



Horizon 2020 Framework Programme
H2020-ICT-2018-2020 (H2020-ICT-2018-2)
Project No.: 825429 SocketSense

SOCKET SENSE
A TAILORED FIT OF THE FUTURE

Advanced sensor-based design and development of wearable prosthetic
socket for amputees

Start date of project: 2019-01-01

Duration: 36 months

Deliverable D7.1: *Communication Toolkit*

Revision: Final 2019-06-29

Due date: 2019-06-30

Actual submission date: 2019-06-29

Lead Contractor for deliverable: KTH

Dissemination level: Public

Project website: www.socketsense.eu



© 2019-06-30 SocketSense

SocketSense received research funding from the European Union's Horizon 2020 Framework Programme.

The document reflects only the author's view. The European Commission is not liable for any use that may be made of the information contained herein.

For further information please contact the SocketSense project coordinator:

Dr. Dejiu Chen
Mechatronics Division, Department of Machine Design,
School of Industrial Engineering and Management,
KTH Royal Institute of Technology
Brinellvägen 85, SE-100 44 Stockholm,
Sweden

chen@md.kth.se

Authors

Document manager:

KTH: Tobias Vahlne

Contributors:

KTH: Tobias Vahlne, Dejiu Chen

Reviewers:

KTH: Dejiu Chen



Table of Contents

1. Introduction	3
2. Report template	3
3. Presentation template	4
4. Newsletter template	5
Address list	5
Sign-up Page	5
5. Flyer template	6
6. Project poster	7
7. Project Website	10



1. Introduction

This deliverable provides a description of the dissemination toolkit that is developed within SocketSense to promote effective project internal and external communication. The toolkit consists of a set of document templates, including

- Report template
- Presentation template
- Newsletter template
- Flyer template
- Poster template
- Website

2. Report template

The report template in MS Word has been given a simple design to be able to work for most documents, including deliverables, meeting minutes and other internal reports. It contains a link to the project web site and EU related information. The front page and second page are shown below:

The image shows a document template for a report. At the top center is the European Union flag. Below it, the text reads: "Horizon 2020 Framework Programme", "H2020-ICT-2018-2020 (H2020-ICT-2018-2)", and "Project No.: 825429 SocketSense". The main logo is "SOCKET SENSE" with a stylized colon between the words, and the tagline "A TAILORED FIT OF THE FUTURE" below it. The project description is "Advanced sensor-based design and development of wearable prosthetic socket for amputees". The start date is "2019-01-01" and the duration is "36 months". The heading "Document Heading" is in a large, italicized font. Below this are fields for "Revision:", "Author:", "Dissemination level:", "Due date:", and "Actual submission date:". At the bottom, the project website is listed as "www.socketsense.eu".



© 2019 SocketSense
SocketSense received research funding from the European Union Horizon 2020 Framework Programme.
The document reflects only the author's view. The European Commission is not liable for any use that may be made of the information contained herein.
For further information please contact the SocketSense project coordinator:

Dr. Dejia Chen
Mechatronics Division, Department of Machine Design,
School of Industrial Engineering and Management,
KTH Royal Institute of Technology
Brinellvägen 85, SE-100 44 Stockholm,
Sweden
chen@md.kth.se

Authors

Document manager:

Contributors:

Reviewers:

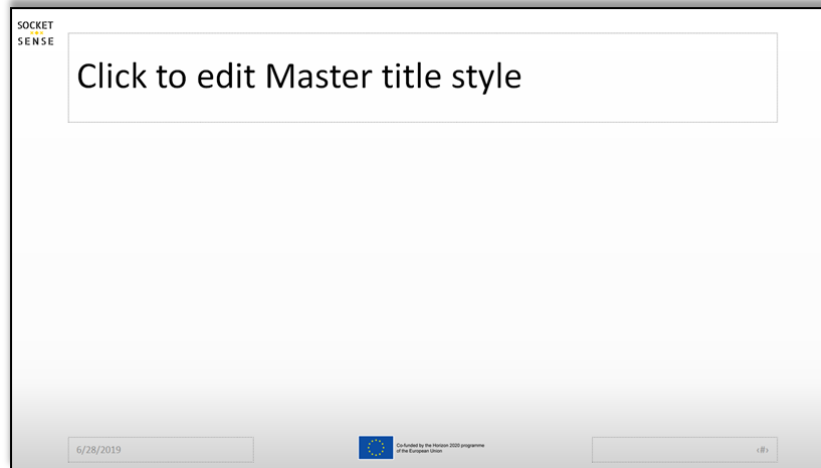
1 www.socketssense.eu

3. Presentation template

The presentation Template in MS PowerPoint has been made in line with the web home page. Plain and not with too many graphical components.

The front page and second page are shown below:

The slide features a white background with a faint network diagram of grey nodes and lines. On the right side, there is a row of five prosthetic legs. At the top left is the European Union flag logo, and below it, the text "Horizon 2020 Project No.: 825429". At the top right is the "SOCKET SENSE" logo, with "SOCKET" above "SENSE" and three yellow diamonds between them. The main content area contains two text boxes: "Click to edit Master title style" in a large font and "Click to edit Master subtitle style" in a smaller font. At the bottom, there is a row of logos for various partners: Teesside University, ÖSSUR, Servicio Andaluz de Salud, South Tees Hospitals NHS Foundation Trust, TWI (quantum technology supersensors smart materials of the future), swerea|IVF, NUROMEDIA, and KTH.



4. Newsletter template

The newsletter will be managed from *mailchimp.com*. It gives good flexibility to let people signup (including opt-in) or opt-out. It also gives good statistics on how the Newsletter have been read.

The newsletter will be designed with the help of mailchimp and will work well on both desktop and mobile clients. The template is shown below:



Address list

The list of addresses will be maintained via mail chimp and allows for easy control of who have signed up or opted out. Its also easy import new subscribers along the way.

Sign-up Page

There is a popup on *socketsense.eu* that offers visitor to sign up for the newsletter. That adds them directly to the address list including a confirmation email.



5. Flyer template

There is an initial flyer in place that gives a short overview of the project. The flyer could be used during events and fairs. And it could either be used as a digital flyer in an email or printed.

The front page and second page are shown below:

SOCKET:SENSE 

A TAILORED FIT OF THE FUTURE

**PUSHING TECH
BARRIERS IN
PROSTHETIC
WEARABLE
MEDICAL DEVICES**

An EU Project with 9 European Partners breaking new grounds.

**WE WILL WORK IT
ALL OUT**

The project will provide an advanced technique for designing tailor-made sockets that offer real-time monitoring. The project will also develop a process for cost-effective and timely manufacturing of the sockets.

PARTNERS

  
smart materials of the future



LET'S RAISE THE BAR

The Project aims to push tech barriers in prosthetic wearable medical devices by fundamentally changing how the socket is designed.

The SocketSense innovation will be in the new technique that will, wirelessly, monitor the performance and any anatomical changes of the residual limb.

Lightweight, conformable and multifunctional electronic sensors combined with a new advanced biomechanical analytical algorithm will allow for real time monitoring of amputees (without the need to visit clinics).

The Biomechanical analytical models will be developed to turn the sensor data into an optimized socket design, unique to each client.

The SocketSense solution will address opportunities in the existing prosthetic market worth billions and will push technology barriers in emerging areas; advanced intelligent AI/Controller-based prosthetics that utilize data-based approaches and flexible/conformable Large Area & wearable electronics.

The Project will deliver the technical solution together with the result from an extensive number of clinical trials by the end of 2021.

**FOR MORE INFORMATION,
VISIT OR EMAIL:**

**SOCKETSENSE.EU
INFO@SOCKETSENSE.EU**



6. Project poster

A poster has been developed for the project disseminations in various contexts relevant for SocketSense. The first poster shows mainly project overall information regarding the problem formulation, the adopted methodologies, the scientific and technological issues of interest. The second poster goes more into details, relating to different work packages, work tasks, etc.



SOCKET SENSE

A TAILORED FIT OF THE FUTURE

Advanced sensor-based design and development of wearable prosthetic socket for amputees

Challenges and motivations

Limb amputations cause serious physical disabilities that compromise the quality of life of many people around the globe. The World Health Organization estimates that there are ~ 40 million amputees in the world. One common reason for limb loss is diabetes. On the other hand, many amputees do not wear their prostheses because of discomfort or residual limb pain. Such a situation often affects their life quality negatively. For example, disabled people are at more severe risk of unemployment as they begin from precarious positions and usually meet more barriers in finding new jobs. The lack of employment significantly affects the perceived social exclusion index. The levels of social exclusion are the highest among the long-term unemployed and those unable to work for reasons of poor health or disability.

Project Goals

SocketSense is a new ICT project which aims at developing an innovative prosthetic socket system through the integration of advanced sensing, data analysis, AI methods, embedded platforms and cloud computing. In particular, the cutting-edge solution will consist of real-time monitoring of critical clinical parameters measured inside the prosthetic socket. The measurement values are evaluated against biomechanical models based on the residual limb tissue properties of individual patients. The result of that comparison may then indicate that the socket fit is non-optimal and that fabricating a better fitting socket may be necessary. When necessary, new tailored prosthetic sockets will then be designed with CAD/CAM tools and additive manufacturing based on guidance from the SocketSense system. With SocketSense, the prosthetists will be able to achieve an optimized socket within the same day when the patient needs a renewal, and the technique will apply to all lower limb amputees (above knee and below knee).

Enabling Technologies and Methods

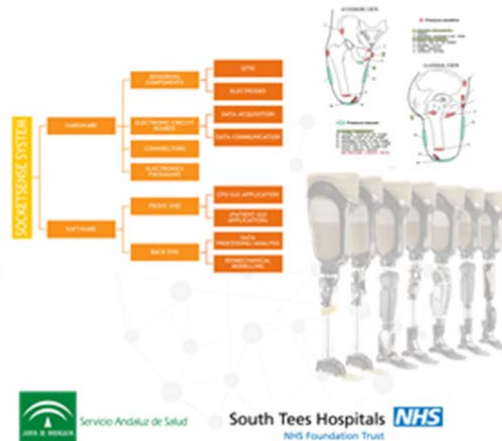
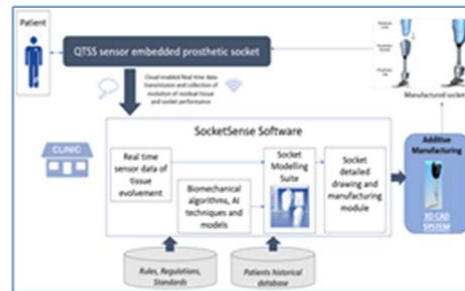
- The enabling technologies to support the project goals are:
- **Wearable sensor**, which will be developed based on QTSS materials (patent protected under WO2017103592A1)
 - **Wireless data communications** allow dynamic biomechanical data to be collected and transmitted to the clinic all the time. (privacy issues will be addressed accordingly)
 - **Biomechanical algorithms** will enable to achieve optimized socket design automatically with basic intervention from the prosthetics.
 - **Software platform** will allow clinics to monitor patients and manufacture 3D Socket.
 - **Clinical trials** to validate the new technique and procedure.

Project information:

Funded by EU within Horizon 2020 Framework Programme, H2020-ICT-2018-2020 (H2020-ICT-2018-2). The project budget is 3.8 million EUR and the duration is three years (from 2019-01). The project partners represent research, healthcare, prosthetics OEM, technology and tool vendors.

Please don't hesitate to contact us if you have an enquiry or an interest in the results created by the project.

Contact enquiries: info@socketSense.eu
Project coordination: Dr. Deju Chen, Associate Professor, KTH Royal Institute of Technology, SE 20044 Stockholm, Sweden. Phone: +46-8-790 84 22. Email: chen@md.kth.se





SOCKET SENSE

A TAILORED FIT OF THE FUTURE

Advanced sensor-based design and development of wearable prosthetic socket for amputees

Problems

—



Research tasks

—



Results/Conclusions

....



Steps to Success record sheet

Steps to Success record sheet		Topic				
Week	#1	#2	#3	#4	#5	

Further information:
—



7. Project Website

Together with other branding components, a website for the SocketSense Project have been put in place; <https://www.socket sense.eu>. It will, together with selected social media channels, serve as a hub for the ongoing communication activities. Further design information is available with D7.2. See below for the snapshots.

