




Development of a Decision Support System for increasing the Resilience of Road Infrastructure based on combined use of terrestrial and airborne sensors and advanced modelling tools- Grant Agreement Number: 769129

D8.3: Dissemination and Communication Plan V1

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Abbreviation List

Abbreviation	Definition
RI	Road Infrastructures
NGO	Non-Government Organizations

Executive Summary

This deliverable presents the dissemination activities that will be carried out during the PANOPTIS project’s life span and may continue also afterwards. Deliverable 8.3 starts with a presentation of the PANOPTIS dissemination strategy, which is adapted to reach different types of audiences (stakeholders, general public), followed by a complete overview of the activity plan. The wide range of PANOPTIS dissemination activities will target several types of communities including end-users, potential customers, researchers and industrialists. The general public will also be approached through full press coverage of the PANOPTIS achievements and field tests. The innovations of the PANOPTIS project will be disseminated on a regular basis. The dissemination and use of the new developments will continue after the project’s lifecycle, through the exploitation of research results and by opening up possibilities of marketing.

It has to be stressed out that this is the first version of the dissemination and communication plan.

1 Introduction

PANOPTIS project has as main objective to leverage existing tools and services as well as novel technologies in the view of delivering an integrated platform that can be applied to various types of Road Infrastructures (RI), addressing multi-hazard risk understanding, smart prevention and preparedness, faster, adapted, efficient and effective response. PANOPTIS technology will be integrated, for validation purposes, to a commercially successful platform for monitoring the quality of a road infrastructure. The present Deliverable 8.3, entitled “Dissemination and Communication Plan VI”, aims to define the strategy for appropriately planning and organizing all communication/dissemination activities undertaken by the consortium for the promotion and dissemination of PANOPTIS results, and outcomes to target audiences (scientific and educational community, general public, and stakeholders within the entire value chain of PANOPTIS design, manufacturing, maintenance and use). It will be updated, in order to include already concluded dissemination activities, as well as for planning the most imminent communication activities.

The document is structured as follows:

- Section 1: Introduction.
- Section 2: Dissemination strategy and roadmap.
- Section 3: Stakeholder community description.
- Section 4: Dissemination material of PANOPTIS project.
- Section 5: Consortium activities in terms of publications, conferences and events.
- Section 6: Consortium dissemination activities including press and mass media, videos and clustering activities.
- Section 7: Dissemination procedures.
- Section 8: Dissemination activities of the first semester of the project.

2 PANOPTIS Dissemination and Communication Strategy and Roadmap

2.1 Dissemination Strategy

This section describes the dissemination strategy that will be followed during the lifecycle of the project. This strategy provides efficient ways to reach the specified target groups for each stage of the project through pre-defined dissemination channels.

2.1.1 Dissemination goals

The PANOPTIS dissemination activities can be discerned into four main categories, according to the targeted specific goals. The first goal is to establish systematic channels and means to disseminate project objectives, activity, progress and technological outcomes to potential stakeholders. The second is to share technical results within the scientific community in the topics related to the project, in order to promote research and receive useful inputs from other scientists and international communities. The third is to inform the public about the scientific and technical improvements offered by PANOPTIS tools and its innovative concept. The fourth

goal is that dissemination activities will ensure the alignment of the project activity with calendar events of relevant EU programs and initiatives.

Any task that aims at spreading the results of the project, promoting PANOPTIS concept, increasing the visibility and supporting the exploitation of the achieved results is considered to be a supporting activity to the dissemination strategy.

The supporting PANOPTIS activities will be carried throughout the project and will be organized in several tasks such as raising user participation and awareness, web-based dissemination, printed dissemination material, workshops and conferences, publications, radio interviews and clustering with other projects.

2.1.2 Target groups

The purpose of dissemination activities is to inform end-users and other stakeholders about PANOPTIS project concept and tools. Dissemination activities are adapted according to the different target groups. Three large target groups have been defined for PANOPTIS project:

1. Academic Institutions related to PANOPTIS activities (Transport, Risk-Analysis, Climate modelling, Structural/ Geotechnical Simulations),
2. Remote sensing companies,
3. Policy makers (Global, EU, Nationals),
4. Security industry,
5. Environmental monitoring authorities and external research organizations,
6. Investors, technology importers, entrepreneurs, SMEs,
7. Environmental devices resellers, vendors and installers,
8. Geotechnical utilities,
9. Environment-related NGOs,
10. ISO/IEC committees- working groups / EIP Transport,
11. Professional associations related to PANOPTIS developments
12. Service providers and possible commercial dealers
13. General public

2.1.3 Dissemination Channels

After the Stakeholder community has been identified, dissemination towards its members follows various channels in order to reach every interested user. The aim of each dissemination activity is to raise awareness, inform (educate the community), engage (get input and feedback from the community), and promote (advertise the results of the project). The main dissemination channels are the followings:

- Web- based dissemination: PANOPTIS website;
- Printed dissemination material: brochures, newsletters, project posters;
- Workshops and conferences: workshops and conferences organized by the PANOPTIS project partners and participation to related workshops, seminars and conferences;
- Newspapers and radio interviews: periodic press releases and interviews in national or international electronic and printed media;
- Social media: Facebook, Twitter, LinkedIn, YouTube Channel;

2.2 Dissemination Manager & Roadmap

2.2.1 Dissemination Manager

The dissemination manager is in charge of coordinating all dissemination issues. As the WP8 (General Dissemination, Creation of PANOPTIS Identity and Standardization Activities) leader, NTUA is the Dissemination Manager of the PANOPTIS project. This role was added after the start of the project, in order to complement the role of the Innovation Manager, already foreseen during the proposal preparation phase. Dissemination activities are part of innovation-related activities such as activities promoting the exploitation of results and IPR protection and management. The two managers work closely in the related activities. The Objectives of both the dissemination and exploitation activities are briefly presented below:

- To produce and update the dissemination and exploitation plan
- To produce a business and marketing plan
- To ensure future exploitability of results through continuous monitoring of standardisation issues
- To communicate widely and through multiple channels the progress, achievements and results;
- Acquire knowledge (tackling IPR issues and future research & development actions)
- Manage the online presence
- To protect, through a patent application, any protectable results
- To perform a sustainability analysis for the large-scale uptake of project results

The Dissemination Manager is responsible for the dissemination of project results and achievements. Any task aiming at disseminating project results, promoting or increasing its visibility is a supporting activity. The dissemination activities for PANOPTIS will cover the entire duration of the project and will be organized in several tasks:

- raising user participation and awareness;
- web-based and social media dissemination;
- printed material;
- workshops/ conferences;
- publications;
- Radio and press interviews;
- Clustering with other projects

The dissemination activities for PANOPTIS will cover the entire duration of the project and will be organized in several tasks:

- raising user participation and awareness;
- web-based and social media dissemination;
- printed material;
- workshops/ conferences;
- publications;
- Radio and press interviews;
- Clustering with other projects

2.2.2 Dissemination Roadmap

The Dissemination roadmap has been defined in order to provide a draft outline of how dissemination channels and material will be used to reach each specified target audience.

2.2.3 Evaluation of the execution of the dissemination strategy

Key performance indicators (KPIs) are defined in order to specify the dissemination strategy and monitor project's execution in respect to PANOPTIS' objectives. The communication and dissemination strategy are designed in a way that PANOPTIS results and outcomes will be spread in different types of users and across many countries. Advertisements, leaflets, workshops and communication channels target to inform the public while the dissemination through scientific conferences and journals plans to inform scientists and researchers. The following table might be updated as the project progresses.

Table 1: Key Performance Indicators (KPIs) of PANOPTIS project.

Dissemination tools	Parameter	KPIs	Actual Achievements on M10	M18	M30	M42
Website	Number of visits/year	10,000	7316	16000	25,000	35000
Social media channels (Facebook, Twitter, LinkedIn, ResearchGate)	Number of members/account	200	FB: 183 Twitter: 70 LinkedIn: 32	FB: 200 Twitter: 120 LinkedIn: 90	FB: 250 Twitter: 150 LinkedIn: 120	FB: 300 Twitter: 220 LinkedIn: 200
	Number of posts/year in total	150	100	200	400	550
Leaflets, videos and e-Newsletters	Number of newsletters ¹	3	1	2	4	6
	Number of leaflets	2	1	1	2	3
	Number of videos	2	0	0	1	2
	Number e-Newsletter	-	0	1	2	3
Publications on open access scientific Journals	Number of publications	2	0	0	2	4

¹ In Task 8.4, monthly newsletters are foreseen. This is due to some typo error. Instead, in Table 10 of Grant Agreement (page 46), three newsletters are expected for the whole project duration. In Table 1, of PANOPTIS Dissemination and Communication Plan 6 newsletters in total.

Scientific conferences	Number of presentations/year	10	1	4	8	12
EU dissemination networks & Mass Media	Number of press releases ²	14	1	4	8	14
	Number of media articles	5	0	1	3	5
	Number of TV/Radio interviews	1	0	0	0	1
PANOPTIS Conference	Number of participants	80	0	0	0	80
Demo events	Expected number of attendees	>50	0	0	50	150
Poster	Number of posters	1	0	1	1	2
Annual Magazine	Number of magazines/per year	3	0	1	2	3
Special innovation/lesson features	Number	Not specified	0	1	2	3
Presentation at multiplier events	Number	Not specified	0	0	1	2

² We foresee 14 total press releases, following the GA KPIs of Table 10. The specific allocation of these releases are presented in Table 2 of this deliverable.

Table 2: Dissemination activities work plan

Dissemination activities	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42										
Website					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■								
LinkedIn, Facebook, Twitter, ResearchGate					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
Leaflets								■																	■																											
Poster																																																				
Video																																																				
Newsletters																																																				
Press releases																																																				
Annual Magazine																																																				
Media Articles																																																				
Number of TV/Radio interviews																																																				
e-Newsletters																																																				
Publications on scientific Journals																																																				
Scientific conferences																																																				
EU dissemination networks																																																				
PANOPTIS conference																																																				
Presentation at multiplier events																																																				
Demo events																																																				

3 PANOPTIS Stakeholders' Community

The dissemination strategy is focused on the stakeholder community. A stakeholder is anyone who has a vested interest in PANOPTIS project or who will be affected by its outcomes. During the project, PANOPTIS stakeholders have been identified, listed, and assessed in terms of their interest in the project and importance for its success and further dissemination.

3.1 Definition of the Stakeholder Community

During the first semester of PANOPTIS project development, the preliminary end user community has been identified, and kept consistently informed on project progress, achievements, and planned project events. This community will be constantly expanded and extended during the project.

3.2 Directory of the PANOPTIS Community

The directory of the first version of the PANOPTIS stakeholder community is presented in the following table. This directory will be updated throughout the project lifecycle and any new contact created during dissemination activities and / or field test will be included.

Table 3: Stakeholders of the PANOPTIS project.

Stakeholder legal name	Type
ECOCITY	NGO
Attikes Diadromes S.A.	Road Operator
OLYMPIA ODOS S.A.	Road Operator
Nea Odos S.A.	Road Operator
National Observatory of Athens	RTD
International Road Union (<u>IRU</u>)	Transport association
European Road Federation (ERF)	Transport association
Institute for Transportation & Development Policy (<u>ITDP</u>)	Institute
European Automobile Manufacturers Association (<u>ACEA</u>)	Transport associations
International Motor Vehicle Inspection Committee (<u>CITA</u>)	Transport associations
INELO	Transport Company
GEMALTO	Transport Company
Continental	Transport Company
Stoneridge	Transport Company
FEHRL (Forum of European Highway Research Laboratories)	Association
AFGC (Association française de Génie Civil)	Association
IDRIM (Institut des routes, des rues et des infrastructures pour la mobilité)	Association
AFGC (Association française de Génie Civil)	Association
Eiffage	Construction company & road operator
Osmos	Monitoring company
SITES	Monitoring company
SimCenter	US Research Network
National Institute of Standards and Technology	US Government Agency

Stakeholder legal name	Type
Federal Emergency Management Agency	US Government Agency
Directorate-General for Public Works and Water Management (Rijkswaterstaat)	Executive agency of the Ministry of Infrastructure and Water Management of the Netherlands
AEMET (Spanish State Meteorological Agency)	Government Agency
CAMS (COPERNICUS Atmospheric Monitoring Service)	European Commission
European Meteorological Society (EMS)	European Association
HNMS (Hellenic National Meteorological Service)	Government Agency
KNMI (Royal Netherlands Meteorological Institute)	Research Institute
Met Office UK	Government Agency / Research Institute
Météo France	Government Agency
NILU (Norwegian Institute for Air Research)	Research Institute
SMHI (Swedish Meteorological and Hydrological Institute)	Government Agency / Research Institute

4 Dissemination Material

PANOPTIS dissemination material will be produced for each of the following main categories:

- Web-based dissemination material: to transmit information about the project
- Printed dissemination material: to raise awareness about the project
- Conference presentations, presence in related events: to promote the project and its outcomes.

4.1 Web-based Dissemination Material

The web-based dissemination material hosted on the public website of the PANOPTIS project, allows sharing the results with the general public, interested users and with PANOPTIS partners. The dissemination of project results and scheduled events will be highly served by web-based means and mechanisms.

4.1.1 PANOPTIS Website

The website is a major dissemination channel for end users, scientists, engineers and the general public. It will be regularly updated with project news and achievements. It is also the area where any person interested in the project can download documents about the project, such as public deliverables, presentations and any other available dissemination material.

PANOPTIS website was designed and implemented by NTUA. It is currently in use on the domain www.panoptis.eu. It contains information on project objectives, significant achievements, project events, technology news, consortium members, etc. The website will be systematically updated during the project's life.

Specifically, the homepage (<http://www.panoptis.eu/>) features are summarized as following:

1. At the top of the page (header) the PANOPTIS logo and the navigation menu can be found. The PANOPTIS logo is available to be downloaded in section Downloads. The logo is designed by NTUA according to the partners' recommendation. Consortium has decided to create a clear and efficient horizontally menu for easy navigation.
2. The centre of the page (main body) contains a short description of the overall concept (a "Learn More" Button has been added), a slider menu, "the Consortium" and the PANOPTIS social media accounts.
3. At the bottom of the page (footer) additional buttons towards the "Objectives", "Events", "Publications", "Image Gallery", "Concept", "Methodology", "Latest News", "Contact US", "Consortium", sections of the website are presented. Links to the social media accounts of the project are also provided:
 - a. **Facebook:** <https://www.facebook.com/Panoptis-2222536261369352/>
 - b. **Twitter:** <https://twitter.com/panoptis>
 - c. **YouTube:** <https://www.youtube.com/channel/UCVUNAGKjEq-GI1tIRTceytA>
 - d. **LinkedIn:** <https://www.linkedin.com/company/12983567/>

Moreover, the footer section acknowledges the EC funding details that PANOPTIS project receives.



Figure 1: Homepage of the PANOPTIS website.

The organization of the PANOPTIS website is as follows.

- Home (landing page)
- Project
- Objectives
- Impact
- Concept
- Methodology
- Consortium
- Media
- Downloads
- Image Gallery
- Publications

- Latest News
- Links
- Contact us
- Social Media
- Facebook
- LinkedIn
- Twitter
- YouTube
- Redmine

Figure 1 depicts a snapshot of the PANOPTIS website, presenting the basic menu options. The website has been developed using HTML5/CSS technologies supporting a responsive design that is suitable for visitors using both desktop and mobile devices. While the content available to the visitor using a mobile device is the same, the design has been tailored to improve user experience. Moreover, integration with Google applications has been performed in order to:

- record visitor statistics and analyse the website traffic (Google Analytics);
- Figure 2 depicts the total views of the PANOPTIS website. We have reached more than 7316 users on M10.

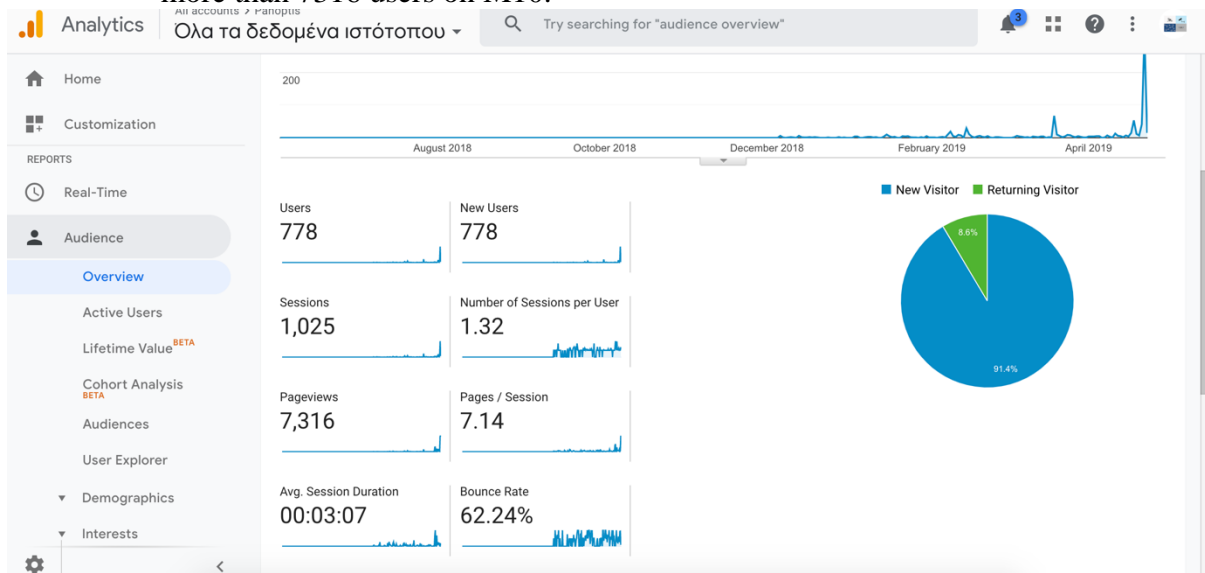


Figure 2: PANOPTIS Google Analytics.

- host the repository of public dissemination material (Google Drive), such as public deliverables, presentations, etc.; embed various videos through the PANOPTIS YouTube channel.

The following paragraphs provide more details on the different sections and pages of the website.

4.1.2 PANOPTIS Header Menu

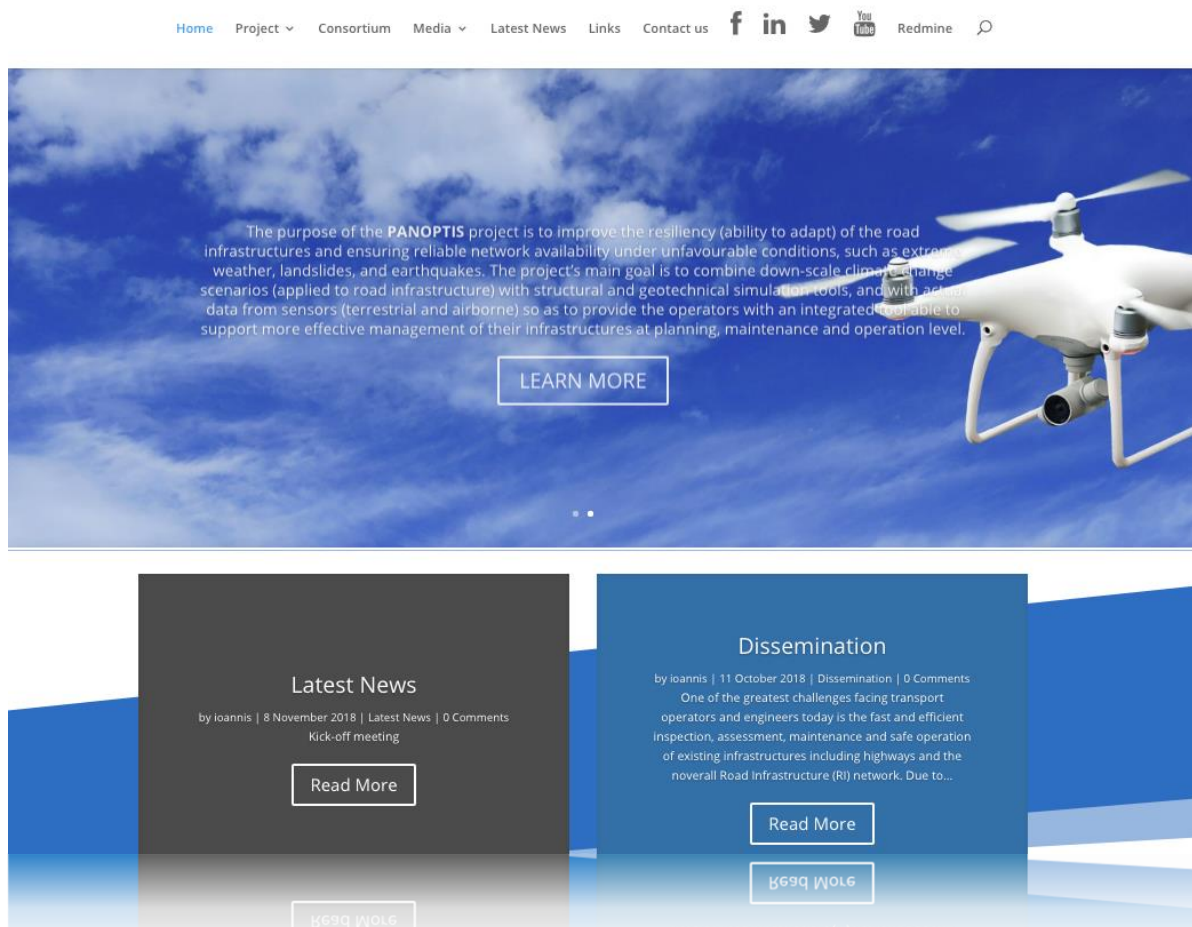


Figure 3: Header menu of the PANOPTIS website.

Figure 3 presents the header menu of PANOPTIS website. The PANOPTIS drop-down menu has links to the following sections:

- **Home section:** This is the Home page (landing page) of the website as presented in Figure 3.
- **Project section:** This is a drop-down menu providing links to the following sections/pages.
 - **Objectives subsection:** This section provides information about the key strategic, the Scientific and Technical objectives of the project.
 - **Impact subsection:** Information about the expected impact. This section is distinguished into: i) the Strategic and Business Impact and the ii) Socio-Economic Impact.
 - **Concept subsection:** This section provides information about the overall concept and approach of the PANOPTIS project.
 - **Methodology subsection:** Information about the adopted methodology and a brief description of the work packages.
- **Consortium section:** This section presents PANOPTIS partners, with direct links to their company/institution websites.
- **Media section:** This is a drop-down menu that gives access to:

- a. **Downloads subsection:** this menu offers the possibility to download project dissemination material such as project public deliverables, presentations along with leaflets and project factsheet. Public deliverables will be added in PDF format after they are accepted by the EC. Any press release performed by the partners will be listed in this page. Videos from events and online demonstrations of project developments will be listed in this page. In addition, the same material will be published on the YouTube Channel, the social media and the Home page of the project.
- b. **Image Gallery subsection:** this page hosts a picture gallery for each project event.
- c. **Events subsection:** This section provides details regarding all the major events relevant to the project (e.g. project meetings, project workshops, major dissemination events).
- d. **Publications subsection:** This subsection provides access to all the publications relevant to project endeavours.
- **Latest News section:** This section lists the news and announcements of the project (meetings, workshops, events, etc.). This page will feed the PANOPTIS social media accounts.
- **Contact Us:** This section redirects to the communication page, where users can achieve direct communication with the dissemination team and the coordinator.
- **Redmine platform:** This button redirects to the PANOPTIS web-based project management software, and its access is restricted only to authorised consortium members. PANOPTIS consortium decided to use an open source platform for internal communication purposes. The Redmine platform will be the main repository, where all the project material can be accessed by consortium partners. A detailed description of the platform is included in D8.3.

4.1.3 Project Section

The Project section introduces the objectives, the impact, the concept and the methodology of PANOPTIS. Indicative screenshot is provided from the Project section (see Figure 4). The “Project” section is a drop-down menu that consist of the following sub-sections:

1. Objectives.
2. Impact.
3. Concept.
4. Methodology.

Home [Project](#) [Consortium](#) [Media](#) [Latest News](#) [Links](#) [Contact us](#) [f](#) [in](#) [t](#) [You Tube](#) [Redmine](#) [🔍](#)

Objectives

The purpose of the **PANOPTIS** project is to improve the resiliency (ability to adapt) of the road infrastructures and ensuring reliable network availability under unfavourable conditions, such as extreme weather, landslides, and earthquakes. The project's main goal is to combine down-scale climate change scenarios (applied to road infrastructure) with structural and geotechnical simulation tools, and with actual data from sensors (terrestrial and airborne) so as to provide the operators with an integrated tool able to support more effective management of their infrastructures at planning, maintenance and operation level.

The following technologies will be implemented in the PANOPTIS tool:

- Reliable quantification of climatic, hydrological and atmospheric stressors
- Multi-Hazard vulnerability modules and assessment toolkit
- Development of a forecasting module to provide high-resolution tailored weather and precipitation forecasts
- Improved prediction of structural and geotechnical safety risk through the use of Geotechnical and Structural Simulation Tool (SGSA)
- Improved multi-temporal, multi-sensor observations with robust spectral analysis, computer vision and Machine Learning (ML) damage diagnostic for diverse Road Infrastructures (RI).
- Detailed and wide area transport asset mapping, integrating state-of-the-art mobile mapping and making use of Unmanned Aerial Vehicles (UAV) technology
- Design of a Holistic Resilience Assessment Platform (HRAP)
- Design of a Common Operational Picture (COP) including a Decision Support System (DSS), an enhanced visualization interface and an Incident Management System (IMS)

The **PANOPTIS** integrated platform (and its sub-modules) will be implemented in two motorway sections in the Greek and Spanish primary road network.

Figure 4: PANOPTIS Objectives page.

4.1.4 Impact section

This section presents the expected impact of the PANOPTIS project, and its content will be updated based on project results and the exploitation activities of PANOPTIS (see Figure 5).

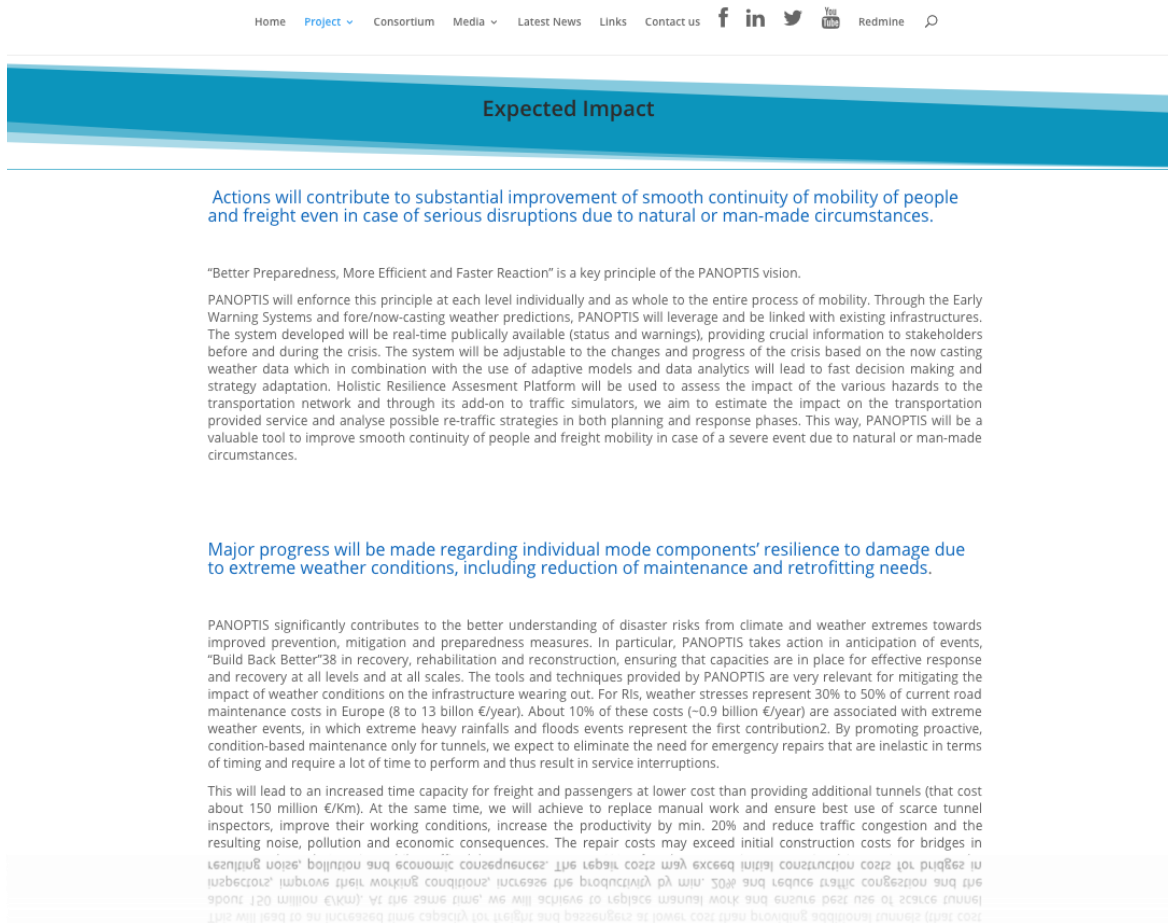


Figure 5: Impact section

4.1.5 Strategic and Business Impact section

This section summarizes the strategic and business impact of the project. Figure 6 gives a screenshot of a webpage that describes the contribution of the project through the development of a user-driven framework for highways/road inspections.

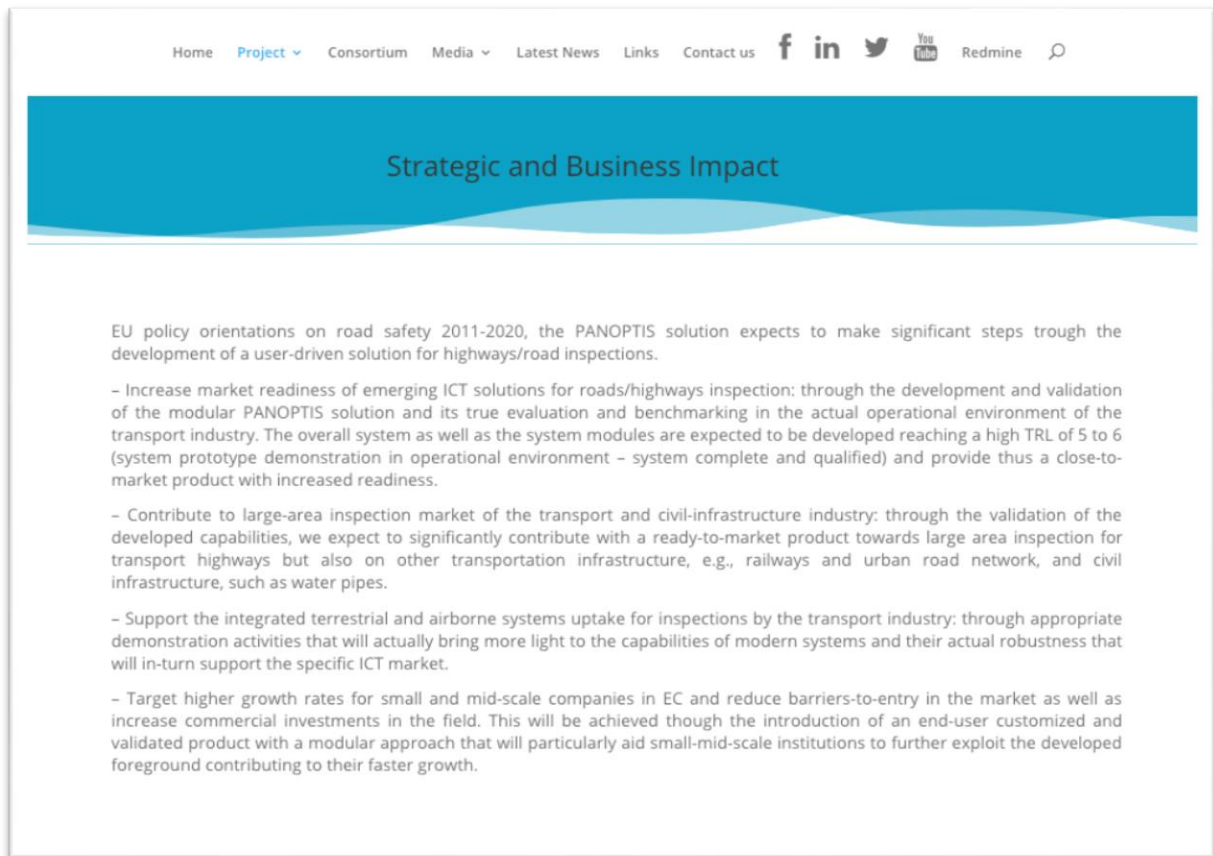


Figure 6: Strategic and Business Impact. PANOPTIS proposed framework for highways/road inspections.

4.1.6 Socio-Economic Impact section

In this section of the website, the socio-economic impact of the PANOPTIS project is analysed (see Figure 7).

Socio-Economic Impact

- Safer and more resilient roads and highways (Road Infrastructure/Transport Infrastructures in general), and consequently better conditions for the users: the provision of automated systems able to perform inspection of roads/highways with increased accuracy, detail, efficiency, objectivity, repeatability and data management capabilities will aid maintenance planning of the inspection personnel with the aid of adapted strategies based on the current conditions and highway needs. This is expected to highly contribute to a safer transport network for the users, particularly the wide public, commuters.
- Reduction of need for highly trained personnel: the suggested system requires less personnel assigned to the inspection/maintenance task itself reducing thus the operational costs of the roads'/highways' owners/operators as well as the inspection/maintenance companies. Furthermore, the solution is expected to reduce hourly labor in the transport environment that is really risky and very costly when having also in mind the transportation of relevant personnel to/from the point of interest.
- Safer working environment for inspection/maintenance/first-response teams, which are most of the times required to execute their tasks in the harsh environments of roads/highways always experiencing and facing inconvenient and not safe conditions such as passing vehicles, noise, dust and extreme temperatures (inspection/maintenance teams) and even worse conditions (smoke, chemicals, risk of collapse, etc.) when referring to first response units. This is expected to greatly improve by the usage of "expert/smart" systems -such as PANOPTIS one- from Road Infrastructure/Transport Infrastructure industry.
- Inspection and maintenance costs reduction through regular, structured and planned inspections: This is expected to be achieved through the introduction of more often, but still less expensive inspections. Currently, there is a precise planning of regular inspections of highways; however, sometimes these are limited due to operational costs of the inspections, often to the limit that can be afforded. The proposed system will allow more frequent inspections, whereas the whole Road Infrastructure, e.g., tunnel lining, pavement, will be inspected and not just some spots under a sampling procedure. This will lead to improved maintenance schedule, targeting to the forecast of future damages and the on-time intervention (predictive maintenance). This can greatly reduce infrastructure maintenance costs.
- Reduce road/highway down-time for inspections: the inspection of roads and in particularly of large highways usually requires partial or total shutdown of a sector and the traffic is usually diverted to local roads around the previous toll stops. This is not an easy task for the highway operators and requires the availability of actual road diversions for the drivers, which is not always the case. The development of an industrial grade robotic system and its exhaustive testing into actual working/environment conditions will ensure the operation of the system without stopping the highway traffic.

Figure 7: Socio-Economic Impact.

4.1.7 Concept section

In this section, we provide details regarding the PANOPTIS overall concept and summarize the challenges of the project (see Figure 8).

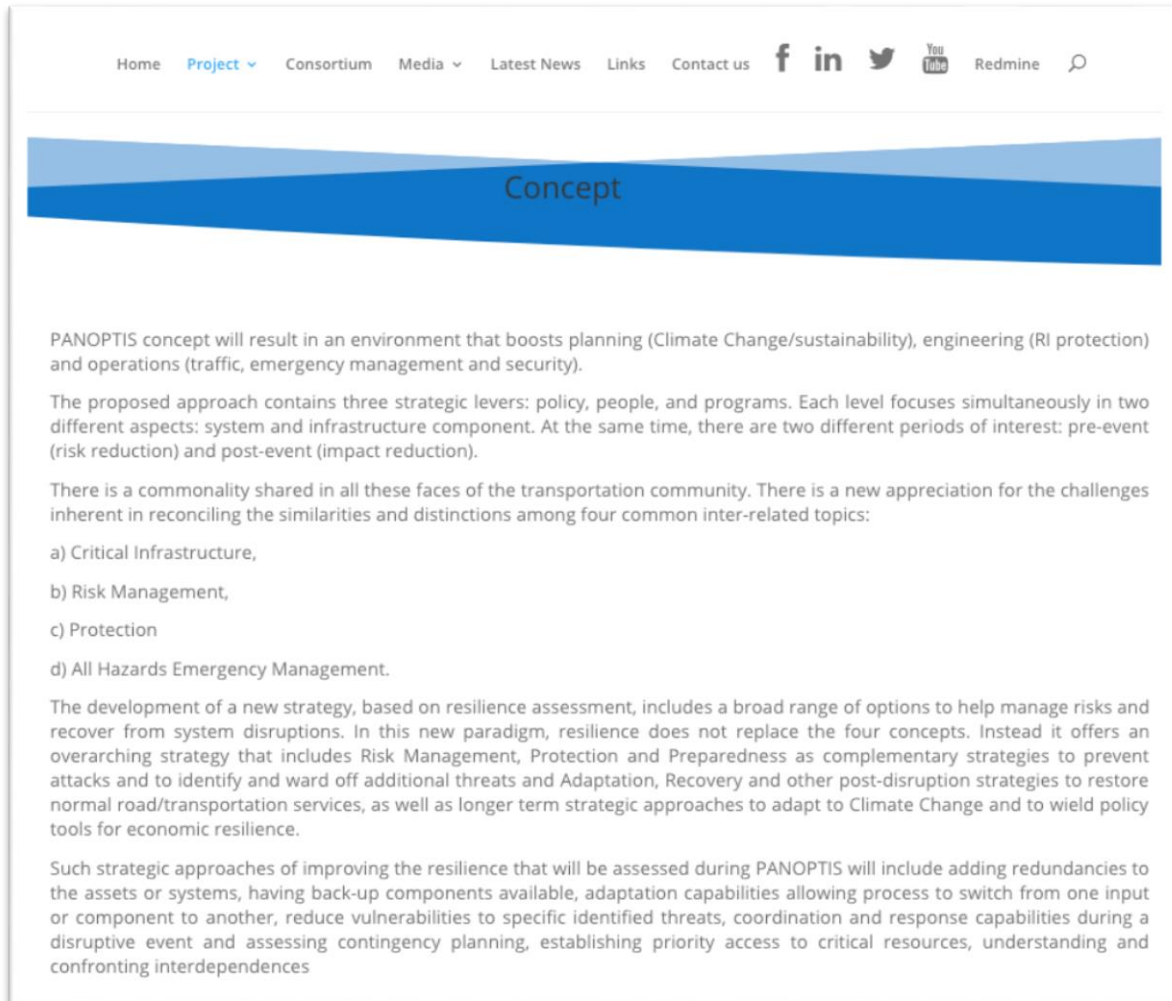
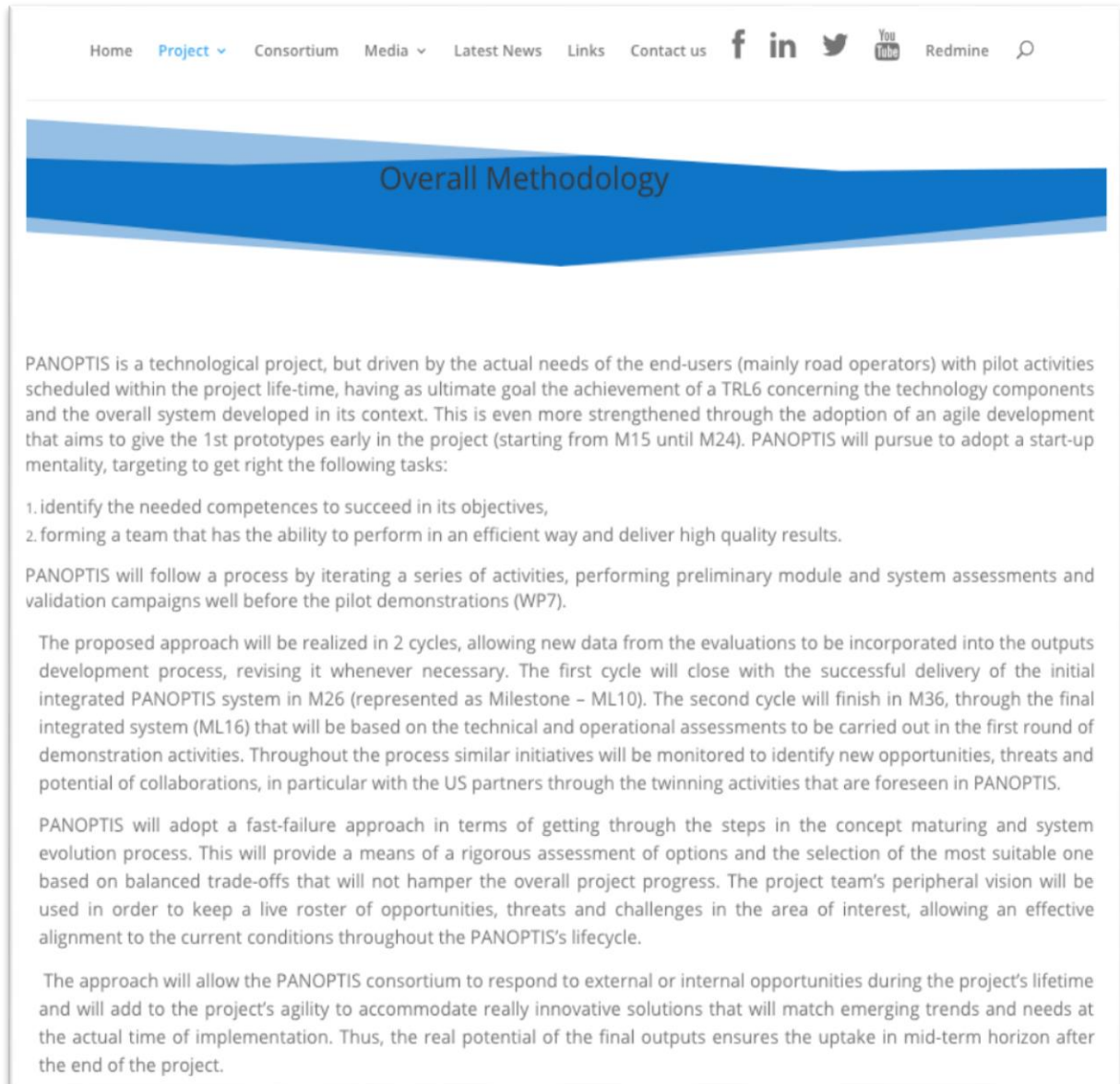


Figure 8: Concept section.

4.1.8 Overall Methodology section

In this section we provide information about the overall methodology (see Figure 9) and the project's work plan in the various Work-Packages -WPs- (see Figure 10).



The screenshot shows a website header with navigation links: Home, Project (dropdown), Consortium, Media (dropdown), Latest News, Links, Contact us, and social media icons for Facebook, LinkedIn, Twitter, and YouTube. A search icon and 'Redmine' link are also present. Below the header is a blue banner with the title 'Overall Methodology'. The main content area contains the following text:

PANOPTIS is a technological project, but driven by the actual needs of the end-users (mainly road operators) with pilot activities scheduled within the project life-time, having as ultimate goal the achievement of a TRL6 concerning the technology components and the overall system developed in its context. This is even more strengthened through the adoption of an agile development that aims to give the 1st prototypes early in the project (starting from M15 until M24). PANOPTIS will pursue to adopt a start-up mentality, targeting to get right the following tasks:

1. identify the needed competences to succeed in its objectives,
2. forming a team that has the ability to perform in an efficient way and deliver high quality results.

PANOPTIS will follow a process by iterating a series of activities, performing preliminary module and system assessments and validation campaigns well before the pilot demonstrations (WP7).

The proposed approach will be realized in 2 cycles, allowing new data from the evaluations to be incorporated into the outputs development process, revising it whenever necessary. The first cycle will close with the successful delivery of the initial integrated PANOPTIS system in M26 (represented as Milestone - ML10). The second cycle will finish in M36, through the final integrated system (ML16) that will be based on the technical and operational assessments to be carried out in the first round of demonstration activities. Throughout the process similar initiatives will be monitored to identify new opportunities, threats and potential of collaborations, in particular with the US partners through the twinning activities that are foreseen in PANOPTIS.

PANOPTIS will adopt a fast-failure approach in terms of getting through the steps in the concept maturing and system evolution process. This will provide a means of a rigorous assessment of options and the selection of the most suitable one based on balanced trade-offs that will not hamper the overall project progress. The project team's peripheral vision will be used in order to keep a live roster of opportunities, threats and challenges in the area of interest, allowing an effective alignment to the current conditions throughout the PANOPTIS's lifecycle.

The approach will allow the PANOPTIS consortium to respond to external or internal opportunities during the project's lifetime and will add to the project's agility to accommodate really innovative solutions that will match emerging trends and needs at the actual time of implementation. Thus, the real potential of the final outputs ensures the uptake in mid-term horizon after the end of the project.

Figure 9: The overall Methodology

Work Packages

WP1 – Project Coordination and Management: This WP will guarantee the successful realization of the project including the project administration and control, risk management, problem handling and quality assurance on management levels.

WP2 – End-User Requirements and Platform Design: This WP aims to define user and system requirements and produce a system design. The work performed in this WP will be the basis of the development taking place in WP3-WP7 as well as the main interface to involve the stakeholders in the development process.

WP3 – Atmospheric Forcing Modelling, Weather Now/Fore-Casting and Data Processing: Dynamic downscaling, maps of risk factors, extremes and environmental forcing at local scale and tailored forecasts are the main objectives WP3. The results of this WP will be interacting with WP4 and WP5 and feed the WP6.

WP4 – Vulnerability and Resilience Assessment of the Road Infrastructures: Employ the Structural/Geotechnical Safety Assessment (SGSA) tool to model and assess the vulnerability of (geo)structures under multiple hazards, provide simplified surrogate models for rapid near-realtime post-event reassessment, implement in software flow-state modules and provide the analysis framework to enable the flow of information from hazard to component state and system risk/resilience.

WP5 –Earth Observation, Sensor Data and Geospatial Services for Increased Resilience of the Road Infrastructures: Timely, multi-modal data and geospatial information from currently operational EU and international services will be integrated with other data coming from UAVs, ground vehicles and existing sensors on the pilot sites.

WP6 – Decision Support System and Enhanced Visualization Interface: This WP concerns the development and the integration of the Common Operational Picture (COP) module, the Data Fusion (reasoning engine), the Incident Management System (IMS) and the main Decision Support System (DSS). This WP is expected to be based on the outputs of the WP2-WP5.

WP7 – Integration and Piloting Activities: The PANOPTIS integrated prototypes will be delivered and the execution of the project's pilots based on the defined scenarios. The outputs of the pilots are expected to feed the development process towards the TRL maturity process of the PANOPTIS system and its components.

WP8 – General Dissemination, Creation of PANOPTIS Identity and Standardization Activities: This WP focuses on the formation of critical mass of stakeholders and on contributing to standardization activities.

WP9 – Exploitation Activities, Route to the Market and Project Sustainability: This is the business pillar of PANOPTIS, including all necessary tasks of the creation, adoption and validation of successful business strategies, taking into account market parameters and maximizing the possibilities for a sustainable solution.

Figure 10: The Work Packages section

4.1.9 PANOPTIS Consortium Section

The “Consortium” section presents the logos of the partners, with links to their websites (see Figure 11).



Figure 11: PANOPTIS Consortium page.

4.1.10 Media section

All the public content of PANOPTIS can be found and retrieved in this section. The public deliverables that will be released during the project will be listed in the sub-section Downloads. Additionally, the newsletters, press releases and other dissemination material will be uploaded here. Finally, all the research papers published by the consortium on scientific journals and conference proceedings, including white papers and poster session papers will be available in the Publications subsection. Media section is distinguished into the following categories:

- i. Download section.
- ii. Image Gallery section.
- iii. Events section.
- iv. Publications section.

4.1.11 Download section

In this section the consortium will upload the Dissemination material (see Figure 12), the Deliverables, the Leaflet, the Newsletters (see Figure 13), the Press Releases (see Figure 14) and the forthcoming video.

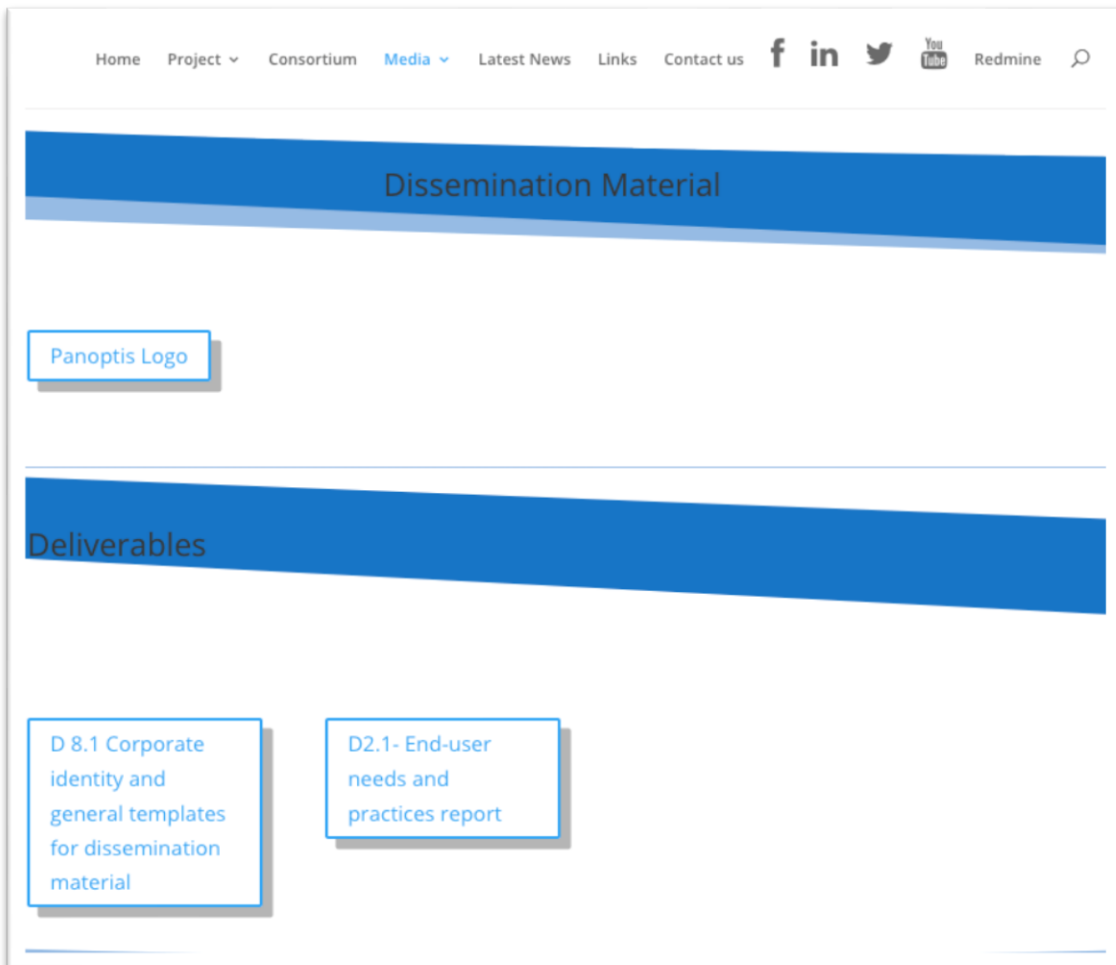


Figure 12: The Download section providing details about the dissemination material of the project



Figure 13: The first PANOPTIS newsletter.

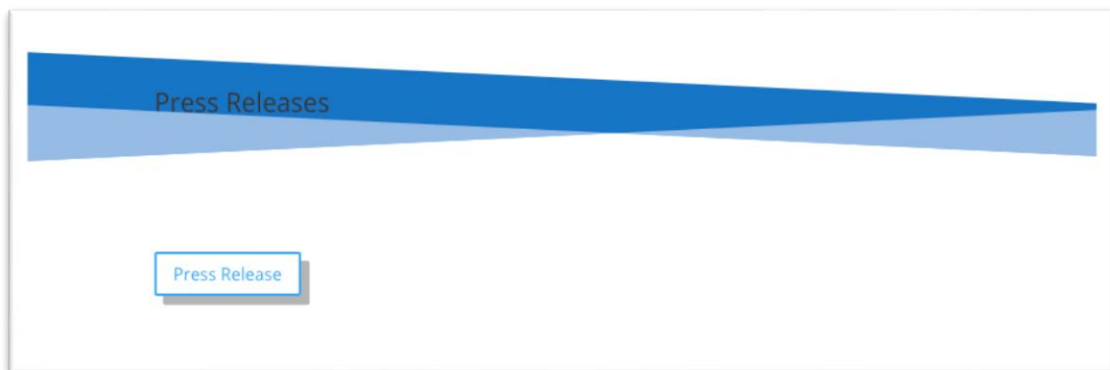


Figure 14: The first PANOPTIS press release

4.1.12 Image Gallery

In this section, the dissemination team uploads images relevant with the beneficiaries' actions. In Figure 15 the workshop in Metsovo is depicted.

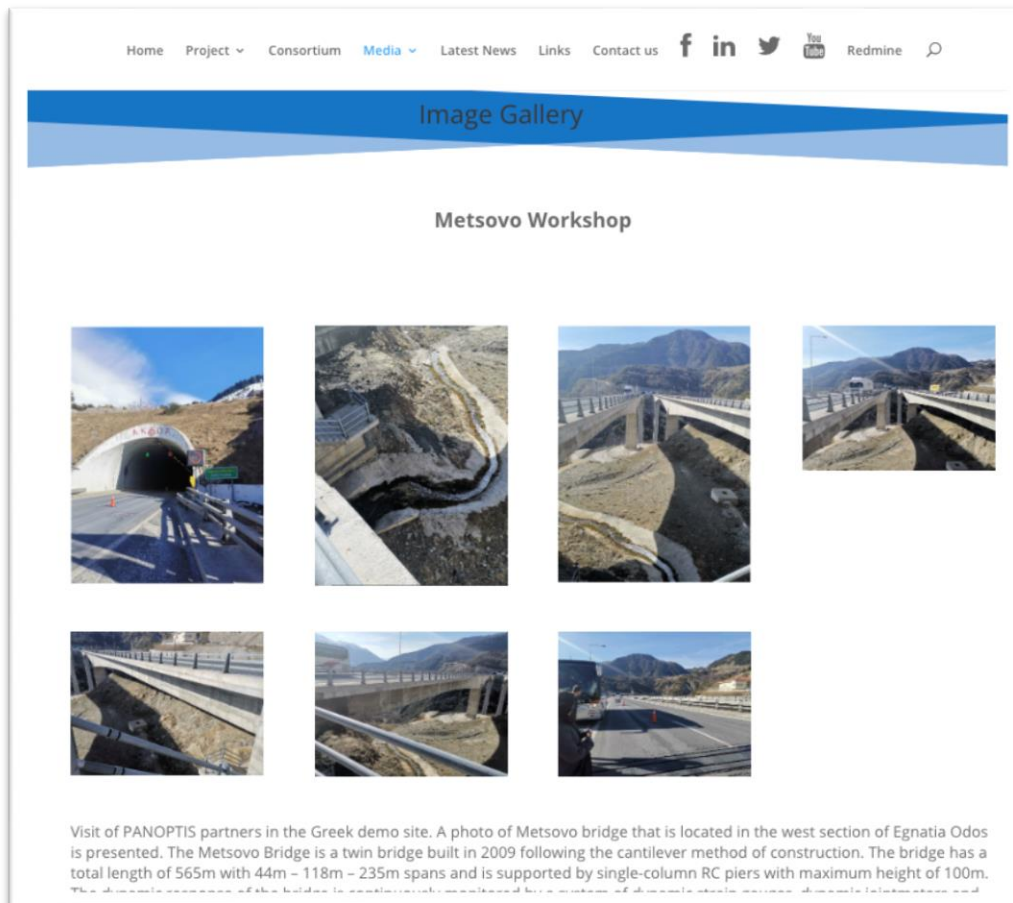


Figure 15: Image Gallery section.

4.1.13 Events section

This section will provide details about the project meetings, workshops and the most important social and scientific activities of the consortium. This section is connected with the social media accounts (see Figure 16).

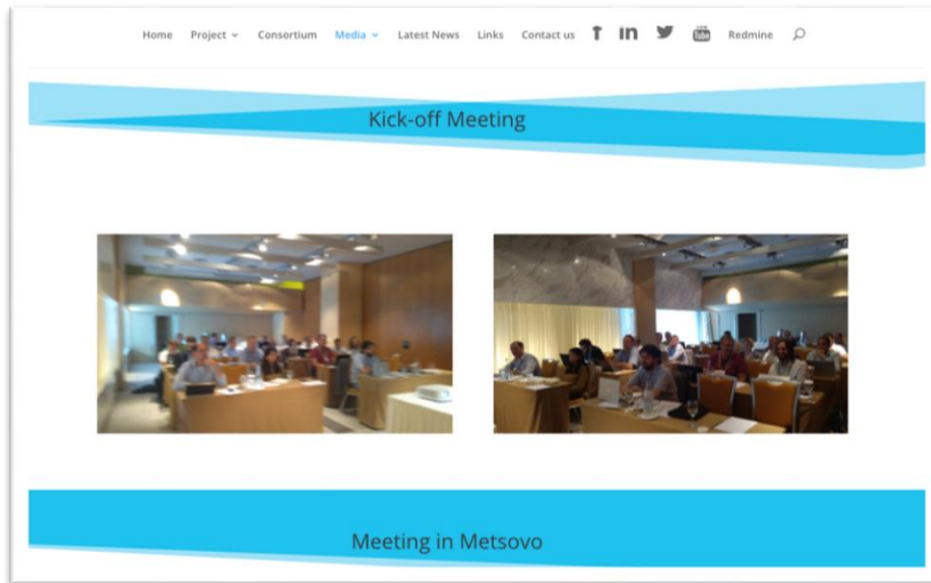


Figure 16: Event section

4.1.14 Publications section

Figure 17 illustrates the Publications section. In this page the consortium partners upload the latest scientific achievements. This section is directly connected with the social media accounts providing simultaneously notifications to the stakeholders.

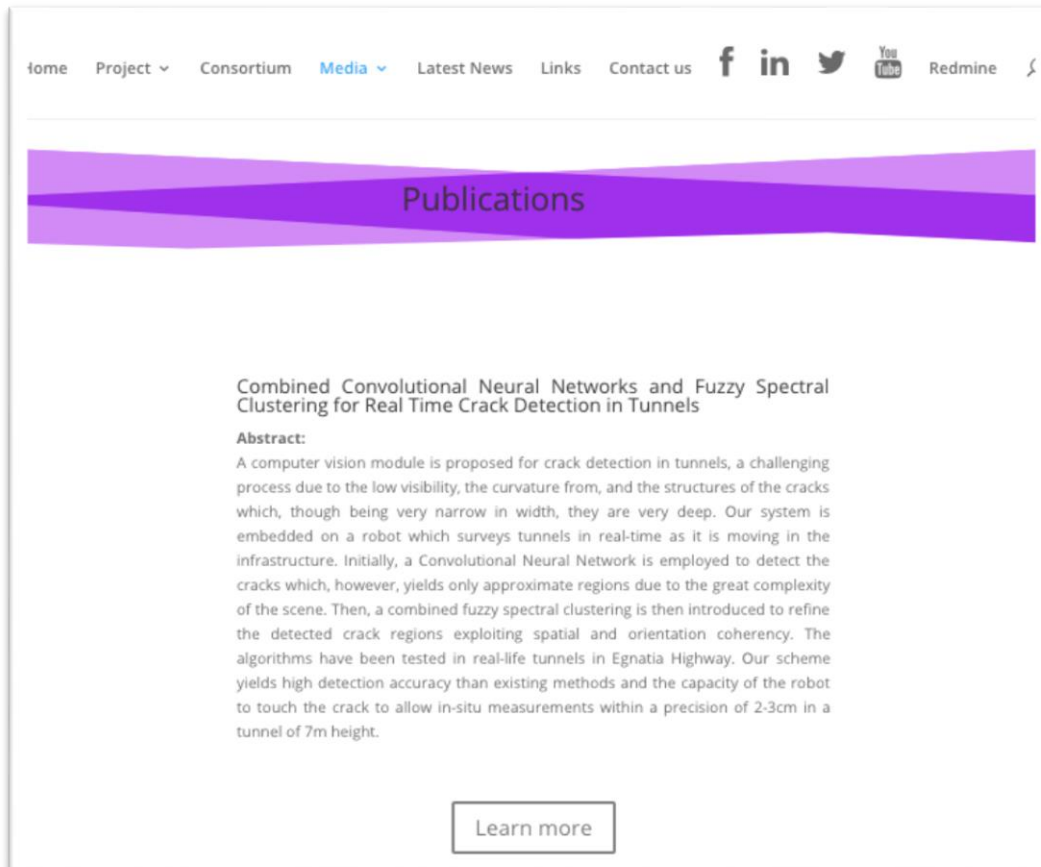


Figure 17: The publications section.

4.1.15 Latest News

This section provides the latest news of the PANOPTIS project (see Figure 18). At the top of this page the main social media accounts (Facebook, Twitter, LinkedIn) are listed. This section is updated by the NTUA and the consortium.

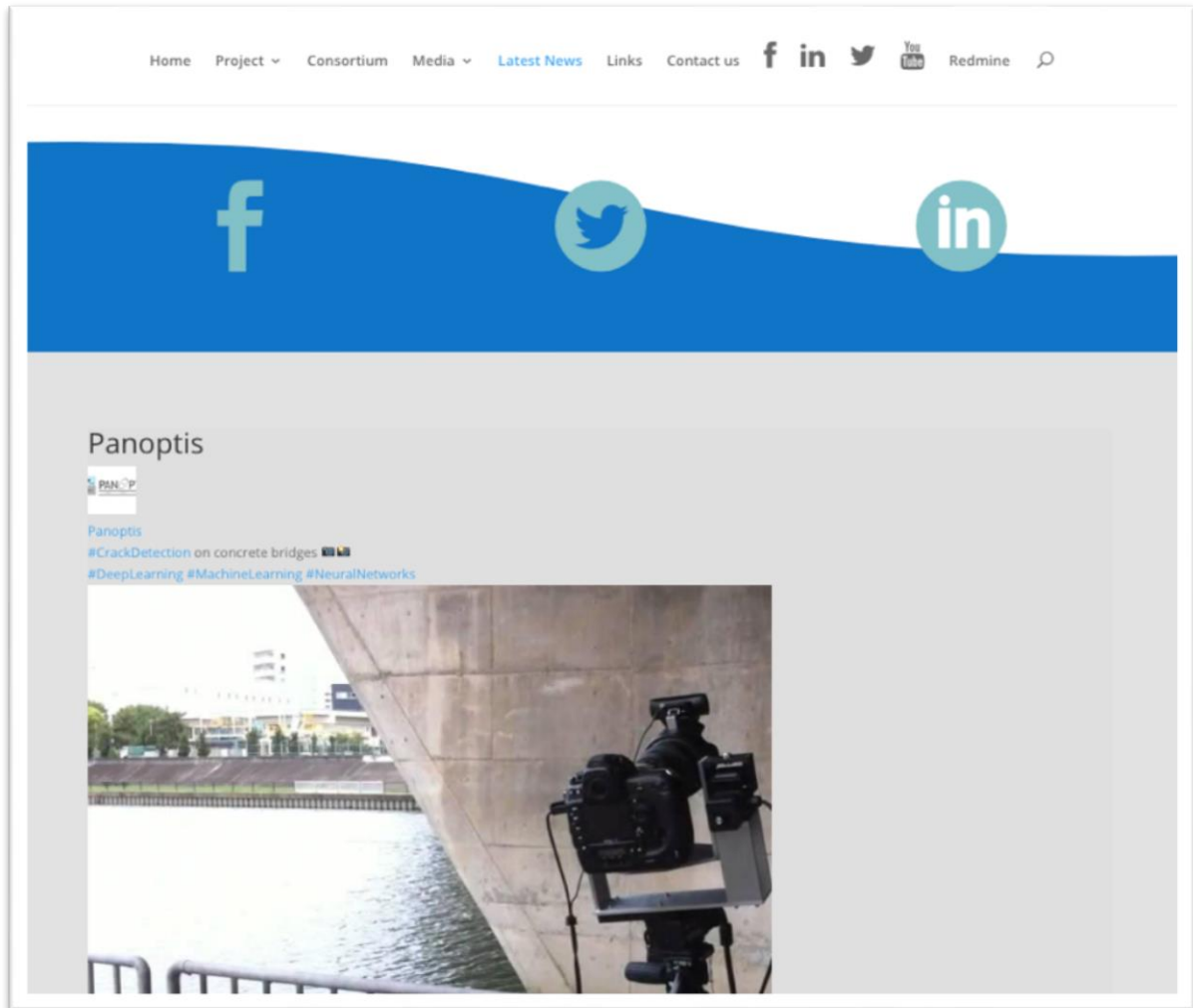


Figure 18: This section provides news regarding the PANOPTIS project.

4.1.16 Links Section

This section provides links regarding other relevant projects. Figure 19 presents a screenshot of the Links section that encompasses EU funded projects and relevant actions.

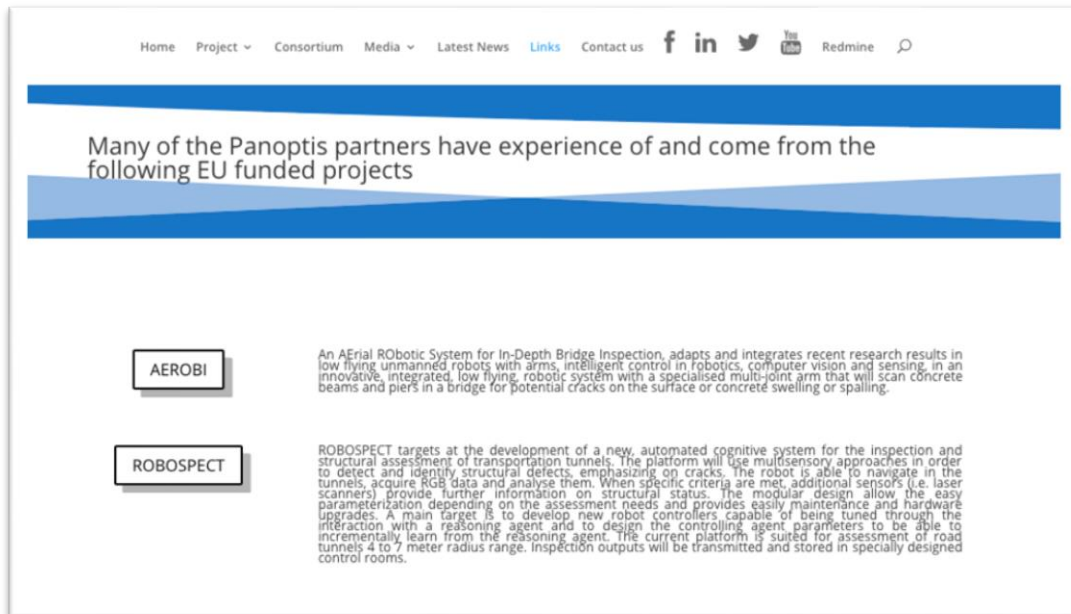


Figure 19: Links section.

4.1.17 Contact us section

During the project we expect to grasp the attention of researchers worldwide, for a variety of research fields. Thus, the establishment of a direct communication link is of major importance. The “Contact us” section provides the contact details of the PANOPTIS Coordinator. As an additional communication link, an online form is provided, allowing the users to get further information about the project (see Figure 20). Moreover, filling the contact form the users could also contact with the Dissemination Manager.

Figure 20: Contact us form

4.1.18 Use of PANOPTIS Social Media

Social media has grown tremendously in the last few years. From 2006 onwards the growth rate is unexpectedly very high. Specially Facebook and Twitter have grown much faster and captured millions of users in just a few years. The way technology is growing, it is obvious that more and more people are going to grasp its benefits. It has brought a lot of advantages for the society. The project intends to develop its presence on social networks, such as Twitter, Facebook, LinkedIn and YouTube.

PANOPTIS website fully exploits the capabilities offered by a variety of social media including:

- Facebook
- Twitter
- LinkedIn
- YouTube Channel

The aforementioned social media will serve as a far-ranging and powerful means to keep stakeholders involved in the outcome of the project and to increase their productivity in the process.

- **Facebook account** PANOPTIS

Facebook account is available here: <https://www.facebook.com/PANOPTIS.eu/>

Facebook is by far the biggest social network and it aims at reaching all kind of audience, and especially lay citizens without having necessarily a professional interest in PANOPTIS activities. The project will through Facebook highlight issues of interest regarding the PANOPTIS objectives. The latest posts are also visible through a Facebook feed on the Latest news section. Figure 21 depicts a screenshot of the PANOPTIS Facebook front page.

Figure 22 presents a snapshot of the most popular posts. Figure 23 depicts the pageviews of the Facebook profile. Figure 24 presents the total page likes of the Facebook account. Figure 25 presents the demographic data about the people who like PANOPTIS Facebook Page based on the age and gender information they provide in their user profiles.

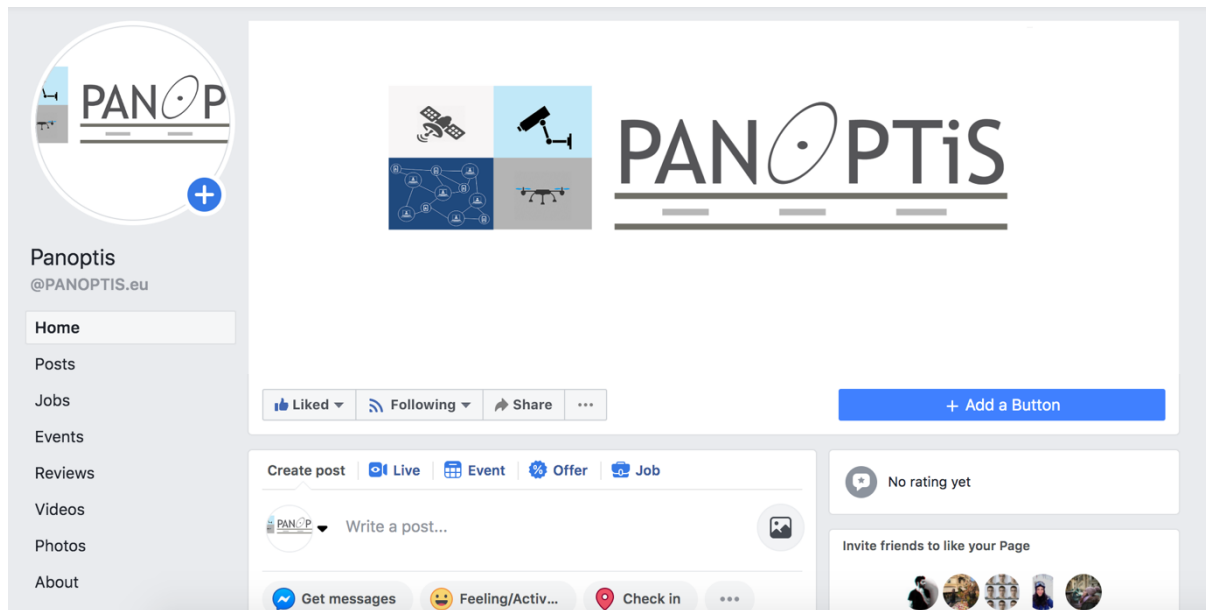


Figure 21: PANOPTIS Facebook home page.

Published	Post	Type	Targeting	Reach	Engagement	Promote
19/04/2019 15:38	Indoor #Drones in Bridge Inspection	🔗	🌐	125	6 9	Boost Post
19/04/2019 15:25	#Drone #AI system for street #CrackDetection	🔗	🌐	92	3 5	Boost Post
19/04/2019 15:23	Real-time object tracking using #DeepLearning. Check it out!	🔗	🌐	72	0 5	Boost Post
19/04/2019 15:16	Why Machine Learning is Vital To Business Today	🔗	🌐	84	1 8	Boost Post
19/04/2019 14:19	#DeepLearning system to detect cracks in nuclear power plants.	🔗	🌐	73	1 5	Boost Post
19/04/2019 14:13		📁	🌐	65	3 5	Boost Post
19/04/2019 13:48	Automatic #CrackDetection for tunnel inspection using	🔗	🌐	78	0 4	Boost Post
19/04/2019 13:23	Computer Vision for tracking	🔗	🌐	90	3 10	Boost Post
19/04/2019 13:10	#AI-based #CrackDetection system for concrete structures.	🔗	🌐	107	5 8	Boost Post
18/04/2019 17:23	PANOPTIS WP4 technical meeting	📁	🌐	171	87 28	Boost Post
18/04/2019 14:22	Live demonstration of a #drone inspecting a cell tower. More in this	🔗	🌐	80	0 11	Boost Post
18/04/2019 13:52	Real-time object detection using a #drone and #DeepLearning. How	🔗	🌐	76	0 10	Boost Post
18/04/2019 13:30	#CrackDetection on concrete bridges 🚧 #DeepLearning	🔗	🌐	80	0 11	Boost Post
18/04/2019 12:44	#DeepLearning for #drones! Check it out! 🚁🤖 #MachineLearning	🔗	🌐	72	0 9	Boost Post
18/04/2019 11:16	Concrete surface #CrackDetection is very important for the	🔗	🌐	104	6 12	Boost Post

Figure 22: The most popular PANOPTIS Facebook posts.

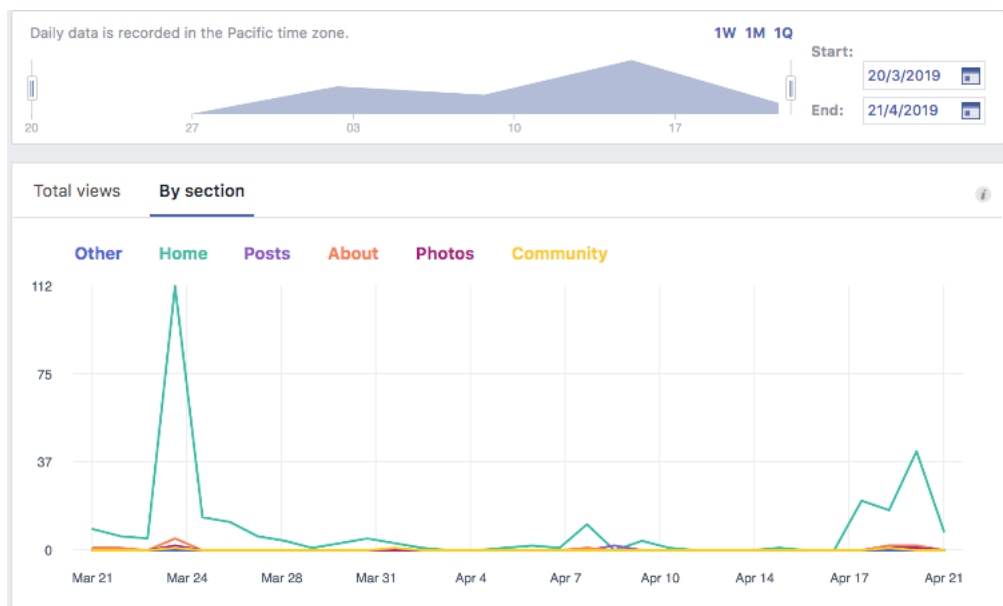


Figure 23: PANOPTIS Facebook pageviews.

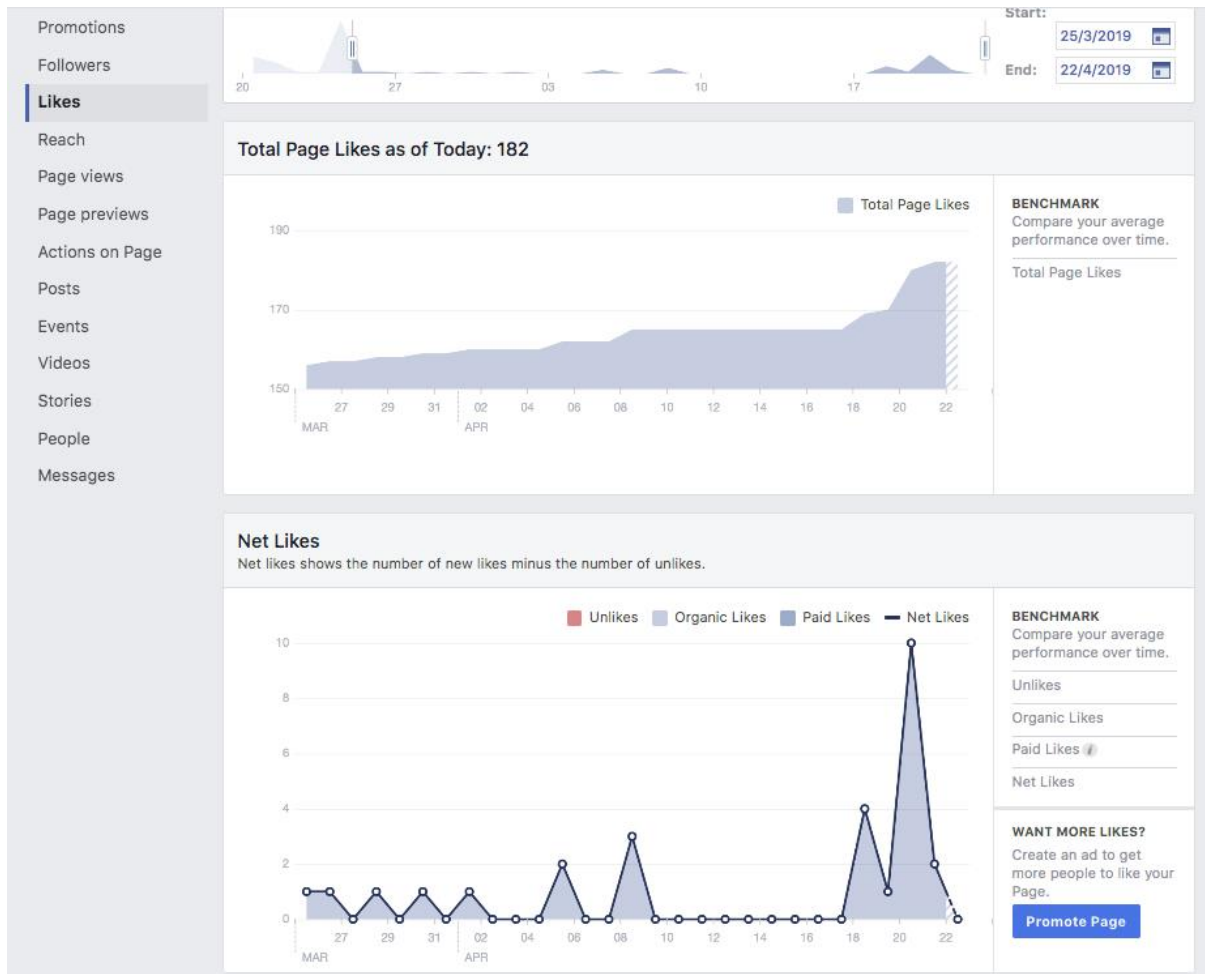


Figure 24: Total page likes from the begging of the Facebook account.

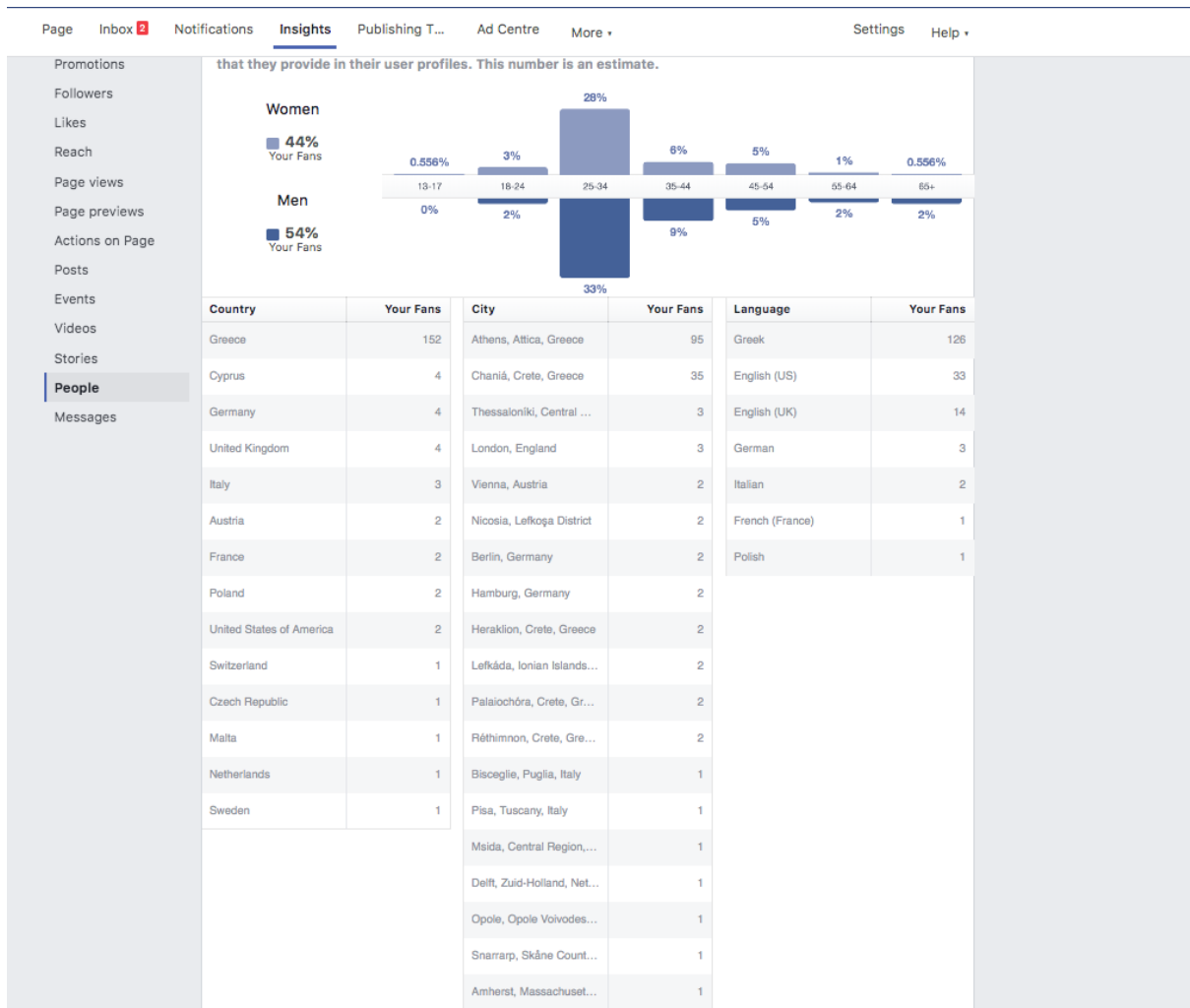


Figure 25: Aggregated demographic data about the people who like PANOPTIS Facebook Page based on the age and gender information they provide in their user profiles.

o **Twitter account PANOPTIS**

Twitter account is available here: <https://twitter.com/panoptis>.

Twitter is a microblogging platform that allows users to share short messages and chat with other users via their phones or web browsers. It aims at sharing PANOPTIS activities and outcomes with a wide audience composed of policy-makers, road and transportation authorities, industries and relevant organizations. Figure 26 presents the PANOPTIS Twitter home page.



Figure 26: PANOPTIS Twitter home page.

○ **LinkedIn account PANOPTIS**

LinkedIn business account is available here: <https://www.linkedin.com/company/12983567/>
 LinkedIn is a business network (see Figure 27). Especially publishers scientific communities, executives and researchers who might not use Facebook or Twitter often have LinkedIn account. A public profile (see Figure 28) is also created and it is reachable here: <https://www.linkedin.com/in/panoptis-europe-758553185/>



Figure 27: PANOPTIS LinkedIn business account.

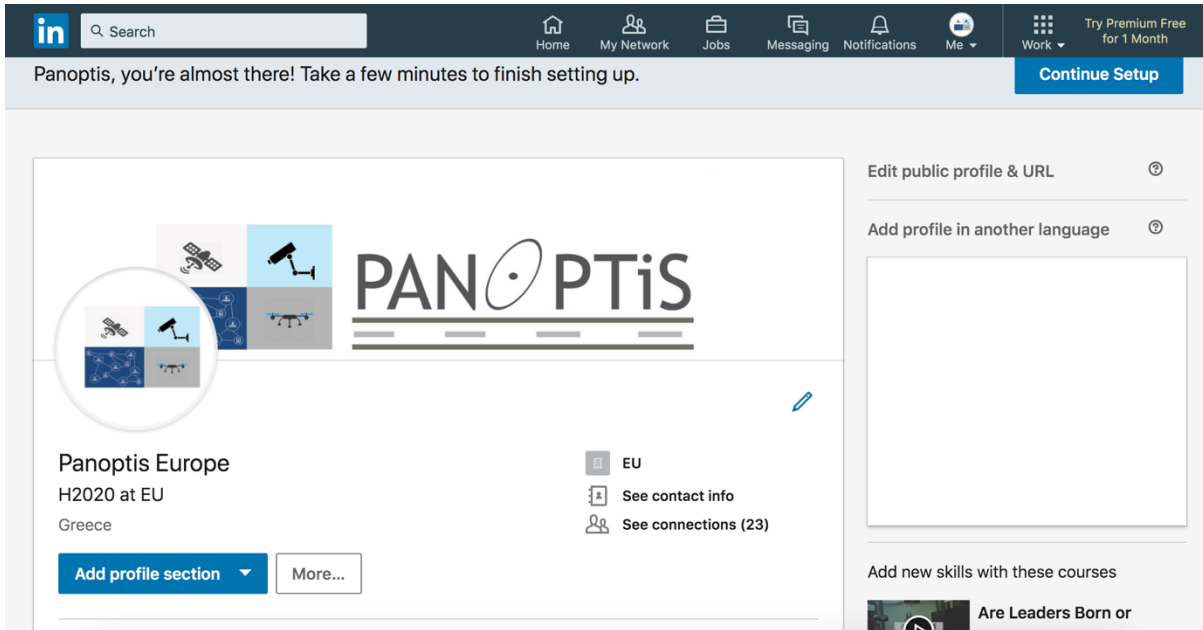


Figure 28: PANOPTIS LinkedIn public account.

○ **YouTube Channel PANOPTIS**

The YouTube Channel is a very useful way of disseminating demonstration videos from the PANOPTIS technical partners (see Figure 29). These videos are very interesting for the stakeholder community, especially for end users that will be kept aware of the PANOPTIS technical achievements and progress. Videos from the web deemed to be of interest for the stakeholder community will also be uploaded.

All partners are invited to provide videos from technical demonstrations, participation to relevant events, and technical developments concerning the tools developed in PANOPTIS.

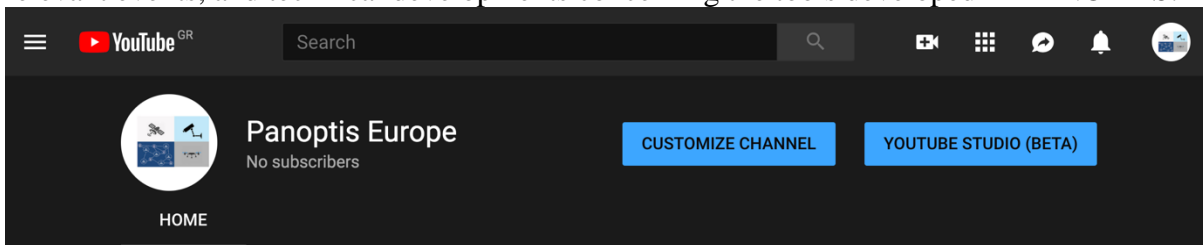


Figure 29: PANOPTIS YouTube channel.

4.1.19 PANOPTIS YouTube Channel

The YouTube Channel is a very useful way of disseminating demonstration videos from the PANOPTIS technical partners. These videos are very interesting for the stakeholder community, especially for end users that will be kept aware of PANOPTIS technical achievements and progress. Videos from the web deemed to be of interest for the stakeholder community will also be uploaded.

All partners are invited to provide videos from technical demonstrations, participation to relevant events, and technical developments concerning the tools developed in PANOPTIS.

4.1.20 PANOPTIS Redmine platform

This private area is password-protected and its access is only allowed to the PANOPTIS partners (see Figure 30). A login and a password have already been provided to each PANOPTIS member. The Redmine platform acts as the main repository for all project

content, and allows all the consortium member to access and retrieve PANOPTIS material (see Figure 31).

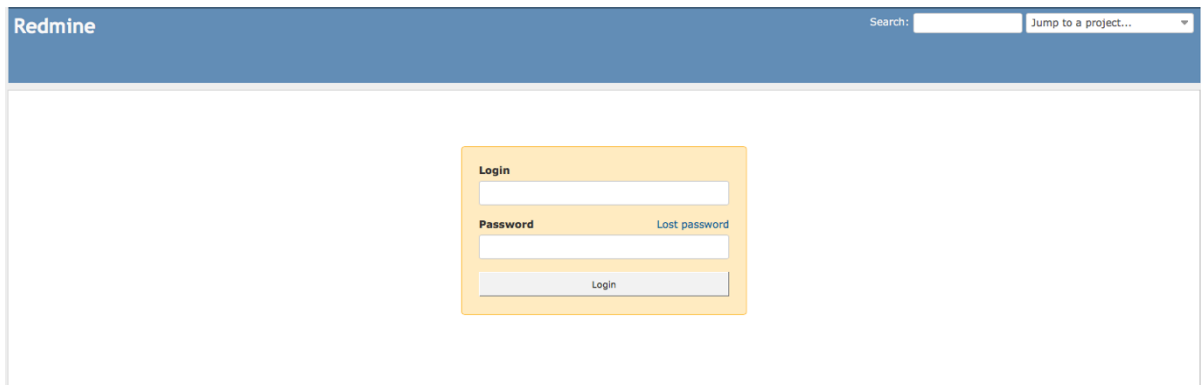


Figure 30: Redmine Login page.

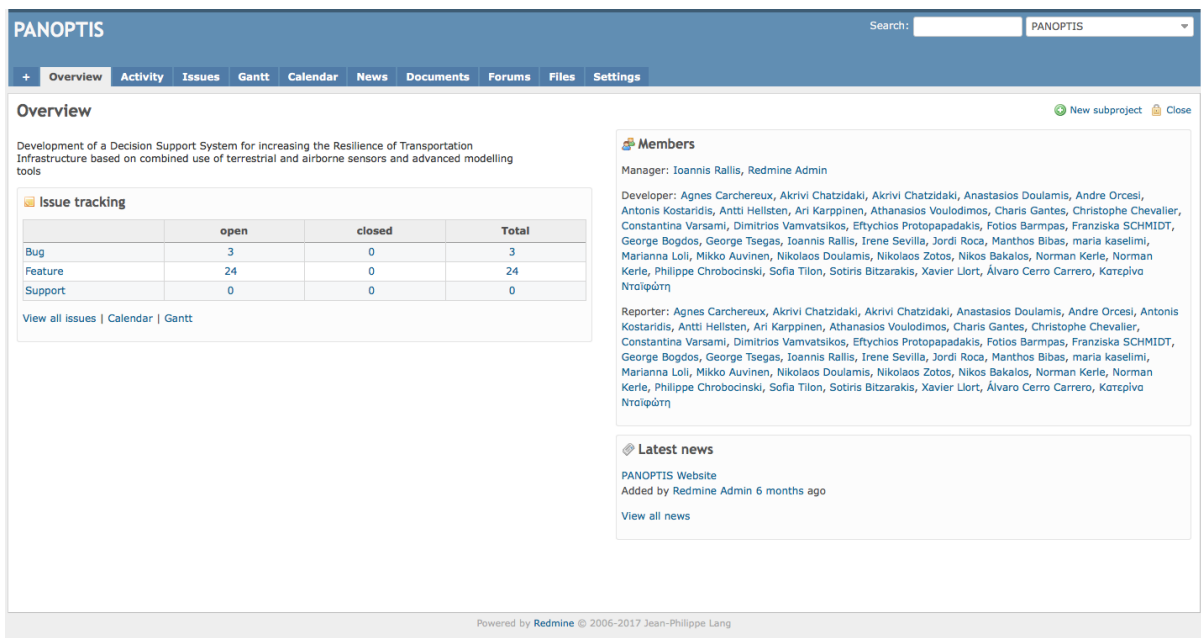


Figure 31: PANOPTIS Redmine platform.

PANOPTIS Redmine platform consists of the Overview section, the Activity section, the Issues section, the Gantt section, the Calendar section, the News section, the Documents section, the Forum section, the Files section and the Settings section.

5 Printed dissemination material

5.1.1 PANOPTIS Logo, graphical identity and style guidelines

A logo is a powerful asset to the project's identity as it can perfectly define and strongly symbolize its character and main objectives (see Figure 32). The PANOPTIS logo has been developed having one main goal in mind: to create a highly recognizable visual identity that strongly reflects the PANOPTIS project ideas and concept and will be used in all graphic materials and documents related to the project. Therefore, the logo chosen is designed to be

simple, easily recognizable and self-explanatory, so that people can immediately grasp the main idea of the project, while it will serve as a trademark for the community.

As explained also in previous deliverables, the first version of the PANOPTIS project logo has been prepared by NTUA and was shared with the consortium for comments and suggestions. The PANOPTIS logo is used on every document and dissemination material that is produced by the consortium members, to serve the purpose of the PANOPTIS “graphic identity” and to promote consistency of produced material. PANOPTIS Logo is available here:

<http://www.panoptis.eu/wp-content/uploads/2018/10/PANOPTISLOGOFINALVERSION.png>



Figure 32:PANOPTIS logo.

5.1.2 PANOPTIS leaflet

One of the most effective ways for disseminating the project’s ideas, results and concept is the project leaflet. The PANOPTIS leaflet will be a means of providing short information on project activities, expected achievements and impact, and it will be distributed in conferences, workshops, special events etc., or put out on display in key locations, including those relevant to project events or information centres. It can also be disseminated in electronic format through various online media, the project website and social networking channels.

The PANOPTIS leaflet is designed to be impressive and eye-catching, demonstrating effectively the most interesting and ground breaking elements of the project, with indications of where more technical or detailed information can be found. It includes a short descriptive text, presenting PANOPTIS message/key information as clearly and as simply as possible, so as to encourage the reader to find out more about the project.

Unlike some of the other forms of communication, leaflets are geared towards anyone who could be interested in the workings of the project. This includes experts working in the field, scientific and academic audience, but also non-technical audiences who might have a personal interest in the subject matter as well as the press. Because of the potentially wide audience the leaflet can reach, its content is not overly technical; it presents the project’s expected impact and explains in short the concept, the basic project facts and scheduled activities, giving this way the opportunity to someone who has never heard of the project to gain a quick understanding of its essential elements. Figure 33 and Figure 34 present the front and the back page of the PANOPTIS leaflet respectively.



f You can like us on Facebook:
www.facebook.com/PANOPTIS.eu

in You can follow us on LinkedIn:
www.linkedin.com/company/panoptis-eu/

t You can follow us on Twitter:
<https://twitter.com/panoptis>

www.panoptis.eu



Project Coordinator
Philippe Chrobocinski

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 769129



Development of a Decision Support System for increasing the Resilience of Transportation Infrastructure based on combined use of terrestrial and airborne sensors and advanced modelling tools



www.panoptis.eu

Figure 33: PANOPTIS project leaflet (front page)

The Challenges

One of the greatest challenges facing transport operators and engineers today is the fast and efficient inspection, assessment, maintenance and safe operation of existing infrastructures including highways and the overall Road Infrastructure (RI) network.

Due to factors such as ageing, Climate Change (CC), extreme weather conditions or other natural and manmade hazards, increased traffic demands, change in use, inadequate maintenance and deferred repairs, the Transport Infrastructures (TI) –including also railways, marine infrastructure, etc.– are progressively deteriorating and become more vulnerable, urgently needing inspection, assessment and repair work.

PANOPTIS aims to leverage existing tools and services (e.g., climate models, modelling of extreme events and their impacts, **Early Warning Systems (EWS)**, **Structural Health (SH)**/ **environmental monitoring sensors** and EU services, such as Copernicus) as well as novel technologies (terrestrial and satellite imaging for RI inspection, advanced machine learning and data fusion techniques, etc.) in view of delivering an integrated platform that can be applied to RI, addressing multi-hazard risk understanding, smart prevention and preparedness, faster, adapted and efficient response.

Our proposed new integrated system to support operational and strategic decisions, by better absorbing and efficiently recovering from damages respectively, aims to increase the resilience of RI/TI.

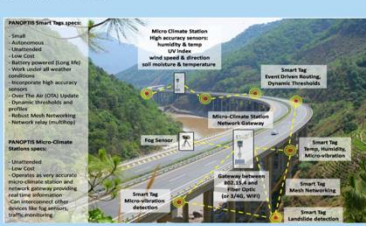


Fig 1 Topology of Network Smart Tags, Micro-climate stations and connected components in RI hot-spot

Approach and Objectives

PANOPTIS aims to further exploit existing sensors (installed in the demonstration sites of the project), and add new and low cost unattended microclimate-stations (wind-speed, air humidity, temperature, soil moisture and temperature) and smart tags (air humidity, temperature, vibrations), as well as fog detection systems.

- Reliable quantification of climatic, hydrological and atmospheric stressors.
- Provide a distributed and standardized system.
- Multi-Hazard modelling.
- Development of a forecasting module to provide high-resolution tailored weather and precipitation forecasts.
- Improved prediction of structural and geotechnical safety risk.
- Improved multi-temporal, multi-sensor observations with robust spectral analysis, computer vision and Machine Learning (ML) damage diagnostic for diverse RI.
- Detailed and wide area transport asset mapping, integrating state-of-the-art mobile mapping and making use of Unmanned Aerial Vehicles (UAV) technology.
- Design of a Holistic Resilience Assessment Platform (HRAP).
- Design of a Common Operational Picture (COP) including a Decision Support System (DSS), an enhanced visualisation interface and an Incident Management System (IMS).
- On-site Integration, Demonstration and Validation of PANOPTIS platform through two real case studies in Greece and in Spain.

PANOPTIS Pilot Series

Demonstration Case A in Greece: Partner EOAE will provide a section of the Egnatia Motorway in the Northern part of Greece as a test case, selected due to the high exposure of its structures - bridges and geotechnical works (high embankments, big cuts) - and their increased vulnerability to catastrophic seismic events, high annual precipitations that affect active landslide areas, traffic overloading, and geotechnical movements (landslide, settlements, rock-falls). Records with the evolution over time of the dynamic characteristics of some seismic prone bridges, based on continuous ambient vibration monitoring are available. The highway is publicly owned, and the operation and maintenance of this stretch is done by EOAE a public body technical company that was also responsible for the design and construction of the motorway and outsources the operation, maintenance and exploitation of the motorway.




Fig 2. Metsovo bridge with a pc based SHM network

Demonstration Case B in Spain: ACCI will provide as case study a section of the A2 Highway in Spain that connects Madrid with Barcelona. The highway is publicly owned, but the operation and the maintenance is done by the Concessions Division of ACCI. The selection has been done based on how crucial it is for the RI/TI system of Spain, as it connects the two largest Spanish cities, and its potential to be affected by a broad range of (mostly weather-related) events having already caused important damage, such as a bridge collapse due to flooding.




Fig 3. Map of the Spanish demo

www.panoptis.eu

Figure 34: PANOPTIS project leaflet (back page).

5.1.3 PANOPTIS Newsletter

In order to disseminate news about project progress, a newsletter is also used. The newsletter respects the graphical chart of the project in order to create a coherent visual identity. The newsletter content will naturally change along with project maturation. At first the technical advancements as well as design evolution and user requirements will be the focus of the newsletter. Moreover, the newsletter presents the end-user workshop in Acciona and the Kick-off meeting in Greece. In the final phases of the project, the main aspect of the newsletter will be the presentation of the results and achievements of the PANOPTIS project. This newsletter will be printed for dissemination in events in which PANOPTIS is presented. The PANOPTIS Newsletter is downloadable from the Downloads section. Figure 35 depicts screenshots of the PANOPTIS newsletter.



PANOPTIS

Development of a Decision Support System (DSS) for increasing the resilience of transportation infrastructures based on combined use of terrestrial and airborne sensors and advanced modelling tools

Newsletter N° 1 - January 2019

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No 759129.



(a)



PANOPTIS Kick-Off Meeting in Greece



The PANOPTIS kick-off meeting took place on 19-20 of June 2018 in Thessaloniki, Greece, where Egnatia Odos A.E., a partner of the project is based. All participating organizations attended the event.

In the two-days meeting, administrative procedures were discussed and an overview of all Work Packages (WP) and scientific approaches to be followed was made. Particular attention was placed on the detailed, technical discussion of the active tasks in the first semester of the project.

Each partner presented their strategy, internal milestones for the task and a roadmap for the first months was drafted.

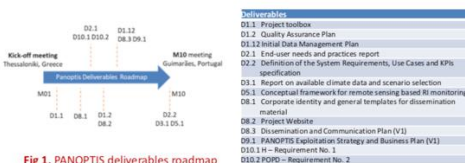


Fig 1. PANOPTIS deliverables roadmap

During the meeting, the team also prepared the main strategy to be followed for the PANOPTIS dissemination activities. Teleconferences for monitoring project progress are organized by the coordinator on a monthly basis.

(c)



www.panoptis.eu
Coordinator: AIRBUS
Philippe Chrobocinski

One of the greatest challenges facing transport operators and engineers today is the fast and efficient inspection, assessment, maintenance and safe operation of existing infrastructures including highways and the overall Road Infrastructure (RI) network. Due to factors such as ageing, Climate Change (CC), extreme weather conditions or other natural and manmade hazards, increased traffic demands, change in use, inadequate maintenance and deferred repairs, the Transport Infrastructures (TI) –including also railways, marine infrastructure, etc.– are progressively deteriorating and become more vulnerable, urgently needing inspection, assessment and repair work. At the same time, while routine monitoring can have a focus that is limited to the actual corridor and its immediate surroundings, the complexity of any critical incident necessitates a more synoptic coverage, whereby air- and space-borne instruments work in synergy with ground-based sensors. Current preparedness plans hardly take into consideration regional CC predictions, while other disaster risk governance and operational tools for the end-to-end management (preparedness, protection, early warning, response and recovery) are quite fragmented, leading to a non-unified and inconsistent crisis confrontation. Hence, the resilience of RI/TI based on risk understanding and multimodal data analysis falls short.

PANOPTIS mission is to leverage existing tools and services (e.g., climate models, modelling of extreme events and their impacts, Early Warning Systems (EWS), Structural Health (SH) / environmental monitoring sensors and EU services, such as Copernicus) as well as novel technologies (terrestrial and satellite imaging for RI inspection, advanced machine learning and data fusion techniques, etc.) in view of delivering an integrated platform that can be applied to RI, addressing multi-hazard risk understanding, smart prevention and preparedness, faster, adapted and efficient response. Our proposed new integrated system to support operational and strategic decisions, by better absorbing and efficiently recovering from damages respectively, aims to increase the resilience of RI/TIS.

PANOPTIS is being developed by a multi-disciplinary team, coordinated by AIRBUS DS SAS, in the EU's Horizon 2020 framework. The project launched in June 2018 and will run for three and a half years (forty two months), to allow enough time for the development and validation of the technology.

(b)



PANOPTIS M05 end-user workshop in Acciona, Spain



The PANOPTIS end-user workshop was hosted on 29-30 of October 2018 in Madrid (Spain), at Acciona premises. All partners attended the event. During the first day of the meeting, administrative procedures were discussed, while an overview of main active tasks took place.

The second day of the meeting was dedicated to a visit to the demo site in a section of the A2 Highway in Spain that connects Madrid with Barcelona. The highway is publicly owned, but the operation and the maintenance is done by the Concessions Division of Acciona. The section selected for the pilot has a length of 77.5 km, and lays in the province of Guadalajara. A more detailed and open technical discussion on the main issues that have to be dealt with in the next period took place.



Fig 2. Visit demo site in Spain

PLANNED EVENTS:

- ✓ The next end-user workshop meeting will take place in Greece in February 2019, at the premises of Egnatia Odos.
- ✓ The next PANOPTIS consortium meeting is going to take place in Guimarães, Portugal in March 2019.

(d)



(e)

Figure 35: The PANOPTIS newsletter. (a) This illustration depicts the front page of the PANOPTIS newsletter. (b) This screenshot presents the second page explaining the mission of the project. (c) This illustration is the third page of the newsletter and presents the kick-off meeting. (d) This snapshot is the fourth page of the PANOPTIS newsletter that presents the end-user workshop in Madrid. (e) This screenshot depicts final page presenting the PANOPTIS consortium.

The first version of the newsletter is available here:

http://www.panoptis.eu/wp-content/uploads/2018/10/PANOPTISnewsletter_v1_Final.pdf

6 Publications, Conferences and Events

This aspect of the dissemination activities is one of the main contributions of the academic partners involved in PANOPTIS, aiming to ensure the dissemination of the project findings among the research and scientific community.

6.1 Publications in International Journals and Participation in European and International Events

PANOPTIS is planning its participation and representation in a number of European and international events, such as workshops, congresses and conferences, and this will continue throughout its duration. In this way, the project partners will have the chance to interact with key representatives of the scientific community, the industry, national and European authorities, end users as well as with the general public. Within these events, PANOPTIS will present its work via technical presentations, organization of special sessions on related research or exhibition of the project's concepts and findings at stands and booths. PANOPTIS dissemination material such as leaflets and posters will be also distributed in every occasion so that a greater audience may be reached. The participation of the PANOPTIS consortium to related events. Possible conference and trade fairs to attend are shown in Section 6.2. In addition, the project will also consider every opportunity to publish its findings and achievements through articles in related technical or other general public magazines, in order to approach as wide an audience as possible.

Table 4: List of indicative journals for publications

Name of Publication	URL
IEEE Trans. On Image Processing	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=83
IEEE Trans. On Intelligent Transportation Systems	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6979
IEEE Intelligent Systems	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=9670
IEEE Trans. On Cybernetics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6221036
IEEE Transactions on Vehicular Technology	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=25
IEEE Journal on Selected Areas in Communications	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=49
IET Circuits, Devices & Systems	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=4123966
Transportation Journal	https://www.jstor.org/journal/transportationj?refreqid=excelsior%3A9ae10db0a98ba78b08a0d35c0379e336
Sensors	https://www.mdpi.com/journal/sensors
Journal of Transport Geography	https://www.journals.elsevier.com/journal-of-transport-geography
Computers, Environment and Urban Systems	https://www.journals.elsevier.com/computers-environment-and-urban-systems
Transportation Research Part C: Emerging Technologies	https://www.journals.elsevier.com/transportation-research-part-c-emerging-technologies
GIScience & Remote Sensing	https://www.tandfonline.com/toc/tgrs20/current
International Journal of Applied Earth Observation and Geoinformation	https://www.sciencedirect.com/journal/international-journal-of-applied-earth-observation-and-geoinformation
European Journal of Operational Research	https://www.sciencedirect.com/journal/european-journal-of-operational-research
Earthquake Engineering & Structural Dynamics	https://onlinelibrary.wiley.com/journal/10969845
Engineering Structures	https://www.journals.elsevier.com/engineering-structures
Natural Hazards	https://link.springer.com/journal/11069
ASCE Journal of Structural Engineering	https://ascelibrary.org/journal/jsendh
Earthquake Spectra	http://earthquakespectra.org/
ASCE Journal of Highway and Transportation Research and Development	https://ascelibrary.org/loi/jhtrcq
ASCE Journal of Infrastructure Systems	https://ascelibrary.org/loi/jitse4
Journal of Civil Structural Health Monitoring	https://link.springer.com/journal/13349
Structural Monitoring and Maintenance	http://www.techno-press.org/?journal=smm&subpage=7
Remote Sensing	https://www.mdpi.com/journal/remotesensing
ISPRS International Journal of Geo-Information	https://www.mdpi.com/journal/ijgi

ISPRS Journal of Photogrammetry and Remote Sensing	https://www.journals.elsevier.com/isprs-journal-of-photogrammetry-and-remote-sensing
Natural Hazards and Earth System Sciences (NHES)	https://www.natural-hazards-and-earth-system-sciences.net/
The Photogrammetric Record	https://onlinelibrary.wiley.com/journal/14779730
Computer-Aided Civil and Infrastructure Engineering	https://onlinelibrary.wiley.com/journal/14678667

6.2 Publications in Conferences, Trade Fairs and Scientific Workshops

The following table presents possible conferences, trade fairs and scientific workshops to attend, as well as the dates of the next edition of those events. Of course, since PANOPTIS is currently at the beginning, project results might be presented in later editions of the same events.

Table 5: List of possible conferences and scientific workshops, in which PANOPTIS partners plan to participate.

Date	Event	Location	Website
3-5 May, 2019	GISTAM 2019	Heraklion, Crete, Greece	http://www.gistam.org/Home.aspx
22-24 May, 2019	Joint Urban Remote Sensing Event	Vannes, France	http://jurse2019.org/
04-06 June, 2019	ISPRS Workshop on Modelling and Managing Geospatial Data	Fredericton, NB, Canada	https://crss-sct.ca/conferences/csr-2019/
10-14 June, 2019	Geospatial Week 2019	Enschede, the Netherlands	https://www.gsw2019.org/
25-27, June 2019	25th International Conference on Urban Transport and the Environment	Aveiro, Portugal	http://www.witconferences.com/transport2019
23-26, June 2019	2nd International Conference on Natural Hazards & Infrastructure	Chania, Greece	https://iconhic.com/2019/
July 28 - August 2 2019	IGARSS, 2019	Yokohama, Japan	https://igarss2019.org/
03-06 September, 2019	GeoInformation for Disaster Management	Prague, Czech Republic	http://www.gi4dm2019.org/
22-25, September 2019	26th IEEE International Conference on Image Processing (ICIP)	Taipei, Taiwan	http://2019.ieeeicip.org/
9-10 September, 2019	SECED 2019 Confernece	Greenwich, UK	https://www.seced.org.uk/index.php/seced-2019
26-27 September, 2019	D-A-CH Tagung, Erdbebeningenieurwesen & Baudynamik	Innsbruck, Austria	http://www.oge.or.at/files/d-a-ch2019.html

6-9, October 2019	IEEE- International Conference on Systems, Man and Cybernetics	Bari, Italy	http://www.ieeesmc.org/
12-14 October, 2019	Sensors and Models in Photogrammetry and Remote Sensing	Teheran, Iran	https://geospatialconf2019.ut.ac.ir/
15-19, October 2019	The 7th International Conference on Risk Analysis and Crisis Response (RACR-2019)	Athens, Greece	http://www.sra.org/events/sra-europe-2019-conference
24-25, October 2019	Transportation Research	Athens, Greece	https://www.ictr.gr/
27 – 30 October 2019,	The 22 nd IEEE International Conference on Intelligent Transportation Systems	Auckland, New Zealand	https://www.ieee-itc2018.org/
3-5 May, 2019	GISTAM 2019	Heraklion, Crete, Greece	http://www.gistam.org/Home.aspx
22-24 May, 2019	Joint Urban Remote Sensing Event	Vannes, France	http://jurse2019.org/
03-06 June, 2019	13th ITS European Congress	Brainport, Eindhoven, the Netherlands	https://2019.itsineurope.com/
03-06 June, 2019	5th Annual International Conference on Transportation	Athens, Greece	https://www.atiner.gr/transport
04-06 June, 2019	ISPRS Workshop on Modelling and Managing Geospatial Data	Fredericton, NB, Canada	https://crss-sct.ca/conferences/csrs-2019/
10-14 June, 2019	Geospatial Week 2019	Enschede, the Netherlands	https://www.gsw2019.org/
17-19 June, 2019	ICE Conference on Engineering Responsibility Innovation in Products and Services,	Sophia Antipolis Innovation Park, Nice, France	http://www.ice-conference.org
26-30 May, 2019	ICASP13 13th International Conference on Applications of Statistics and Probability in Civil Engineering	Seoul, S.Korea	https://www.icasp13.snu.ac.kr/
24-26 June 2019	7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering	Crete, Greece	https://2019.compdyn.org/
1-4 July, 2019	EARSel 2019	Salzburg, Austria	http://symposium.earsel.org/39th-symposium-Salzburg/
14-18 September,	17 th World Conference on Earthquake	Sendai, Japan	http://17wcee.jp/

2020	Engineering 2020		
6-9 July 2020	EWSHM - 10th European Workshop on Structural Health Monitoring	Palermo, Italy	http://www.ewshm2020.com/

7 Other Activities

This part focuses on press and mass media coverage of the PANOPTIS project, as well as on advertising the videos produced by the members of the Consortium.

7.1 Press and Mass Media

This dissemination channel will be used to reach a wide European audience. It will also describe the potential benefits for the society and the application of project results. Periodic press releases in national and international electronic and printed media concerning the project launch, field tests and project dissemination events will be used to keep people informed on PANOPTIS results and achievements.

PANOPTIS progress will be regularly presented in national and international mass media, from an end user point of view and/or from a scientist point of view. In order to share results with the scientific community, several publications in national and international journals will be prepared by the PANOPTIS consortium. Press communication will also be used during the field tests as they are the perfect place to hold a press conference. A separate Press conference will be held before each field test.

7.2 Videos

During the project, partners are invited to provide videos on demonstrations and tests performed. All videos will be uploaded on the YouTube channel created at month 26 and 40 of the project. These videos will include demonstrations of the PANOPTIS components and explain the functioning of the parts of the system or to present results of the field tests. During the field validation, a project video will also be prepared by for presenting the results.

8 Conclusions

The PANOPTIS project is being well disseminated to the different stakeholders, but also to the scientific community and the public. Dissemination activities are being actively carried out by the partners since the beginning of the project. The main accomplishments during the first 10 months of the project can be summarised in the following:

- The PANOPTIS graphical identity and style guidelines were defined;
- The first version of the leaflet of the PANOPTIS project were created;
- The website is regularly updated; and redesigned after the EC recommendations.
- The social networks are regularly updated: Facebook page, Twitter account, LinkedIn account.
- The first version of the PANOPTIS newsletter was created and distributed;
- One publication was made in peer-reviewed conferences;
- The first press release was issued.

Dissemination activities will gradually evolve with the project, increasing usable channels and number of people reached (stakeholders, end users, researchers, industrialists, public etc.). Efforts will continue during the PANOPTIS project life cycle and also after, by exploiting innovations and even commercialization by some PANOPTIS members.