

D7.2 – SAFERtec Website



Security Assurance Framework for Networked Vehicular Technology

### Abstract

SAFERtec proposes a flexible and efficient assurance framework for security and trustworthiness of Connected Vehicles and Vehicle-to-X (V2X) communications aiming at improving the cyberphysical security ecosystem of "connected vehicles" in Europe. The project will deliver innovative techniques, development methods and testing models for efficient assurance of security, safety and data privacy of ICT related to Connected Vehicles and V2X systems, with increased connectivity of automotive ICT systems, consumer electronics technologies and telematics, services and integration with 3rd party components and applications. The cornerstone of SAFERtec is to make assurance of security, safety and privacy aspects for Connected Vehicles, measurable, visible and controllable by stakeholders and thus enhancing confidence and trust in Connected Vehicles.





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V0.3	18/07/2017	ICCS	Updates on Section 3
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# Acronyms and abbreviations

Abbreviation	Description
D	Deliverable
CPU	Central Processing Unit
DoA	Description of Action
EU	European Union
НТТР	HyperText Transfer Protocol
Glosa	Green Light Optimal Speed Advice
ICCS	Institute of Communication and Computer Systems
РНР	Hypertext Preprocessor
Т	Task
V2I	Vehicle-to-Infrastructure
V2X	Vehicle-to-Everything
URL	Uniform Resource Locator (web address)
WP	Work Package

Table 1: List of Abbreviations





# **Executive Summary**

The present deliverable provides a brief description of the developed SAFERtec website and its main functionalities, explaining the rationale behind the layout and structure choices. Furthermore it describes the content of the different pages and sections, and the way that project developments will be communicated through the website.

This deliverable is closely related to D7.1 Dissemination and Exploitation Plan, and is addressed to all interested parties, either within the consortium, the European Commission, or the public. Once approved, it will be uploaded to the project website and will be available to the general public.

The website will serve as the main channel for the project's online communications. It will hold information about the project's concept, the consortium, relevant activities, and it will allow for the broad dissemination of project results.

The SAFERtec website will present the project brand and provide essential project information, using a user friendly layout and navigation structure. The content of the website will be managed and updated on a regular basis by ICCS.





# **1** Introduction

The present deliverable, entitled D7.2 SAFERtec Website is a key document within Work Package (WP) 7, describing the main tool of the SAFERtec online communications. The deliverable also provides a brief description of the main website functionalities.

In line with the SAFERtec communications objectives as set out in the Description of Action (DoA), the partner responsible for the project's online presence and author of this deliverable, ICCS, has developed a dedicated SAFERtec website to serve as the main channel for the project's online communications. The website will hold information about the project's concept, the consortium, and relevant activities, and will allow for the broad dissemination of knowledge, material and project results.

The SAFERtec website URL is <u>www.safertec-project.eu</u>, emphasizing the links to the European Union.

## **1.1 Purpose of the Document**

The purpose of this deliverable is to provide a brief description of the developed SAFERtec website and its main functionalities, as it is foreseen in Task 7.2 Project Web site and Online Presence of WP7 Dissemination and Standardization.

## **1.2 Intended readership**

This deliverable is addressed to any interested reader (*i.e.*, PU dissemination level).

## **1.3 Inputs from other projects**

No input from other projects was considered during the drafting of this deliverable.

## **1.4 Relationship with other SAFERTEC deliverables**

This deliverable is closely related to deliverable D7.1 Dissemination and Exploitation Plan (M06). The work described in the D7.1 plans will leverage the herein described functionality of the SAFERtec web-page to serve (most of) the dissemination purposes.





## 2 Infrastructure

## 2.1 Hosting and Running

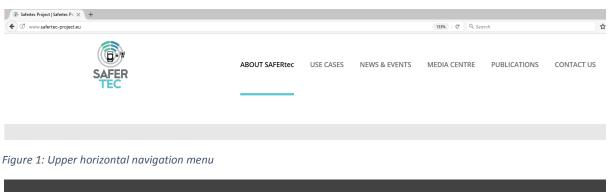
The web portal of SAFERtec website is running on a server with the following characteristics: 4 x CPU: Intel(R) Xeon(R) CPU E5530, Memory: 8GB, Storage: 200GB. Software wise the website is served by an Apache HTTP server 2.4.7 with PHP 5.5.9 and is compatible with all available web browsers (Internet Explorer, Mozilla Firefox, Google Chrome, etc.). The server is hosted in the premises of the Institute of Communication and Computer Systems (ICCS) in Athens, Greece. The website has been developed in a mobile friendly mode by using Wordpress Content Management System. The Content Management System as well as the design are developed and customized by ICCS for the purposes of SAFERtec.





# **3 Website structure**

The SAFERtec website has two horizontal navigation bars as depicted in the following pictures:



This project has received funding from the European Union's Horizon		
2020 research and innovation programme under grant agreement No 732319.	Ƴ in	Dr. Angelos Amditis Institute of Communication and Computer
		Systems (ICCS) 9 Iroon Polytechniou Str. Gr 157 73 Zografou Athens, Greece a.amditis@iccs.gr

Figure 2: Lower horizontal navigation menu

The upper dropdown navigation menu comprises the following pages:

- ABOUT SAFERtec
- USE CASES
- NEWS & EVENTS
- MEDIA CENTRE
- PUBLICATIONS
- CONTACT US

The lower navigation menu comprises the following pages:

- Imprint
- Follow us (links to social media)
- Contact information

The upper menu remains visible on the screen even when the user scrolls down the page to facilitate navigation for site visitors; the lower menu appears when the visitor scrolls the page down.





The different sections of the pages, included in the navigation menus, are described in detail in the following sections of this report.

### 3.1 Homepage

The homepage (see Figure 3), being the point of entry for site visitors, presents essential project information and uses a simple layout to place focus on the branding and to facilitate navigation. The header area contains a large project logo and the "sticky" main navigation menu.

Right below the header, the full project title and an image representing a basic concept of the project, namely the "connected vehicle system", are presented. In addition, information about the SAFERtec concept, objectives and use cases (also included in the main menu) are provided in the homepage, in order to provide visitors with direct access to main project information without further search in the website. Also, information about the latest project news and activities, as well as links to the social media platforms is provided through the "News Feed" section. Moreover, the homepage provides information about the consortium, through a dedicated "Partners" section.

At the bottom of the homepage the EU flag and the respective acknowledgment text are placed. Finally, the lower navigation menu also contains an imprint section (see Figure 4), which includes a disclaimer notice and website information, links to the SAFERtec social media channels, and contact details of the project coordinator. This lower menu appears not only on the homepage but in all website pages, providing quick access to communication with the SAFERtec project (social media, contact details) and ensuring visibility of EU funding.

Visitors can be easily redirected to the homepage by clicking on the SAFERtec logo that appears on the top left side of the website.





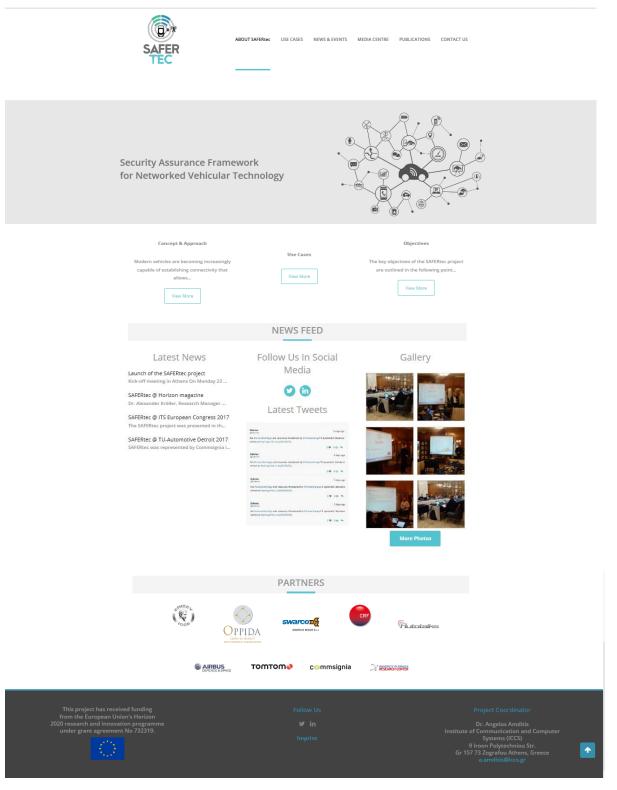


Figure 3: The SAFERtec Homepage



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 732319

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ABOUT SAFERtec USE CASES NEWS & EVENTS MEDIA CENTRE PUBLICATIONS CONTACT US

Imprint

Home > Imprint

The SAFERTEC project is funded by the European Union's HORIZON 2020 research and innovation programme under grant agreement no 732319. Responsibility for the content of this website lies entirely with the SAFERTEC consortium. The information provided in this website has been prepared exclusively for the purpose of providing information about the SAFERTEC project and related work and activities. The SAFERTEC consortium has tried to ensure that all information provided in this website is correct at the time it was included. However, no

representation is made or warranty given as to the completeness, accuracy and constant update of the information contained in this website. The copyright for the material contained in this website belongs to the SAFERTEC consortium. The technology or processes described at this website may be subject to other intellectual property rights reserved by the SAFERTEC consortium or by third parties in various countries. No licence is granted in respect to these intellectual property rights.

By accessing this website, you agree that the SAFERTEC consortium will not be liable for any direct or indirect damage or any consequential loss arising from the use of the information contained in this website or from your access to any other information on the internet via hyperlinks. No information contained in this website can be considered as a suggestion to infringe patents. The SAFERTEC consortium disclaims any liability that may be claimed for infringement or alleged infringement of patents. This website is an offer of information from the SAFERTEC project team.

#### **Google Analytics**

This website uses Google Analytics, a web analytics service provided by Google, Inc., a Delaware company whose main office is at 1600 Amphitheatre Parkway, Mountain View (California), CA 94043, United States (" Google ").

Google Analytics uses cookies, which are text files placed on your computer, to help the website analyze how users use the site. The information generated by the cookie about your use of the website (including your anonymized IP address) will be transmitted to and stored by Google on servers in the United States.

Google will use this information on our behalf in order to keep track of your use of the website, compiling reports on website activity for website operators and providing other services relating to website activity and internet usage. Google may also transfer this information to third parties where required to do so by law or where such third parties process the information on Google's behalf. Google will not associate your IP address with any other data held by Google. You may refuse treatment of the data or information by rejecting the use of cookies by selecting the appropriate settings on your browser, however, you should know that doing so may not be able to use the full functionality of this website. By using this website you consent to the processing of data about you by Google in the manner and for the above purposes.
This website is developed and maintained by:

Institute of Communication and Computer Systems (ICCS) Concept, editing Institute of Communication and Computer Systems (ICCS) Design, programming and web content management system Zulusites Institute of Communication and Computer Systems (ICCS) Contact: Coordinator: Institute of Communication and Computer Systems – ICCS Dr. Angelos Amditis (a.amditis@iccs.gr) 9, Iroon Politechniou Str. Zografou GR-15773, Athens GREECE Telephone: +30 210 772 1663 Dissemination Manager;

Institute of Communication and Computer Systems – ICCS Dimitra Christopoulou (d.christopoulou@iccs.gr)

Figure 4: The "Imprint" subpage

### **3.2 ABOUT SAFERtec**

The menu item entitled "ABOUT SAFERtec" (see Figure 5), which can be reached via the upper horizontal navigation menu, includes the following subpages:

- Concept & Approach
- Objectives
- Partners



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 732319

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• Project Facts

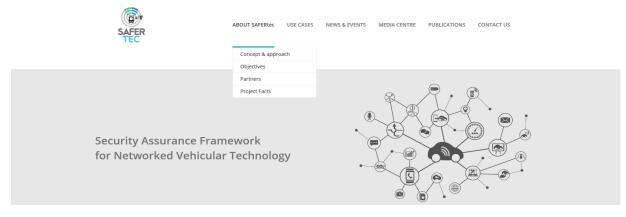


Figure 5: The "About SAFERtec" dropdown menu

A detailed description of the content of the aforementioned subpages is provided in the following sections.

### 3.2.1 Concept & Approach

The first subpage in the dropdown menu of "About SAFERtec" presents the project's concept and its approach (see Figure 6) towards delivering a flexible and efficient assurance framework for security and trustworthiness of Connected Vehicles and Vehicle-to-X (V2X) communications.







ABOUT SAFERtec

USE CASES

NEWS & EVENTS MEDIA CENTRE PUBLICATIONS CONTACT US

### Concept & Approach

Home > ABOUT SAFERtec > Concept & approach

Modern vehicles are becoming increasingly capable of establishing connectivity that allows the rich-information exchange between them and road infrastructure units. The so-called 'connected-vehicles' paradigm can bring-about an enormous potential towards safer transportation only if the involved security needs against a variety of 'new' threats are confidently satisfied.

The SAFERtec project seeks to in-depth explore the involved vulnerabilities of connected vehicles, apply innovative techniques for attack modeling, experimentally validate the quantification of security assurance levels and also contribute to relevant standards. With a total budget of 3.8 million Euros funded by the European Commission, 9 partners of industrial, SME and academic profile coming from 6 different countries join their expertise to contribute to the vision of introducing a security assurance framework tailored for future networked vehicular technology. The area of Automotive technology is one of the most prominent to have experienced the trend of developing a plethora of (hardware and software) modules provided by numerous 3rd party entities and having them integrated into an ICT products of advanced functionality. The emerging Connected Vehicles paradigm shift is expected to dramatically change the way drivers interact with their vehicle and improve significantly traffic safety and efficiency. While introducing new electronic systems, sensors, embedded devices, services, connectivity to the internet, navigation, safety and mobile applications a complex new eco-system is build including among others new vulnerabilities and risks. Vehicle manufacturers (OEMs), infrastructure providers (cloud, telecom), third parties systems and component providers as well as application and service providers are facing immense challenges towards the design, development, implementation, integration and operation of highly connected ICT components, services and applications for Connected Vehicle systems. All these new possibilities increase the complexity and risk with potential fatal consequences if security, safety and privacy are not adequately addressed.

What is then of the utmost importance is to establish links of trust to foster innovation, societal acceptance and market uptake. Formal procedures for assuring and certifying products, systems and services adherent to relevant standards and practices, is one relevant key enabler. The SAFERtec concept is based on those key findings and thus aims to propose an Assurance Framework for enhancing trust by providing formal methods, processes, techniques and tools that will facilitate the assurance of security, safety and privacy.

SAFERtec will design an agile security assurance framework tailored for V2I Automotive settings and evaluate the results of its application relying both on careful comparison with current standardized frameworks, best practices and recommendations but also experimentation means. A Connected Vehicle System (i.e., vehicle connected with infrastructure) developed and integrated by the consortium partners will cover a wide range of the respective stakeholders (OEM, On board units, SW, application and service providers). SAFERtec will then incorporate the designed framework in a modular and extendable Assurance Framework Toolkit to provide estimations of security assurance levels for a range of automotive scenarios.

Figure 6: The "Concept & Approach" subpage





## 3.2.2 Objectives

The second subpage outlines the key objectives of the SAFERtec project.

SAFER TEC	ABOUT SAFERtec	USE CASES	NEWS & EVENTS	MEDIA CENTRE	PUBLICATIONS	CONTACT US
Objectives					Home > ABOUT SA	FERtec > Objectives
The key objectives of the SAFERtec project ar • Provide a security assurance Framework en operation and maintenance) of ICT-based Cou • Provide methods for threat analysis and att around vehicle applications, services, embed • Enhance vulnerability analysis and penetrat will create a set of standardized tests and pro • Define metrics (and their taxonomy) to enh leverage aggregation and dependability tech services and applications. • Introduce methods for defining Key Perform in translating radio/network/physical KPIs to • Foster the adaptation of more flexible and of traditional certification schemes. • Identify gaps in current security assurance	abled to cover the nnected Vehicles. tack modeling, white ded devices and co- tion testing technic ocesses that will be ance the framewor niques to capture t nance Indicators (K Reliability/Safety/S cost-efficient assur-	whole System I ch will accurate mmunications. jues tailored fo incorporated i ch validation with he security, saf PIs) related to s security metrics ance methods f	ly assess security th r highly connected II nto the assurance fr thin the connected-v ety and privacy assu system reliability, sa for the considered for the automotive in	reats introduced by CT in Connected Ve amework. vehicles setting. The arance levels of the fety, security and p use cases. ndustry to reduce t	y current/future in thicles and V2X syst e development of r involved data, con privacy. Emphasis v the complexity and	-vehicle and tems. This netrics will nponents, vill be given effort of

standardization activities for security assurance of ICT based Connected Vehicles, including safety, privacy and reliability aspects.

Figure 7: The "Objectives" subpage





## 3.2.3 Partners

The third subpage contains information about the SAFERtec consortium. Partners are presented through a list which provides their names, linked to their official websites, logos, and country as depicted in Figure 8.

SAFE	ABOUT SAFERtec USE CAS	ES NEWS & EVEN	NTS MEDIA CENTRE	PUBLICATIONS	CONTACT US
Partne	ers			Home > ABOUT S	SAFERtec > Partners
1 INSTI	TUTE OF COMMUNICATION AND COMPUTER SYSTEMS (Coordina	ator)	Greece		
2	CENTRO RICERCHE FIAT SCPA	CRF	Italy		
3	CASSIDIAN CYBERSECURITY SAS	SARBUS	France		
4	UNIVERSITY OF PIRAEUS RESEARCH CENTER	27 INSEAN CONTRA	Greece		
5	AUTOTALKS LTD	Plutotaiks	İsrael		
6	SWARCO MIZAR SRL	SWORCODE INVIRONMENT	Italy		
7	TOMTOM DEVELOPMENT GERMANY GMBH	тоттот	Germany		
8	COMMSIGNIA KFT	commsignia	Hungary		
9	OPPIDA		France		

Figure 8: The "Partners" subpage





### 3.2.4 Project Facts

The Project Facts subpage provides basic information about the duration, budget, funding and coordination of the project.

SAFER TEC	ABOUT SAFERtec	USE CASES	NEWS & EVENTS	MEDIA CENTRE	PUBLICATIONS	CONTACT US
Project Facts					Home > ABOUT SAFE	Rtec > Project Facts
SAFERtec has received funding from the Eu Start date: January 2017 End date: December 2019 Total cost: EUR 3 819 380 EU contribution: EUR 3 819 380 Topic: DS-01-2016 – Assurance and Certifica Funding scheme: RIA – Research and Innov Project Coordinator: Dr. Angelos Amditis,	ation for Trustworthy	and Secure IC	T systems, services a	and components	grant agreement no	o 732319.

Figure 9: The "Project Facts" subpage

## **3.3 USE CASES**

This subpage aims at presenting in brief the considered SAFERtec use-cases. The current description includes the two general V2I instances that the project work focuses-on (see Figure 10); it stays in high-level abstracting the involved details of the different scenarios that will be put under the SAFERtec microscope. Both considered instances essentially include numerous details in terms of the involved hardware and software modules as well as communication protocols that will be thoroughly investigated within the project.





( S	AFER TEC	OUT SAFERtec USE CASES	NEWS & EVENTS	MEDIA CENTRE	PUBLICATIONS C	ONTACT US	
USE	CASES				Hon	me > USE CASES	
	The SAFERtec project will put under th RSU- and cloud- communications) and Both instances expose a large attack s hardware (OBD, CAN, external interfact SAFERtec will go-beyond those well-kn assurance framework that accounts for driving scenarios such as:	I consider a broad range of th surface which typically includ ces) and/or trust-establishme nown vulnerabilities and thro or the associated infrastructu hicle can rely on phase and ti	e related security-a: es the direct malicio ent processes among ugh innovative form rre (i.e., RSU, cloud) : ming messages to ca	ssurance issues. ous interaction with g numerous involve al methods will int as well as the excha	the vehicle ed entities. roduce a security anged messages in	Con	Read-side unit
	<ul> <li>speed at which it will reach the interse</li> <li>Provision of real-time traffic informati can avoid rear-end collision as it appro- to make the driver aware.</li> <li>Priority request in intersection-crossin vehicles are in-time informed about a</li> <li>Privacy-preserving trip planning and n</li> </ul>	ion. Relying on environmenta oaches an already-formed tra gr. Through timing and aware special priority vehicle appro	l notification messa iffic jam (on a highw ness messages distr vaching an intersecti	ributed by the infra	tionality is then used structure all nearby		Coud Infrastructure
	navigation device in the car is synchro	nized by a cloud-based servi	e to provide the dri	ver with a suggeste	ed route		



To ease the understanding of our web-page visitors and clearly mark the scope of our technical work we have provided a 4-bullets list to generally describe the use-cases that SAFERtec will focus-on.

What we have tried to avoid is to go-into many technical details in this page (that can be visited by interested people of non-technical background). For instance, we do not explicitly mention that in the case of a vehicle-RSU communication SPaT (Signal Phase and Timing) messages are considered for informing or actively supporting the driver to drive through an intersection without stopping (e.g., first use-case usually called GLOSA). All relevant technical issues and corresponding terms will appear in our corresponding deliverables.

### 3.4 NEWS & EVENTS

The main purpose of this page (see Figure 11) is to keep the website visitors up to date with all project-related news, such as organization of and participation in meetings, workshops, conferences and other events/activities. The "NEWS & EVENTS" page consists of two distinct subpages namely News, and Project events. Both subpages will be continuously updated throughout the project duration.





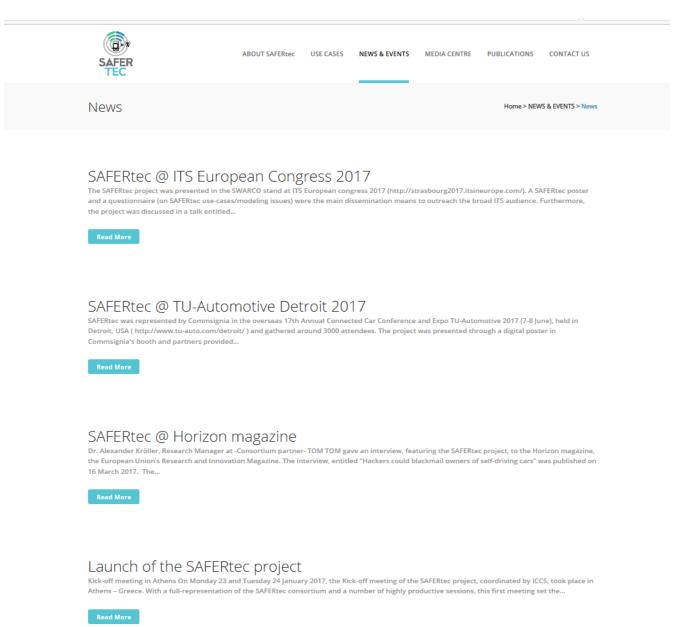


Figure 11: The "News" subpage



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SAFER	ABOUT SAFERtec	USE CASES	NEWS & EVENTS	MEDIA CENTRE	PUBLICATIONS	CONTACT US	
Project Events					Hor	me > Project Events	
1st SAFERtec plenar On July the 12th and 13th the SAFERtec p among the 13 participants and the next a Read More	project organized its first	plenary meet	ing in the CRF office		ll technical fronts v	vere discussed	
Launch of the SAFER Kick-off meeting in Athens On Monday 2 Athens – Greece. With a full-representati Read More	3 and Tuesday 24 Januar	y 2017, the Kic					

Figure 12: The "Project Events" subpage

## **3.5 MEDIA CENTRE**

This page comprises the following subpages:

- Press Releases
- Press Clipping
- Dissemination material
- Public Deliverables
- Video
- Photos

These subpages will contain the SAFERtec media communications and relative press reports, the project's audiovisual promotional material, available for download, as well as all public deliverables of the project.



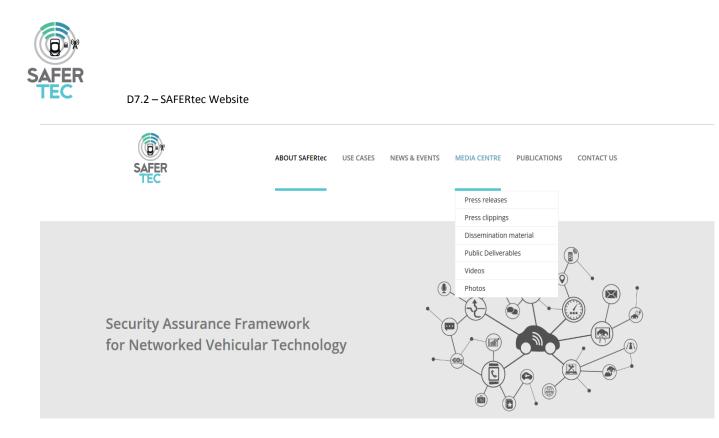


Figure 13: The "MEDIA CENTRE" dropdown menu

### **3.6 PUBLICATIONS**

This page will contain all project related publications to scientific journals and conference proceedings as well as poster presentations.



Figure 14: The "PUBLICATIONS" page

### **3.7 CONTACT US**

The "CONTACT US" page (see Figure 15) contains a contact form, providing an easy way to interested parties to contact the SAFERtec consortium and put forward their inquiries, requests or





proposals.							
SAFER TEC		ABOUT SAFERtec	USE CASES	NEWS & EVENTS	MEDIA CENTRE	PUBLICATIONS	CONTACT US
Contact Us							Home > Contact Us
	Your Name (requi						

Figure 15: The "CONTACT US" page





# 4 Conclusions

This deliverable has presented the SAFERtec website and its main functionalities. It has also explained the rationale behind layout and structure decisions, and has described the content that will be included in the different pages and sections of the website. Furthermore, it has discussed the way that project related developments (i.e., news, activities, results etc) will be communicated, allowing the broad dissemination of results. Finally, this deliverable has established that the website will be regularly updated throughout the lifetime of the SAFERtec project.

