D6.4. Public Communication Materials

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Approvals

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Document history

Revision	Date	Modification	Author/ Organisation
Version 1			
Version 2			
Version 3			

Abstract

This deliverable details the communications materials that have been prepared during the project execution and that are available to partners.

It is worth noting that in order to protect the commercial interests of the industrial participants, publication of the materials will be selective, except for submission of contractually required reports and information to the Commission.

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1. Introduction

Optogenerapy proposes a new interferon-β (IFN-β) drug delivery system to revolutionize Multiple Sclerosis treatment. The project develops and demonstrates a new cell-chamber device to be implanted subcutaneously providing a steady drug release during at least 6 months. The cell confinement within a chamber sealed by a porous membrane for safe drug release will overcome the adverse effects of current cellular therapies. Wireless powered optogenetics – light controlling the cellular response of genetically engineered cells – is used to control the production of IFN-β.

Replacing standard intravenous IFN-β delivery by subcutaneous delivery prevents short and long term side effects and efficiency-losses related to drug peaks and discontinuation, while saving non-adherence costs.

It is a low-cost system of high industrial and clinical interest, combining:

– Polymeric biomaterials with strong optical, biocompatibility and barrier requirements, to build the cell chamber and to encapsulate the optoelectronics
– Optoelectronics research on miniaturization, device autonomy and optical performance
– Optimal cellular engineering design, enhanced by computer modelling, for stability and performance of the synthetic optogenetic gene pathway over long-term implantation
– Micro mold manufacturing enabling optoelectronics embedding and minimal invasiveness

The innovation potential is so huge that a proof-of-concept was listed by Scientist Magazine as one of the 2014's big advances in science.

In this deliverable, the communication activities done during M1-M20 are presented, including, among others, the development of a corporate visual identity manual, print and digital dissemination and promotional materials designed, social media activity and press releases written.

Eurecat is responsible for designing and implementing Optogenerapy's communication activities, through its Research Communications Office, which are in line with the project's dissemination.
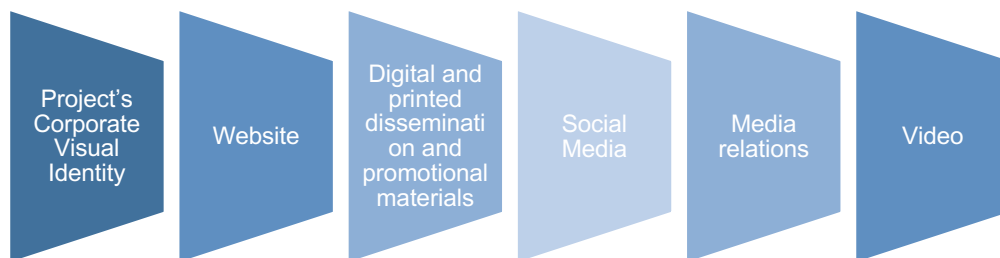
2. Communication activities

2.1 Communication plan

The Communication Plan goal is to **catch the attention of the broad audience about the research done in Optogenerapy project in a way that can be understood by non-specialists** and **increase social acceptance** in order to facilitate the new bioelectronic implant's introduction into the healthcare system.

The communication activities have the following objectives:

1. Visualize new opportunities for health and industry sectors related with the main objective of Optogenerapy: to develop and demonstrate a new optogenetics implant for controlled beta interferon (IFN-β) protein delivery for treating patients suffering from multiple sclerosis (MS).
2. Visualize new opportunities and advances for MS patients.
3. Visualize the novelty and advances beyond the State of the Art (SOTA) and the potential of the research.

Optogenerapy's communication activities include:

Project's Corporate Visual Identity	Website	Digital and printed dissemination and promotional materials	Social Media	Media relations	Video

All actions consider EC recommendations explained in the Participant Portal H2020 Online Manual section on project communication.

2.1.1 Key messages

Key messages were defined and have been used in all Optogenerapy dissemination and communication activities. For the communication activities done the messages have been adapted to be understood by the broad audience and tailored to the different channels used.
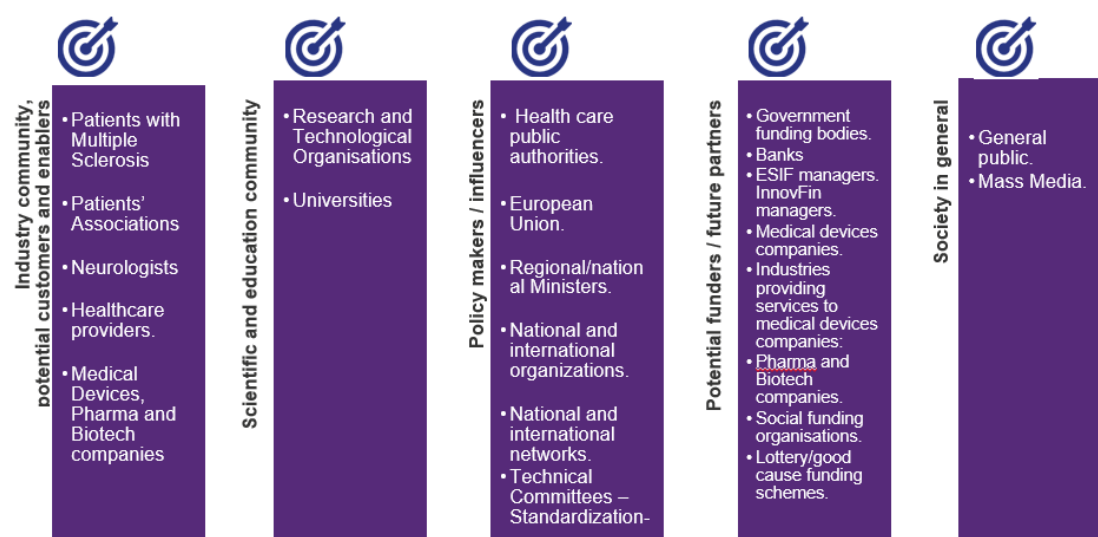
Those messages include:

- The wide potential of optogenetics as a safe cell therapy for multiple diseases.
- How an implanted device under the skin provides therapeutic efficiency independently of patient compliance.
- Multiple Sclerosis disease awareness, prevention measures, treatment options and adherence benefits.
- The mid-term direct benefits of the project outcomes for Multiple Sclerosis therapy.

- Optogenerapy is an efficient and less costly therapy for Multiple Sclerosis.
- Optogenerapy production contributes to the competitiveness of the European manufacturing sector preserving and creating added-value employment.
- The project has been supported by the EC, which believes in the benefits that such development will bring to the progress of the society.

The key messages take into account **keywords as**: Multiple Sclerosis, Interferon Beta, Optogenetics, Subcutaneous, Drug Delivery, Cell Therapy, Therapeutic Implant, Active Implantable Medical Device or low-cost system of high industrial and clinical interest, among others.

2.1.2 Target audiences

Optogenerapy's communication activities target audiences are those identified for dissemination. Communication activities though are addressed to a broad non-specialized audience.

Industry community, potential customers and enablers	Scientific and education community	Policy makers / influencers	Potential funders / future partners	Society in general
• Patients with Multiple Sclerosis • Patients' Associations • Neurologists • Healthcare providers. • Medical Devices, Pharma and Biotech companies	• Research and Technological Organisations • Universities	• Health care public authorities. • European Union. • Regional/national Ministers. • National and international organizations. • National and international networks. • Technical Committees – Standardization-	• Government funding bodies. • Banks • ESIF managers. InnovFin managers. • Medical devices companies. • Industries providing services to medical devices companies: • Pharma and Biotech companies. • Social funding organisations. • Lottery/good cause funding schemes.	• General public. • Mass Media.

2.2 Corporate Visual Identity

Eurecat, as the leader of Dissemination and Communication work package has developed the Optogenerapy's Corporative Visual Identity, including a logo, the basic font and colour manual, power point and word template.

2.2.1 Logo

<p align="center">**Figure 1: Optogenerapy's logo.**</p>

2.2.2 Basic manual

The Corporate Visual Identity (CVI) Manual was developed at the beginning of the project. The document, shared with all partners, defines colours, fonts, uses and some applications. Some screenshots are showed below:

CORPORATE VISUAL IDENTITY (BRANDING)
BASIC MANUAL

A project coordinated by:

eurecat

COLOURS

Pantone: 2617 U
CMYK: 75, 100, 0, 0
RGB: 102, 36, 131
#662483

Pantone: 285 U
CMYK: 80, 53, 0, 0
RGB: 61, 111, 182
#3D6FB6

Pantone: 240 U
CMYK: 34, 79, 0, 0
RGB: 179, 80, 153
#B35099

USE FONT

ARIAL BOLD
abcdefghijklmnñopqrstuvwxyz
ABCDEFGHIJKLMNÑOPQRSTUVWXYZ
1234567890

ARIAL REGULAR
abcdefghijklmnñopqrstuvwxyz
ABCDEFGHIJKLMNÑOPQRSTUVWXYZ
1234567890

ARIAL ITALIC
abcdefghijklmnñopqrstuvwxyz
ABCDEFGHIJKLMNÑOPQRSTUVWXYZ
1234567890

CORPORATE APPLICATIONS

Figure 2: Screenshots CVI manual.

2.2.3 Power point template
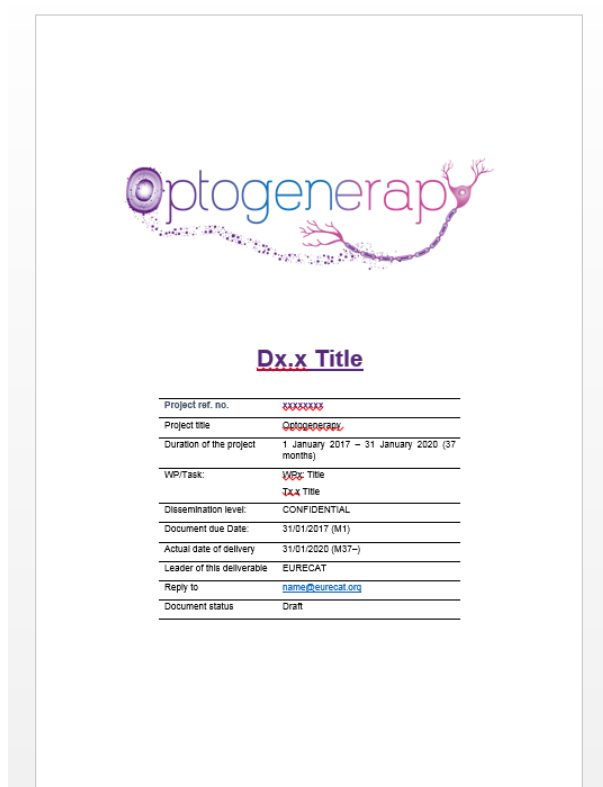
Power point template designed for internal and external use.

Figure 3: Cover of Power Point template.

2.2.4 Word template

Word template available to all partners for deliverable and other project related materials writing.

Figure 4: Cover of Word template.

2.3   Promotional materials

A **leaflet describing the Optogenerapy project** has been elaborated.

They are available to the consortium in an electronic format, so they can be used every time a partner carries out some activity related to dissemination and communication (e.g., having a booth in a fair).

The document contains an introduction to the project, its objectives, partners' descriptions and activities, as well as other related information. The leaflet is freely downloadable from the Optogenerapy website.

Figure 5: Optogenerapy brochure.

2.4   General presentation

To support the communication of Optogenerapy project, a power point presentation has been prepared. This presentation can be optimized according to the event and/or audience.

Together with the leaflet, this presentation serves as the project business card and will be distributed as widely as possible, including the general public, conferences, workshops and other events, from the beginning of the project.

Optogenetic Protein Therapy for Multiple Sclerosis
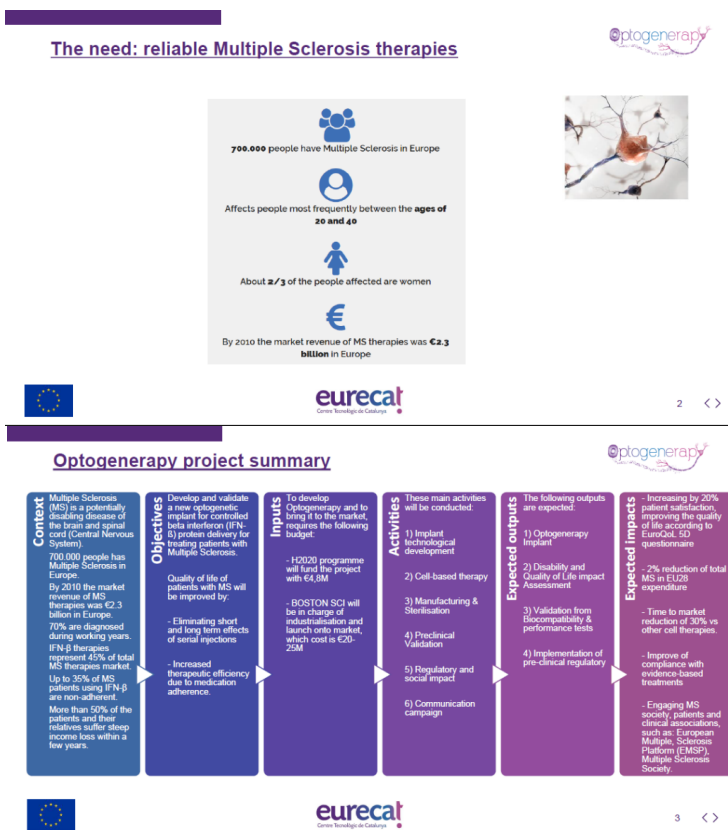
A project coordinated by

eurecat

PRESENTER NAME

Figure 6: Overview of some slides of the general presentation.

2.5   Website

The registered URL is www.optogenerapy.eu

2.5.1   Overall principles

The website is **the anchor for all communication activities** related to the project and serves as a **central point** of entry for all public material, including the project's basic information, the demos, resources and public deliverables. The website continues to be updated with news, links to other relevant sites, details of published papers, conferences and exhibitions attended, etc.

The website platform **follows up the corporate visual identity** of the project and gives access to Optogenerapy's social media channels.

Considering that different authors update the site, **Wordpress is used as a Content Management System (CMS)** to easily and quickly publish the content.

As to responsive design, the website is optimised for browsing on tablets and smart phones as well.

2.5.2 Website structure

The website is divided into two areas:

1. **Public area.** These pages aim to give a public description of the project: project objectives, expected impact, use scenario, partners' descriptions, news and events... Secondly, it includes all public communication materials such as the project brochure or media coverage and gives access to the project's twitter.

2. A partner **restricted area**, used for internal communication. This area is accessible for every partner, using a login and a password. It is dedicated to the project management with specific tools (PROCEMM) for exchanging, sharing data, files and all relevant project information.

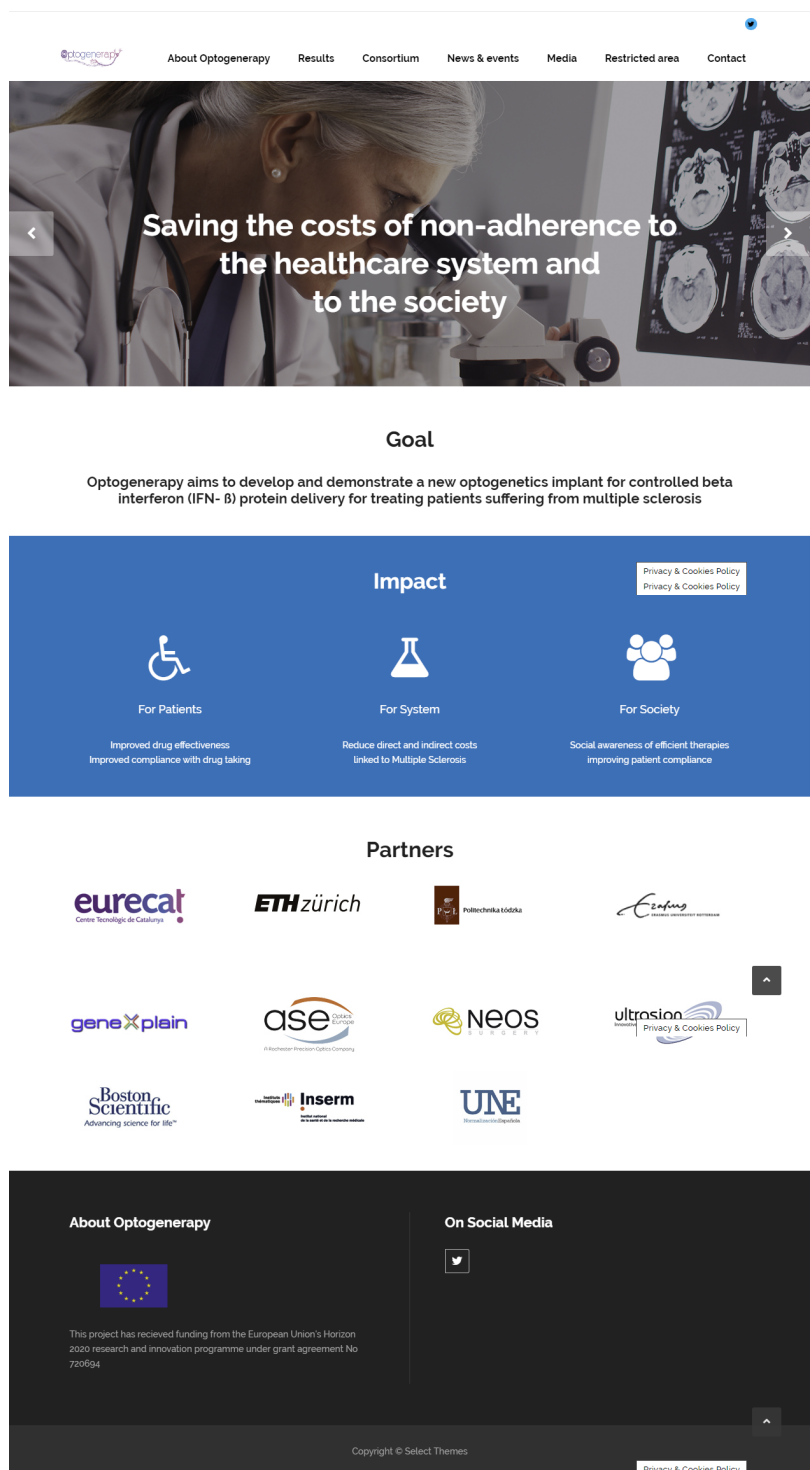Optogenerapy's website content architecture is presented as follows:
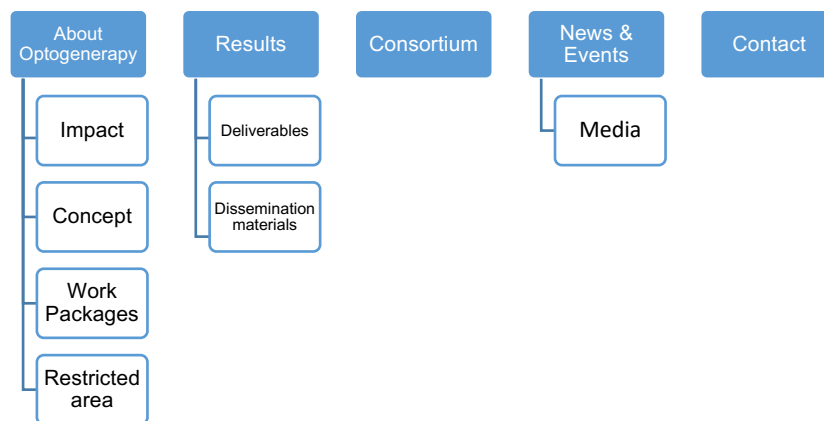
Figure 7: Screenshot of Optogenerapy's website

2.5.3 Analytics

The Optogenerapy website has installed Google Analytics in the platform's back end to monitor all the traffic and obtain, periodically, reports about the site's performance. Since its launch in M4, the website has received **1,494 sessions** and **4.715 page visits coming from 963 users' visits** (analysis based on M4 – M20 reports). Regarding the source of the traffic, most of it comes directly from search engines (organic):

Source	#Sessions
Organic: Got from search engines	506
Direct: URL typed in the browser	466
Social: Got from SM channels	280
Referral: URL linked in other website	207
Email: Got from link in an e-mail	35

As for **geographical and device traffic distribution**, the **majority of visits have come from Spain** (denoting EUT's own efforts disseminating and communicating it at the Spanish level). The picture seems relevant also to show that Optogenerapy has impacted beyond EU borders. Concerning devices, most of the sessions have been established through desktop devices.

2.5.4 Maintenance and updates

Eurecat is responsible for hosting and maintaining the site. Since its release, the website has been **regularly updated with news**. **13 news have been published during the first year and a half of the project**, including news on project's meetings, partners' presence at fairs and congresses, scientific publications released, 2 articles on the project's innovation management task (03/06/2018 NEOS Surgery Applies Innovation Management Methodology for Surgical Instrument Conceptualizing / 02/05/2018 Innovation management in Optogenerapy: from training workshops to consultancy support) and 3 interviews with Optogenerapy's team:

- "Optogenerapy's printed electronics prove the potential of this technology for improving patient's quality of life" – Claudia Delgado from Eurecat's Printed Electronics research line.
- "Microinjection by ultrasounds opens new opportunities for medical devices manufacturing" – Encarna Escudero from Eurecat's Plastic Polymeric Materials unit.
- "A disruptive innovation for a novel non-invasive drug delivery" – Marc Folcher, senior scientist and lecturer at the Department of Biosystems Science and Engineering in ETH-Zurich.
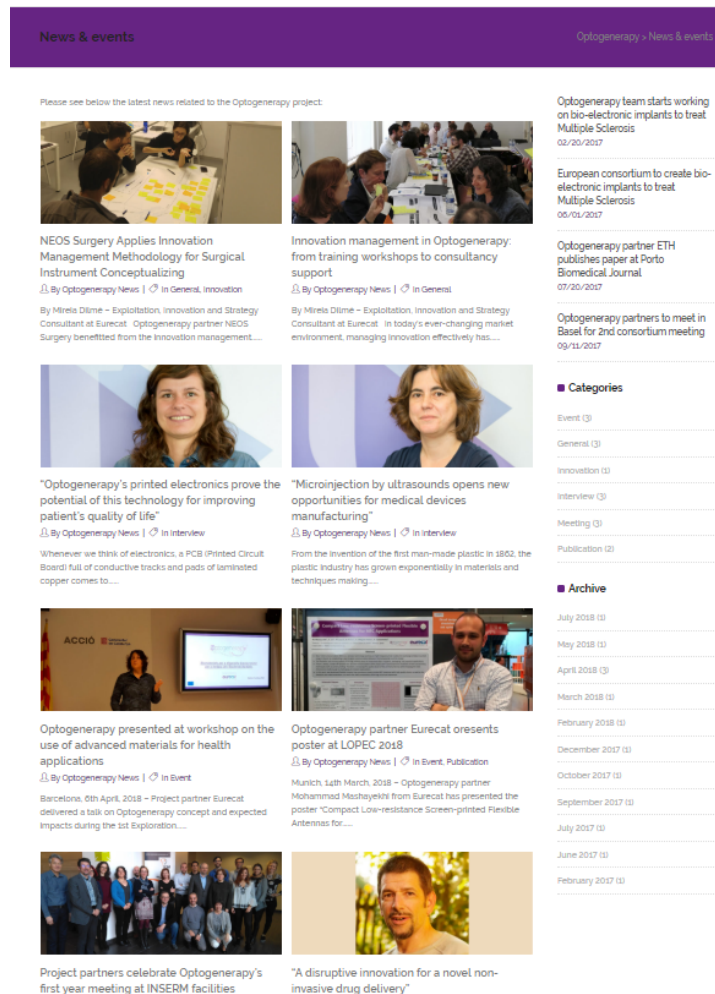
Figure 8: Screenshot of the news and events page.

2.6 Social Media

Eurecat manages Optogenerapy's Twitter account, preparing content and graphic materials to share publicly. For further communicate the project activities, partners actively publish news about the project in their corporate channels, including social media accounts in LinkedIn, Twitter and Facebook.

The typology of content published in social media includes:

- Disseminate the organization of project meetings, reviews, milestones, …
- Coverage of project partners' attendance in sectorial fairs and congress, by means of events' tags (if a).
- Content curation: news about Multiple Sclerosis, innovative biomaterials, optogenetics, active implantable medical devices, etc.

Our impact in social media channels reaches more than 335K users on LinkedIn, more than 130K on Twitter and more than 85K Facebook followers, figures that keep growing.

Partner logo	in	(twitter)		f
eurecat	2.341	@eurecat_news	11.971	569
ETH zürich	72.217	@ETH_en	15.075	48.847
Boston Scientific Delivering what's next.	214.784	@bostonsci	13.939	17504
ase Optics A Rochester Precision Optics Company	125	@AseOpticsEu	312	53
Lodz University of Technology	22.113	@p_lodz_pl	1.941	1.346
geneXplain	327	@geneXplain	319	449
Inserm Institut national de la santé et de la recherche médicale	10.001	@Insern	75.205	16.503
NEOS SURGERY	173	@neosurgery	26	-
ultrasion Innovative Ultrasonic Solutions	16	@ultrasion	675	54
Erasmus Universiteit Rotterdam	965	@iBMG_EUR	1.543	953
UNE Normalización Española	471	@NormasUne	10.416	-

Figure 9: Social media followers by partner at the beginning of the project

2.6.1 Optogenerapy Twitter

Optogenerapy counts with a Twitter account, @optogenerapy_eu. The account is managed by Eurecat with the support of project partners for the correct management of the account.

To feed the account, Eurecat works with **bimonthly content plans**. All consortium partners can propose contents (text, images, videos…) to be distributed for this channel and can spread the word through their own channels.

Content strategy was based during the first year and a half on generic tweets about the project, communicating the project latest developments, news about the project, presence of Optogenerapy at events (before and after the event) and content on Optogenerapy partner's expertise published as interviews on the website. When possible, tweets include graphical material to make them more appealing.

To increase the reach of the tweets, hashtags on the scope of the project are frequently used (#H2020 #Horizon2020 #EuInnovation #ResearchImpactEu #Optogenetics #health #MultipleSclerosis #MSlife #MSresearch #printedelectronics #Optogenerapy).

On the other hand, Optogenerapy official project account is referenced in partner's corporate accounts meaning that mentions will be followed by a RT from every partner (@eurecat_news @ETH_en @bostonsci @AseOpticsEu @p_lodz_pl @geneXplain @Insern @neonsurgery @ultrasion @iBMG_EUR @NormasUNE). In addition, when communicating on project's developments partners accounts are mentioned.

Other important accounts mentioned regularly are those from the European Commission (@EU_H2020 @EuScienceInnov @Eu_Health) in order to gain bigger impact when information about results are published, and MS patients' associations (@esclerosiseme @mssociety).

In order to increase reach on targeted audiences, **key stakeholders (about 250 key accounts identified so far) have been followed** to promote follow-back and to increase the number of Optogenerapy followers.

As a result, Optogenerapy Twitter has, at M20, **65 followers**, among them one can find neurologists, MS patients, scientific journals and specialized media.

Figure 10: Screenshot Twitter account

In sum, **76 tweets have been published from M1-M20**, achieving more of 30K impressions and 15 mentions.

2.6.2 Activity on partners' Social Media accounts

Optogenerapy official **Twitter** account has been mutually referenced in partner's corporate accounts. Additionally, partners have actively retweeted content to spread the word in their own networks. From M1-M20, **partners (EUT, ASE, UNE, GENEXPLAIN) have posted a total of 6 tweets**, which got 12 likes and 8 retweets.

Figure 11: Examples of posts published on Twitter about the project.

Regarding **LinkedIn**, partners (EUT, UNE, ASE) have published content both in their corporate and personal profiles. Partners posted news on Optogenerapy press releases, notices about events, promotional materials and other contents published on www.optogenerapy.eu or in the twitter account. A total of **5 posts have been published in partners' corporate accounts**, generating 40 likes and 2 comments.

Figure 12: Examples of posts published on LinkedIn.

A list of LinkedIn groups of interest on the topics of the project have been identified in the first months and shared among partners to be used as other communication and dissemination channels.

On **Facebook**, partners (TUL, EUT) have published 3 posts with 22 likes and 3 shares.
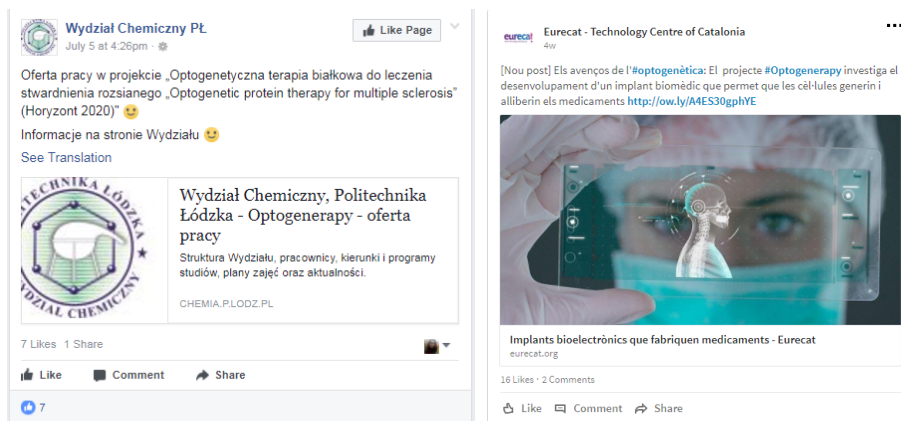
Figure 13: Examples of posts published on Facebook.

2.7 Media relations

In the framework of the project, a database with the broadcast media contacts (general and specialized) has been created.

Press releases have been written at regular intervals throughout the project with the focus on new developments and scientific advances and meetings.

From M1-M20, **2 press releases** have been written and sent to the media at a consortium level. One of them was posted in Alphagalileo, an international science news service.

- **European consortium to create bio-electronic implants to treat Multiple Sclerosis**

European consortium to create bio-electronic implants to treat Multiple Sclerosis

- Optogenerapy consortium working on optogenetic cellular therapy device which will produce active ingredients
- Researchers from seven European countries perfecting technology from the Swiss Federal Institute of Technology Zurich (ETHZ), a partner in the consortium
- Implant to improve treatment and replace regular injections for sclerosis patients, improving their quality of life

Barcelona, xx May 2017 – Researchers from eleven institutions and companies in seven different European countries have started working within the Optogenerapy consortium to develop optogenetic cellular therapy implants by means of printed electronics with biocompatible materials that will enable the administration of therapeutic protein doses for patients with multiple sclerosis, an illness that affects 2.3 million people all over the world and 700,000 in Europe.

The implant, based on technology developed at the Swiss Federal Institute of Technology in Basel, liberates the active ingredient of the medicine by means of an infrared LED light, which activates the production of therapeutic proteins by genetically modified cells present in the device.

According to Doctor Esther Hurtós, the coordinator of the consortium, "Optogenerapy will enable a more efficient and less invasive therapy for multiple sclerosis patients, who will not require the regular injections they are now subject to. It will also improve their quality of life thanks to a "more efficient therapy" and "better adherence to the medication" (the efficiency of the treatment), which is currently between 50 and 75% for cases of chronic illness.

Marc Folcher, senior scientist at ETHZ, pointed out that "Optogenerapy's optogenetic therapy will reduce the direct and indirect costs of sclerosis treatment in the medium term", and will avoid "the expenses of non-adherence to the treatment", which amounted to 255.4 million Euros in Europe as a whole in 2015.

The first phase of development of the consortium, led by the Eurecat technology centre, will last for 36 months and has eleven partners from seven different countries in Europe, including research centres, universities and specialized companies. More specifically, the participants in the project are the Swiss Federal Institute of Technology Zurich, the Lodz University of Technology in Poland, the Erasmus University of Rotterdam in the Netherlands, the National Health and Medical Research Institute of France, the global company Boston Scientific, which wishes to take the product to the market, geneXplain from Germany, and the Spanish entities Neos Surgery, Ultrasion, Twoptics Systems Design and UNE.

Optogenerapy's budget is 6.2 million Euros, of which 4.8 million are financed by the European Commission within the Horizon 2020 programme.

- **Project partners celebrate Optogenerapy's first year meeting at INSERM facilities**

Project Partners Celebrate Optogenerapy's First Year Meeting at INSERM facilities

- Optogenerapy consortium working on optogenetic cellular therapy device which will produce active ingredients
- Implant to improve treatment and replace regular injections for sclerosis patients, improving their quality of life

Paris, 23rd February, 2017 – Optogenerapy's consortium has met in Paris at INSERM facilities for the project's third meeting, marking one year after the start of the project. Optogenerapy consortium is developing optogenetic cellular therapy implants by means of printed electronics with biocompatible materials that will enable the administration of therapeutic protein doses for patients with multiple sclerosis, an illness that affects 2.3 million people all over the world and 700,000 in Europe.

During the **first year of project**, partners addressed the **design and development of the implant**, including the selection of materials and components to comply with the mechanical, optoelectronics, wireless, biocompatibility, and minimal invasiveness requirements of the new device.

According to Biotza Gutiérrez, the coordinator of the consortium, "Optogenerapy will enable a more efficient and less invasive therapy for multiple sclerosis patients, who will not require the regular injections they are now subject to. It will also improve their quality of life thanks to a more efficient therapy" and "better adherence to the medication", which is currently between 50 and 75% for cases of chronic illnesses.

Optogenerapy partners have also evaluated the compliance of the identified design parameters with the manufacturing process and fully functional 3D-printed prototypes were assembled and tested by the Swiss Federal Institute of Technology in Zurich. Protocols for in vitro biocompatibility assessments of the biomaterials and the implant have been reviewed. First steps to implant performance assessment in vivo have been done.

On the other hand, a first draft of the regulatory strategy has been created and the future development of the implantable device will be supported by Boston Scientific's Product Life Cycle Process, based on which the best design and regulatory approaches were identified.

A risk analysis is continuously being monitored, having in mind both safety and security regarding the future use of the implantable and associated external components. On another hand, a cost-effectiveness analysis is already in progress and the scope of the systematic literature review, associated with the disability and quality of life assessment, has been defined. Upon the completion of this review, the preparations for the cross-sectional survey of Multiple Sclerosis patients will start.

On the other hand, **EURECAT has produced a total of 2 country-focused press releases** coinciding with the 2017 and 2018 "World's Multiple Sclerosis Day" sent to Spanish media.

The press releases have been published in **32 Spanish print and online media outlets** accounting for a total audience of 7,123,520, which translates on an Economic Value of 43,635 € as calculated by Accesso Clipping Tool.

Figure 14: Examples of Optogenerapy's media coverage.

Implante bioelectrónico evitará inyecciones a enfermos de esclerosis múltiple

La Vanguardia (Spain)- 05/31/2017

Un implante bioelectrónico evitará inyecciones a enfermos de esclerosis múltiple

RTVE (Spain) – 05/31/2017

Unos nuevos implantes administran proteínas terapéuticas en pacientes con Esclerosis Múltiple

Infosalus (Spain) – 05/30/2018

2.8   Popularized publications

Partners have produced 3 articles and blog entries in corporate channels. These publications have been actively disseminated these through SM channels to help increase visibility on the project among a non-specialized audience.

EUT, TWO, NEOS have posted Optogenerapy's project description in their websites.

In addition, EUT has posted news about the project in their internal (delivered to +600 employees) and external (+15,000 subscribers) newsletters and in 2 entries on its blog while UNE has posted about Optogenerapy's 1 year meeting on its website.

2.9   Video

A video explaining Optogenerapy's concept, research done and benefits of the implant's use will be recorded during the last year of the project to be used in events and to be accessible via Internet after the project's end.

All promotional material will have a clear reference to EC support via the Horizon 2020 programme.

3. KPIs

The following table reviews Optogenerapy's Key Performance Indicators (KPIs) established at the beginning of the project at the Dissemination and Communication Plan, for assessing the Dissemination activities and impact. See below for the state of the KPIs at M20.

	Indicator	Means of verification	M1 – M20	Target by the end of the project
Website	Number of web visits	Google Analytics	1,494	>5,000
	Number Pages Viewed		4,715	>15,000
	Page / session		3,16	>3.0
	Number users		963	>2,000
	Avg. session time		1:24 min	>1.00 min
Media	Number press releases written	Proof of publication and reporting in the dissemination reports	3	>5
	Number of articles, sector press with project acknowledgements		32	>50
Video	Production of audiovisual material	Video uploaded at YouTube	-	1 video produced
Social Media (Twitter)	Number Followers	Twitter Analytics	64	>150
	Number Tweets		76	>150
	Twitter Impressions		32.267	>35.000
	Number mentions		15	>25
Social Media (Mentions in partners accounts)	Number of posts	Monthly follow up (quantitative)	14	>20
	Number of Likes		76	>100
	Number Shares / Retweets		12	>20