Deliverable D1.3

# Impact Creation Activities

MATiSSE

Empower Hospitals' Reliability via TagItSmart Service platform

Funded by TagItSmart - Smart Tags driven service platform for enabling ecosystems of connected objects
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| **AUTHOR(S):** | Terpsi Velivassaki (THERA) |
| **APPROVAL OF THIS REPORT:** | Chris Zachariadis (THERA) |
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# Executive Summary

MATISSE aimed to significantly decrease or annihilate “never events” in the complete hospital value chain while promoting TagItSmart! (TiS) added value in a real life eHealth pilot which took place at City Clinic, Athens, Greece. The MATISSE system architecture comprised the benefits of IoT, dynamic smart tags and cloud computing technologies in order to build a safer health care ecosystem by automating, rationalizing and verifying internal hospital tracking, reporting and monitoring. MATISSE will offer an innovative smart hospital treatment service which, relying on the passive or active information stored in a smart tag, will provide verification of the everyday medical procedures that regularly take place within a hospital environment. Via patients’ identification and association with drugs, medical exams *et cetera*, MATISSE will support medication administration as well as real-time quality assessment. MATISSE envisions the progressive minimization of attributed to the human factor errors in hospital environments through the five solid use cases that supports, with an ulterior desire to make “never events” completely extinct in the future.

The present deliverable focuses on the impact creation activities that were carried out throughout the whole duration of the project. An overview of a market analysis is presented in section 2 of this deliverable, while the exploitation is depicted in section 3. Finally, the dissemination activities that were carried out through the available dissemination channels are presented.

# Table of Contents

1. Introduction....8
2. Market Analysis....8
2.1. Target Market....8
2.1.1 Healthcare Market....8
2.1.2 Health Insurance Market....9
2.1.3 Ehealth Solutions Market....9
2.2. Stakeholder Analysis....9
2.3. Force and Environment....10
2.3.1 SWOT Analysis....11
3. The Exploitation Strategy....11
3.1. Value Proposition....12
3.2. Business Models....12
3.3. MATISSE Functionalities....14
4. Communication and Dissemination Results....15
4.1. Dissemination activities and impact....16
4.1.1 Communication Channels and Dissemination Tools....16
4.1.2 Overview and Evaluation of Dissemination Activities....17
5. Conclusion....24

# List of Figures

Figure 1: The MATISSE Business Model Canvas....13
Figure 2: Therapia@Hospital/MATISSE value proposition on the website....18
Figure 3: MATISSE successfully piloted and validated at City Clinic....18
Figure 4: Therapaenis' YouTube Channel....19
Figure 5: MATISSE Smart Cart video details....20
Figure 6: Tweets of Therapenis about the release of Therapia@Hospital components and Smart Cart video....21
Figure 7: Therapaenis' tweet analytics for M7-8 of MATISSE....22
Figure 8: Therapaenis' description in Linkedin....23

# List of Tables

Table 1: Stakeholder Types....10
Table 2: Stakeholder incentives in adopting MATISSE....10
Table 3: MATISSE SWOT Analysis....11
Table 4: MATISSE Functionalities....14
Table 5: An overview of the identified dissemination channels....16
Table 6: Target groups along with their primary communication channel(s)....17
Table 7: List of attended events....24
Table 8: List of attempted and foreseen publications....24

# List of Abbreviations

| | |
|---|---|
| **API** | Application Program Interface |
| **DoW** | Description of Work |
| **EC** | European Commission |
| **EHR** | Electronic Health Record |
| **IoT** | Internet-of-Things |
| **NRE** | Non-recurring Engineering |
| **REST** | Representational State Transfer |
| **SWOT** | Strengths, Weaknesses, Opportunities, Threats |
| **TiS** | TagItSmart! |
| **TTM** | Time-to-Market |
| **WP** | Work Package |

# 1. Introduction

The present document constitutes the deliverable of the Work Package (WP) 1 *Impact Creation Activities* of the MATISSE project, reporting the activities conducted in the framework of Task 1.2 “Dissemination and exploitation”. In the entirety of the document, the following are presented:

- A market analysis, determining and analyzing the specific markets expected to adopt the MATISSE proposal, namely, the healthcare market, the health insurance market and the market of eHealth solutions
- The exploitation plans, suggesting the MATISSE value proposition as a unified platform for hospitals, defining an initial version of a business model and finally presenting the MATISSE functionalities.
- Dissemination activities that were carried out, from social media updates to participation in events and conferences, or even personal contacts presenting the MATISSE solution and vision

# 2. Market Analysis

## 2.1. Target Market

The market analysis that has been carried out before the acceptance of the MATISSE proposal, but also during the development and pilot phase of the project, have concluded that at least three markets could be targeted for promoting the MATISSE solution. These markets, which can be considered subcategories of the wider health market, are as follows:

- The Healthcare market, and particularly hospitals
- The Health Insurance market
- The eHealth solutions market

The major market characteristics and opportunities are presented in the following subsections for each of the aforementioned market types.

### 2.1.1 Healthcare Market

The healthcare market, and particularly hospitals is considered a short term customer of the implemented MATISSE platform. A new generation of services is gradually introduced in hospitals and clinics, transforming and improving the execution of the current procedures, leveraging on the recent advancements in Internet-of-Things (IoT), cloud computing, robotics and analytics. The main reasons that will drive hospitals to adopt the MATISSE solution would be the expected cost savings along with the increased hospital reputation.

The efficiency of the personnel in hospitals is expected to increase after the adoption of the MATISSE solution. The platform will minimize the time needed for the medical workers to perform everyday procedures like the preparation of drugs for distribution to patients, the actual distribution of drugs to patients, the time to check the drugs/pills lifetime/aptness, the transmission of medical exams to doctors or storage areas, the performance of the necessary pre-surgery control and monitoring the patients’ therapy in general. Moreover, the attributed to human factor errors would be substantially minimized, hence improving and shaping the hospital’s reputation and fame.

### 2.1.2 Health Insurance Market

Insurance companies and governmental bodies are expected to be indirect customers of MATISSE. At least in Greece, each doctor working in a privately-held hospital and each privately-held hospital are obliged by law to have signed medical insurance contracts. These contracts usually cover the compensation of patients or patients' families in case an unfortunate situation occurs in a surgical procedure or generally during a patient's hospitalization.

Obviously, such never events are undesirable for the hospital, for doctors and nurses, as well as for the insurance companies being forced to provide economic compensation to the unfortunate patient and/or his/her family. The insurance companies' desire would be for medical errors to be completely annihilated within hospital environments. If insurance companies are informed and persuaded by the validity of the MATISSE solution they are expected to push hospitals to install such a system which will substantially decrease the occasional never events and, subsequently, the total amount paid to patients by these companies. In exchange, insurance companies are expected to provide discounts on the prices of the aforementioned medical insurance contracts both to hospitals with an installed version of the MATISSE platform and doctors working and operating in these hospitals.

### 2.1.3 Ehealth Solutions Market

Companies and providers of eHealth solutions are expected to adopt MATISSE and extend or build upon the whole platform or some of its components. For instance, a company might need to integrate a smart tag scanner into their existing product, introduce a dashboard, a smart medication cart or simply take advantage of the implemented Representational State Transfer (REST) Application Program Interface (API), lying on the MATISSE Back-end. These solutions would significantly reduce a product's time-to-market (TTM) and non-recurring engineering (NRE) costs for the interested company or party, possibly allowing the company to reduce the initial price of a product and, subsequently, its competitiveness.

Furthermore, the aforementioned companies or parties will show significant interest as MATISSE has been validated in a real-life pilot, executed within a real hospital environment. On top of that, our solution is a Tis-based platform. These facts will persuade the interested parties of the validity of MATISSE, and our expectation is that eHealth solution providers will desire to exploit MATISSE or some of its components, not only as time-saving solutions but because of the value and reputation that would be introduced in their products, which will be considered more trustworthy.

## 2.2. Stakeholder Analysis

The stakeholder analysis has lead to the identification of customers and groups that might have an interest in the results of the MATISSE project and implemented platform as a product. A clear overview of stakeholders and their goals, interests and influence has been an important precondition for formulating the MATISSE value proposition. The stakeholder analysis has provided valuable input for defining a dissemination strategy tailored for the different stakeholder groups. The identified stakeholder groups have been classified into three types to better distinguish their incentives and interest in MATISSE as shown in the following tables.

*Table 1: Stakeholder Types*

| Type of Stakeholder | Description |
|---|---|
| Potential customer / End user | Potential customer of the MATISSE solution wishing to install and operate the MATISSE platform |
| Significant Promoter | Promoter and/or supporter of the MATISSE platform having economic or other benefits from the MATISSE installation and considerable influence towards other stakeholders |
| Interested Party | A group interested in following MATISSE in further hardware and software developments |

*Table 2: Stakeholder incentives in adopting MATISSE*

| Type of Stakeholder | Stakeholder groups | Incentives / Interest in MATISSE |
|---|---|---|
| Potential customer / End user | Public and privately-held hospitals | • Eliminate never events occuring within the hospital environments<br>• Gain reputation and fame through the elimination of human-attributed errors<br>• Improve the effectiveness of medical personnel through the processes' rationalization and verification<br>• Improved health services for hospitalized patients<br>• Cost savings as a result of the improved personnel effectiveness |
| Significant Promoter | Insurance Companies | • Decreament on the amount of compensations given to patients and patient's families as a result of in-hospital errors<br>• Competitive medical insurance contracts to hospitals adopting the MATISSE solutions |
| Interested Party | Ehealth solution providers | • Potential extension of the MATISSE system<br>• Development of relevant IoT solutions targeted in healthcare, inspired or based on MATISSE |

## 2.3. Force and Environment

Being familiar with the market offers great assistance in understanding its forces and, consequently, to now opportunities they offer and threats which would harm the business. Therefore, when planning a project it is quite important to learn about the internal and external factors that can affect the project. Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis constitutes a strategic planning method, able to analyze all these factors.

### 2.3.1 SWOT Analysis

*Table 3: MATISSE SWOT Analysis*

#### Strengths

- Complete solution for hospital administration from admission to post-surgery monitoring
- 5 solid use cases offering rationalization, correct execution verification and reduction in time needed to execute everyday procedures within a hospital environment
- No similar existing attempt to interconnect a large number of tagged entities (patients, drugs, exams, smart cart, cart drawers)
- Innovation with the Smart Trolley utility
- The solution has been verified in a real hospital environment

#### Weaknesses

- Assumes the existence of a wireless internet connection
- Wireless connectivity issues might emerge if the hospital has an unusual structure
- Public hospitals are not expected to support such a system anytime soon
- Depending on the valid data protection regulation, it might not be legal for patients' electronic health records to be stored remotely, hence the installation of a local, in-hospital server could be needed

#### Opportunities

- A new generation of services has emerged in hospitals
- Global breeding market grounds for IoT in healthcare
- Privately-held hospitals continuously seek to improve their reputation and services

#### Threats

- Unfavorable future regulations regarding the hospitals' procedures
- Emerging of other IoT solution preferred by the market
- Limited acceptance by stakeholders

## 3. The Exploitation Strategy

Exploitation outcomes of the MATISSE project are based on two main inputs: the market context, and the project capabilities and constraints. The market context is relevant because it helps identify and evaluate opportunities for the exploitation, puts the project in context with respect to other initiatives, both commercial and research, and leads to a strong market position towards future or existing potential competitors.

Capabilities and limitations clearly have an impact on the exploitation of a project. Capabilities and constraints of the technology determine what can and cannot be accomplished, while the innovation of the solution provides the uniqueness which will give the project's potential results in a commercial environment.

## 3.1. Value Proposition

MATISSE constitutes a unified platform for hospitals with benefits for the healthcare and insurance industries, as well as the hospitalized patients' health, by ensuring the correct execution of everyday, in-hospital procedures.

The MATISSE **unique selling proposition** can be identified as a **unified solution for hospitals**, offering both **administration services**, **verification of the correct execution of in-hospital procedures and real-time quality assessment**.

MATISSE builds its offer to the interested stakeholders (hospitals, insurance companies, eHealth solution providers) by exploitation of the TagItSmart! (TiS) platform and advancements in IoT, cloud computing and analytics. By smart tagging patients, drugs, exams and the smart trolley MATISSE forms a smart hospital ecosystem, minimizing the probability of errors in everyday in-hospital procedures.

The unique combination of a complete administration solution for hospitals along with the verification and guidance through the execution of in-hospital procedures, real-time quality assessment and assurance of the medication's correctness and proper storage conditions will allow for hospitals to claim error-proof medical procedures, thus shaping their reputation and fame, while reducing costs raised by the occasional ineffectiveness of the medical staff.

## 3.2. Business Models

A business model describes how an organization creates, delivers and captures value. The Business Model Canvas is a strategic management template for developing new or documenting existing business models. The process of identifying one or more possible business models may become laborious; the canvas facilitates discussion and work and supports in keeping focus on the main elements of a business model. The Business Model Canvas is divided into nine blocks:

- Customer Segments – The customers or customer groups that will be served.
- Value propositions – The value that is delivered to the customer segments.
- Channels – The ways that the customer segments are reached.
- Customer Relationships – The relationships with each customer segment.
- Revenue Streams – The service or value paid by the customers.
- Key Resources – The essential resources required by the Value Propositions.
- Key Activities – The necessary activities required by the Value Propositions.
- Key Partners – The partners that are considered important for the Value creation.
- Cost Structure – The costs inherent in the business model.

By the above definition, the MATISSE business model canvas is presented below.

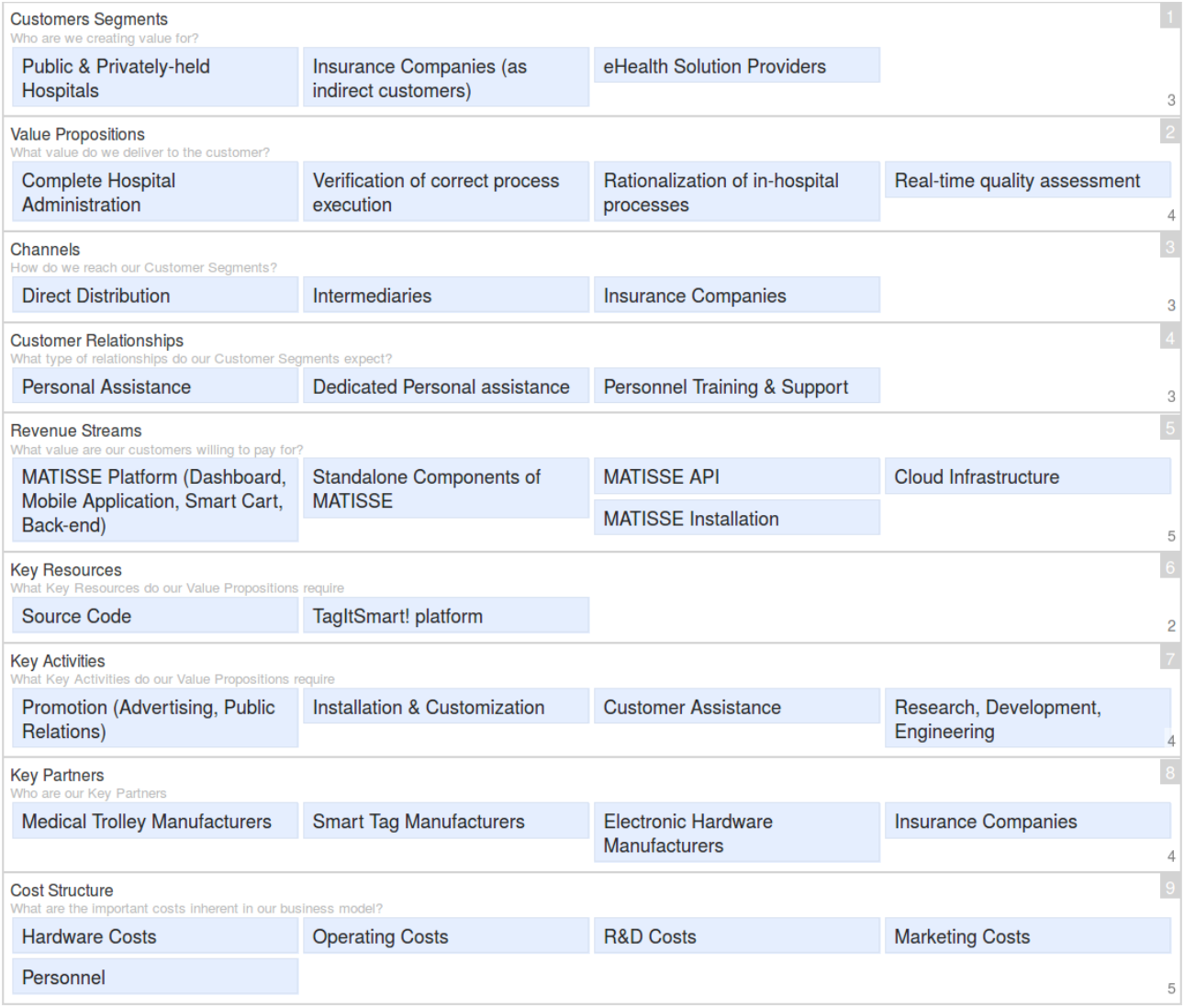


*Figure 1: The MATISSE Business Model Canvas*

The MATISSE Business Model Canvas can be shortly explained and described as follows:

- Customer Segments – It is expected that the values proposed by MATISSE will directly serve hospitals and eHealth solution providers, while insurance companies may be indirect customers. This is explained in more detail in Chapter 2 of the present document.
- Value Propositions – The proposed values are full in-hospital administration, verification of executed procedures, rationalization of processes and real-time quality assessment.
- Channels – The MATISSE platform can be delivered directly by Therapaenis', potential representatives or even insurance companies support the solution
- Customer Relationships – Personal dedicated assistance will be available to customers, as well as training and support.
- Revenue Streams – Therapaenis' incomes will include the MATISSE platform itself along with its installation, components of MATISSE as standalones and possible revenues from provided cloud infrastructure since most hospitals are not expected to install an internal server.

- Key Resources – The resources that are necessary to create value are the source code and, of course, the TiS platform
- Key Activities – The essential activities needed for value creation include the promotion of MATISSE, installation and customization of the platform to fit the customer needs, customer support and further research and development.
- Key Partners – The key partners required by MATISSE include medication trolley, smart tag and electronic hardware manufacturers as well as insurance companies
- Cost Structure – The costs incurred by MATISSE include hardware, operating, research and development (R&D), marketing and personnel costs

## 3.3. MATISSE Functionalities

The following table summarizes the main functionalities that MATISSE offers.

*Table 4: MATISSE Functionalities*

| Service | Details | MATISSE components involved |
|---|---|---|
| Full In-Hospital Administration | MATISSE comes with the Dashboard component which is considered a full administrative platform. The dashboard could be able to substitute the existing bureacratic procedures, supporting the secretariat in keeping a patient's record from admission to discharge. | Dashboard |
| Remote prescription of Medication | A doctor is able to sign in the dashboard remotely and prescribe a drug to a specific patient or modify an existing prescription. In the next Drugs' Stocktaking session the pending prescriptions' doses of this patient will include the modification. | Dashboard |
| Indication of the position where a patient's drugs should be stored during the drugs' stocktaking | When a drugs' stocktaking session begins, the patients with pending prescriptions are fetched, and each of them is associated with a specific drawer and bin on the Smart Cart. When the drugs for a specific patient are prepared, the smart trolley provides visual indications of the drawer and bin where the drugs should be stored. If a wrong drawer is opened an alarm notifies the user. | Mobile Application, Smart Trolley |
| Notifications in case of wrong selection of a drug or improper storage conditions | When a patient's prescription doses' list appears on the mobile application, the user picks and scans the drug's packaging. All the drug's packagings have a QR code for identification, while those requiring special storage conditions have an attached combined tag with both a QR code and a Time-Temperature Indicator (TTI). If either the selected drug is wrong, or its storage conditions are violated the user is notified accordingly. | Mobile Application, Smart Tags |
| Overview of the hospital's pharmacy stock | Upon the scanning of a correct drug during Drugs' Stocktaking use case, the number of pills of this specific drug's package is updated accordingly and can be visualized through the MATISSE Dashboard | Dashboard, EVRYTHNG platform |

| | | |
|---|---|---|
| Assurance of medication's proper storage conditions | The MATISSE combined tag, a combination of Time-Temperature Indicators and QR code is attached on drugs' packages in order to ensure that medication with special storage requirements have been kept under proper storage conditions. Upon the scanning of a drug for placement in the MATISSE Smart cart the mobile application will notify the user in case of defected medication. | Mobile Application, Smart Tags |
| Indication of the storage position of a patient's medication during drugs' distribution | When a nurse enters a patient's room, he/she scans the patient's tag to see if the patient's needs to reveive medication. If the patient has medication to receive the smart cart will indicate the drawer and bin it is stored. In case of a wrong drawer's opening an alarm notifies the user. At the same time, for cross-reference purposes the mobile application fetches the photo of the patient along with an overview of the cart, displaying the position of the medication. | Mobile Application, Smart Trolley |
| Two-way association of patients and their exams | Through the Smart Medical Exams use case, the doctor or nurse is able to fetch a patient's exams on the mobile application's screen. On the other hand, while cross-checking medical exams, a doctor can scan an exam and recall the patient it belongs to. | Mobile Application, Smart Tags |
| Centralized Pre-surgery Control | Through the Pre-surgery control use case the doctor scans a patient's tag and is able to fetch detaills about the forthcoming surgical procedure. Additionally, the doctor will be able to assure that all the required exams have been conducted and the patient is ready to be operated. | Mobile Application |
| Patient's Monitoring through a thorough electronic health record | The MATISSE platform gives the ability to store every information about a patient's health status and history such as admissions, exams, past and active prescriptions, scheduled and completed surgeries, known allergies etc. When a doctor periodically visits a hospitalized patient he/she is able to fetch and visualize his entire electronic health record (EHR) by scanning his/her tag. | Dashboard, Mobile Application |

# 4. Communication and Dissemination Results

This particular chapter aims at presenting the communication and dissemination activities conducted in the MATISSE project, offering an insight of the achieved results in terms of engagement and interest about the implemented MATISSE platform. The results will be compared to the targets set in the Description of Work (DoW), providing a reflection on how our dissemination actions supported and shaped the project's impact creation strategy.

The strategy undertaken by Therapaenis to raise awareness among all types of stakeholders relevant to MATISSE and its results has been followed throughout the duration of the project. The project's visibility was driven by the need to ensure that all relevant actors and stakeholders are approached and engaged in the project's communication strategy, thus maximizing the project's results impact.

Throughout the duration of the project and our activities, we made our mission to demonstrate the MATISSE solution and its ability to gradually annihilate the never events occurring in hospital environments to privately-held hospitals as well as medical insurance companies.

In the following sections, details related specifically to dissemination target groups are provided. In addition, a comprehensive overview of already undertaken dissemination activities is presented, covering the whole duration of MATISSE, from September 1st, 2017 until August 31st, 2018.

## 4.1. Dissemination activities and impact

In the first half of MATISSE, the dissemination activities focused on informing the audience about the progress recorded in the development of the MATISSE platform, while in the second half, these activities were focused on dissemination of the first integrated prototype, the procedures related to the pilot and the collected results. MATISSE is considered of major interest for the following groups:

- *Healthcare Industry*: This group consists of privately-held hospitals' managers expected to adopt the MATISSE solution in order to verify and rationalize the existing hospital procedures and work flows within the hospital environment, nurses and doctors as the end-users of the MATISSE platform, or even pharmaceutical companies expected to make their drugs' packagings traceable and interconnected by exploitation of smart tags. Additionally, this group includes existing providers of eHealth solutions.
- *Insurance Industry*: This group consists of insurance companies signing medical contracts with privately-held hospitals. The MATISSE solution could be promoted by these companies in order for lower prices to be available in medical insurance contracts.

During the lifetime of the project and as results became available from the design, development and real-life pilot related WPs, we have exploited diverse communication channels at out disposal to interact with each identified stakeholder group.

### 4.1.1 Communication Channels and Dissemination Tools

Table 3 provides an overview of the identified communication channels along with their corresponding dissemination material, while table 4 lists the various stakeholders along with the appropriate means of communication.

*Table 5: An overview of the identified dissemination channels*

| Communication Channel | Dissemination Material | Remarks |
|---|---|---|
| **Conference papers/magazines publications** | MATISSE papers dealing with the topic at hand, accompanied by related presentations | Peer-reviewed, scientific technical journals and conferences |
| **Workshops, exhibitions, industrial & trade events** | Presentations | Either as speakers or attendees or participants in discussion panels |
| **Liaisons & Bilateral Contact** | As necessary | |
| **Project Demos & Videos** | Live demonstration, video | Demonstration of the platform's operation to stakeholders |

| | | |
|---|---|---|
| **Social media** | Short updates, photos, videos | LinkedIn, Twitter & Youtube |
| **Website** | All applicable | Therapaenis' website |

*Table 6: Target groups along with their primary communication channel(s)*

| Target Group | Primary Communication Channel(s) | Remarks |
|---|---|---|
| **Healthcare Industry** | Liaisons & Bilateral Contact, Project demo & video, Conference papers/magazines publications | Effort is focused on establishing liaisons and bilateral contacts; the impact is increased through live demonstration of MATISSE and conference papers |
| **Insurance Industry** | Liaisons & Bilateral Contact, Project demo & video, Conference papers/magazines publications | Same as above |
| **General Public** | Website, Social Media, Workshops, exhibitions, industrial & trade events | LinkedIn, Twitter & Youtube; workshops and exhibitions held for more interested users |

In general every communication channel comes with its own success indicators. For instance, number of followers is a very important metric for Twitter and LinkedIn, while the views of a released video is the most significant metric for YouTube. The success of a conference paper would depend on the publisher of the paper and a demo should succeed in conveying the MATISSE offering to the end-user.

### 4.1.2 Overview and Evaluation of Dissemination Activities

#### 4.1.2.1 Online presence and social media

Updates on the MATISSE project can be found in Therapaenis' main website which was extensively presented in D1.1 *MATISSE website and social media accounts* [1]. In this site [2], MATISSE is disseminated as part of the Therapia@Hospital MMIS [3]. The main updates on the website concerned the release of a video presenting the MATISSE smart cart utility, and the conclusion of the real-life pilot with validation of the platform's operation. These updates are presented in figures 2 and 3.

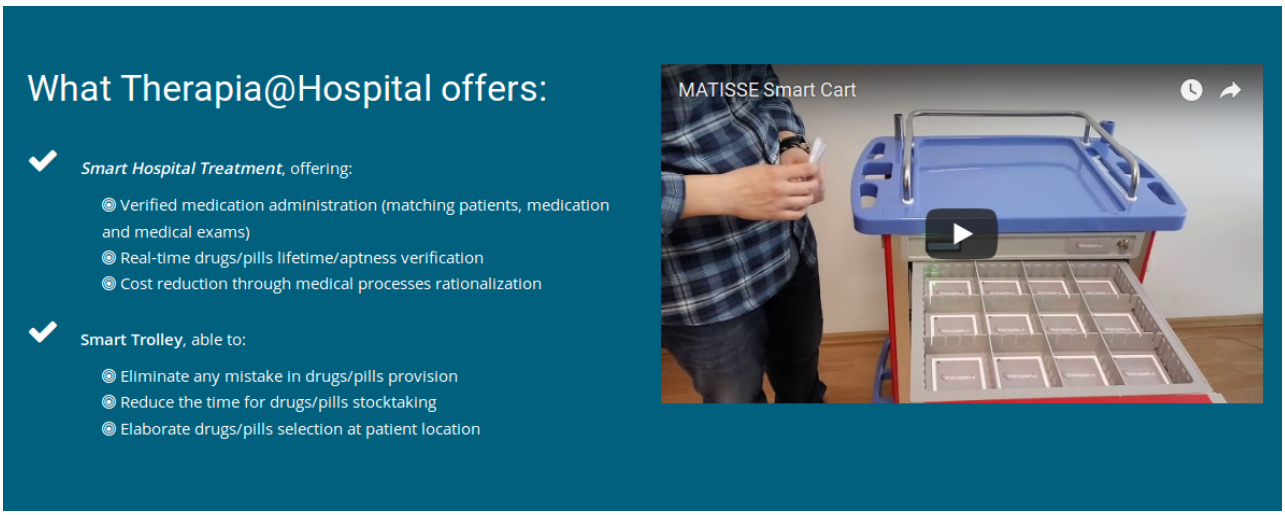


*Figure 2: Therapia@Hospital/MATISSE value proposition on the website*

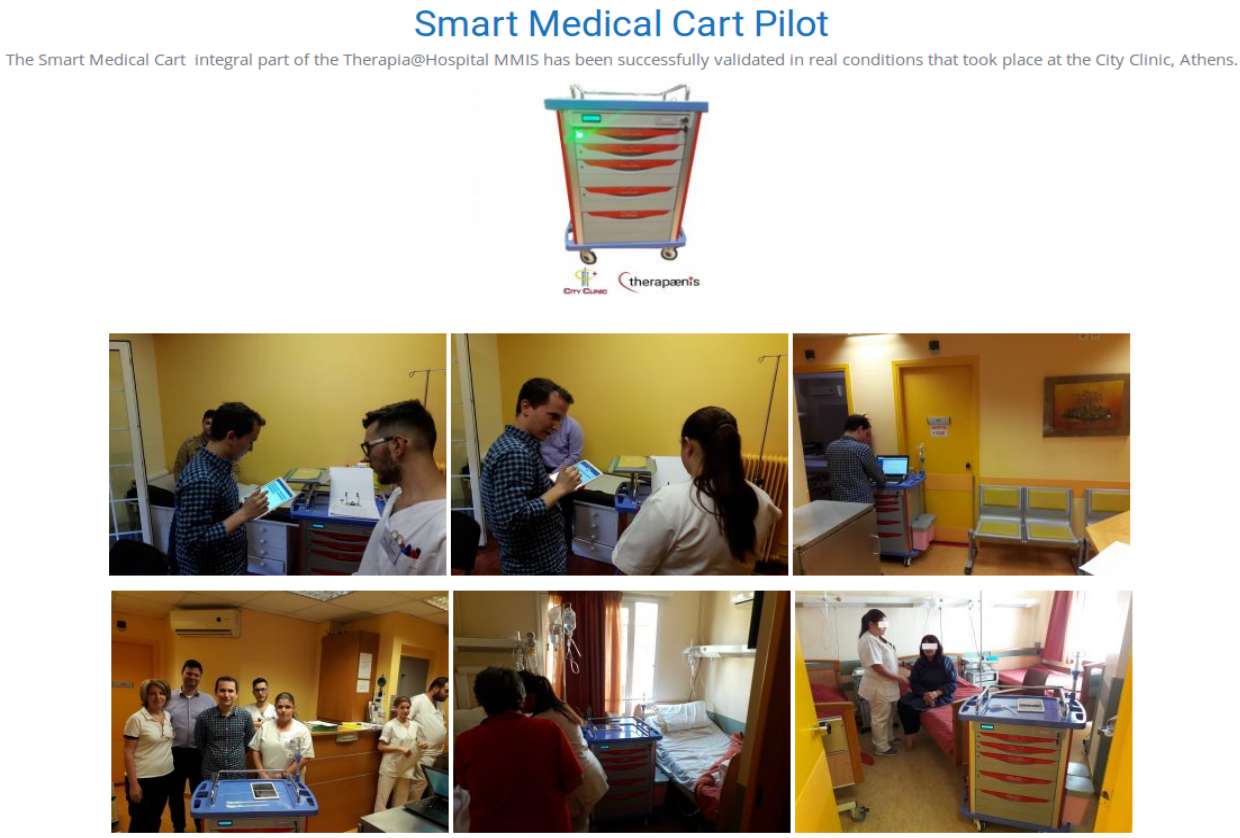


*Figure 3: MATISSE successfully piloted and validated at City Clinic*

Therapaenis' main effort for establishment of the MATISSE project's online presence was achieved through its social media accounts, namely LinkedIn, Twitter and YouTube. Regarding the content published, it mainly included updates on the development progress of MATISSE and news about the pilot's execution and results.

For YouTube [4], the dissemination material included a video [5] that was shot during month 7 and demonstrated the MATISSE smart cart utility as part of the two main MATISSE use cases. The views of the video at the moment of this report's authoring have reached 120, and the number of subscribers to Therapaenis' channel is 6, which is not considered discouraging as the number of video views is considered a more important criterion for YouTube. The video was also shared in Therapaenis' LinkedIn and Twitter accounts. In fig. 4 Therapaenis' YouTube channel is presented and fig. 5 shows the actual video along with its description.

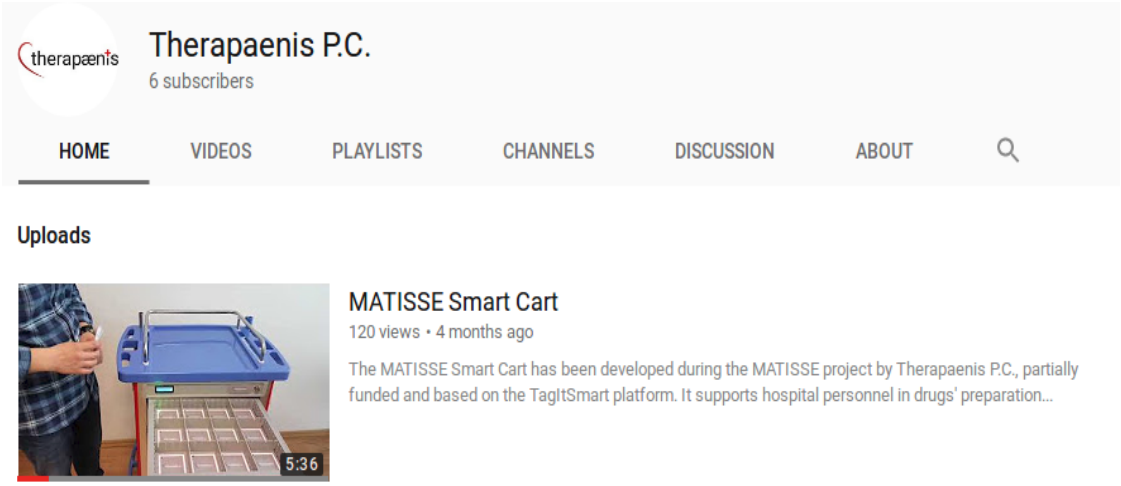


*Figure 4: Therapaenis' YouTube Channel*

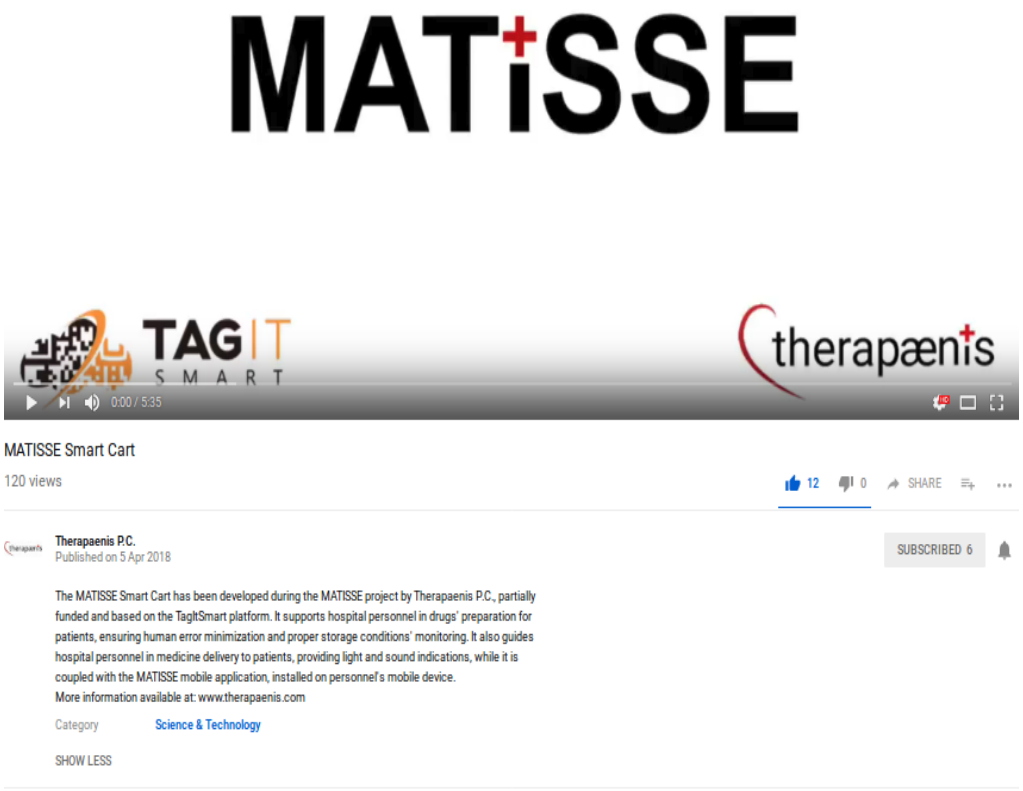


*Figure 5: MATISSE Smart Cart video details*

A greater number of updates were made on Therapaenis' Twitter account [6]. Up until the authoring of this report, Therapaenis has 31 followers on Twitter, which is considered a relatively low number of followers. Of course, if the duration of MATISSE was longer this number would substantially increase after the presentation of the validated results. Various updates where shared and one of the most important periods in terms of tweet engagement was around the release of the aforementioned video, which followed the release of the MATISSE Mobile Application and the MATISSE Dashboard components. In Fig. 6, the tweet referring to the mobile application and dashboard, along with the tweet concerning the release of the MATISSE smart cart video are presented. These tweets offered over 2000 impressions in M7-8 and this is depicted in Fig. 7.

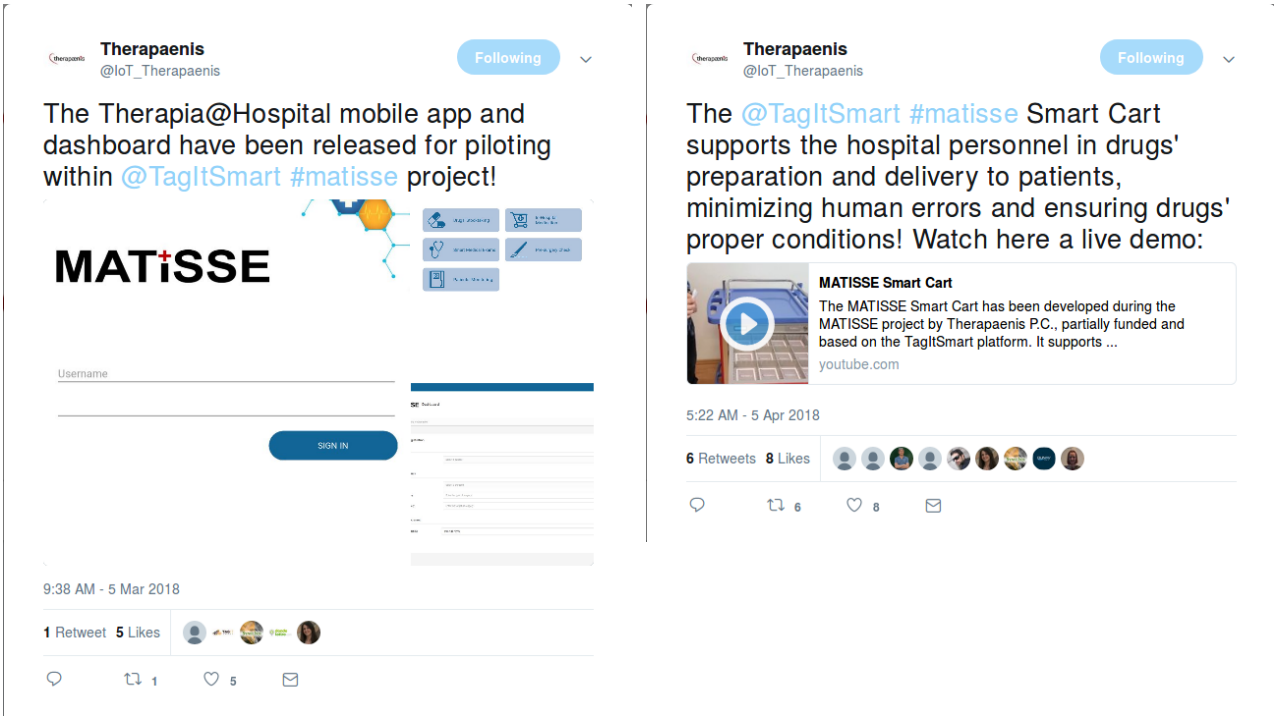


*Figure 6: Tweets of Therapenis about the release of Therapia@Hospital components and Smart Cart video*

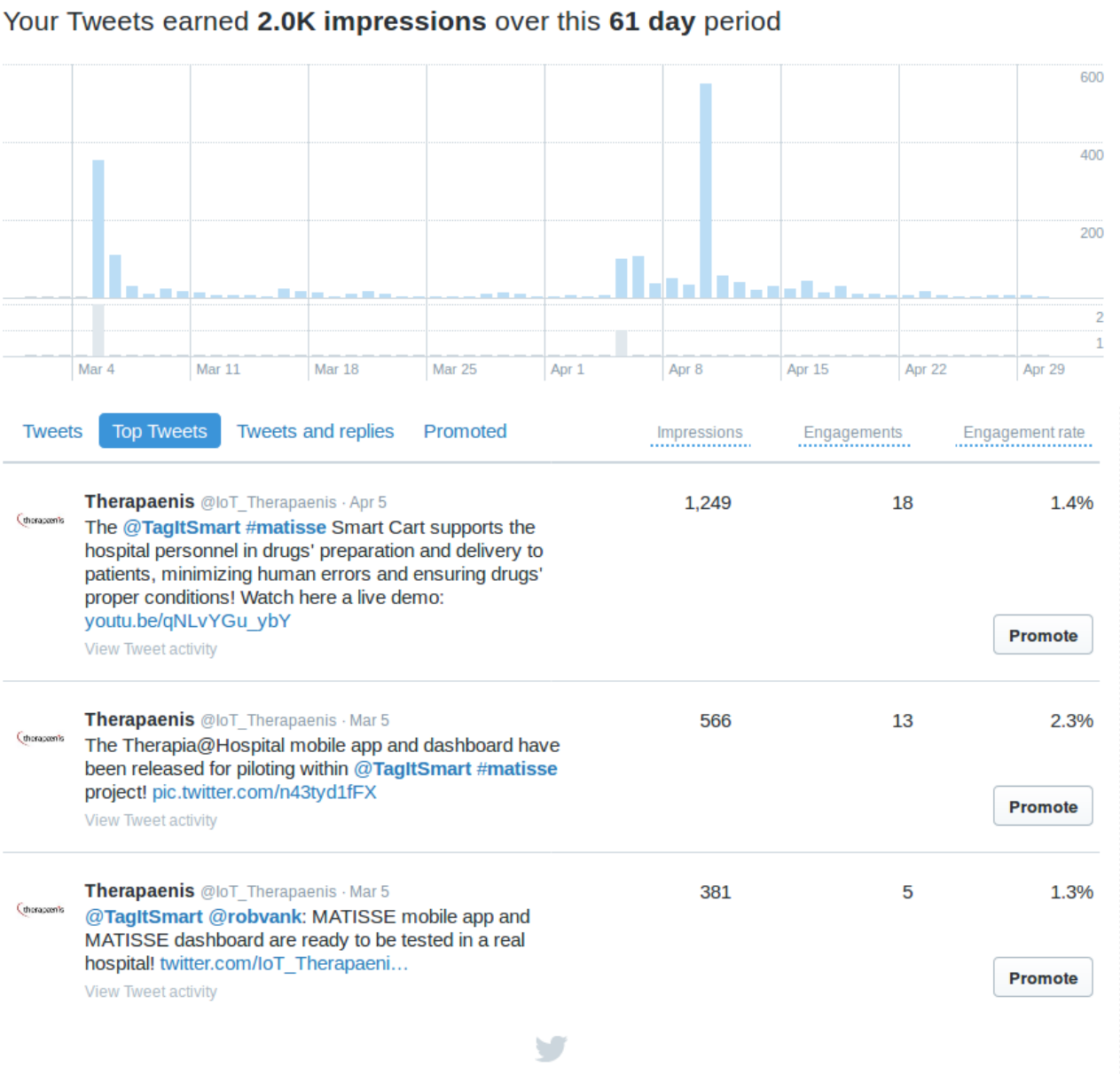


*Figure 7: Therapaenis' tweet analytics for M7-8 of MATISSE*

The online presence of MATISSE was also established through Therapaenis' LinkedIn account [7]. The LinkedIn followers of Therapaenis are considered less diverse than its followers on Twitter, as LinkedIn is more oriented to businesses. Therapaenis has acquired 11 followers on its LinkedIn account. On the other hand, the most effort for communication of the MATISSE progress and results was focused on Therapaenis' Twitter account, which indeed showed better outcomes in terms of impressions and engagements that our tweets earned. Hence, the not so satisfying results from our LinkedIn account were balanced by the better outcomes in Twitter. In fig. 8 the description of Therapaenis in Linkedin is presented.

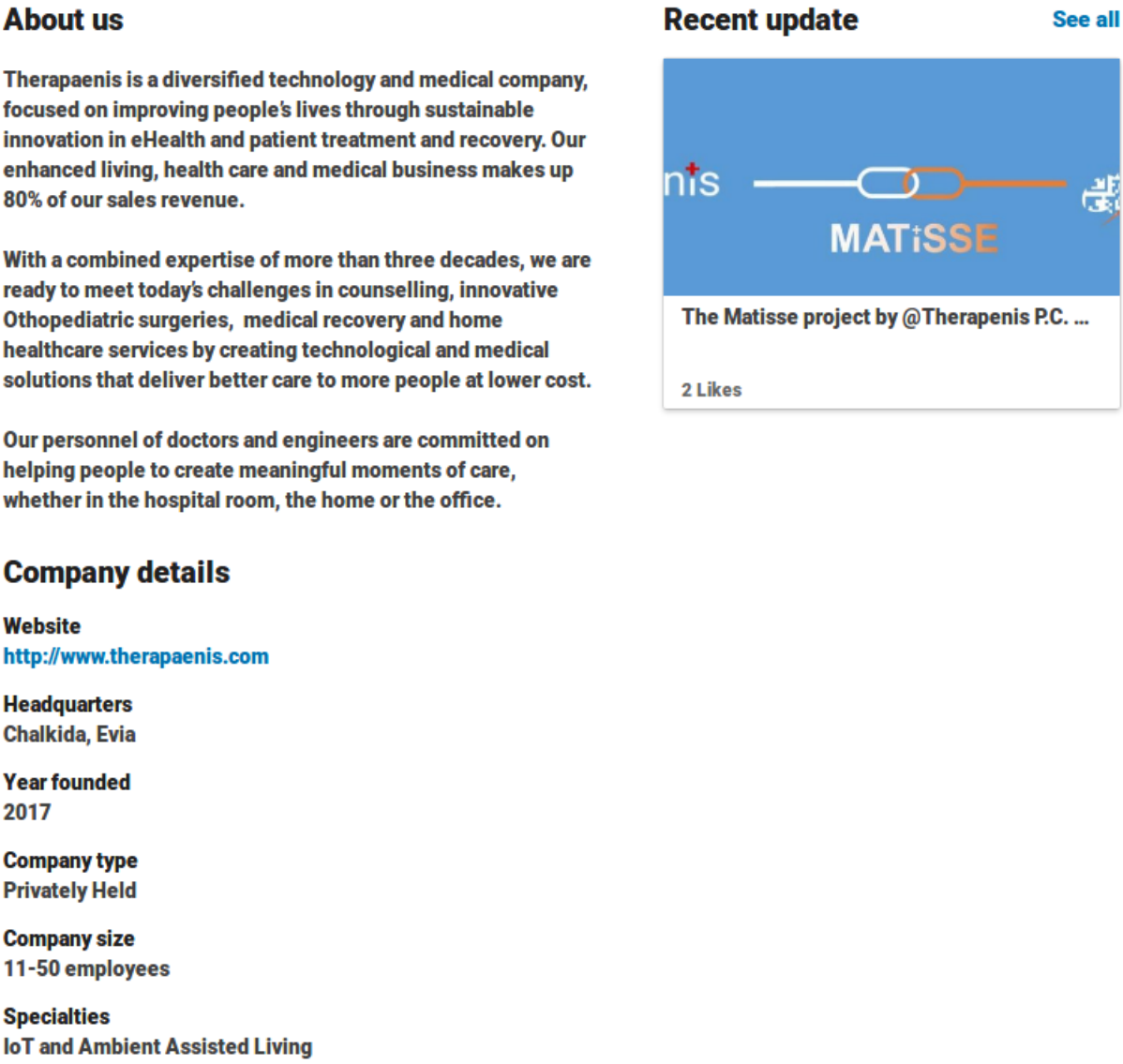


*Figure 8: Therapaenis' description in Linkedin*

#### 4.1.2.2 Events

The participation in workshops, exhibitions, industrial and trade events is considered of vital significance for the successful communication of the MATISSE proposals, outcomes and offerings. Therapaenis has participated in two such events which are presented in the following table. The first event was a TiS project meeting which co-existed with an Open Call Co-Creation workshop and was held in Vaasa, Finland in M1. The second event listed was the Innovation Night organized by the IoT – European Platforms Initiative in Athens, Greece and offered us the opportunity to present our visions and ideas behind the MATISSE proposal to various stakeholders.

*Table 7: List of attended events*

| Event | Organizer | Date | Location |
|---|---|---|---|
| TiS project Meeting, Meetup and Open Call Co-Creation Workshop | UPCODE LTD. | 05_07/09/2017 | Vaasa, Finland |
| Meetup Athens: Innovation Night | IoT-EPI | 27/09/2017 | Athens, Greece |

#### 4.1.2.3 Performed and foreseen publications

The following table lists the attempted publications of a paper that was authored and presents the implemented MATISSE platform as a whole. The paper was sent to two conferences and was finally accepted for oral presentation at the 21st Euromicro Conference on Digital System Design (DSD) [8] on August 29 – 31, 2018 in Prague, Czech Republic.

*Table 8: List of attempted and foreseen publications*

| Publication Media | Title | Author(s) | Status |
|---|---|---|---|
| *21st Euromicro* Conference on Digital System Design (*DSD*) | MATISSE: A Smart Hospital Ecosystem | C. Zachariadis, T. H. Velivassaki, T. Zahariadis, K. Railis, H. C. Leligou | Accepted |

# 5. Conclusion

The MATISSE project provides a unified integrated solution for hospitals, promising a true reduction in never events that occur within a hospital environment. Leveraging on the recent advancements of IoT, cloud computing, analytics and smart tags, MATISSE claims error-proof in-hospital procedures, rationalization and verification of the executed process, and real-time quality assessment. Market researches suggest that MATISSE, as well as other possible IoT solutions for healthcare, find breeding grounds for success. The MATISSE value proposition addresses the target market offering a wide range of services needed in hospital environment.

Public and privately-held hospitals are expected to be the direct customers of MATISSE, seeking to raise their reputation and fame as well as the quality of services they provide, while reducing costs through the rationalization of procedures and increased effectiveness of the personnel. Insurance companies and governmental bodies are considered the indirect customers of MATISSE, suggesting the installation of the system in hospitals, thus reducing the amounts of compensations to patients through human error reductions, in exchange for discounts to medical insurance contracts for both hospitals and doctors.

As part of the MATISSE solution promotion strategy, the dissemination activities aimed to reach the stakeholders as well as the IoT community in general, through direct contacts with hospitals, participation in industry events and conferences, as well as Therapaenis' online presence through our website and social media accounts. In conclusion, it is believed that MATISSE has been successfully disseminated, the targeted market and potential customers have been clearly defined, the MATISSE value and offering have been outlined and promoted accordingly through the considered dissemination channels.

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