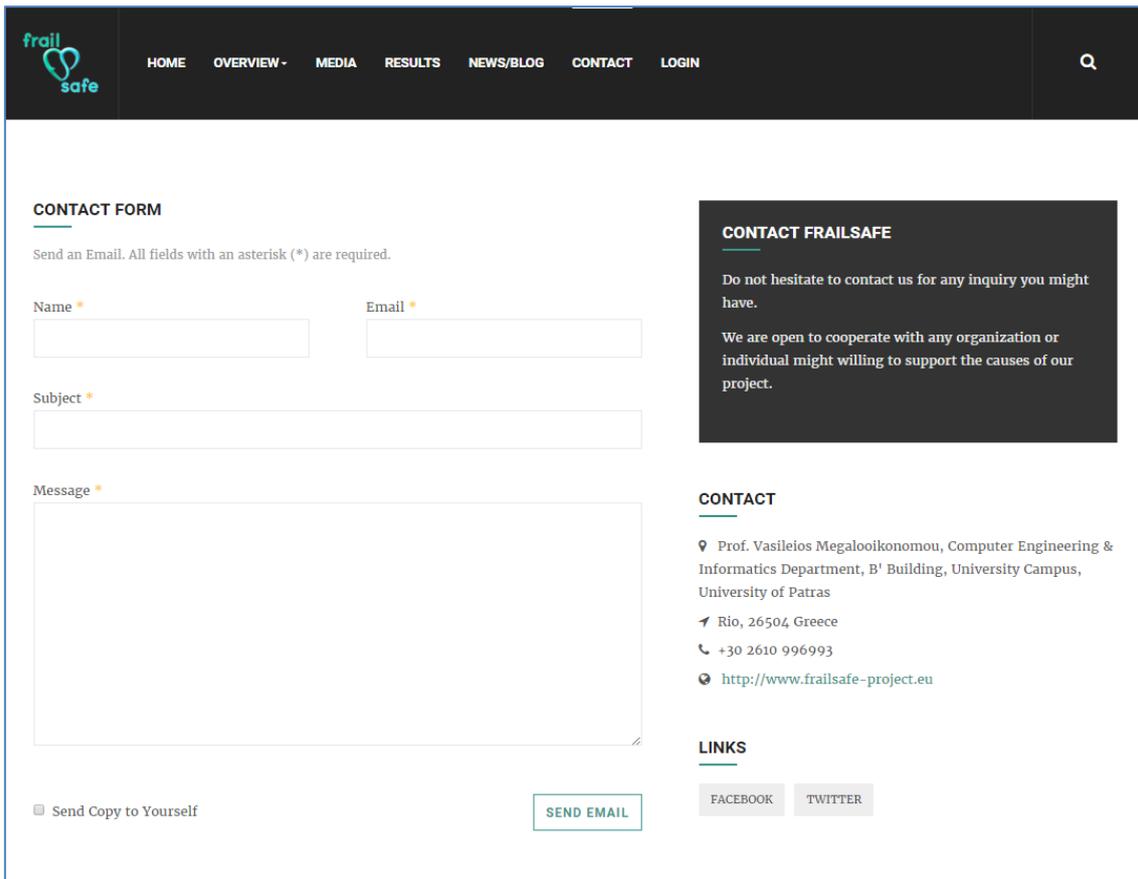


Figure 12 The “Contact” section

3 Wiki/Repository

The FrailSafe website supports a **private/logged area**, currently restricted to consortium members only. By selecting the “Login” option of the top menu, user is redirected to the login form (Figure 13).

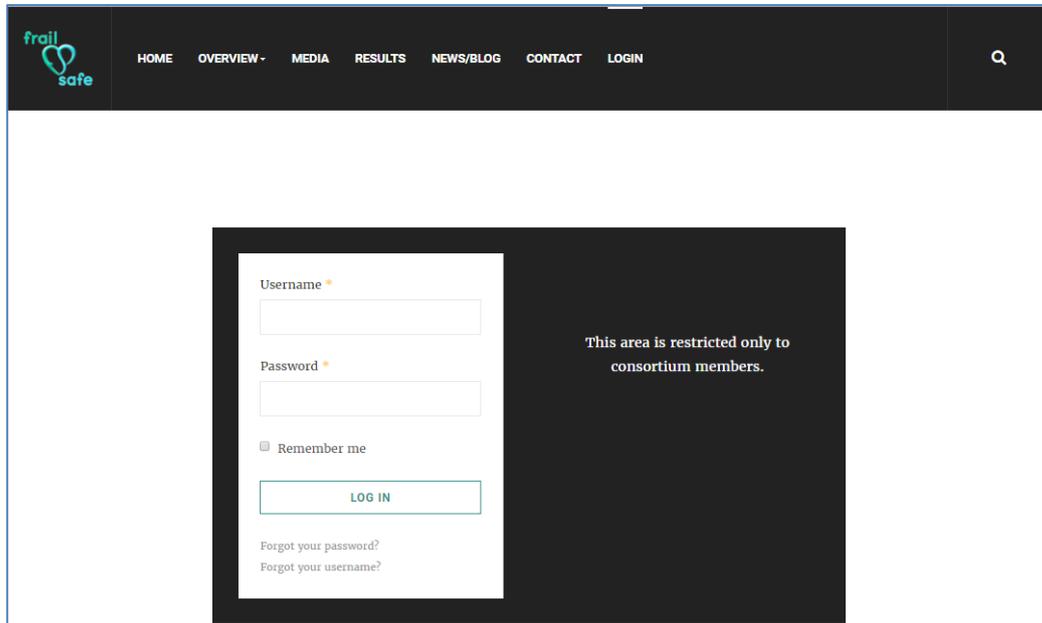


Figure 13 The login page

The logged section mainly **forms** the **internal Wiki/repository of the project** enabling file sharing and exchange among the project partners.

After logging in, user has three options (Figure 14):

- **Profile**, to see and edit the account details (Figure 14)
- **Repository**
- **Logout**

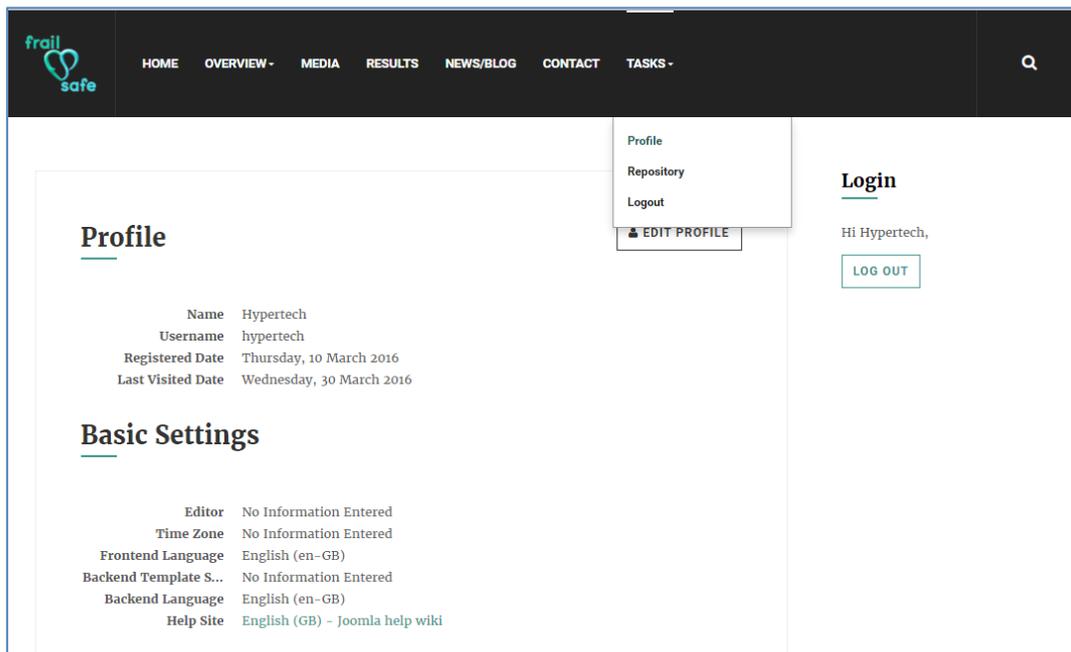


Figure 14 Available logged user options & the “Profile” page

Members could select the “Repository” option to enter in the **FrailSafe wiki/repository**. The website allows users to navigate through the available folders and files (Figure 15), add new files or download the existing ones.

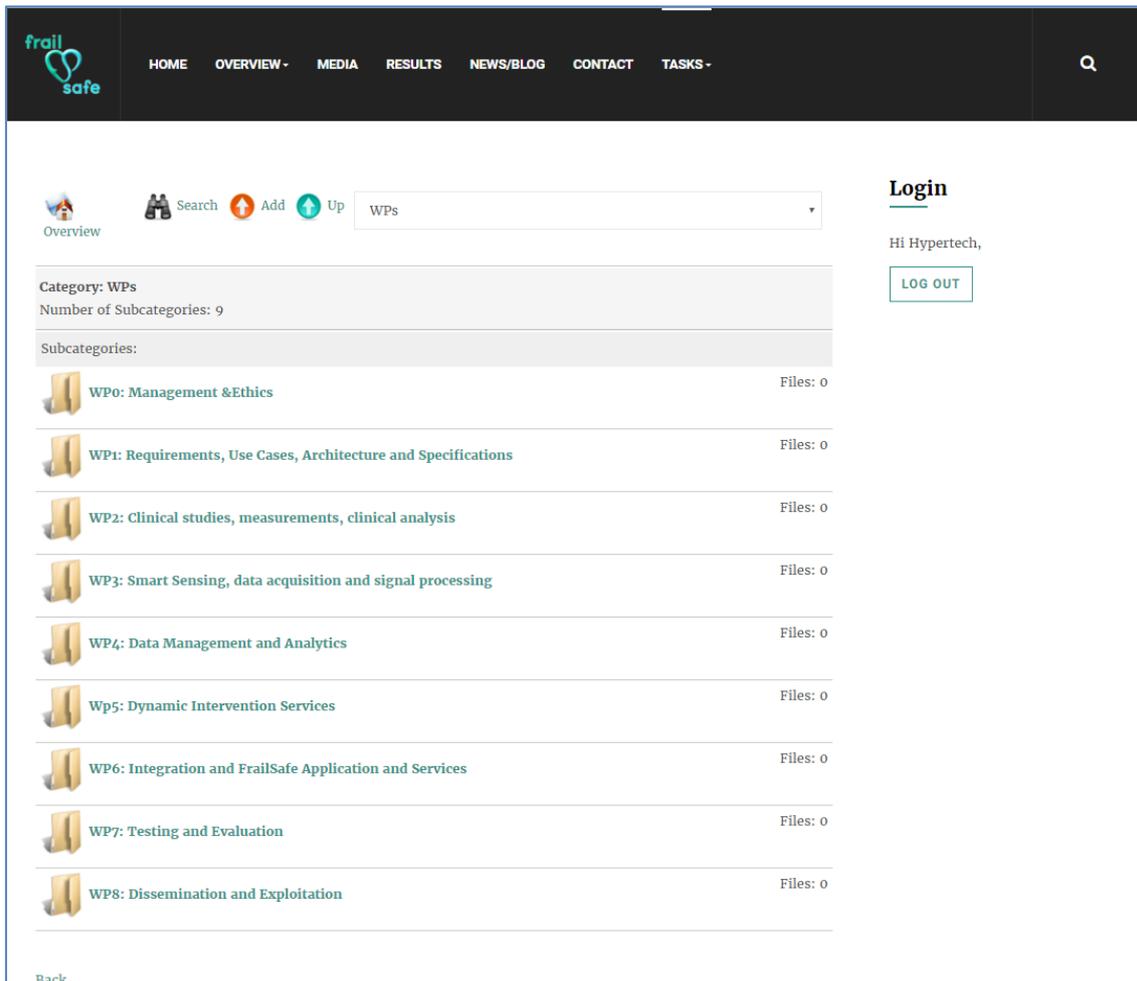


Figure 15 FrailSafe repository

User could select the “Add” option to **upload a new file** into the desired folder (Figure 15). Figure 16 demonstrates the form that user is asked to fill in, in order to submit a file. Apart from the usual **primary fields** (title, file, etc.), the form also supports the submission of **plenty of optional metadata fields**, enabling user to best describe and characterise the selected file.

As soon as the file is submitted successfully, it gets available to all registered members of the website to **download**, as seen in Figure 17. Users could **edit and update the available description** or even **replace the submitted file** (e.g. share a newer version).

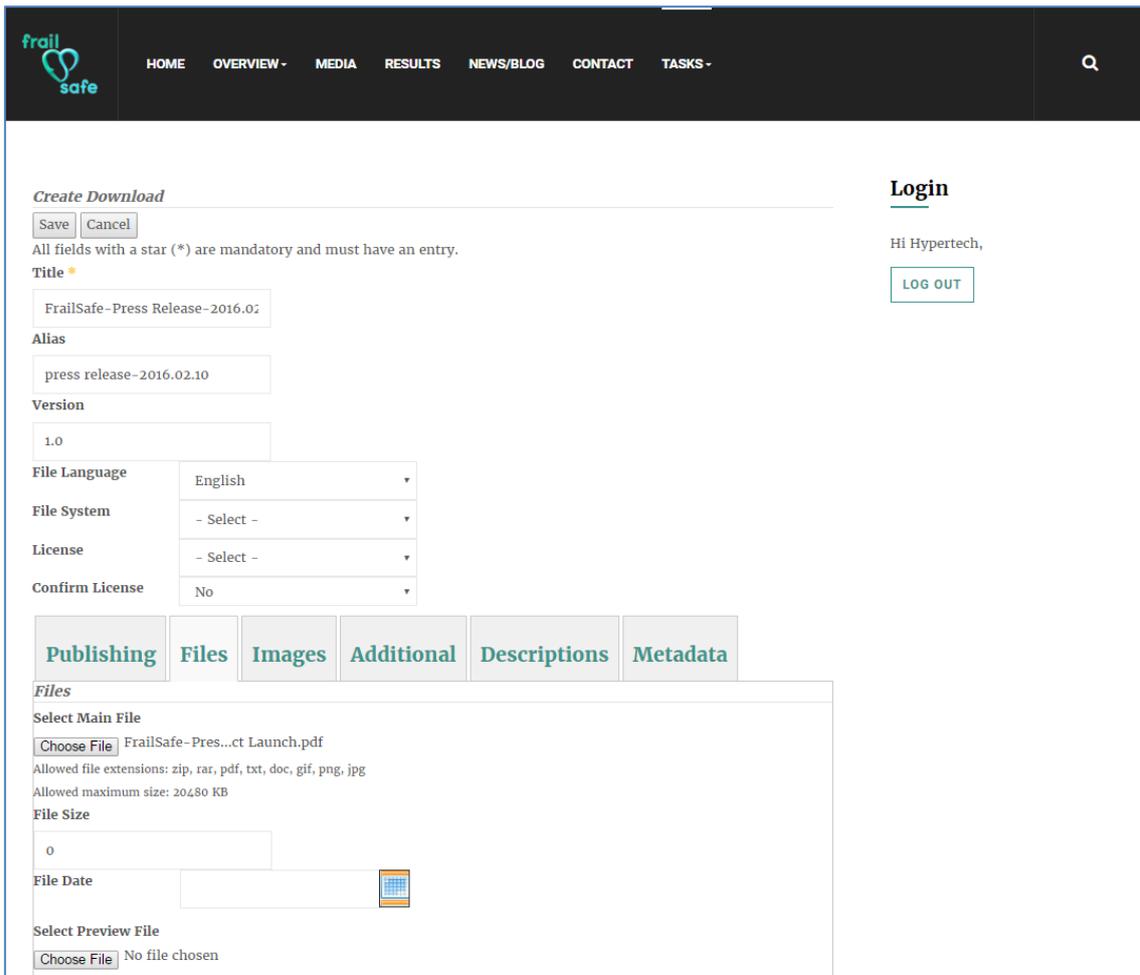


Figure 16 Upload a new file

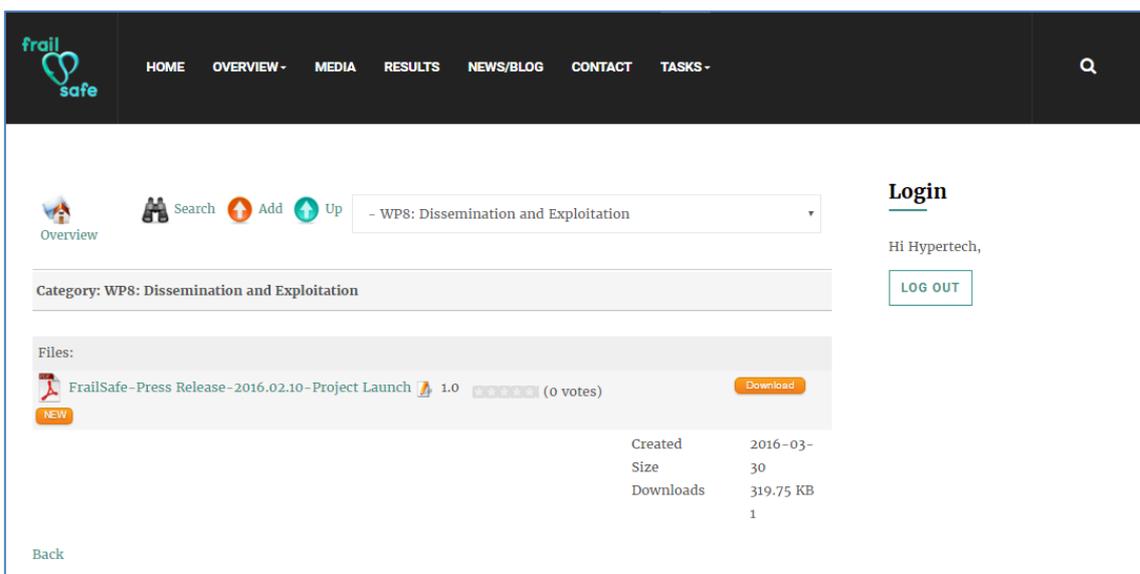


Figure 17 Check and download available files

4 Social Media Channels

Following the project website development, a Facebook and a Twitter page were also created to **strengthen the dissemination activities** of FrailSafe.

As already mentioned, both pages are going to be **maintained and updated regularly** with news, articles, multimedia content etc., in order to **engage relevant stakeholders but also the general public** to the project.

The **Facebook** page (Figure 18) is available at the following address: <https://www.facebook.com/frailsafe/>.

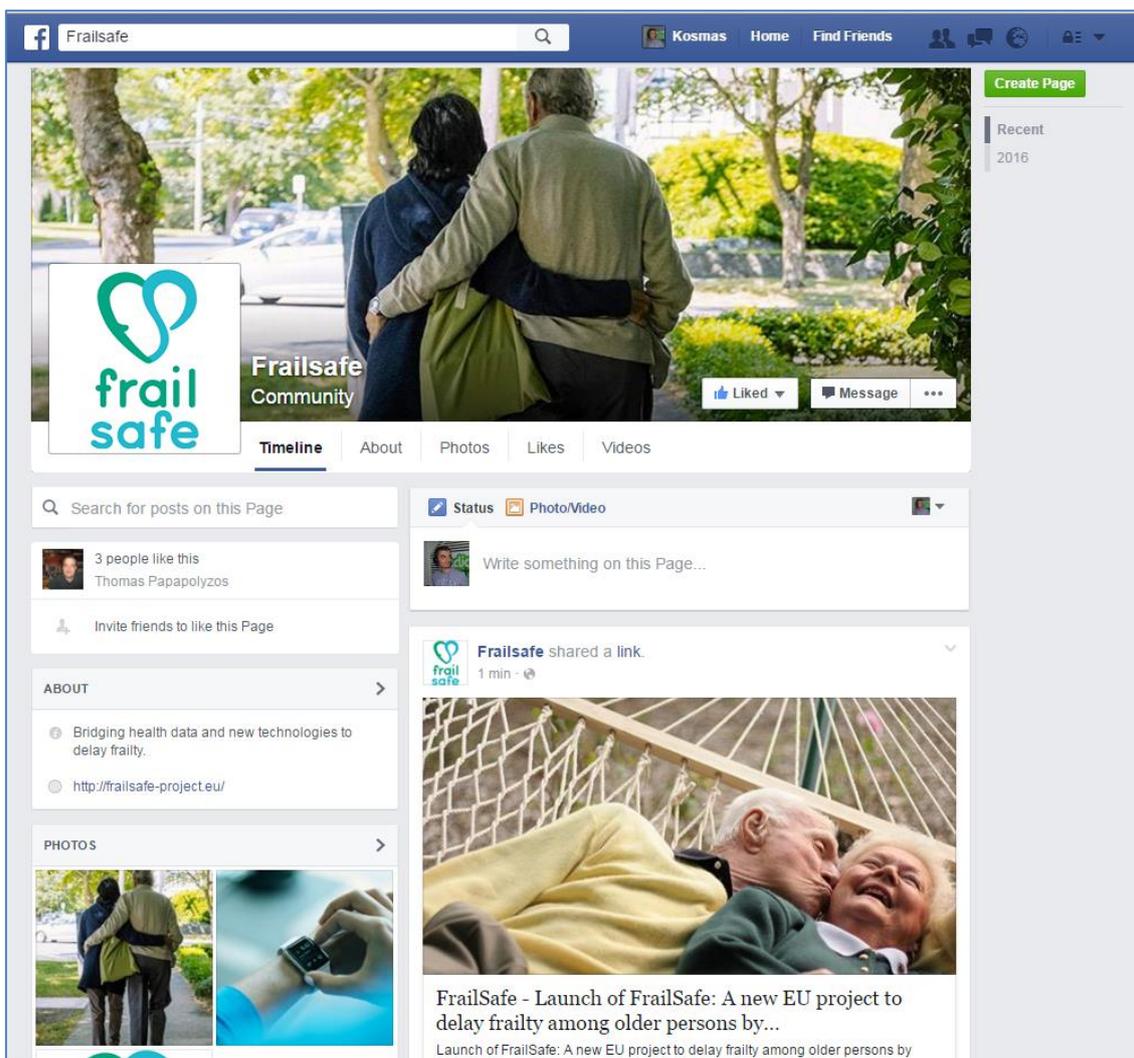


Figure 18 FrailSafe's Facebook page

Also, the **Twitter** page (Figure 19) is available here: <https://twitter.com/EUFrailSafe>.

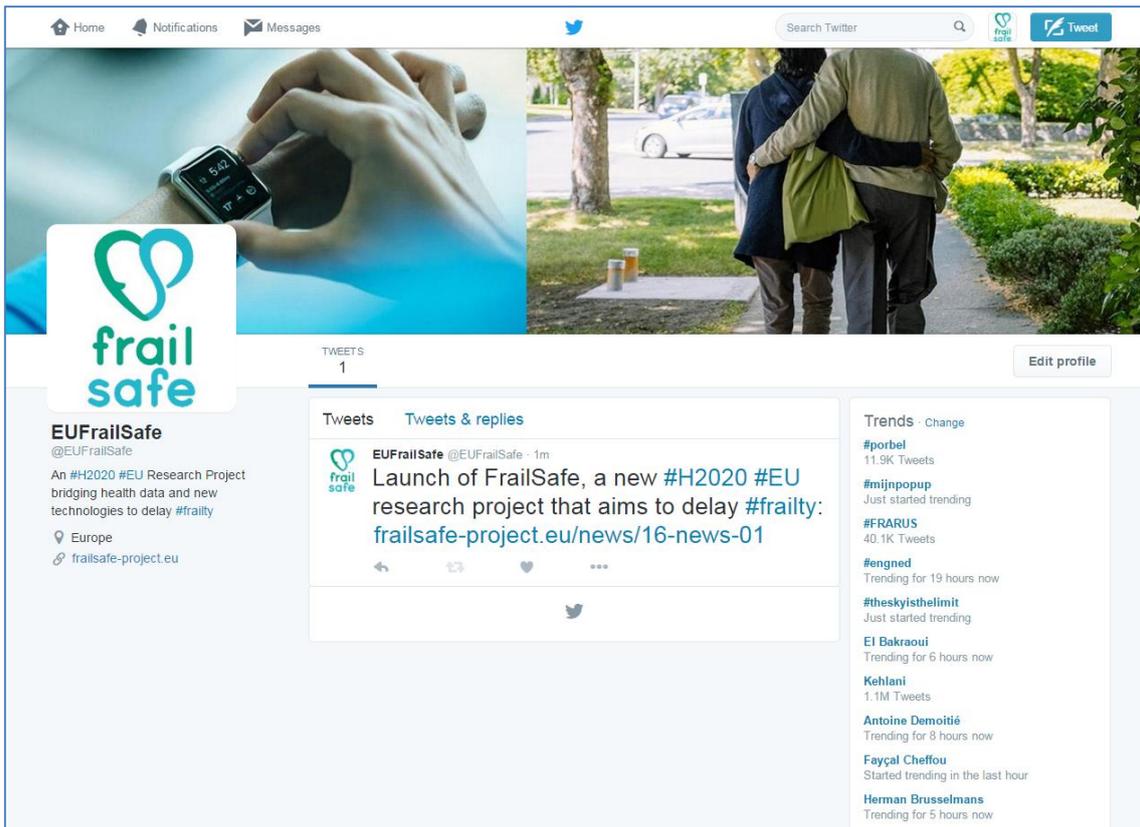


Figure 19 FrailSafe’s Twitter page

5 Technical Specifications

The FrailSafe website is built on top of **Joomla 3.4** (<https://www.joomla.org/>) (Figure 20).

Joomla is a free and open-source content management system (CMS) for publishing web content. Joomla is written in **PHP**, uses object-oriented programming (OOP) techniques and software design patterns and includes features such as page caching, RSS feeds, printable versions of pages, news flashes, blogs, search and support for language internationalization.

As of February 2014, Joomla has been downloaded over 50 million times. It is estimated to be the second most used content management system on the Internet, after WordPress.

Joomla supports **extensions**, which extend the functionality of Joomla websites. Over 7.700 free and commercial extensions are available from the official Joomla! Extension Directory and more are available from other sources. The FrailSafe website uses a lot of extensions to achieve the functionality presented in the previous chapters.

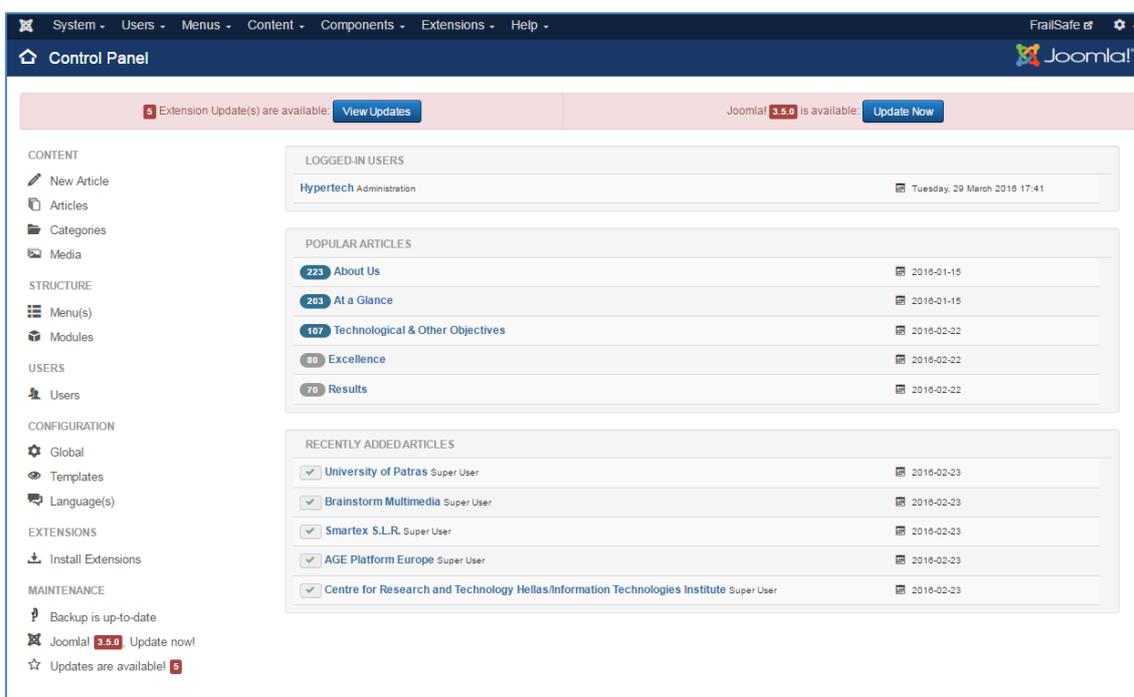


Figure 20 FrailSafe's Joomla main page

The FrailSafe website also takes advantage of the following software systems:

- **Apache HTTP 2.2** (<https://httpd.apache.org/>), which is the most popular free and open-source web server available today.
- **MySQL 5.5** (<http://www.mysql.com/>), as the database to store all project data.

Finally and in order to track and report traffic, the FrailSafe website was linked to **Google Analytics** (Figure 21), a popular service offered by Google (<https://analytics.google.com/>). Google Analytics is now the most widely used web analytics service on the Internet.

Google Analytics' approach is to show high-level, dashboard-type data for the casual user and more in-depth data further into the report set. Google Analytics analysis can identify poorly performing pages, where visitors came from (referrers), how long they stayed, their geographical position etc.

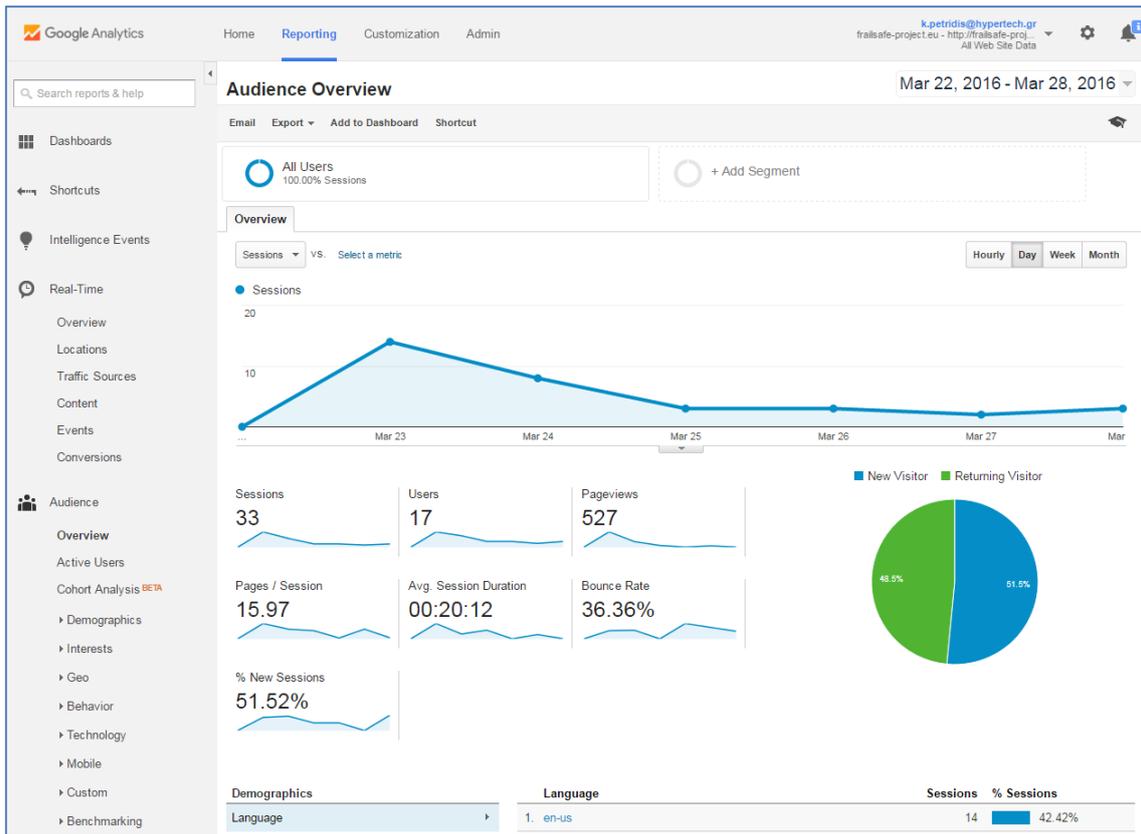


Figure 21 Google Analytics for FrailSafe website