



**Multi-layered
Security
Technologies**
for hyper-connected
smart cities

D5.1: Project's Web Site

September 2018



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Table of Contents

Table of Contents	3
Glossary	6
List of Figures.....	5
Executive Summary	6
1. Introduction.....	7
1.1 Objectives of the M-Sec project	7
1.2 Objectives of the website	7
1.3 Structure of the report	8
2. Target audiences.....	8
3. Visual identity	9
3.1 Logo	9
3.2 Website branding	11
4. Website set-up.....	12
4.1 Domain	12
4.2 Hosting.....	12
4.3 Duration.....	12
4.4 Language.....	12
5. Website structure	13
5.1 Main menu	13
5.2 Elements of movement	14
5.3 Home page.....	14
Header banner	14
Who we are / What we do.....	15
Want to be a part of it?	15
Latest News.....	15
M-Sec technologies.....	16
Facts.....	16
Our smart cities.....	17
Follow us	17





5.4	About M-Sec	17
	Partners.....	18
	Santander.....	18
	Fujisawa	19
5.5	Use Cases.....	20
5.6	Events	20
5.7	For you.....	20
	Media Kit.....	21
	Relevant initiatives.....	21
	Scientific papers.....	21
	Deliverables	21
	Get involved.....	21
5.8	Contact	21
6.	Social media connection	22
7.	Transparency	23
	7.1 Visibility of funding information.....	23
	7.2 Language.....	23
8.	Website maintenance.....	24
9.	Conclusion.....	25
	9.1 Increasing awareness	25
	9.2 Monitoring engagement.....	25
	9.3 Presenting all official communications.....	25





List of Figures

Figure 1. Shield shape added for security	9
Figure 2. Multiple layers were added for a feeling of triple strength	9
Figure 3. New M-Sec colour palette for trust and security	10
Figure 4. Horizontal and vertical versions of the logo.....	10
Figure 5. M-Sec homepage section, demonstrating new visual identity colours	11
Figure 6. M-Sec animated 'loading' screen, demonstrating the enhanced visual identity.....	11
Figure 7. Button to select language (English or Japanese).....	12
Figure 8. Header banner showing M-Sec project in a nutshell. The logo and text are both animated.	14
Figure 9. Section on the homepage demonstration who we are and what we do as a project	15
Figure 10. 'Want to be a part of it?' section on the homepage	15
Figure 11. M-Sec technologies presented in an attractive and interactive way	16
Figure 12. Animated ('scrolling') facts on the homepage	16
Figure 13. Section on the homepage with a preview of our smart cities	17
Figure 14. 'About Us' page excerpt, with short easy-to-read texts.....	17
Figure 15. Excerpt of partners page with partner logos.....	18
Figure 16. Santander page excerpt with image, facts and description of the city.....	19
Figure 17. Fujisawa page excerpt with image, facts and description of the city	19
Figure 18. 'Use Cases' page, with cursor over the top left box to show the name of the use case appearing.	20
Figure 19. 'For You' page with a range of resources for the M-Sec targets	20
Figure 20. 'Contact' page excerpt with a short and concise form.....	21
Figure 21. Footer of the M-Sec website with social media icons and live twitter feed	22
Figure 22. EU and NICT funding information in the site-wide footer.....	23





Glossary

EU	European Union
GDPR	General Data Protection Regulation
IoT	Internet of Things
NICT	National Institute of Information and Communications Technology
UJ	User journey
UX	User experience
WP	Work Package

Executive Summary

This document was elaborated for **the M-Sec (Multi-layered Security technologies to ensure hyper-connected smart cities with Blockchain, BigData, Cloud and IoT) project**. It corresponds to the Deliverable 5.1 – Project’s Website, which is part of Work Package 5: GDPR, dissemination, exploitation and sustainability. WP5 will run from Month 1 until Month 36, i.e. the whole duration of the project. Although the type of the deliverable is “Websites, patents filling, etc.”, the present report was developed to provide a description of the website.





1. Introduction

1.1 Objectives of the M-Sec project

The main goal of M-Sec project is to research, develop, deploy and demonstrate multi-layered Security technologies to ensure hyper connected smart cities and empower IoT stakeholders with an innovative platform which leverages blockchain, Big Data, Cloud and IoT security, upon which they can build innovative smart city applications.

There are 4 main objectives to be achieved with M-Sec:

- 1) M-Sec infrastructure: A robust and trusted smart city platform based on IoT, cloud, Big Data and blockchain technologies. Through this trusted infrastructure, IoT stakeholders will develop, deploy and operate novel multipurpose IoT applications for smart cities on top of smart objects.
- 2) M-Sec IoT marketplace: An innovative and open IoT market of applications, data and services that allows objects and humans to exchange value in form of virtual currencies, for assets (data and services) received, for both social and business contexts.
- 3) M-Sec ecosystem: A sustainable ecosystem of stakeholders, roles, tools and infrastructures upon which new entrants (e.g. startups, SMEs) and other players (e.g. developer communities, students, entrepreneurs) can build and experiment with the hyper-connected smart city applications.
- 4) M-Sec revenue model and replication plan: A parameterized model (according to socio- economic contexts, smart city IoT infrastructure and business purpose, as well as utilization models of smart objects/devices) on how to replicate the M-Sec approach further and guarantee its return of Investment and benefits.

Although each M-Sec result is individual and unique, each has at its core a common objective: the creation of secure and connected relationships between different human actors (local governments, citizens, researchers and developers) and objects, not just within Santander and Fujisawa themselves, but also between the EU and Japan, eventually leading to replication in other contexts.

This is important to recognise when considering the M-Sec website, as the website must play a central part in ensuring such a diverse range of secure connections, between a wide array of actors.

The project website is available <http://www.msecproject.eu>.

1.2 Objectives of the website

The objectives of the website are as follows:

- 1) Increase awareness of the project among the target groups;
- 2) Monitor the different ways in which the target groups may interact and engage with the project; and,
- 3) Act as the space to find all official communications relating to the project (press releases, posters, scientific papers and “public” deliverables)





The following report will present the current M-Sec website, a detailed rationale regarding its development and our future strategy in order to confidentially achieve both 1), 2) and 3) throughout the duration of the project.

1.3 Structure of the report

This report will cover the main aspects of the development of the M-Sec website, namely:

- Target audiences
- Visual identity
- Website set-up
- Website structure
- Social media connection
- Transparency

2. Target audiences

As stated in 'Project Objectives', the M-Sec project aims to achieve four main results, all directed at different smart city actors, within the cities of Santander and Fujisawa themselves, as well as on an EU-Japan and international levels at large:

- Governmental and Municipal authorities
- Citizens
- Developers
- Social entrepreneurs
- Standardisation bodies
- Businesses
- Researchers
- Other authorities, citizens, businesses, developers, social entrepreneurs, standardisation bodies and/or researchers who may replicate the M-Sec project outcomes in other smart cities or other contexts





3. Visual identity

3.1 Logo

When considering the M-Sec website and the project objectives, it was decided to refresh certain aspects of the logo developed at proposal stage. In particular, the security aspect was reinforced via a number of adjustments:

- Symmetry was added to the original 'lock' design to bring a feeling of security (Figure 1);
- A shield shape was added to enhance the feeling of safety (Figure 1);
- Coloured layers were added behind the image to add a feeling of triple strength (Figure 2);
- Two matt blues were added, and the original red was toned down, to enhance a feeling of stability, courage and trust (Figure 3).

This visual identity has been confirmed by both European and Japanese partners of M-Sec to be not just suitable, but engaging, for all possible audiences.



Figure 1. Shield shape added for security



Figure 2. Multiple layers were added for a feeling of triple strength





	RGB 238 114 96	WEB #EE7260	CMYK 0 67 58 0
	RGB 91 195 223	WEB #5BC3DF	CMYK 61 0 11 0
	RGB 0 61 88	WEB #003D58	CMYK 100 0 0 75
	RGB 0 0 0	WEB #000	CMYK 0 0 0 100

Figure 3. New M-Sec colour palette for trust and security

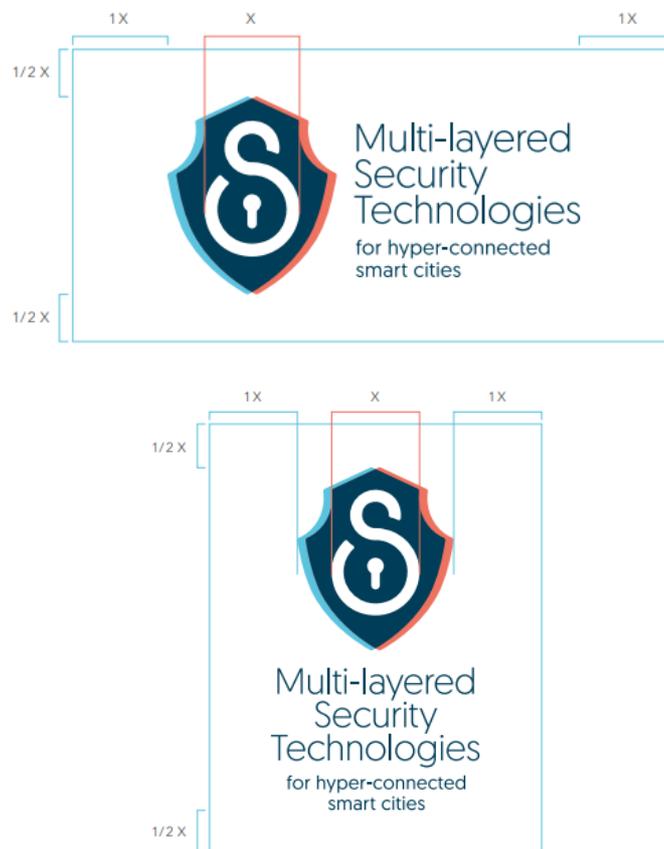


Figure 4. Horizontal and vertical versions of the logo





3.2 Website branding

The colours of the website titles, body text, buttons, loading page and icons all reflect the enhanced M-Sec project identity (Figure 5, Figure 6).



Figure 5. M-Sec homepage section, demonstrating new visual identity colours

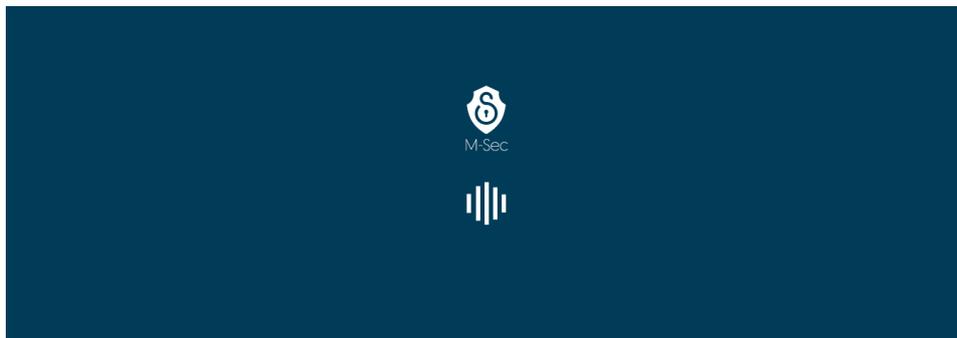


Figure 6. M-Sec animated 'loading' screen, demonstrating the enhanced visual identity





4. Website set-up

4.1 Domain

The domain name www.msecproject.eu was selected for the project and purchased for a period of 10 years. This domain was chosen to clearly identify the project name (through its acronym).

4.2 Hosting

The M-Sec website will be hosted through the M-Sec partner F6S's infrastructure, in order to provide stability and security. This infrastructure is managed and monitored by a dedicated team at F6S, who also look after the F6S website and other project websites. For this reason, the hosting of the M-Sec website will be monitored in a secure and efficient manner.

4.3 Duration

The M-Sec website must be maintained 3 years after the project end for supporting the project impacts. As the project is 3 years in duration, the website must therefore be maintained for 6 years in total. Due to restrictions when purchasing the domain name, in which the domain name was only available for periods of 5 years or 10 years, this domain has been reserved for a period of 10 years to cover the project requirements.

4.4 Language

As stated in the Description of Action, the website is provided in English and in Japanese languages. The translation from English to Japanese is provided by NTTE. The website includes a 'toggle' button in the top right-hand corner that allows the user to easily switch between languages (Figure 7).

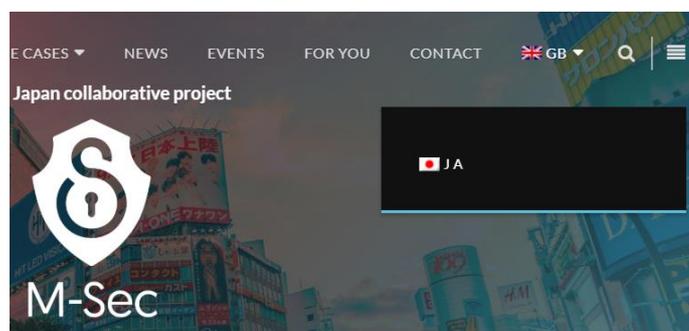


Figure 7. Button to select language (English or Japanese)



5. Website structure

5.1 Main menu

The website opens on the homepage. From here, a main menu is visible in the top right-hand corner.

- About
 - Santander
 - Fujisawa
 - Partners
- Use Cases
 - Use Case 1: Supercharging IoT devices of a smart city with multi-layered security (Santander)
 - Use Case 2: Healthcare for active and independent ageing people (Santander)
 - Use Case 3: Secure and trustworthy environment sensing and data dissemination (Fujisawa)
 - Use Case 4: Secure and trustworthy effective hyper-connected society apps (Fujisawa)
 - Use Case 5: Playable city – a marketplace of IoT devices and services to make the city more playable (Joint EU/JP cross-border use case)
 - Use Case 6: Government and citizens- citizen engagement through citizen as sensor (Joint EU/JP cross-border use case)
- News
- For you
 - Media Kit
 - Relevant initiatives
 - Scientific papers
 - Deliverables
 - Get involved
- Events
- Contact

The main menu has been designed to catch the attention of each of our target groups and give them exactly what they are looking for in one glance.

The order presents a clear user journey (UJ) and allows our targets, whether they are government authorities, citizens, researchers, entrepreneurs, developers or industry players to find out static information about what the project does and where it is based first ('About', 'Use Cases', 'Partners'), before moving on to the dynamic and interactive aspects of the project that invite their participation, like our news ('News'), how to get involved ('For You') and where to meet us ('Events').





5.2 Elements of movement

Throughout the website, there are elements of movement. Whether this be a moving button, a section that changes colour when the user moves the cursor over, or sections that appear as the user scrolls down, this brings a feeling of interaction and life to the project website. This is important as it emphasises the dynamic nature of the project and prepares the user to become actively involved as a stakeholder.

5.3 Home page

The structure of the home page has been designed to spark the attention of the target and explain the basic elements of M-Sec. Keeping this page simple and easy-to-read is essential to achieving a low bounce rate.

It is important to mention that every section of the header appears as the user scrolls down, introducing the user to the feeling of dynamism from the first view.

Header banner

The header banner sums up the M-Sec project in a nutshell. The M-Sec logo and text are both animated and appear at different times when the user first visits the page. This brings the feeling for the user that the project is alive and dynamic.

The scrolling images behind the text of Santander and Fujisawa evoke an understanding that this is a cross border project (Figure 8).



Figure 8. Header banner showing M-Sec project in a nutshell. The logo and text are both animated.





Who we are / What we do

This section expands on what M-Sec is and who it serves. The language is easy to understand, concise, and avoids technical jargon to be inclusive of all target groups (Figure 9).

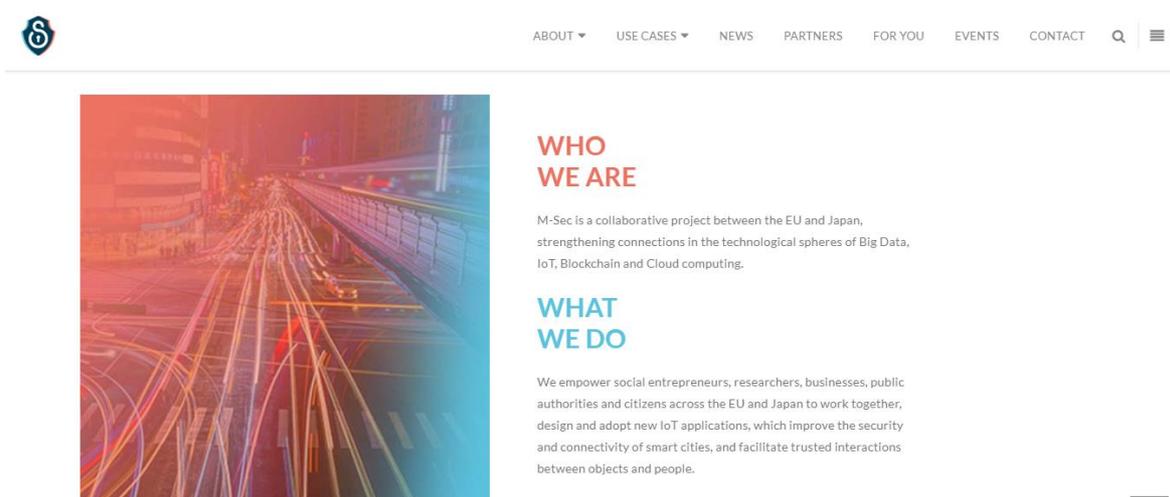


Figure 9. Section on the homepage demonstration who we are and what we do as a project

Want to be a part of it?

This section presents the M-Sec areas that users can get involved in. Phrasing the title as a question invites the target to participate and implies the collaborative nature of the project (Figure 10).

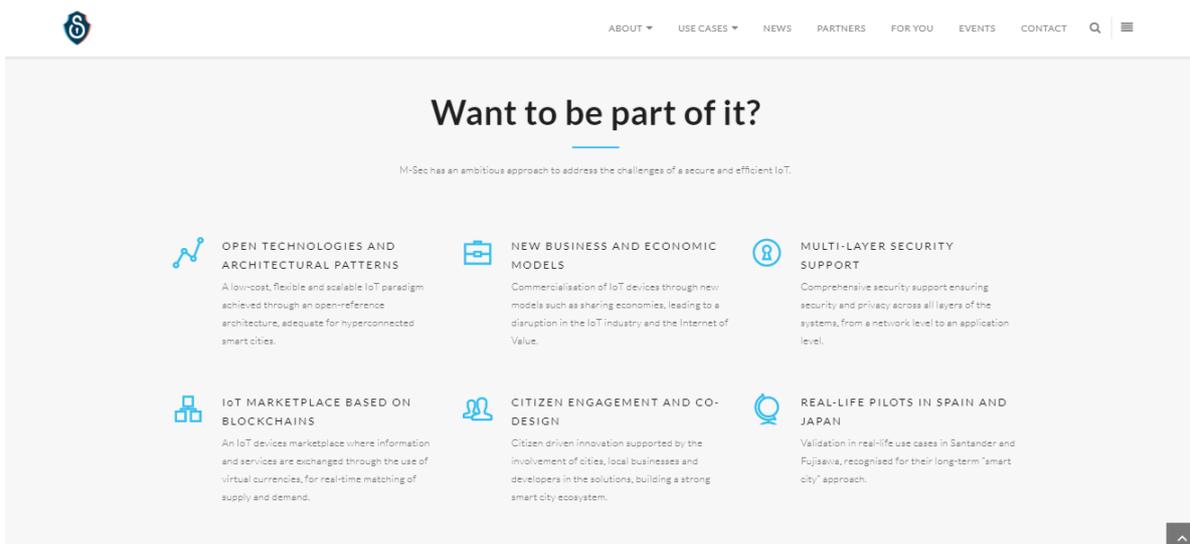


Figure 10. 'Want to be a part of it?' section on the homepage





Latest News

The news section on the homepage pulls out three of the most recent news articles with an image and preview text. Placing this section directly after the 'Want to be a part of it?' section, begins to tell a story of the project to the user which reinforces the active and dynamic nature of the project.

M-Sec technologies

This section highlights the different technologies to be investigated throughout the project in an attractive way. The colour of the icons shifts when the user moves the cursor over, changing from grey to blue (Figure 11).



Figure 11. M-Sec technologies presented in an attractive and interactive way

Facts

This section shows four main statistics about the project in an interactive way. The numbers scroll, adding movement to the page (Figure 12).

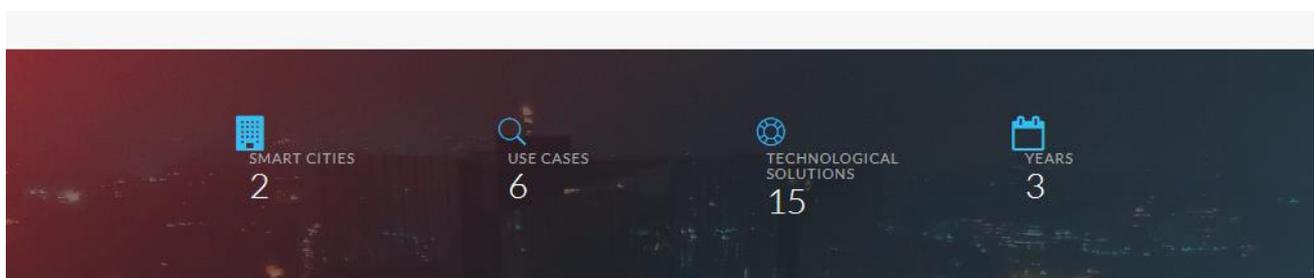


Figure 12. Animated ('scrolling') facts on the homepage





Our smart cities

This section shows two large, full-screen images of the smart cities participating in the project: Santander and Fujisawa. The user is encouraged to click to learn more (Figure 13).

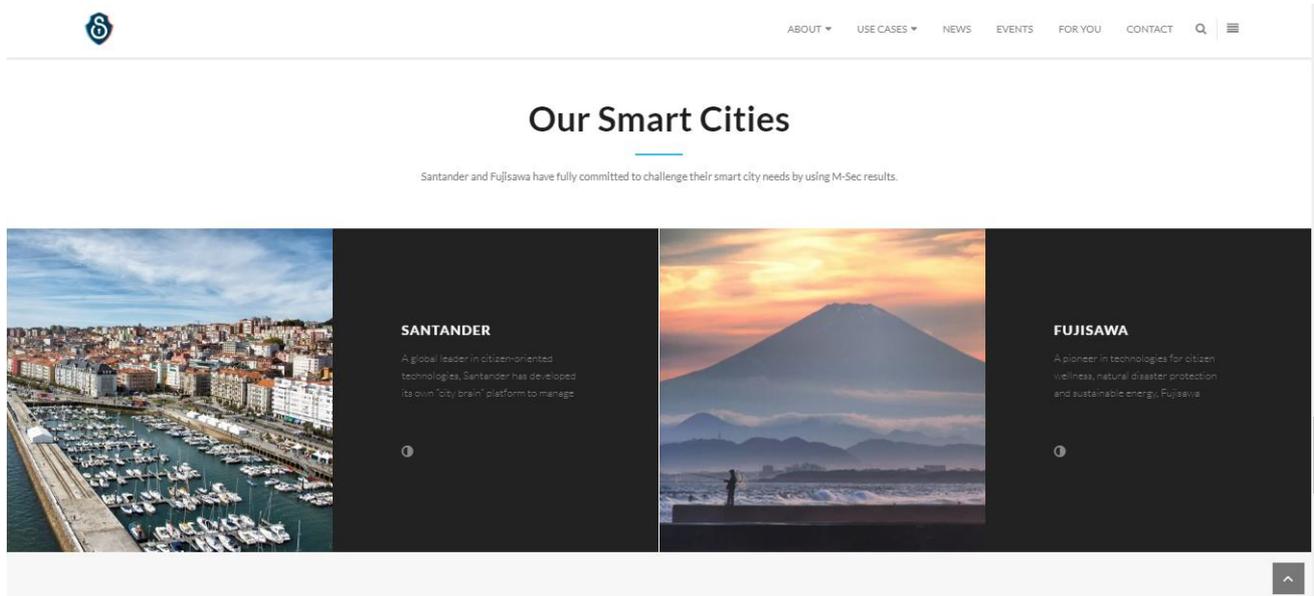


Figure 13. Section on the homepage with a preview of our smart cities

Follow us

The page ends with the M-Sec social media icons (Twitter, LinkedIn, F6S), to encourage new followers in the M-Sec social media accounts.

5.4 About M-Sec

The main 'About M-Sec' page presents a short text, image, a newsletter option and an M-Sec fact sheet. This page is concise, easy to read and accessible for all target groups (Figure 14).

The main goal of M-Sec project is to research, develop, deploy and demonstrate multi-layered Security technologies to ensure hyper connected smart cities and empower IoT stakeholders with an innovative platform which leverages blockchain, BigData, Cloud and IoT security, upon which they can build innovative smart city applications.

WHAT DOES M-SEC DO?

The main goal of M-Sec project is to research, develop, deploy and demonstrate multi-layered Security technologies to ensure hyper connected smart cities and empower IoT stakeholders with an innovative platform which leverages blockchain, BigData, Cloud and IoT security, upon which they can build innovative smart city applications.

Figure 14. 'About Us' page excerpt, with short easy-to-read texts





Partners

The M-Sec partners page presents the icons of each partner. To see more information, the user just clicks on the logo. This simple presentation without large text blocks is easy to understand and highly accessible for the target users (Figure 15).



Figure 15. Excerpt of partners page with partner logos

Santander

The Santander page presents a beautiful image of Santander city, a short profile on the city including its role in smart city projects, and interesting facts (Figure 16).





SANTANDER

- Country: Spain
- Area: 38 km²
- Population: 378,468 (2013)
- Initiatives: SmartSantander, ClouT, WiseIoT, Synchronicity, M-Geo

Located in the north coast of Spain, the city of Santander is the capital of the Cantabria region. In recent years, it has moved into the vanguard of smart cities, through the improvement of public services and the development of citizen-oriented policies and the stimulation of a new business model of productivity. Innovation is conceived as transversal to various areas of governance, facilitating the incorporation of new technologies in municipal services.

The city of Santander participates in diverse initiatives to smart cities and has become a reference at international level. It is home to one of the largest-scale experimental research facilities, having fostered the deployment of the SmartSantander platform, addressing to both the research and experimentation of architectures and key-enabling technologies for the IoT realm, as well as organizing innovation in the city. Thanks to this initiative, the Santander city council has participated in 20 EU innovation projects, including EU-Japan and EU-South Korea collaborations.

DATE 24/09/2016

CATEGORY @Sas Santander

SHARE f t G+ in t @

Figure 16. Santander page excerpt with image, facts and description of the city

Fujisawa

The Fujisawa page shows a high-quality image of the city, a description of its role in smart city innovation, as well as a list of interesting facts (Figure 17).



FUJISAWA

- Country: Japan
- Area: 69.57 km²
- Population: 429,317 inhabitants (2016)
- Initiatives: Fujisawa SST, G-Spatial, BigClouT, M-Geo

Fujisawa is one of Japan's leading smart cities. With a population of approximately 429,317 inhabitants, Fujisawa is located in the central part of Kanagawa Prefecture, being also a bedroom community for Yokohama and Tokyo.

The city has participated in many projects fostering the smart city strategy, such as Fujisawa SST and G-Spatial. Fujisawa is also focusing on local citizen's wellness, as one of the themes of local city planning. In addition, prevention and reduction of disaster, traffic accidents and crimes are high in the city's attention. This is of particular relevance since Fujisawa will be hosting part of the 2020 Tokyo Olympics and Paralympics.

DATE 24/09/2016

CATEGORY @Sas Fujisawa

SHARE f t G+ in t @

Figure 17. Fujisawa page excerpt with image, facts and description of the city





5.5 Use Cases

The Uses Cases are presented in the form of 6 boxes. The name of each use case appears on top of the photographic background when the user moves the cursor over. Again, this movement brings a feeling of dynamism to the project website, which reflects its interactive nature (Figure 18).



Figure 18. 'Use Cases' page, with cursor over the top left box to show the name of the use case appearing

5.6 Events

Events are of huge importance to the M-Sec project as they present a way to achieve the project results, such as creating an IoT ecosystem and facilitating cross-border connections. For this reason, the events section has been made in a simple way which is easy to navigate for all targets.

5.7 For you

The title of this section directly calls to the user and offers him/her free resources and information which are relevant to M-Sec activities (Figure 19).

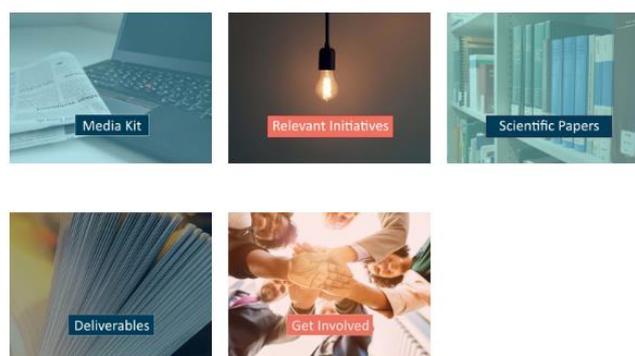


Figure 19. 'For You' page with a range of resources for the M-Sec targets



Media Kit

The M-Sec media kit includes the standard M-Sec logo, as well as logo variations, press releases.

Relevant initiatives

Here the user can find information on related initiatives which they can participate in and get involved in.

Scientific papers

For the researchers, government authorities and developers, there is a section housing the most recent scientific papers to encourage debate and the sharing of information.

Deliverables

To give a high level of visibility, the deliverables will be made available for download in the 'For You' main menu, with their own dedicated section. From here, members of the general public can freely download the documents.

Get involved

The 'Get Involved' section presents another way for the user to write to M-Sec project and get engaged in the activities. Clicking on this box will bring the user to the 'Contact Us' form, as well as the newsletter subscription. Further information will be provided as the project progresses.

5.8 Contact

The user is encouraged to get involved in the project via filling out a form. The form itself has been designed to be short and concise, with only four fields to fill out (Figure 20).

Contact Us

Feel free to reach out to us if you have any questions or would like to cooperate!

Name E-mail Subject

Message

Figure 20. 'Contact' page excerpt with a short and concise form





6. Social media connection

The M-Sec project has a Twitter account (<https://twitter.com/msecproject>) and a LinkedIn page (<https://www.linkedin.com/company/msecproject>).

To give maximum visibility to the M-Sec Twitter and LinkedIn accounts, the social media icons appear in several places. Repeat impressions will increase the likelihood of users following the accounts (Figure 21).

Firstly, the social media icons appear at the base of several pages, such as the home page and the Contact page. These locations have been chosen due to the likelihood of the user being primed to interact with the project on these pages.

Secondly, the footer hosts a site-wide presentation of the social media icons, which is visible on every page. The live twitter stream is an effective way to show that the M-Sec social media accounts are active on a regular basis, therefore encouraging users to visit and follow those pages.

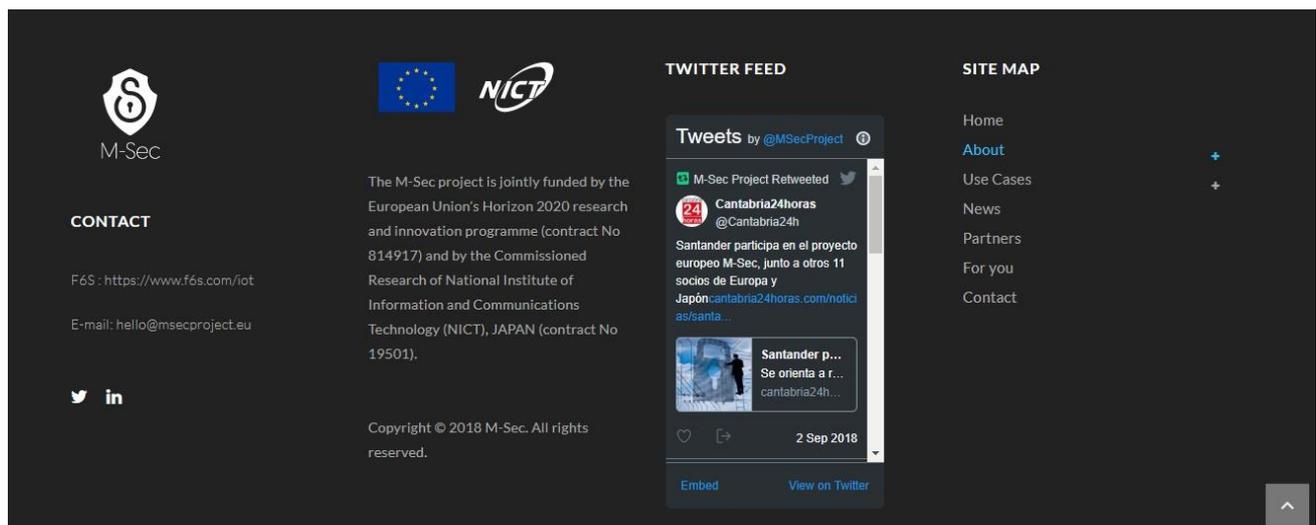


Figure 21. Footer of the M-Sec website with social media icons and live twitter feed





7. Transparency

7.1 Visibility of funding information

European Union and NICT funding information, including EU emblem and accompanying text, must be presented on all pages of the website. A secure way to ensure this is to place the emblem and text in the footer of the website, which is present across all areas of the website (Figure 22).

According to the M-Sec grant agreement (page 48-49, 56), the EU funding information must be made visible. The following sentence, together with the EU emblem and the NICT logo, are included in the website footer.

The M-Sec project is jointly funded by the European Union's Horizon 2020 research and innovation programme (contract No 814917) and by the Commissioned Research of National Institute of Information and Communications Technology (NICT), JAPAN (contract No 19501).



Figure 22. EU and NICT funding information in the site-wide footer

7.2 Language

To make the project goals, activities and results transparent and understandable by all our target groups, a fine balance has been struck between technical language and everyday language.

While it is important to maintain critical technical vocabulary, this must not alienate any of our target groups, particularly citizens in Santander, Fujisawa and other cities across the world. It is, however, acceptable to employ more technical terminology in areas of the website that are reserved for certain users, such as the 'Scientific Papers' area within 'For You'.





8. Website maintenance

The M-Sec website domain (<https://www.msecproject.eu>) was acquired for the duration of the project, as well as additional 7 years, to ensure the sustainability of the M-Sec project and its results.

The website is built on the Open-source WordPress platform, which is compliant with Privacy and Data protection law, by informing users on its use of cookies, if any. The WordPress platform has been selected as the management platform for the website due to its accessibility, flexibility, wide range of functionalities, website design options, plugin options and security.

Furthermore, being provided by a group of organisations based in the EU and in Japan, the website is compliant with the European General Data Protection Regulation (GDPR) and the act on the protection of personal information in Japan, ensuring data protection and privacy for its visitors.

The content of the website is developed by F6S and NTTE, in collaboration with the other project partners. After the version provided on 30 September 2018 (due date of Deliverable 5.1), the website will be regularly updated according to the project developments and activities. This will include the updating of the events section, the news section, the media kit, scientific papers, relevant initiatives, public deliverables to download, and more. As the project develops, this may additionally involve the creation of new pages or sections.

The languages used in the website are English and Japanese, easily swapped with a button in the header of the website. The Japanese translation is provided by NTTE.

To track the number of visits to the website and monitor the visitors' information, the website is registered in Google Analytics and the "count per day" plugin has also been activated. This will allow a continuous analysis of the website performance and improvement of the customer journey and user experience wherever applicable.





9. Conclusion

The project website is available at www.msecproject.eu. The website will be updated as the project progresses. As demonstrated throughout this report, the M-Sec website fulfils the three main website goals discussed in the introduction.

9.1 Increasing awareness

The M-Sec website has been carefully designed to raise awareness of the project among the target groups, using the following main elements:

- A clear homepage;
- A clear website main menu and structure that tends to all targets;
- Availability in English and Japanese languages;
- Clear, concise language use.

9.2 Monitoring engagement

The website will facilitate monitoring the ways in which the target groups interact and engage with the project. For this end, the website has been equipped with the Google Analytics and “count per day” plugin. This will allow monitoring of many factors, such as number of visitors and views to certain pages, user journey, downloads, and the success of other dissemination methods (press releases, social media) in bringing traffic to the website.

9.3 Presenting all official communications

As mentioned, the M-Sec website offers several spaces to house all official communications relating to the project:

- **News** is visible via a section on the homepage and in a dedicated ‘News’ section;
- **Press releases and promotional materials** are available in the dedicated ‘Media Kit’ section within ‘For You’;
- **Scientific papers** can be found in the ‘For You’ section;
- **Public deliverables** are available to download in the ‘For You’ section.

