



Midterm Communication Report Deliverable 6.3

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Executive summary

The ORION project focuses on triggering **evidence-based institutional, cultural and behavioural changes** in Research Funding and Performing Organisations (RFPOs), targeting researchers, management staff and high-level leadership. The project is exploring ways in which research and funding organisations in life sciences and biomedicine can open up the way they fund, organise and do research. The long-term vision is to “**embed**” **Open Science and Responsible Research and Innovation (RRI)** principles (ethics, gender, governance, open access, public engagement, and science education) in RFPOs, in their policies, practices and processes to organise and do research. The main objectives are:

- **Assess:** gather information and understand current views, knowledge and practice about Open Science and RRI among targeted stakeholder groups.
- **Co-create:** co-design and perform “open experiments” with multiple stakeholders.
- **Train:** design, deliver and disseminate innovative training programmes on Open Science and RRI, particularly targeting researchers at early career stages, policy-makers and staff at funding organisations.
- **Embed:** embed “lessons learnt” during the project lifetime to induce institutional and culture changes at RFPOs.
- **Outreach:** engage different RFPOs and other stakeholders to disseminate projects activities and key outcomes.

The outreach and dissemination Work Package, WP6, led by VA (Public & Science) is responsible for the overall communication of the ORION project and all partners support and contribute to the communication activities of the project. WP6 sets the framework for project communication through the Dissemination and Communication Plan, by giving communication support to the other WPs, by communicating and disseminating project information through different channels and by promoting the project objectives and activities to relevant stakeholders including policy makers.

WP6 supports Work Package leaders and project partners in reaching the project objectives and enhancing the visibility of the project among the following stakeholders; business and industry, the research community, educational community, policy makers and civil society organisations. This is done through a variety of communication channels, such as: website, newsletter, social media and podcasts.

This midterm communication report covers communication and dissemination activities and the WP6 tasks conducted from the start of the project on May 1, 2017 until 31 March 2019.



Objectives and tasks of WP6

The overarching goals of WP6 are to raise awareness and communicate about project objectives, activities and results among stakeholders, to support project partners in their communication activities and to create opportunities for the stakeholders to contribute to the project. This is achieved by using a wide range of communication channels, including; the project website, partners' websites, project newsletter, social media, conferences, workshops, presentations as well as articles and podcasts. Dissemination and communications activities have been designed and planned to target the key audiences and stakeholders and to maximise awareness of ORION's objectives and results.

The WP6 tasks include:

- *Task 6.1 Dissemination and communication plan (M1-42)*
- *Task 6.2 ORION project website and institutional (partner) and Open Science webpages (M1-48)*
- *Task 6.3 ORION social media platform and other communication channels (M1-48)*
- *Task 6.4 Reviews, reports, white paper and roadmaps (M12-48)*
- *Task 6.5 Institutional changes via Open Science Action Plans (M36-48)*
- *Task 6.6 Final international workshops (M36-48)*

Communication and dissemination tasks and tools

Task 6.1 Dissemination and communication plan (D6.1)

VA has developed an extensive communication and dissemination plan (Deliverable 6.1) that provides the framework for communicating, disseminating and embedding the knowledge generated during the four-year ORION project. The plan outlines the communication and dissemination strategy for the ORION project as well as an Action Plan containing detailed actions and timescales for external and internal communication, digital and written media. Specific dissemination plans are designed for larger outreach events, conferences and trainings.

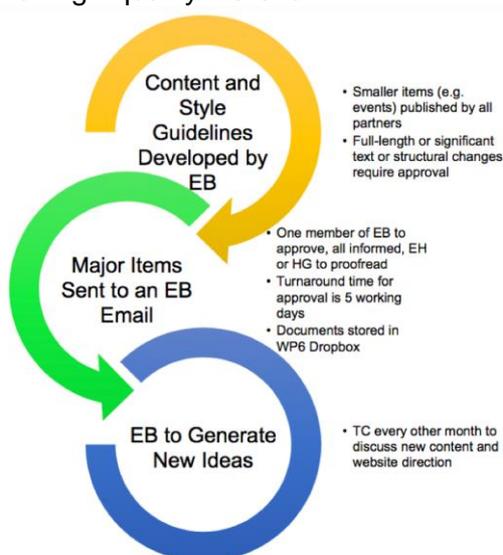
The WP6 leader is responsible for developing and maintaining the plan and coordinates regular revisions of the document. All partners have had the possibility and are encouraged to review and contribute to this document. The first revision of the plan was made in May 2018 and includes new sections on methodology, information on new communication channels, key messages and the editorial board. As suggested by the Expert Advisory Board at the consortium meeting in Bologna in April 2018, a set of key communication messages targeting different target groups as well as project pitches have been elaborated by the partners and added to the plan. The communication and dissemination plan is a living document and is being updated as the project evolves.

All partners are encouraged to engage in dialogues with different stakeholders through the organisation and attendance of workshops, events and courses, as well as through the organisation of ORION activities in all the different WPs (especially WP2, WP3 and WP4).



Project Editorial Board

An Editorial Board has been set up within the project to facilitate and decentralise the online communication of the project (figure 1). The Editorial Board consists of representatives of the Coordinator CRG, WP6 leader VA and WP leaders of WP3 (BI) and WP4 (MDC). The editorial board is responsible for the overall structure of the website, its content and all the major articles written and published in the name of the project. To support dialogue via social media channels and engage with target audiences, each project partner has been encouraged and invited to tweet and post items on Facebook in the name of the project. The Editorial Board is working well and ensures a regular flow of high-quality material.



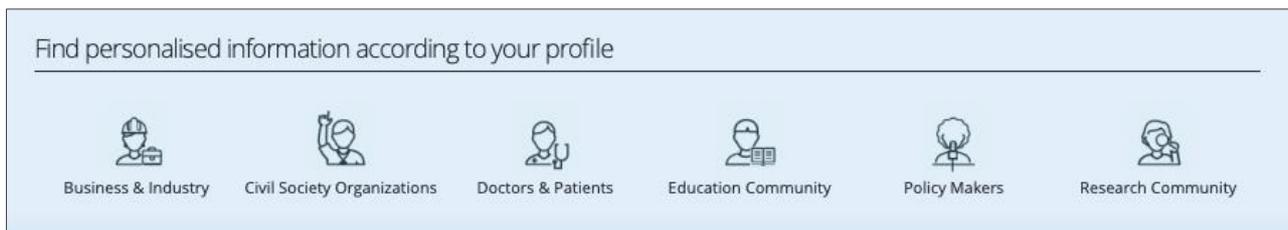
Picture of the workflow of the Editorial Board.

Task 6.2. ORION project website and institutional Open Science web pages

The project website <http://www.orion-openscience.eu/> is the communication node for the project where all project related information, publications, training materials, events information and deliverables can be found. VA is main partner responsible for the updates but all of the Editorial Board members (CRG, MDC, BI and VA) have editing rights on the website. By sharing responsibilities, the website is very much up-to-date content wise and between 1-2 news items are published every month. CRG hosts the website and will continue to host it beyond the life of the project so that all resources will remain accessible.

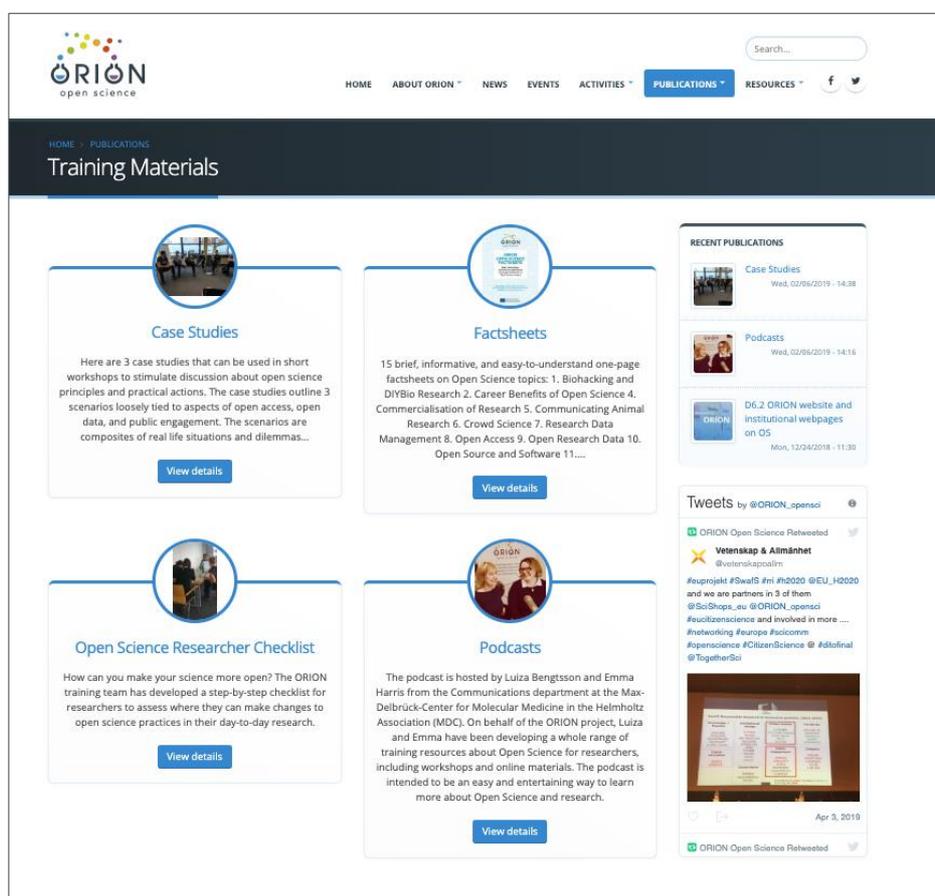
The website has been developed by CRG, VA and the company Scienseed, with a modern and interactive user experience in mind. Specific effort was made to ensure an easy-to-read design that is responsive and has a high contrast in colour (background and text) in order to enhance the user experience and work across different devices. To facilitate the search for relevant content and information for specific users, a stakeholder banner was built in which helps users to be redirected to relevant content depending on which stakeholder group they belong to.





Screenshot of the stakeholder banner

New features are regularly added to support the project development. The latest sections are; a web page for the ORION Newsletter and subscription information, and a section for the training materials produced by WP4 including case studies, factsheets, checklist and podcasts, which is located under the publications' menu.

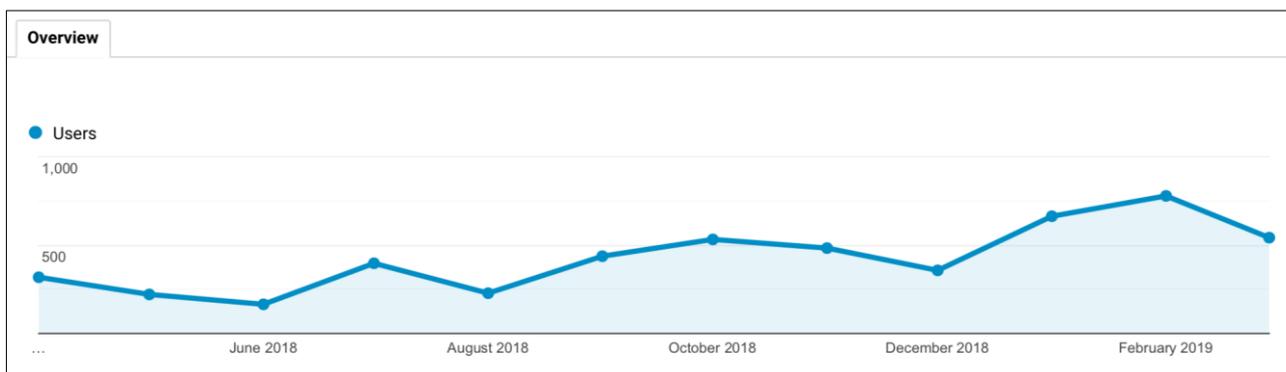


Screenshot of the new Training Materials webpage

Web statistics can give us more information about the audience, and their behaviour i.e. who is visiting the website, how long do they stay, demographics, most popular pages, gender, how they arrive at the website, the number of new visitors and much more.

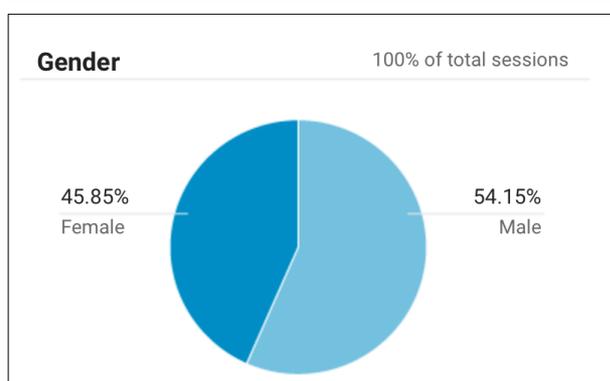
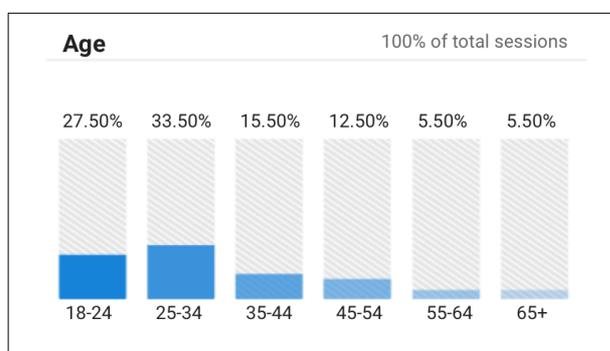


In terms of usage, the latest statistics from Google Analytics shows us that over the previous 12-month period (April 1, 2018 – March 31, 2019), the ORION project website has had 20,000 page views by more than 4500 different users. The majority of users are from the ORION partnering countries, as well as from the US, Belgium, Netherlands and France. The number of users has grown steadily during the reporting period and reached a peak in February with close to 800. Peaks in user behaviours can partly be explained by the dissemination of the ORION newsletter which is sent out in July, October, December and January. The newsletter content links directly to the ORION website.



Number of page views of the ORION website the past six months, Aug 1, 2018 – March 31, 2019

A larger part of visitors, 85% are new visitors to the website and only 15% are returning visitors. This low percentage of returning visitors can be explained that the project and its activities are still in a built-up face and attracts a new audience. The visitors equally represent both sexes, 46% female and 54% male and most visitors are between the age of 18-34. The majority of users are from the ORION partner countries, as well as from the US, Belgium, Netherlands and France.



Age and gender of website visitors

Country	Users
	4,533 % of Total: 100.00% (4,533)
1. Spain	717 (15.63%)
2. Germany	609 (13.27%)
3. United States	506 (11.03%)
4. United Kingdom	434 (9.46%)
5. Czechia	293 (6.39%)
6. Italy	157 (3.42%)
7. Sweden	151 (3.29%)
8. Netherlands	134 (2.92%)
9. Belgium	133 (2.90%)
10. France	125 (2.72%)

Country of origin of website visitors



Half of the users find the ORION website by searching on the internet, 30% via direct links to webpages (one source is the ORION newsletter) and a third find the website via social media Facebook and Twitter.

Institutional Open Science web pages

To further communicate about the project, each participating partner has agreed to create a dedicated webpage to Open Science and RRI on their institutional website. Links to these pages can be found below:

- Babraham Institute: <https://www.babraham.ac.uk/about-us/impact/public/special-projects>
- Centre for Genomic Regulation, CRG: <http://www.crg.eu/content/about-us-international-scientific-affairs/open-science>
- CEITEC: <https://www.ceitec.eu/ceitec-to-help-research-open-up-to-society-in-new-eu-project/t3124>; <http://openscience.ceitec.cz>
- CRECIM: <https://crecim.cat/en/open-responsible-research-and-innovation-to-further-outstanding-knowledge-orion/>
- JCMM: http://www.icmm.cz/projekt/orion_en
- MDC: <https://www.mdc-berlin.de/orion-open-science>
- VA: <https://v-a.se/paverkan-och-utvecklingsarbete/orion-open-science/>

A specific website has also been designed, developed and published by CRG to communicate the ORION Citizen Science Project Genigma: <https://genigma.app/?lang=en> The project, managed by CNAG-CRG and financed by ORION, will develop an app to discover the genomic alterations in cancer cells.

Task 6.3. ORION social media platform and other communication channels

A variety of communication channels have been set up to reach and tailor messages to the different stakeholder groups. The reason for using several different communication channels is to offer the stakeholders interested in the project or in Open Science a choice of channels through which they can receive information about the project. VA is responsible for ensuring regular social media postings although all partners are encouraged to post and share information too.

The ORION Social media accounts e.g: Twitter, Facebook and LinkedIn are used to reach out, create dialogue and to interact with the community of people interested in the ORION project as well as Open Science and RRI issues. The aim is also to showcase and communicate the activities and the results of the project more broadly to the target audiences. Posts in social media always include relevant links to try to direct the audience to the ORION website and to communicate current project news. In addition to ORION's own posts and tweets in social media, the project follows other accounts of interest and posts and shares interesting and related content from other stakeholders and networks relating to open science.

The content of posts in the different social media accounts is more or less the same with the exception of Twitter where messages cannot be larger than 280 characters. The Facebook account is used more for publishing and promoting ORION events. All posts contain # hashtags for words related to the project e.g. #lifesciences #opensciences and social media handles i.e. @ and the organisation's name, are used to highlight relevant people or organisations e.g. @EU_2020



(European Commission’s official Horizon 2020 Twitter account). All social media accounts are managed and monitored on a daily basis by the WP6 leader.

The Social Media accounts have their own analytics to assist users in tracking their impact and mostly, their reach. We have drawn from the standard analytics data available on these media to delve further into understanding our presence and progress. However, in order to properly measure ORION’s impact and engagement in digital media a specific engagement tool – Meltwater, has been used.

Twitter - @ORION_opensci

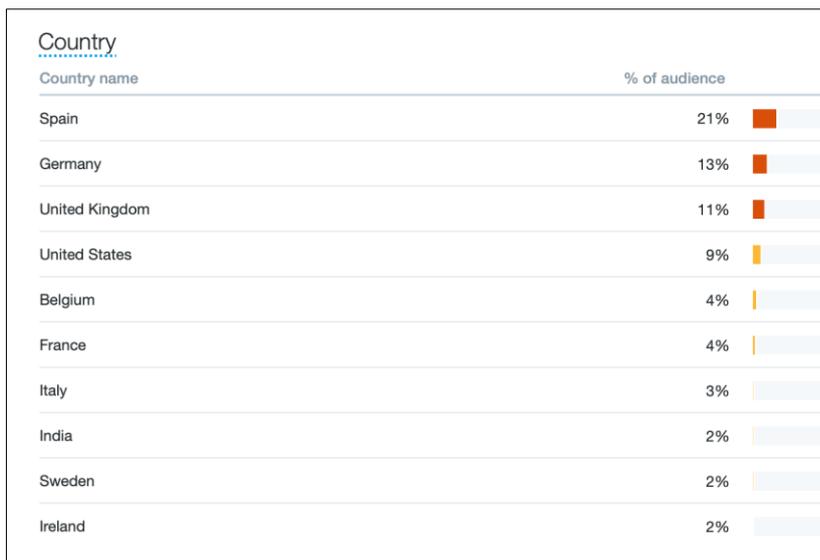
Twitter is the channel that has had the largest impact so far and is used for daily news postings about the project and its activities. The ORION Twitter account has, apart from the website, been the primary digital communication channel. The number of followers has nearly doubled during the last year and at the end of March 2019 the number of followers was 984 persons. The number of followers is still increasing steadily with approximately 30 new followers each month. Nearly all posts published on the ORION twitter account contains a link to the project website which consequently drives the traffic to the website.



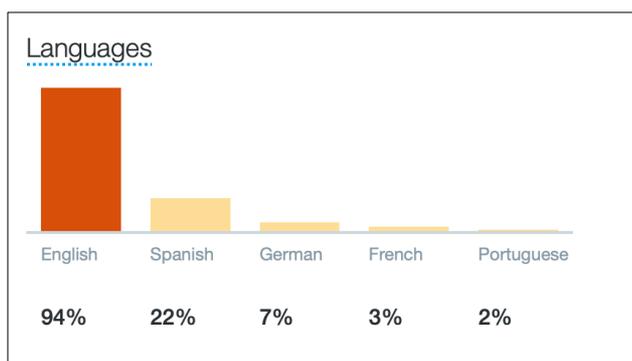
Screenshot of the ORION twitter account

Most ORION followers are based in Spain, followed by Germany and the UK, as shown in the graph below. Country of origin here means where the computer hub on which the users’ twitter account is registered. 66% of the followers are women and the language used is mainly English.

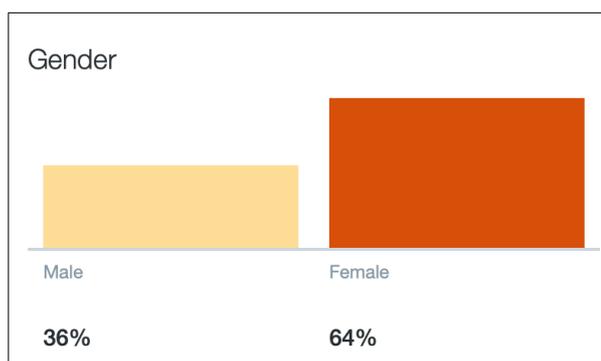




Orion Twitter followers by country of "origin".



Language used in tweets about ORION



Gender of users twittering about ORION

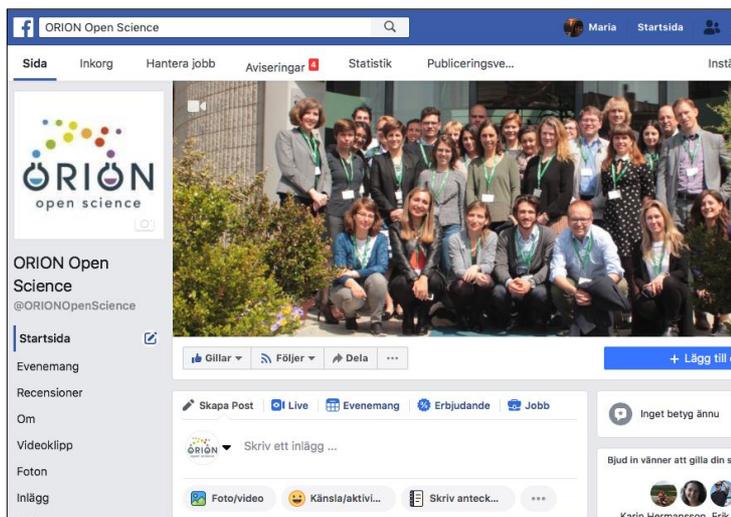
The five most influential top posters i.e. followers that have the largest social reach by volume and that have tweeted and mentioned @ORION_opensci during the first two years of the project are

1. The Royal Society, UK, @royalsociety – 200,000 followers
2. Art Suriyawongkul, Adjunct lecturer, Bangkok, Thailand @bact – 168,000 followers.
3. Helmholtz @helmholtz_de – 77,000 followers
4. Open Science Federation, USA, @openscience – 60,000 followers
5. Manuel Guerrero Antequera, Uppsala University, @manuel_guerrero – 43,000 followers.

Facebook - @ORIONOpenScience

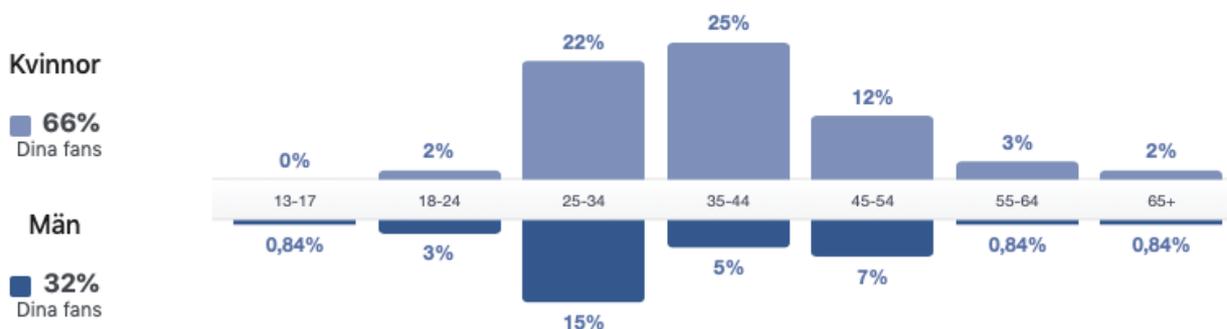
Interest in the ORION Facebook account was a bit slow at start of the project but has gained a larger audience during the last twelve months. Facebook is mostly used for promoting project events, as it contains a very good events tool, but also for dissemination of project news and results. By the end of March 2019, the account had 128 followers and has doubled the number of followers since October 2018.





Screenshot of the ORION Facebook account

The ORION Facebook followers are mostly women (66%) and in the age between 25-44 years. Male facebook followers are between 25-34 years. Most followers come from Sweden, Germany, Spain and the UK.



Gender and age of ORION Facebook followers (Kvinnor/Female and Män/Male)

LinkedIn - @ORIONOpenScience

In order to diversify the channels through which the project is communicated, to reach new target groups and to offer more ways of obtaining information about ORION, a LinkedIn account was set up during autumn 2018. As LinkedIn has more users within the business and research community, it is hoped that this channel may be a good way to make new stakeholders aware of the project. The published posts are similar to the ones published on Facebook and highlight project activities, policies and events. The information links back to the ORION website, hence, driving traffic to this source. However, the account has not yet developed at the expected rate and on 31 March had 31 followers.





Screen shot of the ORION Linked in account

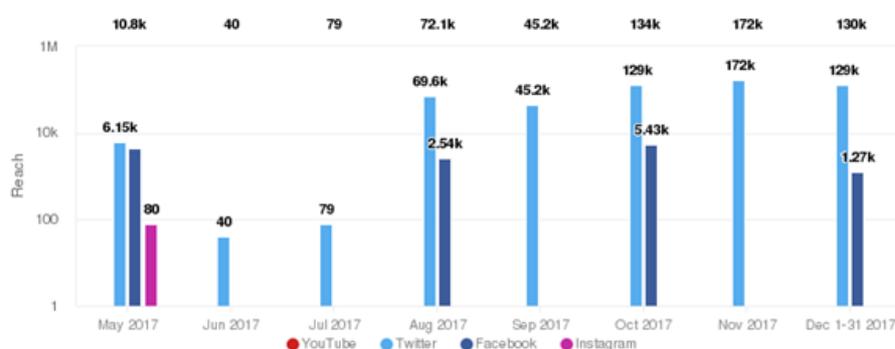
Social media statistics

Postings in social media about the project is not solely restricted to Europe even though the number of tweets is higher in the EU. News about the project is also picked up and retweeted around the globe. The statistics below clearly show that information about ORION project activities is reaching more and more people around the world.

By monitoring audience behaviour, i.e. how much the ORION Open Science project is mentioned in social media by all our followers, we can gain an understanding of who and how many people are potentially reached with information about the project, which country they are from, which languages are primarily used and the division between men and women. Potential or social reach is the total number of people that we are able to reach through followers across all social media channels.

The figures below show the potential social reach, i.e. the number of persons the project might reach via Twitter and Facebook. The number of new Twitter users augmented fast during the first 12 months of the project. Whereas the statistics for the last six months show a slight slowing down, there is more steady development in social reach for both Twitter and Facebook.

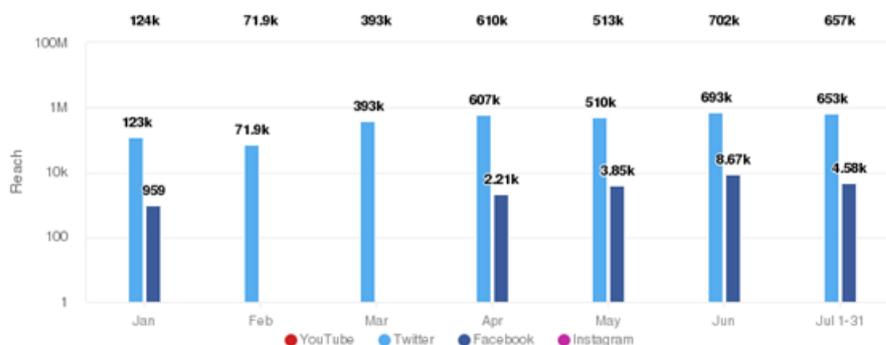
Social reach



Social media reach, Twitter and Facebook, May 1, 2017 – Dec 31, 2017

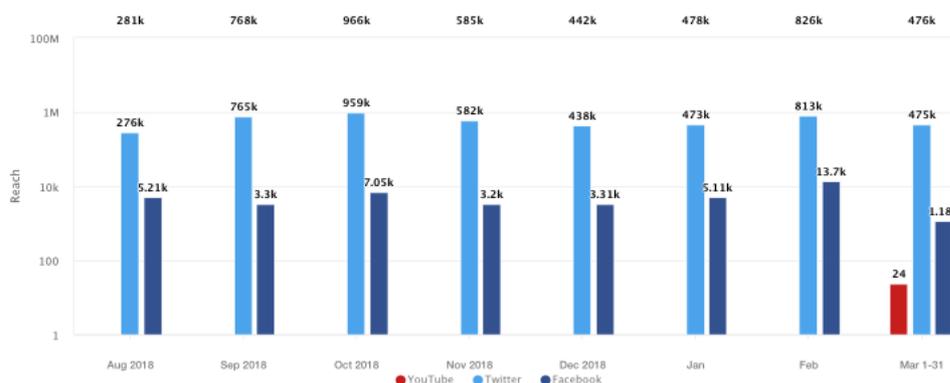


Social reach



Social media reach, Twitter and Facebook, May 1, 2018 – Dec 31, 2018

Aug 1, 2018 - Mar 31, 2019



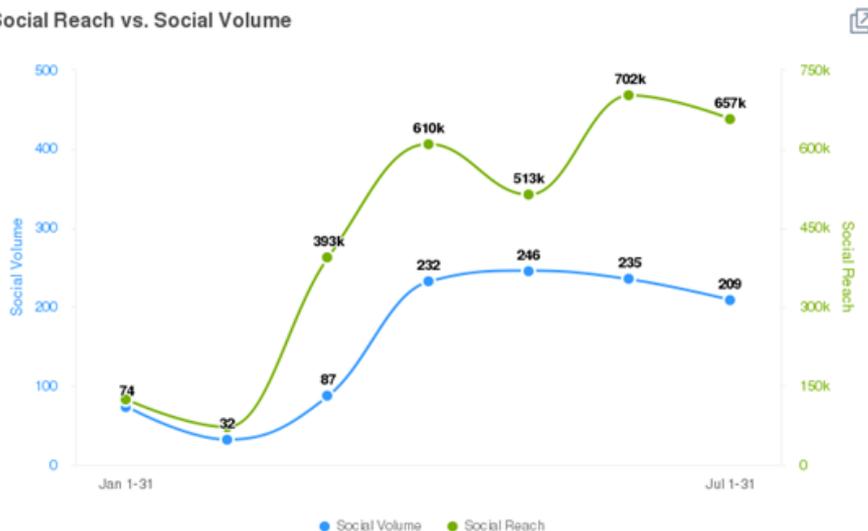
Social media reach, Twitter and Facebook, Aug 1, 2018 – March 31, 2019

The graph below shows the number of *engagements* with users; tweets, retweets, likes and mentions (blue line), in comparison with the *social reach*, i.e. the number of persons that could potentially be reached (green line) during the first six months of 2018. It shows a steady growth of social reach and that there is also a steady increase in interaction with the audience.

When comparing figures from the last six months of the project (1 Aug 2018 – 31 March 2019), the two lines have moved closer together, which implies that there is more interaction with followers for each tweet. The peaks in the graphs mainly occur during the week prior and after the ORION Newsletter is disseminated. Promotion about the newsletter is also done via the different social media channels. The audience is getting larger which implies that we have more social reach (audience interaction) for every post where the @ORION_opensci (Twitter) and ORIONOpenscience (Facebook) handles are mentioned.

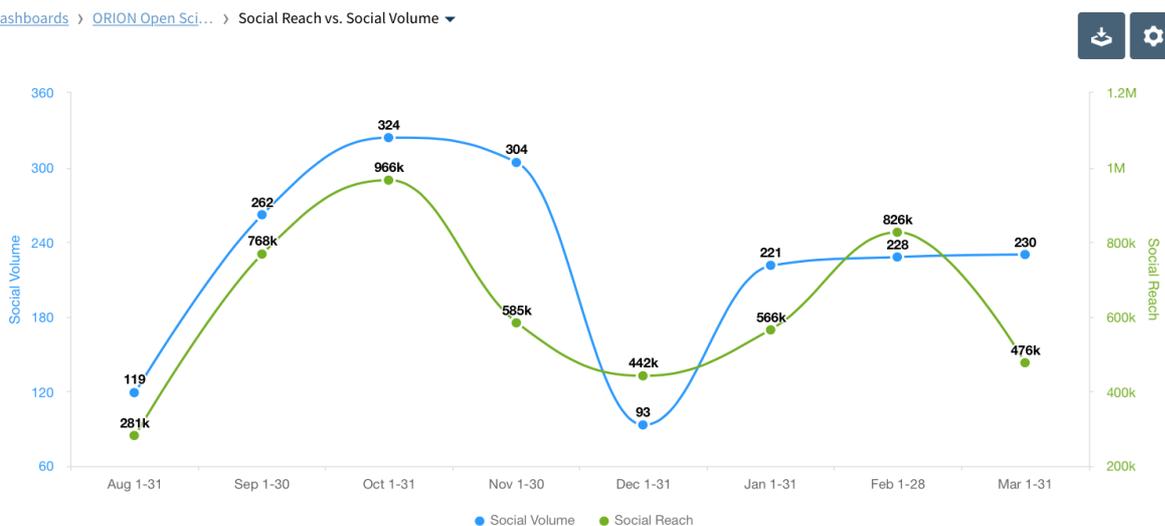


Social Reach vs. Social Volume



Social media volume vs social reach Jan 1, 2018 – July 31, 2018

Dashboards > ORION Open Sci... > Social Reach vs. Social Volume



Social media volume vs social reach Aug 1, 2018 – March 31, 2019

As seen in the statistics for the website, ORION’s communication and dissemination activities reach Open Science stakeholders across the globe. The graphs below show the worldwide spread and interactions with the ORION Open Science social media accounts during the last six months, i.e. 1 Aug 2018 – 31 March 2019. Spain and Germany are in the lead followed by the UK, Sweden, the US, Canada, India and Brazil. However, it should be noted that the map does not show the physical position of the user/follower but the location of the computer hub where the social media account is registered.



Flash (Dec 2018 and March 2019) were disseminated during the first year of the project to all partners.

During the second year, an external digital Newsletter has been designed and the first issue was disseminated in late June 2018 targeting all types of project stakeholders. The newsletter was sent out prior to ESOF 2018 in Toulouse to particularly highlight the project's activities at the conference. The Newsletter contains news and new project findings, past and future project activities as well as individual presentations of ORION team members. VA is responsible for design, content and dissemination of the newsletter but all partners are encouraged to contribute.

The newsletter contains links to ORION articles published on the ORION website, information about forthcoming activities, a brief description of past events plus a "Meet the Team" section. In this part a member of the ORION Project Management Board is interviewed on his/her opinion on Open Science. This interview is also published and available on the ORION website. By linking all material to the website, we increase the number of visitors to the ORION platform.

The newsletter is issued four times per year and is also available via the "News section" on the ORION [website](#). The number of subscribers after the first newsletter amounted to 50 persons. A more extensive dissemination campaign in social media and through partners' newsletters was done prior to the second issue in October 2018. The number of subscribers on 31 March 2019 had more than doubled and now amounts to 114.

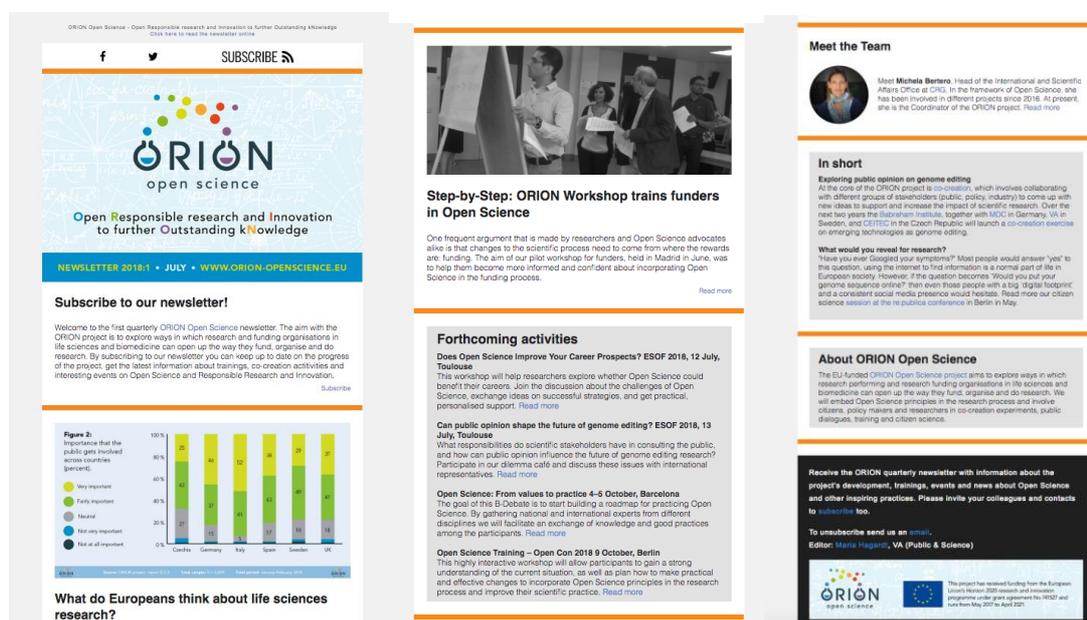


Figure 2: Importance that the public gets involved across countries (percent).

Country	Very important	Fairly important	Neutral	Not very important	Not at all important
Spain	25	45	20	10	0
Sweden	15	45	30	10	0
Germany	15	45	30	10	0
Italy	15	45	30	10	0
Spain	15	45	30	10	0
Sweden	15	45	30	10	0
UK	15	45	30	10	0

First issue of the ORION Newsletter – July 2018

Articles, press releases and blogs

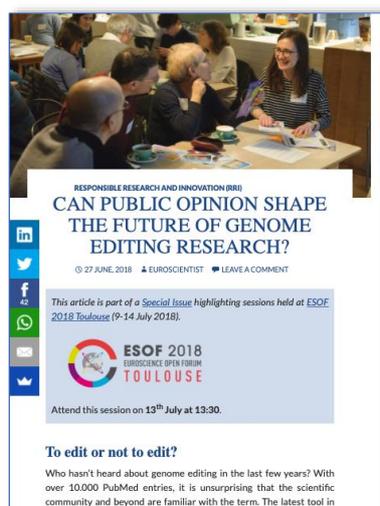
Another way of communicating project activities is through articles, press releases and editorial blogs. However, in today's diversified communication and media landscape this should always be done in combination with other communication channels. Press releases were sent out at the start of the ORION project to European and international media houses. It was also published on each of



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the partners' websites and in several organisations' newsletters. A number of articles and blogs on project activities have been written and published in on-line magazines and websites during the first two years of the project.

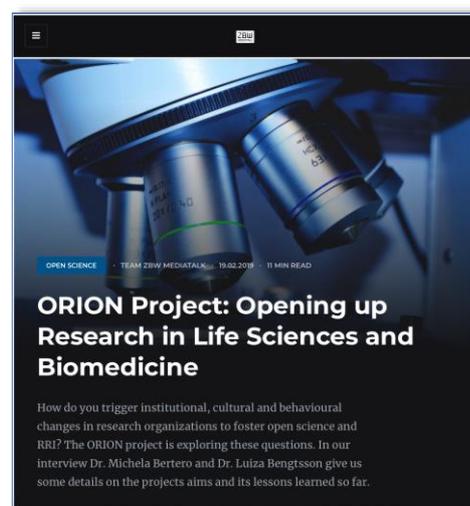
Externally written and published editorial texts and blogs are also communicated and disseminated via the ORION website, the social media channels and the newsletter. All partners are encouraged to communicate with the media and the WP6 leader together with the editorial team supports and suggests ideas and items for articles and blogs. Several news articles have also been published on partners' websites in local languages and in other digital media. From the start of the project up until 31 March, 30 articles and blogs have been published about the project (Annexe 3).



EuroScientist, June 27 2018



PLASMA Art & Science Magazine, Oct 19 2018

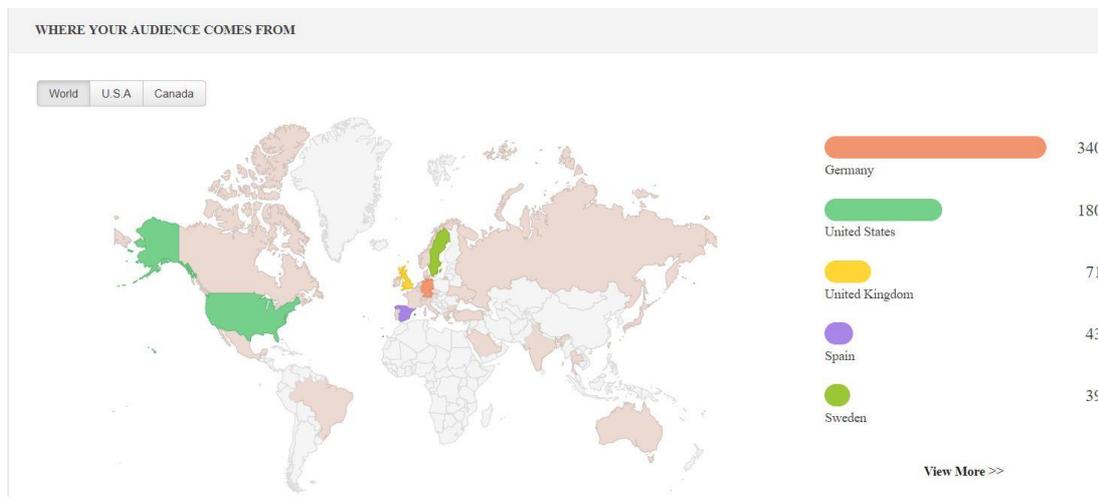


ZBW Mediatalk Blog on Open Science, Feb 19 2019

Podcasts

The ORION Open Science podcast was developed by the WP4 leader Max-Delbrück-Center for Molecular Medicine in the Helmholtz Association (MDC) and launched at the end of January 2019. The podcast is structured around a series of interviews with interesting guests about a variety of topics related to Open Science. The aim with the podcast is to be an easy and entertaining way for researchers to learn more about Open Science. From data sharing to citizen science and from peer review to professional development the podcasts include interviews with a variety of guests to explore the good, the bad, and the ugly of the current scientific system, and what Open Science practices can do to improve the way we do science. Until March 31 the number of podcast downloads: 936. These downloads were spread out across the world, some can be seen on the map below, but others came from Japan, India, and Canada.





Podcast audience worldwide January-March 2019

Outreach activities

One of the key objectives of the ORION project is to engage with different research performing organisations, policy makers, business representatives and the general public to disseminate project activities and key outcomes. One way of fulfilling this objective is to actively take part as speakers and give talks in conferences, events, science festivals and to organise own outreach events. In total, project partners have participated in, co-organised and presented the ORION project at close to 70 conferences and has held more than 20 training workshops in open science and science communication including public engagement across Europe and beyond. All events are announced at the Events section on the ORION website. Some examples of these international conferences and workshops are:

- [Engage Conference December 6-7, 2017](#) (Cambridge, United Kingdom) workshop
- [2nd HEIRRI Conference, April 27, 2018](#) (Vienna, Austria) talks
- [Re:Publica May 2-4, 2018](#) (Berlin, Germany) presentation
- [2018 Living Knowledge Conference May 30 – June 1, 2018](#) (Vienna, Austria) training session
- [European Citizen Science Association June 5, 2018](#) (Geneva, Switzerland) information session
- [ESOF 2018, July 12-13, 2018](#) (France) dilemma café
- [B-Debate Open Science, October 4-5, 2018](#) (Barcelona, Spain) national conference
- [11th Forum Wissenschaftskommunikation 2018, October 8](#) (Bonn, Germany) presentation



Cambridge Science Festival 2017



Re:Publica 2018 Berlin



ESOF 2018 Toulouse



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Outreach materials to enhance visibility

To further promote, inform, communicate and highlight the project at conferences, workshops and outreach activities, the WP6 leader has designed and produced a set of visual communication and dissemination material including:

- Flyers and leaflets - handouts for Events, Visits, Presentations (to inform)
- Rollup banners (different languages) – for use at events (awareness)
- Poster: key info about the project – for use at events (awareness)
- Promotional material as badges, key rings and stickers

Moreover, the WP4 (Training) and WP3 (Co-creation) have developed, in collaboration with WP6, a set of information material such as factsheets, an Open science checklist, and co-creation menu, which are being used at conferences, workshops and outreach events to inform about open science and the project. All materials are available on the project platform to use and be reproduced by the ORION project [partners](#).



A selection of ORION communication and promotional materials





ORION Roll-up banner



ORION Project Poster

Task 6.4 Reviews, reports, white paper and roadmaps

To date, no scientific papers have been published yet.

Task 6.5 Institutional changes via Open Science Action Plans

This task is planned for the final period of the project (M36-M48).

Task 6.6. Final international workshops (M36-38)

The final international workshops will take place at the end of the project (M36-48). Planning of the workshops will start during year three at the Annual Consortium in Brno in May 2019.

Impact assessment

The open communication approach of the ORION project whereby all partners are encouraged to communicate, are included in and actively taking part in communication activities has resulted in extensive communication activity in digital media, a good number of visitors to the website, and participation in a large number of conferences and workshops. This is also reflected in the statistics of the different communication channels.

WP6 is contributing to the overall project impact by; setting the framework for project communication through the Dissemination and Communication Plan, by giving communication support to the other WPs, promoting the project to the different stakeholders, by communicating and disseminating project information through different channels; website, written and social media, presentations and newsletters and by thus reaching a multitude of stakeholders.

