

# GENE-SWitCH

The regulatory GENome of SWine and CHicken: functional annotation during development

## Deliverable D6.1 Outreach, Dissemination, and Training Plan (ODTP)

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## Revision History

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v1	7 January 2020	Cagla Kaya Duru Eroglu Marlene Sciarretta Riccardo Carelli	This is the first version created for ODTP.
V1.1	17 July 2020	Cagla Kaya	Revision requested from the EC on Figure 5 Update of project logo
V2	18 January 2021	Cagla Kaya	Update of ODTP according to recent developments and possible opportunities
V3	22 June 2021 -19 July 2021 submitted 3 August 2021 (M26)	Cagla Kaya	Update of stakeholder mapping, update of profile raising events and dissemination events tables, addition of impact evaluation

### Summary of update M18:

The ODTP's first update consists of a broader view on evaluation strategy as well updated stakeholder engagement, communication and dissemination tools. During the first period, some of the planned physical activities were delayed or cancelled due to Covid-19 crisis and restrictions. Therefore, a need for a new plan for possible profile raising and dissemination events has arisen.

A plan for the second year of the project has been added in order to be able to meet the DoA objectives. EuroFAANG, an initiative for joint research and dissemination of three sister projects, AQUA-FAANG, BovReg and GENE-SWitCH has been added as it is an important part of the first reporting period communication efforts. The upcoming events where GENE-SWitCH and EuroFAANG possibly could participate have been added.

The need for a solid evaluation strategy is needed to understand which actions have higher impact on the communication and dissemination efforts. Based on the Toolkit provided by the European Commission on evaluation of communication activities, a basic strategy has been designed and started to be implemented. In addition, the evaluation of RP1 activities has been added in order to reassess the future planned activities.



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## About the GENE-SWitCH project

GENE-SWitCH aims to deliver new underpinning knowledge on the functional genomes of two main monogastric farm species (pig and chicken) and to enable immediate translation to the pig and poultry sectors.

The activation status of functional genome sequences varies across time and space, and in response to environmental perturbations. In full coordination and synergy with global effort and ongoing projects of the Functional Annotation of ANimal Genomes (FAANG) community, we work to characterize the dynamics (“switches”) of the functional genome from embryo (chicken) and foetus (pig) to adult life by targeting a panel of tissues relevant to sustainable production. New expression QTL data in pigs and existing high-resolution QTL data in chicken will be used for developing innovative genomic predictive models that integrate functional annotations, and these models will be validated in commercial pig and poultry populations. In addition, nutritional epigenetic data will allow evaluation of the influence of maternal diet on the epigenome of the pig foetus and whether such effects persist until post-weaning. The open shared datasets being produced will conform fully with FAANG standards and add valuable knowledge on genetic and epigenetic variation of functional elements to FAANG.

A comprehensive plan of dissemination and outreach activities to a large audience of stakeholders is being implemented.

The GENE-SWitCH consortium brings together partners representing pan-European excellence (including the academic institutions which pioneered FAANG) and world-leading animal breeding and biotech industry in a true co-creation effort.

Overall, GENE-SWitCH will contribute to the global FAANG effort considerably, demonstrate how functional annotation of genomes can foster the advancement of genomic selection for immediate benefit to the breeding industry, and produce cutting-edge research paving the way to new studies and strategies for sustainable productions.



## Project consortium

Part. N°	Participant organisation name (acronym)	Country
1	Institut National de Recherche pour l'Agriculture, l'Alimentation et l'Environnement (INRAE) **	France
2	INRAE Transfert (IT) ****	France
3	The University of Edinburgh (UEDIN)*	United Kingdom
4	Wageningen University (WU)*	The Netherlands
5	European Molecular Biology Laboratory (EMBL)**	Germany
6	Uppsala Universitet (UU)*	Sweden
7	Diagenode (DIAGEN)***	Belgium
8	European Forum of Farm Animal Breeders (EFFAB) ****	The Netherlands
9	Federazione Europea Di Zootecnica (EAAP)****	Italy
10	Hendrix Genetics Research, Technology & Services BV (HG)***	The Netherlands
11	Institut De Recerca I Tecnologia Agroalimentaries (IRTA)**	Spain

\* Universities/veterinary schools

\*\* Research institutes

\*\*\* SMEs - Industry

\*\*\*\* Knowledge transfer and innovation organisations



# 1 Summary

One of the main objectives of GENE-SWitCH is defined as “*enabling the use of produced knowledge to further improve the effectiveness of genomic selection in the pig and poultry sectors*”. Therefore, the main purpose of this Outreach, Dissemination and Training Plan (ODTP) is to engage and inform the stakeholders throughout the animal production chain, from breeders to consumers, enabling an increased understanding of the value of genetic information with development of targeted strategies and communication materials to ensure knowledge exchange and two-way communications.

Since GENE-SWitCH follows a multi-actor approach, it has strong connections with the actors in the pig and poultry production systems. Thus, it requires a detailed and targeted outreach and dissemination strategy to be developed at the onset of the project. Main targets and end-users of GENE-SWitCH tools, outputs and new knowledge are all the actors involved in the pig and poultry sectors including breeding companies, breeders, technicians, farmers and farmers’ organisations, consumers, policy makers and the scientific community. Therefore, an ODTP is designed to properly focus the dissemination strategy. Indeed, optimized and quick utilisation of project outputs by all stakeholders requires an efficient strategy to disseminate GENE-SWitCH information in relevant formats and through specific dissemination channels suitable for each stakeholder group.

The ODTP is detailing the potential users, the communication and dissemination strategy, the potential use and the impacted area for each main result. The context of D6.1 is built on the description given in the Description of Action (DoA) of the Grant Agreement. Therefore, the ODTP focuses on *communication, dissemination and training activities* ensuring the aimed impacts will be achieved. This plan has a dynamic character which will follow the project progress, update as project evolves and guide GENE-SWitCH partners so that the project impact could be maximised.

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## 1.1 Objectives

WP6 – “Outreach, dissemination and training plan” will operate in synergy with WP3 – “*FAANG data coordination, standardisation and integration*” to ensure broad dissemination and communication and facilitate uptake of the GENE-SWitCH outcomes. Dissemination and outreach activities ensure that new knowledge and models are transferred to the breeding industry and other stakeholders.

## 1.2 Method

The ODTP is built to benefit from the communication and outreach measures already established by the FAANG initiative, by the COST Action FAANG Europe (CA15112) that was active until April 2020, and by the Animal Epigenome Database and Data Coordination Centre-DCC (funded by the BBSRC, until November 2020). In WP3, GENE-SWitCH contributes to the further development and consolidation of the DCC (Deliverable D3.1 GENE-SWitCH Data Management Plan) and to the implementation of clustering activities with other H2020 SFS30 projects (Milestone MS26: European node of the FAANG DCC – now EuroFAANG - established). The Consortium includes partners who pioneered the FAANG initiative, and several project-related activities will mirror and further amplify the outcomes of GENE-SWitCH nationally and internationally. Overall, these measures will add an important component of durability beyond project’s term.

Outreach, dissemination and training plan will be carried out through 4 main tasks during the lifetime of the project:

- Stakeholder Engagement



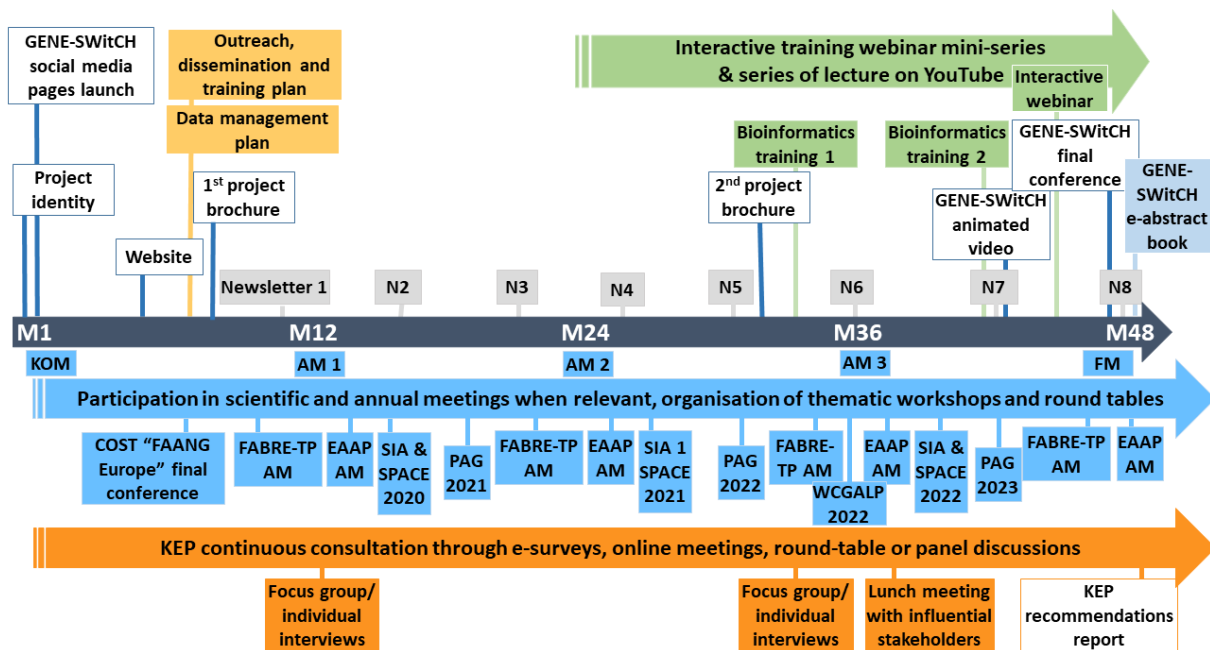


- Communication Strategy
- Dissemination Strategy
- Training Strategy

WP6 aims to publicize the project, make project results available and facilitate their use, by providing a basis for stakeholder engagement and knowledge exchange. WP6 works in close contact with all other WPs using a multi-actor approach that includes stakeholders throughout the whole project period. Interactions with other EU SFS30 projects (AQUA-FAANG and BovReg) are being developed to promote the transfer of the results. Additionally, promotional materials (brochures & flyers) and project's e-newsletters are to be regularly delivered to the targeted stakeholders. Scientific publications will target journals of high impact; free access will be prioritized, and associated press-release facilitated. Extension papers on national journals will be produced as reference for farmers and other operators in the animal breeding sector. Major external events (such as main scientific conferences) will be attended by scientists of the involved teams, with particular attention to promote participation of young scientists and researchers appointed to the project.

A plan for training courses and workshop organisation has been devised. As the FAANG initiative and several other large scientific consortia communication will rely extensively on social media, such as Twitter, e.g. @GeneSwitch (run by EFFAB, EAAP, INRAE, EMBL), @faangomics (run by EMBL) and @FAANGEurope (run by UEDIN), to maximize outreach to all stakeholders and to potentially several levels of society (mainly young scientist and students interested across several genomics domains and in animal science). Project-related audio-visual materials, promotional and educational videos will be produced on YouTube. Video-journals (e.g. [www.jove.com](http://www.jove.com)) will be targeted especially to address the specific requirements of science educators and students at the undergraduate course level. In addition, WP3 will provide training on the provision of data to contribute to GENE-SWitCH aims, the bioinformatics processing of GENE-SWitCH data and for utilisation of the datasets it produces. This will involve supporting joint training programmes drawing upon the expertise of the experts in all the work packages. Training workshops will be targeted at major livestock conferences and events or held at EMBL-EBI's state-of-the-art computational training suites. We will connect with the largest possible audience by offering on-demand training through webinars and shorter instructional videos and documentation. The impact of the dissemination and exploitation activities will be monitored both qualitatively and quantitatively.

The GENE-SWitCH's ODTP is based on the roadmap illustrated in Figure 1. The lead partner EFFAB and the co-leader EAAP will be supported by EMBL-EBI, the WP Leaders, academic and non-academic GENE-SWitCH partners and the stakeholders' platform mainly represented by SAB members.



### 1.3 Teams Involved

EFFAB has led the preparation of this deliverable and the ODTP as the WP leader. IT contributed by preparing graphic project identity and communication package (MS22) consisting of logo, slides and poster templates (to be used by partners) and a Power Point presentation template design. EAAP is the co-leader of WP6 and has contributed to the whole deliverable, in particular to the scientific dissemination strategy.



## 2 Stakeholder Engagement Strategy

*“The stakeholder engagement plan is a component of the project management plan that identifies the strategies and actions required to promote productive involvement of stakeholders in decision making and execution. It can be formal or informal and highly detailed or broadly framed, based on the needs of the project and the expectations of stakeholders.”<sup>1</sup>*

One of the main objectives of GENE-SWitCH is defined as enabling the use of produced knowledge to further improve the effectiveness of genomic selection in the pig and poultry sectors. WP6 – “Outreach, dissemination and training” takes this as a basis for its tasks and objectives. The main purpose of this WP is to engage and inform the stakeholders throughout the animal production chain, from breeders to consumers, enabling an increased understanding of the value of genetic information. This also includes the richly annotated high-quality genome sequences information and its application in sustainable animal production.

Stakeholder engagement relies on the mapping of various stakeholder types and on the development of strategies to create a two-way communication channel with them (multi-actor approach). To this issue GENE-SWitCH outreaches to stakeholders and organisations that interact directly with the consortium and to those who are affected by the project or can affect the actions of the project (see Figure 2). For example, farmers and consumers will be involved to implement and evaluate the progress of the activities targeted to relevant stakeholders. The Outreach, Dissemination, and Training Plan will be used to evaluate the progress of the activities.

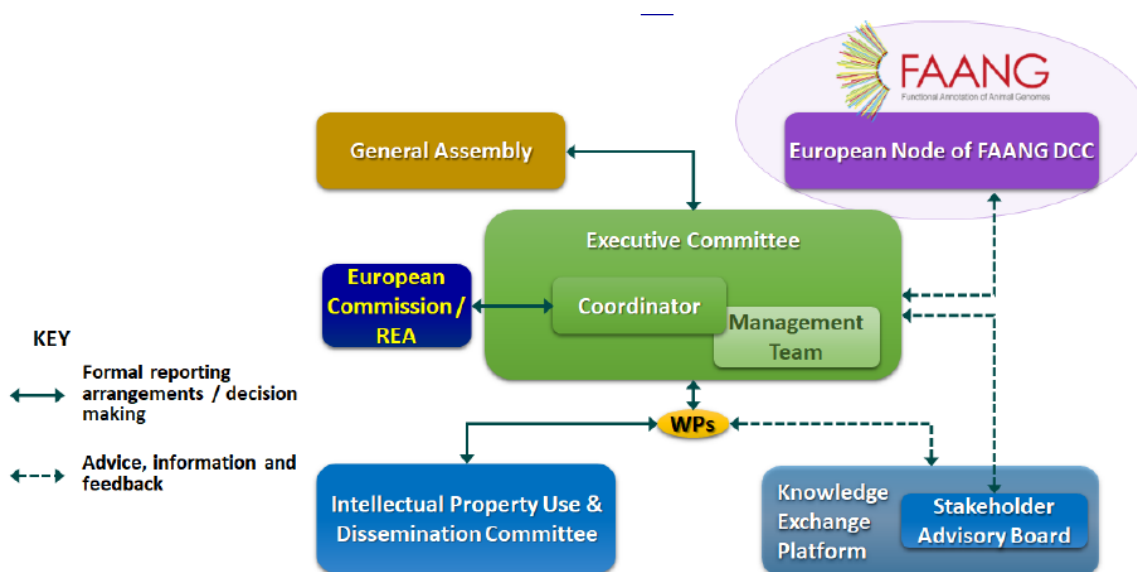


Figure 2 Governance of GENE-SWitCH and the positioning of the stakeholders

### 2.1 Stakeholder mapping

The mapping and listing of stakeholders are made in T6.1 (Stakeholders' Engagement). For each of the stakeholder groups, targeted communication channels are being selected, and specific activities are being listed in order to ensure the transfer of knowledge in the most efficient way. Map and list of stakeholders will be updated throughout the time span of the project and will be used as a guide for the WP6 communication and training tasks.

Early engagement with a wide range of stakeholders at a strategic level is essential to allow a solid understanding of their specific needs and concerns and to maximise their uptake of GENE-SWitCH outputs. The establishment of a Knowledge Exchange Platform (KEP) will enable a continuous dialogue through a unique platform and thus ensure that the various

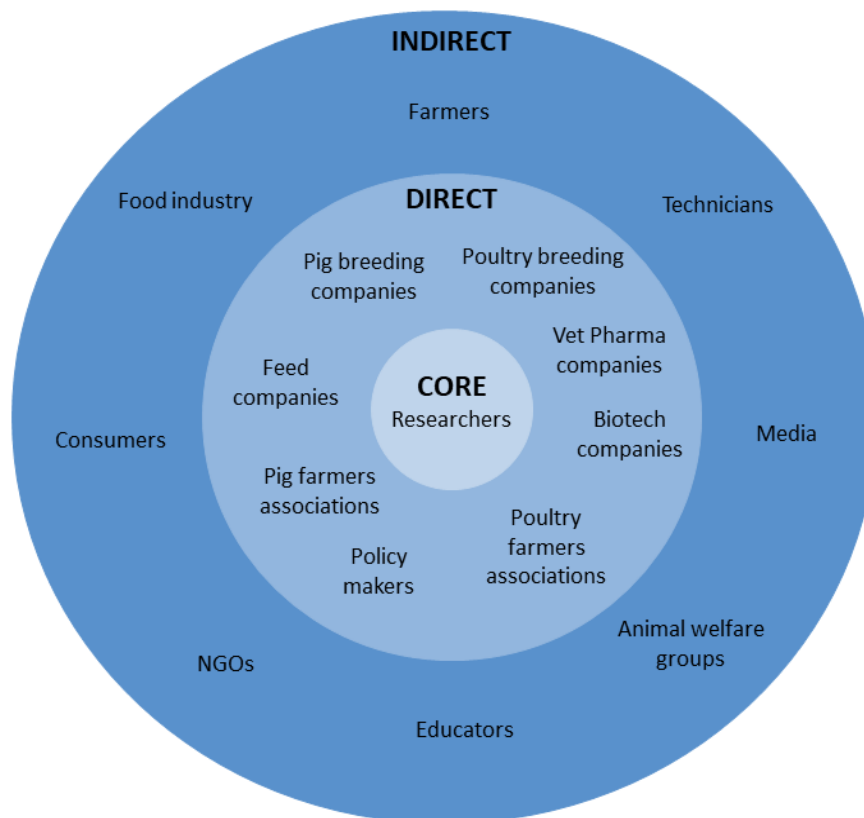
<sup>1</sup> Project Management Body of Knowledge, 6th Edition, 13.2.3.1



needs of end-users are factored into the detailed planning of work and in the implementation of the ODTP.

The first step of stakeholder engagement in the creation of a stakeholders list. In order to be able to select the right stakeholders, stakeholders' groups are first identified and mapped according to their anticipated roles in the project. The stakeholder mapping helps us understand the areas of influence each stakeholder has; in other words, it helps us understand how GENE-SWitCH could interfere with their businesses and why they would be interested in the project. Another important element is understanding the proximity each group has in relation with being affected by the project and having the ability to affect the project progress and outcomes.

The Stakeholder Proximity Chart<sup>2</sup> (Figure 3) summarizes the base strategy for stakeholder management depending on the level of involvement and being affected by the project results per stakeholder group. The stakeholders listed in the “Direct” area are usually the key players that are involved in decision making who are consulted regularly and on whom GENE-SWitCH should focus on mostly. The stakeholders under “Indirect” area are the ones that the project needs to address to increase their interest, so that they would be willing to take more part in the work together area (i.e. the work together area). The “Core” area includes the stakeholders that have a strong interest in the project research areas.



*Figure 3 GENE-SWitCH stakeholder proximity chart*

## 2.2 The Knowledge Exchange Platform (KEP)

The KEP is a unique platform for cooperation and collaboration with representatives of directly and indirectly linked stakeholders, who express their specific stakes or views at a certain

<sup>2</sup> Reproduced from The Influence Agenda by Dr. Mike Clayton (Palgrave Macmillan)



moment of the project and are willing to share these with the project partners during stakeholders' meetings and consultations.

The KEP serves as the key forum for stakeholders to interact with the project and thus ensure that the full diversity of relevant stakeholders' perspectives, demands, concerns and needs is captured and integrated in the entire work cycle of GENE-SWitCH with the aim of enhancing its value and impact. The KEP will also maximise the flow of information to and from the project to enhance knowledge transfer and effective and timely uptake of GENE-SWitCH outcomes. The KEP aims to:

- ensure that experts' and practitioners' view and needs in terms of knowledge, technology development and services are included/considered throughout the duration of the project,
- guarantee an effective two-way communication,
- assist in disseminating the results generated by the research effort.

In building the KEP, use will be made of all project partners' networks, particularly EFFAB and FABRE-TP – industry-oriented – and EAAP – academic oriented – networks to effectively cover both industry actors and knowledge institutes across Europe.

KEP is established using Facebook as a private stakeholders' community which is managed and facilitated by EFFAB. KEP members and other potentially interested stakeholders will be invited to this group via emails, social media channels and a link from the GENE-SWitCH website.

The KEP ensures direct and bi-directional contact with the project's Stakeholder Advisory Board (SAB) through the most user-friendly media (e.g. GENE-SWitCH Twitter account: @GeneSwitch, closed Facebook group: <https://www.facebook.com/groups/584486442314503/>, LinkedIn groups: <https://www.linkedin.com/company/gene-switch>). Specifically, the feedback and views of stakeholders will be used as input to improve the applicability of project results and the pertinence of training and dissemination activities and tools (interest of training topics, accessibility and comprehensibility of communication materials, etc.).

The KEP will be consulted regularly and at the minimum on a biannual basis. Consultations will be carried out in two different forms:

- consultations on specific developments, results, methodologies, and
- an ongoing consultation to track and monitor stakeholder perceptions within the broader perspective of GENE-SWitCH.

These consultations differ in the methodology, e.g. more focus group and individual depth interviews will be used for specific consultations of the SAB while more generalized techniques such as e-surveys, online meetings, round-table or panel discussions would be adopted for a continuous consultation of the KEP on the general project progress.

### 2.3 The Stakeholder Advisory Board (SAB)

Some representatives of the KEP will join the project governance by constituting the SAB. SAB includes the representatives of the breeding companies involved in Pillar 2 besides HG (Hypor B.V, Aviagen, IFIP) and the additional stakeholders mapped in the "Work Together" area of the map.

The SAB will provide direct advice, quality assurance and will contribute to shape the research agenda of GENE-SWitCH. Their advice on how to maximise outcomes' impacts and how to exploit the most promising results for transfer will be particularly valuable for the GENE-SWitCH consortium (Figure 4). The SAB members will also support the project dissemination, notably by providing advice on the main topics of interest for training events and will act as 'ambassadors' in the further dissemination of results to their respective networks. The SAB will be guided by the Executive Committee and participate in the meetings of the General



Assembly once a year. The travel and accommodation expenses of the SAB members will be covered by GENE-SWitCH dedicated funds.

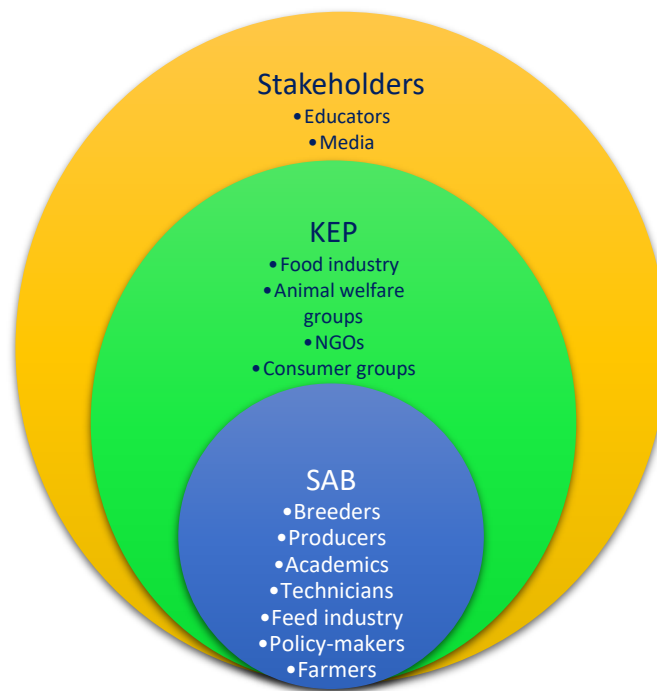


Figure 4 GENE-SWitCH stakeholder map in different levels

SAB members have been given below;

Contact Person	Organisation	Country	Group
Abe Huisman	Hypor	Netherlands	Pig breeder
Andrea Kranis	AVIAGEN	UK	Poultry breeder
Barbara Harlizius	Topigs Norsvin	Netherlands	Pig breeder
Federica Di Palma	Earlham Institute	UK	Academic
Filippo Miglior	Genome Canada	Canada	Biotech
Gabor Meszaros	Masteranimalbreeding/ BOKU	Austria	Educator
Geert Bruggeman	NuScience	Netherlands	Feed
Graham Plastow	Genome Canada	Canada	Biotech
Gwendal Restoux	Masteranimalbreeding/ AgroParisTech	France	Educator
Marie-José Mercat	IFIP BioPorc	France	Pig breeder
Paul Boettcher	FAO	Austria	Policy maker



### 3 Communication Strategy

The GENE-SWitCH communication strategy targets defined stakeholders and end-users. Chosen communication tools and materials aim to target different audiences with the different methods and channels selected by the project.

#### 3.1 Communication package

To make sure that the GENE-SWitCH project is coherent and consistent in all communication materials, a project identity and communication package has been produced by IT (MS22) and has been made available to consortium partners. The graphic project identity and communication package consists of project's logo, slides, presentation and poster templates. All participants have been encouraged use these materials for presentations, brochures, newsletters and publications.

##### 3.1.1 Logo

The GENE-SWitCH logo has been designed for branding the project in all communication forms. It shows a pig and a chicken image (the two main monogastric farm species filled with square blocks to represent the data gained by functional annotation of animal genomes:



Figure 5 GENE-SWitCH logo

Along with the GENE-SWitCH logo, the EU flag will be visible on all communications from the GENE-SWitCH project:



Link to graphic design of EU-projects:

[http://ec.europa.eu/regional\\_policy/information/logos/index\\_en.cfm](http://ec.europa.eu/regional_policy/information/logos/index_en.cfm)

Please note that any **dissemination** and any **communication** activity related to the action (including in electronic form, via social media, etc.) and any infrastructure, equipment and major results funded by the grant must include this information:



The GENE-SWitCH project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement No 817998.

#### Disclaimer

The sole responsibility of this publication lies with the authors. The European Commission and the Research Executive Agency is not responsible for any use that may be made of the information contained therein.





Table 1 The colours of GENE-SWitCH logo with RGB codes









Logo colours	Hex code	Red	Green	Blue	Colour
Blue	#2468af	36	104	175	
Light Blue	#5991cc	89	145	204	
Dark Blue	#1a3357	26	51	87	
Grey	#979797	151	151	151	

Table 2 The colours of GENE-SWitCH logo with CMYK codes.

Logo colours	Cyan	Magenta	Yellow	Key	Colour
Blue	79	41	0	31	
Light Blue	56	29	0	20	
Dark Blue	70	41	0	66	
Grey	0	0	0	41	

### 3.1.2 Project Message

The tagline describes the essence of the project in a short and understandable way, linking to why this is important for the target audiences. This is used on communication materials (website, brochure, presentations, etc.).

Currently used and proposed taglines:

*“The regulatory GENome of SWine and CHicken: functional annotation during development”*

*“Delivering new underpinning knowledge on the functional genomes of two main monogastric farm species – pig and chicken”*

*“Characterizing the dynamics (“switches”) of the functional genome from embryo (chicken) and foetus (pig) to adult life”*

*“Developing innovative genomic predictive models that integrate functional annotations”*

*“Demonstrating how functional annotation of genomes can foster the advancement of genomic selection for immediate benefit to the breeding industry”*

*“Producing cutting-edge research paving the way to new studies and strategies for sustainable productions”*

*“Providing in-depth understanding of the regulation of genes and how these bring about genetic variation in pigs and poultry (chicken, turkey and ducks).”*

*“Characterising the most important genomic elements linked to key traits for sustainable production”*

*“identifying the dynamics of genomic elements, analysing how external factors, such as nutrition and environmental surroundings, influence an animal’s biological blueprint during its development from embryo to adult size.”*

The communication message consists of one general message which should be further specified per target group. It will create the ‘external identity’ of the project. The message must be simple, clear and positive. This main communication message is:

*“GENE-SWitCH aims to deliver new underpinning knowledge on the functional genomes of pigs and chickens, and to enable immediate translation of this knowledge to the pig and poultry sectors.”*





### 3.2 Digital Communication

The online communication and dissemination channels and materials are targeted to the different stakeholder audiences. The aim of these materials is to communicate about GENE-SWitCH and its results, ensuring the impact of the project and raising awareness of the project and its outcomes to a wide range of stakeholders. Examples of digital channels that will be used to communicate and disseminate results are the EIP-AGRI website and the FAANG website which will hold a page specifically for GENE-SWitCH. Moreover, GENE-SWitCH has its own [website](#) and social media pages ([LinkedIn](#), [Facebook](#), [Twitter](#), [ResearchGate](#), [YouTube](#)) which will be sustained until for 2 additional years upon project finalisation.

Digital communication and dissemination materials and tools that will be generated during the project include the development of a biannual newsletter, press releases, fact sheets, audio-visual materials, popular articles and flyers for all stakeholders. These materials could easily be reached from the project website and could be received by email if subscribed to the GENE-SWitCH emailing list.

#### 3.2.1 GENE-SWitCH Website

The website is the major communication and dissemination tool of GENE-SWitCH and requires continuous updating in the course of the project. The goal is to keep the website informative, up-to-date, inspiring and inclusive, so that visitors feel motivated to further engage with the project. The project website will be maintained for 2 more years after the end of the project.

The project website link is <https://www.gene-switch.eu/>. The website covers the following content:

- Information about the project
- Links to GENE-SWitCH social media channels
- Press releases and latest news
- Calendar and information on project events
- Project brochures and other promotional materials
- Digital newsletters
- Audio-visual materials
- E-trainings and webinars
- Scientific publications, presentations from conferences and proceedings of workshops
- Specific webpage on EuroFAANG
- Links to related national and international EU projects

EFFAB is responsible for the design and content of the GENE-SWitCH website. All partners have been requested to make a link to the GENE-SWitCH website on their own institutional website.

*Table 3 GENE-SWitCH website task summary*

<b>Aim:</b>	<b>Keep the website up to date with information about project activities, directions, results and implementation of tools</b>
<b>What:</b>	Press releases, news, events, video material, e-trainings, results
<b>How:</b>	The desire is to share as much information as possible through the website.
<b>Who:</b>	All project partners are responsible for providing input on their work packages and have been invited to provide ideas for the website. EFFAB is responsible for uploading the information and keeping the website up to date.
<b>Time frame:</b>	M6-M48

The site map of the website is shown below. In addition to provide basic information about the project, it will provide information about the involved countries, inclusive of the local stakeholders' activities. It will provide up-to-date information about project progress and events, communication and dissemination materials. Specifics of the website are given in MS23 Project Website report.

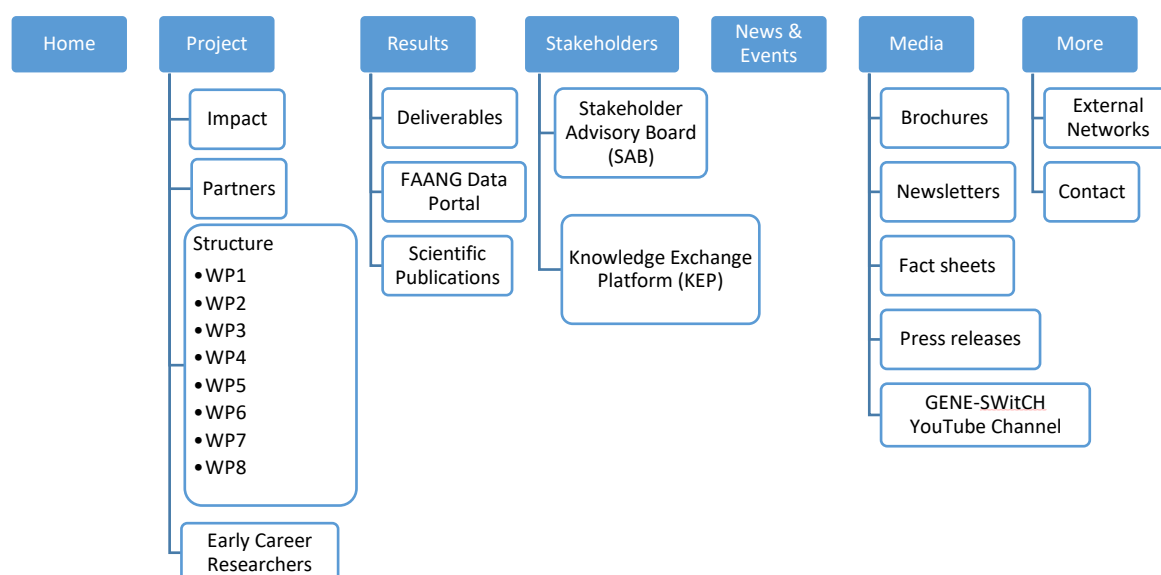


Figure 6 Site map of ROADMAP

The website follows the Commission's guidelines on privacy and data protection and informs users that cookies are not being used to gather information unnecessarily. The ePrivacy Directive – more specifically Article 5(3) – requires prior informed consent for storage or for access to information stored on a user's terminal equipment.

### 3.2.2 GENE-SWitCH Collaborative Platform

The GENE-SWitCH collaborative platform is a secure online space specifically implemented for the project and intended for all the partners. Indeed, the platform is only accessible through a personal login and password. The aim of the platform is to help the smooth running of the project by facilitating communication between the partners. It allows to share information internally, to upload and download documents developed in the project and in general to find any document relevant to the implementation of GENE-SWitCH. D7.2 (GENE-SWitCH collaborative platform guidelines) aims at presenting the structure of the GENE-SWitCH collaborative platform and gives a general over-view of the basic functions of the platform.

### 3.2.3 Social Media strategy and management

The GENE-SWitCH project uses five different social media networks to target different stakeholder groups; YouTube, Facebook, Twitter, LinkedIn and ResearchGate. Facebook is the most popular social network when targeting the end-users in many of the European countries. Twitter and LinkedIn are mostly used by companies, researchers and by international, national and local policy and decision makers. Twitter is largely used by different umbrella organisations representing different parts of the society, from producers to consumers. LinkedIn is mainly targeting professionals willing to read more about technological and knowledge advances and enables users to connect and share content with other professionals. ResearchGate is used mostly by researchers working in the public and private institutes including the R&I departments of companies. YouTube is used to share all kinds of audio-visual information for a broad range of stakeholders from the general public to scientists.

The social media strategy of GENE-SWitCH aims at:

- Attracting many different target groups and stakeholders,
- Raise awareness on the research GENE-SWitCH is conducting within the FAANG community,



- Spreading news/content about the project: project content, activities, news, results etc.,
- Engaging social media users and directing them to GENE-SWitCH website,
- Enabling and facilitating interactive discussion forums at European and national scale using different social media channels.

In order to achieve the aims of GENE-SWitCH social media strategy, the actions listed below are being carried out;

- Establishment of a GENE-SWitCH stakeholder's forum on Facebook,
- Sharing of targeted social media posts to inform about the progress of the project, events, news and results,
- Using social media channels to actively engage with relevant stakeholders,
- Preparation of targeted social media campaigns.

*Table 4 GENE-SWitCH social media accounts*

Social Media Channel	Account link
Facebook	<a href="https://www.facebook.com/GENESWitCHEU/">https://www.facebook.com/GENESWitCHEU/</a>
Twitter	<a href="https://twitter.com/GeneSwitch">https://twitter.com/GeneSwitch</a>
LinkedIn	<a href="https://www.linkedin.com/company/gene-switch/">https://www.linkedin.com/company/gene-switch/</a>
ResearchGate	<a href="https://www.researchgate.net/project/GENE-SWitCH-The-regulatory-GENomE-of-SWine-and-CHicken-functional-annotation-during-development">https://www.researchgate.net/project/GENE-SWitCH-The-regulatory-GENomE-of-SWine-and-CHicken-functional-annotation-during-development</a>
YouTube	<a href="https://www.youtube.com/channel/UCiBRC_rYhVvxyFvLveZRAHg">https://www.youtube.com/channel/UCiBRC_rYhVvxyFvLveZRAHg</a>

All partners are encouraged to follow and share above accounts. In order to engage a wider audience through social media, their content must be relevant, valuable and usable for the different target groups. Different kinds of content could (among others) be;

- Publication of research results
- Writing articles or blogs
- Publication of whitepapers
- Publication of informative videos
- Photographs
- Promoting GENE-SWitCH or other interesting events

The social media accounts can also be used to participate in discussions on relevant social platforms.

*Table 5 Relevant keywords and tags*

Hashtags	Mentions
#genomics #epigenetics #monogastrics #genotype #phenotype #annotation #functionalannotation #mapping #FAANG #genome #breeding #livestockbreeding #livestockgenetics #genetics #H2020	@EFFAB @INRAE_France @EdinburghUni @WURanimal @embl @UU_University @Diagenode @EAAPofficial @BetterBreeding @irtacat @EU_Commission @GeneSwitch @VCSTX

In order to make full use of the communication channels, it is important to harmonize and integrate the contents of the different social media channels by;

- enabling the sharing of the GENE-SWitCH website content,



- embedding Twitter feed on the homepage of the GENE-SWitCH website,
- giving the links to the social media channels in the GENE-SWitCH newsletter,
- using QR codes in the offline communication materials to forward readers to GENE-SWitCH social media accounts or website easier,
- promoting the GENE-SWitCH activities or related events via the social media accounts.

There are also some risks that could generate from social media shares. Therefore, it is important to identify the possible risks and offer solutions beforehand. Table 6 summarizes some of the main risks and envisaged solutions.

*Table 6 Risks of social media usage in projects*

Risk	Solution
<b><u>Web care is important</u> in order to manage your online reputation. If there's no control over what is being said about GENE-SWitCH or related topics online, an unwanted message can spread very quickly.</b>	<p>By monitoring what is going on online, it is possible to respond to potential crises within a short amount of time.</p> <p>Prior to replying to such messages, it will be helpful to first discuss with the WP7 leader on the effective severity of the unwanted message; in some cases, it could be better to not react.</p> <p>Give attention to always show respect and convey transparent messages.</p>
<b><u>Responding too quickly</u> to a tweet or post may compromise the quality of the response. However, waiting for days to get a tweet approved is not accepted neither.</b>	<p>As a starting point a response should be sent within a couple of hours up to a working day at the latest, depending on the subject.</p> <p>The most important thing is to manage expectations and give relevant reactions to questions and comments.</p>
<b><u>Time, content and overview</u> of online activities are key factors for success. If it is decided to use social media, it must be taken care of on a regular basis. Social media accounts are not updated regularly, it will lose its impact and followers.</b>	<p>Choose wisely which and how many channels will be used.</p> <p>There are tools available to manage posting on social media accounts, for example Twitter feed.</p> <p>To keep track of what is happening it is advisable to use tracking tools like Hootsuite, LinkedIn analytics, Facebook analytics, Google analytics or YouTube analytics.</p>
<b><u>Manage the opinions and expectations from stakeholders.</u> The project is designed in order to achieve a maximum interaction with stakeholders, but many different views/opinions could also be difficult to manage; how do you coop with opposite opinions? And what do you do when stakeholders feel like nothing was done with their ideas/opinions?</b>	<p>The stakeholders should be included since the beginning, in order that they feel like they have had an influence on the direction of the project. Depending on the number and kind of stakeholders, WP6 will update the managing plan accordingly to match expectations.</p> <p>The option to organize evaluations with the stakeholders will be considered.</p>

### 3.2.4 Newsletters

To spread project news to partners, stakeholders and other groups of interest, 8 digital newsletters have been planned. The content for the newsletter will be assembled by EFFAB, who will also facilitate its distribution. All partners are strongly encouraged to share articles and any other news items to be published in the newsletter. The newsletter will be created and distributed by using the online tool MailChimp. New newsletters will be mentioned on the website and other social media to increase awareness. People can subscribe for the newsletter via the GENE-SWitCH homepage. Furthermore, partners and stakeholders are encouraged to share the newsletter within their network.



Table 7 GENE-SWitCH estimated newsletter publication dates

Issue No	Project month	Publication date
GENE-SWitCH Newsletter 1	M10	April 2020
GENE-SWitCH Newsletter 2	M19	January 2021
GENE-SWitCH Newsletter 3	M24	June 2021
GENE-SWitCH Newsletter 4	M29	November 2021
GENE-SWitCH Newsletter 5	M34	April 2022
GENE-SWitCH Newsletter 6	M39	September 2022
GENE-SWitCH Newsletter 7	M44	February 2023
GENE-SWitCH Newsletter 8	M48	June 2023

### 3.2.5 Audio Visual Documents

Project-related audio-visual materials, promotional and educational videos will be produced and published in GENE-SWitCH YouTube channel and website to create awareness, and for communication, dissemination and training purposes. Video-journals (e.g. [www.jove.com](http://www.jove.com)) will also be considered, especially to address the specific requirements of science educators and students at the undergraduate course level and will be promoted through social media channels (Facebook, Twitter, LinkedIn) of the project as well as EFFAB and FABRE-TP networks.

A specific GENE-SWitCH Video (MS 24 due at Month 42) will be prepared by EFFAB to enhance the understanding of the value of genetic information and its application in sustainable animal production by the stakeholders throughout the animal production chain from producers to consumers. In order to explain richly annotated high-quality genome sequences with fundamental and innovative principles and techniques in lay-man terms, the video will be prepared as an animated short movie to be easily shared through social media channels such as YouTube, Facebook, Twitter, LinkedIn, Instagram, etc.. The concept of this movie will be decided with the Executive Committee.

### 3.2.6 Press Releases

Press releases on main project's actions for example the publication of interesting results or update on project's progress, will be created. All press releases will be released at the international level and will target the broader press by advertising on the website, social media accounts and the network of GENE-SWitCH partners and stakeholders. Partners will assure translation into national language where appropriate and necessary. Popular online magazines will be used to disseminate GENE-SWitCH results to a wider audience.

Table 8 News on popular magazines

<b>Aim:</b>	<b>Inform wider society about GENE-SWitCH project's aim and results through magazines such as Boerderij, Pig Progress, Poultry World, Pig World</b>
<b>What:</b>	Information about GENE-SWitCH project news
<b>How:</b>	Through press releases, articles and news
<b>Who:</b>	EFFAB and all partners
<b>Time frame:</b>	M1-M48

Save-the-Date flyers or program leaflets presenting the project events will be prepared to communicate and promote the specific GENE-SWitCH sessions, workshops, conferences and trainings and will be shared through GENE-SWitCH digital networks.

## 3.3 Offline tools and activities

Communication materials and channels that will be used in the project include development of an introductory brochure, fact sheet, results brochure, poster, project banner and organisation of profile-raising events and sessions. GENE-SWitCH will also be promoted and introduced to



the pig and poultry breeding sector through a meet-up, presentation and interactive networking session during the FABRE-TP Annual meeting in 2022.

### 3.3.1 First Brochure

A project brochure was prepared in M12 in English to promote the GENE-SWitCH project to potential stakeholders. The brochure aims to create awareness to the project objectives and impact targeting different stakeholders.

It hasn't been printed in hardcopy due to Covid-19 impact, that made impossible for partners to participate in person to several previously planned conferences. Nevertheless, it was shared with the project partners and from GENE-SWitCH online channels.

### 3.3.2 Poster

A project poster summarizing the project for the scientific community will be prepared by and will be used by partners for various scientific events. It will illustrate the project aim and structure, highlight the innovations and the expected impacts for the research community.

### 3.3.3 Banner

Project banner will be prepared when Covid-19 restrictions are lifted to be used during conferences, workshops, profile raising events and stakeholder activities. The banner will include information such as the aim and objectives of the project.

### 3.3.4 Fact sheet

A fact sheet has been designed focusing on the policy impact of the project expected results and has been shared with the consortium, SAB members and KEP through social media channels (M18). The aim is to have it translated to Spanish and other possible European languages.

### 3.3.5 Results brochure

A results brochure will be prepared at the last (4<sup>th</sup>) year of the project. It will be used for the dissemination of the project outcomes and results. It will be available in English and other European languages.

### 3.3.6 Profile Raising Events

GENE-SWitCH will be promoted and introduced to the pig and poultry breeding sector targeting commercial and scientific actors at different events. Unfortunately some of the previously planned activities targeting producers and policymakers have been either cancelled or postponed by the organisers and new dates are not yet available.

*Table 9 Possible international events for profile raising events of GENE-SWitCH*

When	Event	Where	Target Audience	Participation
15-16 May 2019	EFFAB-FABRE TP AGM	Dublin, Ireland	Breeding and reproduction companies/ organisations	<input checked="" type="checkbox"/>
23-24 September 2019	BovReg KoM	Dummerstorf, Germany	BovReg project consortium	<input checked="" type="checkbox"/>
28 May 2020	EFFAB-FABRE TP AGM	Online	Breeding and reproduction companies/ organisations	<input checked="" type="checkbox"/>
April 2021	EFFAB-FABRE TP AGM	Online	Breeding and reproduction companies/ organisations	<input checked="" type="checkbox"/>
14-16 September 2021	SPACE 2021	Rennes, France	Animal production sector	<input type="checkbox"/>
May 2022	EFFAB-FABRE TP AGM	Evora, Portugal	Breeding and reproduction companies/ organisations	<input type="checkbox"/>





## 4 Dissemination Strategy

The main targeted end-users of GENE-SWitCH tools, strategies and new knowledge are all the actors involved in the animal production chain, from breeders to consumers. Chosen dissemination methods aim to target different audiences with different events, materials and tools.

The dissemination strategy is devoted to ensuring that new knowledge and models generated by GENE-SWitCH are transferred to the breeding industry and other stakeholders, with the ultimate aim to fit stakeholders' needs and expectations for the improvement of the sustainability of pig and poultry production systems. Dissemination tools and channels cover the publication of peer-reviewed GENE-SWitCH articles in highly ranked international journals and GENE-SWitCH presence in respected European and international scientific conferences and congresses.

### 4.1 Dissemination goals

GENE-SWitCH aims to provide tools and results starting from the farmer itself, as the main end-user of GENE-SWitCH strategies, to the general public. GENE-SWitCH results and outputs will have an impact on different levels of actors in the society, ranging from global impacts to highly specialized ones. In Figure 7, different levels of target groups are given in relation to the dissemination goals of GENE-SWitCH based on its expected results.

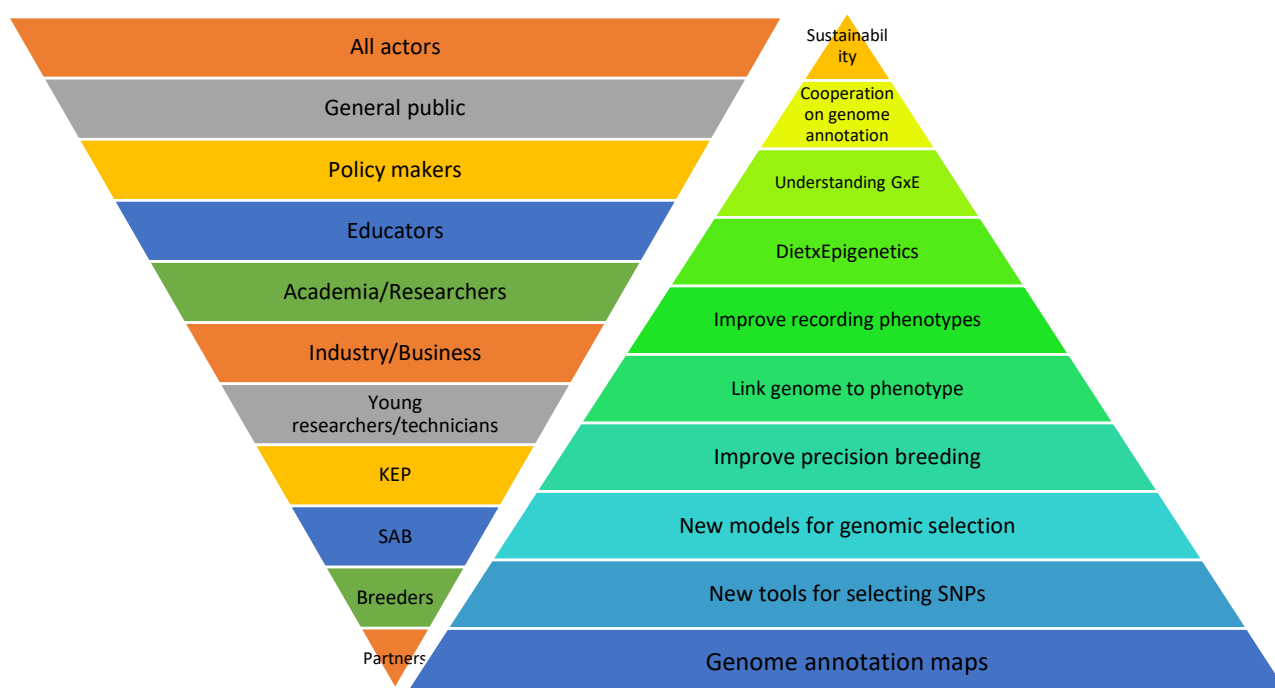


Figure 7 GENE-SWitCH dissemination goals targeted to different stakeholder levels

### 4.2 Targeted dissemination tools

GENE-SWitCH will make use of different interactive and innovative dissemination methods and tools in order to target different stakeholders and actors. These tools will ensure that key stakeholders are aware of GENE-SWitCH results and know-how and facilitate their active involvement in project activities and training. The following illustration lists the target audiences and the specific tools to reach out to them:

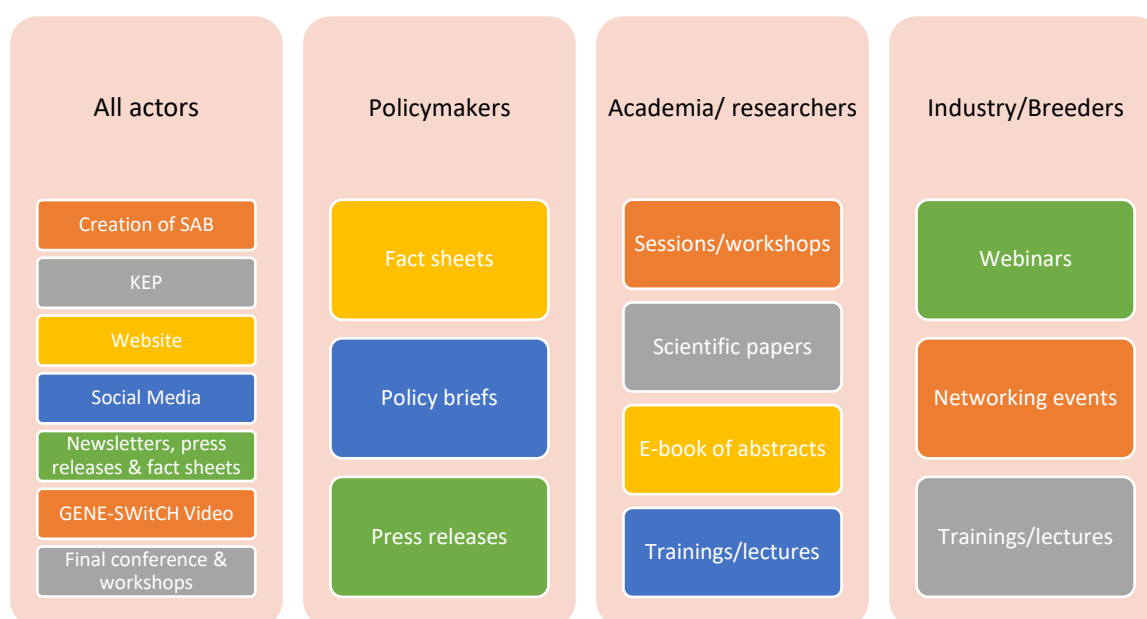


Figure 8 GENE-SWitCH targeted dissemination strategy

#### 4.3 Peer-reviewed scientific publications

GENE-SWitCH will pursue the publication of results in open access peer-reviewed scientific journals, with budget allocated to each partner for “gold” open access (i.e. where open access publications are provided by the publisher). Partners will try, as far as possible, to use the “gold” open access mode, thus providing immediate open access to stakeholders. Whenever the “gold” open access mode is not possible, partners will use the “green” open access mode, thus archiving the published articles or the final peer-reviewed manuscripts in an online repository of their choice.

#### 4.4 E-Book of abstracts

The GENE-SWitCH e-book of abstracts will be published at the end of the project on the website and disseminated through social media.

Table 10 E-Book of Abstracts task summary

<b>Aim:</b>	<b>Share the outcomes of the project with stakeholders and a wider audience.</b>
<b>What:</b>	All project results will be shared through an e-book of abstracts.
<b>How:</b>	Website and social media accounts
<b>Who:</b>	EAAP and all partners
<b>Time frame:</b>	M48

#### 4.5 Policy briefs

A policy brief is a concise summary of a particular issue, including the policy options to deal with it and recommendations on the best option to adopt. It is aimed at European and national level policymakers and others who are interested in formulating or influencing policies<sup>3</sup>. GENE-SWitCH policy briefs will be prepared in the second half of the project. A specific GENE-SWitCH policy template will be prepared to have a common format and the policy briefs will be published and distributed in the networking events.

<sup>3</sup> <http://www.fao.org/3/i2195e/i2195e03.pdf>





#### 4.6 Workshops and conferences

GENE-SWitCH will organise 2 specific sessions at international scientific events (e.g. EAAP annual meeting, WCGALP 2022, Plant and Animal Genome Conference, ICQG, and others); one at M26 (EAAP Annual meeting 2021, Davos, Switzerland) and one as a Final Conference targeting both academic community and industrial stakeholders. GENE-SWitCH results will also be disseminated through project poster and brochures at EAAP conferences.

Following the results from Pillar 1 and 2 (at the last year of the project), a second meet-up in the form of a lunch meeting with an influential group of stakeholders – including policymakers, breeding industry, influential umbrella organisations and media groups – will be organised to communicate the main achievements of the project. The aim is to transfer the improved knowledge on genomic prediction models for application in selective breeding to the pig and poultry sectors, maximize the uptake of results and project sustainability and pave the way for future research projects on genomics and NBTs (new breeding techniques).

*Table 11 Possible list of international conferences for GENE-SWitCH workshops/sessions*

When	Event	Where	Target Audience	Participation
11-15 January 2020	PAG (International Plant & Animal Genome)	San Diego, CA, USA	Genetic scientists, plant and animal researchers	<input checked="" type="checkbox"/>
11-13 February 2020	2nd FAANG-Europe COST Action Workshop	Prague, Czech Republic	Researchers, scientists	<input checked="" type="checkbox"/>
10 January 2020	FAANG Shared Workshop: Foundation for the Future	Hinxton, UK	FAANG researchers, projects	<input checked="" type="checkbox"/>
25-27 February 2020	FAANG Shared Workshop: Foundation for the Future	Hinxton, UK	FAANG researchers, projects	<input checked="" type="checkbox"/>
17-20 November 2020	BovReg Nextflow Workshop	Online	FAANG researchers	<input checked="" type="checkbox"/>
1- 4 December 2020	EAAP 2020	Online	Researchers and scientists on animal science, industry	<input checked="" type="checkbox"/>
22-23 April 2021	International Conference of Quantitative Genetics & Genomics (ICQGG)	London, UK (Online)	Geneticist	<input type="checkbox"/>
15-20 May 2021	PAG (International Plant & Animal Genome)	San Diego, CA, USA	Genetic scientists, plant and animal researchers	<input type="checkbox"/>
30 August – 3 September 2021	EAAP 2021	Davos, Switzerland (hybrid)	Researchers and scientists on animal science, industry	<input type="checkbox"/>
16-17 September 2021	International Conference of Quantitative Genetics & Genomics (ICQGG)	Zurich, Switzerland (Online)	Geneticist	<input type="checkbox"/>
9-13 January 2022	PAG (International Plant & Animal Genome)	San Diego, CA, USA	Genetic scientists, plant and animal researchers	<input type="checkbox"/>
22-23 April 2022	International Conference of Quantitative Genetics & Genomics (ICQGG)	London, UK	Geneticist	<input type="checkbox"/>
03-08 July 2022	WCGALP 2022	Rotterdam, The Netherlands	Breeding companies, scientific institutions	<input type="checkbox"/>
August – September 2022	EAAP 2022	Porto, Portugal	Researchers and scientists on animal science, industry	<input type="checkbox"/>
16-17 September 2022	International Conference of Quantitative Genetics & Genomics (ICQGG)	Zurich, Switzerland (Online)	Geneticist	<input type="checkbox"/>
9-13 January 2023	PAG (International Plant & Animal Genome)	San Diego, CA, USA	Genetic scientists, plant and animal researchers	<input type="checkbox"/>
22-23 April 2023	International Conference of Quantitative Genetics & Genomics (ICQGG)	London, UK (Online)	Geneticist	<input type="checkbox"/>
August – September 2023	EAAP 2023	Lyon, France	Researchers and scientists on animal science, industry	<input type="checkbox"/>



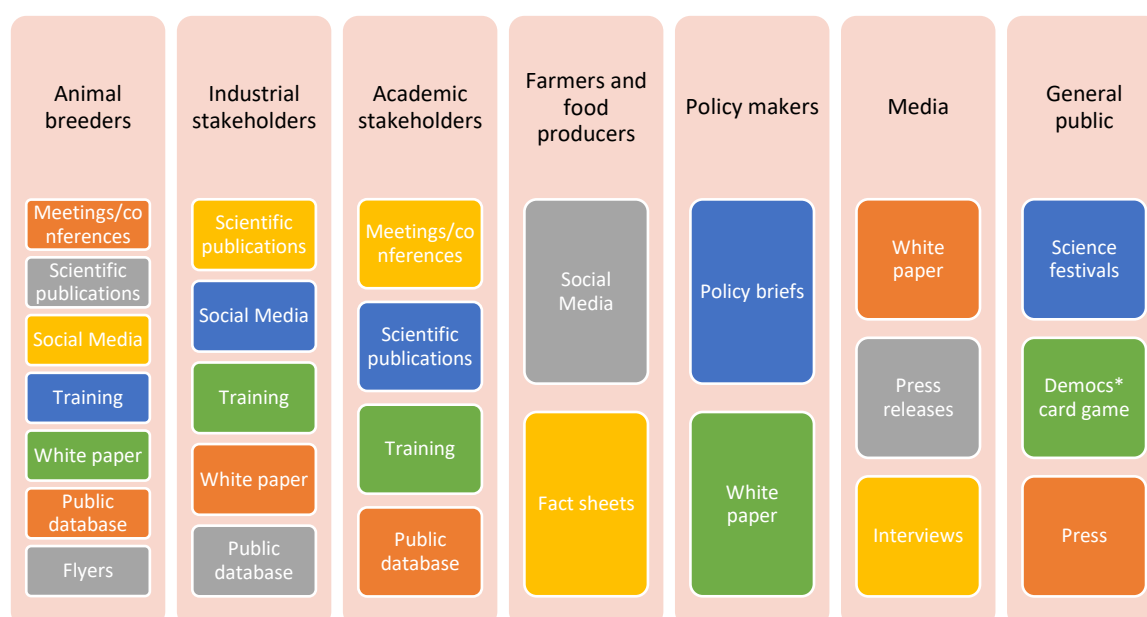
<b>16-17 September 2023</b>	International Conference of Quantitative Genetics & Genomics (ICQGG)	Zurich, Switzerland (Online)	Geneticist	<input type="checkbox"/>
<b>August – September 2024</b>	EAAP 2024	Florence, Italy	Researchers and scientists on animal science, industry	<input type="checkbox"/>

#### 4.7 EuroFAANG Joint Dissemination Cluster

EuroFAANG represents the joint dissemination cluster of the H2020 SFS-30-2018 call projects, namely AQUA-FAANG, BovReg and GENE-SWitCH, and aims to carry out a joint communication, dissemination and training strategy in order to maximise the stakeholder engagement and uptake of results by joining forces in targeting different stakeholder groups. EuroFAANG communication objectives are;

1. Support AQUA-FAANG, BovReg and GENE-SWitCH in achieving their objectives by issuing effective, coordinated and timely communications
2. Raising awareness within the relevant scientific communities of these initiatives
3. Promoting the tools and data resources that EuroFAANG projects make available to the community
4. Providing clear information and call to actions to the scientific community about how they can get involved in the projects and dissemination
5. Promote the public acceptance of the tools/techniques developed by the three projects
6. Cross-promote the three projects whenever appropriate
7. Encourage synergy, maximise mutual benefits and map a collaboration path between the three projects' communication and dissemination objectives
8. Target different stakeholder groups jointly, in particular non-academic partners to increase the impact and effectiveness of the dissemination activities

The target audience and targeted communication and dissemination efforts are summarised below.



\* Democs card game enables group discussion for 6-8 people, using cards, which provide information and stimulate ethical debate. The aim is to learn about and discuss new technologies and ethical issues.

EuroFAANG message house for different audiences are summarized in the following headings.



#### 4.7.1 Scientific audiences

EuroFAANG will create a suite of free resources that link genome to phenome to improve animal production		
Increase efficiency through precision breeding	Reduce disease resistance	Minimise environmental impact

#### 4.7.2 Policy-makers

EuroFAANG leverages genomic knowledge to make animal production more robust and sustainable		
Increase efficiency through precision breeding	Reduce disease resistance	Reduce the environmental impact

#### 4.7.3 General audience

EuroFAANG uses genetics to improve how we breed animals		
Feed a growing population	Reduce antibiotic use	Reduce the environmental impact

### 4.8 Planned joint communication and dissemination events

Name	Date	Location	Topic /focus areas	Action
EFFAB/ FABRE-TP 2021	First half of 2021	Zoom	Agri and aqua	Breeding companies and researchers are the main audience. After the short presentations of all 3 projects, there could be species specific break out rooms. Date and agenda will soon be shared.
EAAP 2021	30 Aug - 3 Sep, 2021	Davos/ Switzerland / hybrid	Mainly agri /livestock	Flyers, one joint presentation / poster with all 3 projects



EAAP 2022	To be announced	Porto, Portugal	Mainly agri /livestock	EuroFAANG stand/flyers/poster/banner EuroFAANG slides
WCGALP 2022	3-8 July 2022	Rotterdam, Netherlands	Mainly agri/ livestock, but fish also represented	A joint EuroFAANG session is planned.
ISAG	July 25-30 2021	Cape Town, South Africa	Agri and aqua	FAANG DCC workshop / Global FAANG- BovReg
IQGC 2021	mid-June 2021, postponed, new timing?	Brisbane, Australia	Agriculture, human health, natural species and evolutionary genetics	flyers, one joint presentation / poster with all 3 projects?
PAG	May 2021	San Diego, USA	Plant and animal	FAANG pre-meeting afternoon on Friday prior to PAG EMBL-EBI will have a stand in 2022 (2021 is uncertain)
ASAS	mid-late July, 2021/2022	Kentucky/ California	Agri	
SMBE	2021	New Zealand	Human, bacteria, molecular	flyers, one joint presentation / poster with all 3 projects?
AGBT-A	2021	Florida, USA	genome science and technology conference (not species related?)	

#### 4.9 Newsletters

- 2-3 special issue newsletters could be dedicated to the cluster by projects.

#### 4.10 Additional assets

- EuroFAANG slides (1-3 slides describing the three projects. These can be used by partners in any presentations) EuroFAANG flyer
- Policy briefs
- Joint e-book of abstracts at the end of the projects – to be discussed at a later stage

#### 4.11 Training

Name	Date	Location	Organiser
<b>Bioinformatics of FAANG Assays</b>	TBC	Virtual	AQUA-FAANG, EMBL-EBI
<b>Bioinformatics</b>	October 2020		CRG, BovReg
<b>Wet lab</b>	Winter 2021		UniLim, BovReg
<b>Bioinformatics processing of GENE-SWitCH data</b>	2022		GENE-SWitCH, EMBL-EBI



<b>using GENE-SWitCH pipelines</b>			
<b>Genomic evaluation</b>	2023		BovReg
<b>Utilising GENE-SWitCH data, pipelines, track hubs and visualisations</b>	2023	Webinar	GENE-SWitCH, EMBL-EBI
<b>Exploitation of ENSEMBL</b>	End 2022 – beginning 2023		AQUA-FAANG
<b>E-learning series to enhance industry-specific exploitation</b>	Late 2022 – early 2023	Webinar	AQUA-FAANG/GENE-SWitCH could have 1 webinar to joint dissemination of 3 projects, EFFAB



## 5 Training Strategy

GENE-SWitCH will support the capacity building of stakeholders, namely research institutes and industry, by offering tailored training workshops and events. To build and enhance knowledge in a wide range of stakeholder groups, including those in developing countries, an interactive webinar mini-series (minimum 3) with global coverage will be co-organized by EFFAB and EAAP (M38-42), focussing on the value of genetic information – including richly annotated high-quality genome sequences. Moreover, the series of lectures (~3) will be published on YouTube and these will be linked to the GENE-SWitCH website.

In close collaboration with WP6, the FAANG Data Coordination Centre (DCC) will develop specific web portal presentations that disseminate key GENE-SWitCH findings and datasets to the community and to a more general audience. EMBL will contribute to the activities of WP6 as given below (Table 12). This will involve supporting joint training programmes with other SFS30 projects drawing upon the expertise of the experts in all the work packages. Training workshops will be targeted at major livestock conferences and events or held at EMBL's state-of-the-art computational training suites. GENE-SWitCH will connect with the largest possible audience by offering on-demand training through webinars and shorter instructional videos and documentation.

*Table 12 Training Plan*

Partner	WP	Estimated Date	Location	Topic	Language	Target Group
EMBL	WP3	25-27 February 2020	Hinxton, UK	FAANG shared workshop	English	Researchers, bioinformaticians
EMBL	WP3	2021	EMBL-EBI training suites or relevant EU conference	FAANG DCC: Submitting FAANG data relevant to GENE-SWitCH	English	Researchers/ Scientists, Young Researchers and Technicians
EMBL	WP3	2022	EMBL-EBI training suites or relevant EU conference	Bioinformatics processing of GENE-SWitCH data using GENE-SWitCH pipelines	English	Researchers/ Scientists, Young Researchers and Technicians
EMBL	WP3	2023	Webinar	Utilising GENE-SWitCH data, pipelines, track hubs and visualizations	English	Researchers/ Scientists, Young Researchers and Technicians

Training activities of GENE-SWitCH will be updated with the provided information from the partners at the beginning of each year.

### 5.1 FAANG shared workshop

The [FAANG shared workshop](#) is a collaboration between the BBSRC funded FAANG Data Coordination Centre and the H2020 funded AQUA-FAANG project.

The meeting is held between 25th-27th February at the Rosalind Franklin Pavilion, Wellcome Genome Campus Conference Centre, Hinxton, UK. It is attended by 10-20 members from each of the AQUA-FAANG, BovReg, and GENE-SWitCH projects. It was focussing primarily on researchers working on comparative analyses and analysis pipelines' development. The meeting benefited from the input from EU H2020 projects' coordinators, data production work packages, training work packages and other bioinformaticians.

The aim of the workshop was to establish coordination (and potentially cross project working groups) on plans for cross project (species) comparative analysis, standardised metadata, standardised FAANG analysis workflows/pipelines, planning for future shared dissemination, training and management meetings, and act as an excellent opportunity for cross project networking.



## 6 Evaluation

### 6.1 Evaluation plan

In order to assess the impact created by the implemented communication and dissemination efforts within the project and to improve future efforts, it is important to evaluate the use of communication and dissemination means. When planning the evaluation, timing is important so that the evaluation results could feed into decisions on design, renewal, modification or suspension of activities [1] GENE-SWitCH evaluation strategy consists of 3 interim evaluations (M18, M31 and M42) and a final/impact evaluation (M48). GENE-SWitCH evaluation strategy is based on the evaluation toolkit for communication activities prepared by DG Communication ([https://ec.europa.eu/info/sites/info/files/communication-evaluation-toolkit\\_en.pdf](https://ec.europa.eu/info/sites/info/files/communication-evaluation-toolkit_en.pdf)).

#### 6.1.1 Interim evaluations

Interim evaluations examine the implementation, or the way activities roll out as well as the efficiency of the communication intervention. Interim evaluations use the results of monitoring to make judgements on the success of the activity and to adjust it where necessary. This is one of the most common forms of evaluation in communication activities. Interim evaluation is mostly focused on inputs and outputs and in some cases outtakes (what activities are undertaken, who are reached by the activities what happens as a direct effect) [1]. Interim evaluations will be carried out during periodic reporting periods.

Interim evaluation can provide management-oriented information on issues such as:

- Types and number of communication tools developed, and disseminated
- Relevance of, and demand for, each type of communication tool and message
- Web site traffic, including services that assess hits to a site, visitor navigation patterns, who visited and how long they stayed
- Earned media coverage and media content
- Target audience outreach
- Initial reactions to communication activities

#### 6.1.2 Final/impact evaluation

Final/impact evaluation looks at the implementation of the whole of the communication activities in order to draw conclusions about the results and effectiveness of a communication intervention. The evaluations should consider; *relevance*, *efficiency*, and *coherence*. This type of evaluation examines the outcomes, which usually means its effects on its target audience(s). [1].

#### 6.1.3 Monitoring

For an accurate monitoring system, the achievement of the objectives shall be monitored by performance indicators for each activity.

*Table 13 Evaluation tools for the communication and dissemination activities*

ACTIVITY	EVALUATION TOOL
<b>Social Media</b>	The number of interactions (views, mentions, re-tweets, etc)
<b>Website</b>	Google Analytics will be used to evaluate the number of new visits, average time per visit, number of visits to multiple pages, etc.
<b>Newsletter</b>	MailChimp offers an analytical tool to keep track on the number of people opening the newsletter, direct feedback, number of downloads
<b>Brochures, flyers and other online materials</b>	Number of downloads and visualizations, direct feedback
<b>Stakeholder E-Platform</b>	Number of participants, visits, feedbacks and information exchanges
<b>Conferences and events</b>	Number of participants to the meeting, Survey after the conference or event
<b>Peer-reviewed Scientific papers</b>	Number of citations
<b>Workshops and training sessions</b>	Number of participants, Surveys after the workshop or training are spread among the participants in order to receive feedback





#### 6.1.4 Targeted audience during the project lifetime

In order to be able to measure the impact of the communication activities, there are a set of identified key performance indicators (KIPs). These key indicators are based the reach of audience by different channels of the project, namely the website and social media channels. The targeted audience for the total duration of the project for GENE-SWitCH communication activities are given as below.

Communication measures	Key Performance indicators (KIPs)
<b>Online tools</b>	
Project website	1.000 users
Twitter	350 followers
Facebook	100 followers
LinkedIn	100 followers
Research Gate	100 followers
YouTube	2.000 views
Project newsletters (8 issues)	400 readers in total
Video	10 videos
Press releases	3 press releases
Popular on-line magazines	5 popular articles
<b>Off line tools</b>	
Project introductory brochure	1 brochure with a total of 100 views
Poster/Banner	1 banner & 1 poster
Fact Sheets	2 fact sheets with a total of 500 views
Results brochure	1 brochure with a total of 500 views
Profile raising events	5 stakeholder event participation with a total 500 participants
<b>Dissemination measures</b>	
Peer reviewed publications	15 articles
E-book of abstracts	1 e-book of abstracts containing indicatively 15 abstracts
Policy brief	1 policy briefs
Participation to workshops and conferences	Participation to 30 conferences with a total 2.000 participants
Organization of conference sessions	240 scientific participants in 2 conference sessions
Organization of the final conference	150 participants

#### 6.1.5 Evaluation results of RP1 activities

The development and launch of GENE-SWitCH social media channels in Twitter (<https://twitter.com/GeneSwitch>), LinkedIn (<https://www.linkedin.com/company/gene-switch/>), Facebook (<https://www.facebook.com/GENESWitCHEU/>), ResearchGate (<https://www.researchgate.net/project/GENE-SWitCH>) and YouTube ([https://www.youtube.com/channel/UCiBRC\\_rYhVvxyFvLveZRAHg](https://www.youtube.com/channel/UCiBRC_rYhVvxyFvLveZRAHg)) was completed in July 2019 (M1) in order to share project news, events and progress with a much higher impact and by communication of project and its activities regularly through these online channels. GENE-SWitCH social media accounts have been used actively in RP1 to share information. They are one of the main channels used for promoting and communicating project activities and events.





The development and launch of a project website (<https://gene-switch.eu>) providing information on different levels of detail targeting different audience was completed in December 2019 (MS23, M6). Project website is the main portal for the external actors and stakeholders to get first-hand information on project, its structure, partners, objectives, expected impacts and results. It aims to provide full summary of the project supported by differentiated content for different stakeholder groups. It also provides links to the Knowledge Exchange Platform (KEP) and to different social media channels used by GENE-SWitCH. The website also provides a media kit for different actors including brochures, fact sheets, press releases, newsletters and audio-visual materials.

The design and contenting of a project introductory brochure targeting pig and poultry breeding companies, feed companies and researchers was completed in June 2020 (M12). It has been emailed to KEP and the project partners. It is also shared through all social media channels and website of GENE-SWitCH. It has been viewed 264 times.

The design and contenting of the first digital newsletter has been completed and the newsletter has been published in this RP (M10). It has been shared through GENE-SWitCH channels, website and emailed to subscribers and partners. It has been reached to a total of 651 readers.

Two press releases about the starting of the GEN-SWitCH project was prepared and these were published on IRTA's website (M2) and in EAAP's newsletter (M3). A fact sheet addressing the expected impact of GENE-SWitCH project on United Nation's Sustainable Development Goals (SDGs) and the Green Deal topics was prepared (M18). The GENE-SWitCH fact sheet has been distributed online and reached to a total of 112 stakeholders.

The promotion of GENE-SWitCH to the pig and poultry breeding sector through a meet-up, presentation during the EFFAB and FABRE-TP Annual meetings in 2019 and 2020 has been realized. However due to Covid-19 the EFFAB and FABRE-TP Annual Meeting was held virtually, and interactive session preparation was postponed to post-Covid period. GENE-SWitCH project was introduced to approximately 30 animal breeding company representatives from Europe.

Communication measures			
Tools	Key Performance Indicators (KIPs)	Period 1 achievements	Achievement rate, %
<b>Online tools</b>			
Project website	1.000 users	381 users	38%
Twitter	350 followers	185 followers	53%
Facebook	100 followers	25 followers	25%
LinkedIn	100 followers	49 followers	49%
Research Gate	100 followers	32 followers	32%
YouTube	2.000 views	192 views	10%
Project newsletters (8 issues)	400 readers in total	68 readers	17%
Audio-visual materials	10 videos	1 video	10%
Press releases	8 press releases	4 Press Releases	50%
Popular on-line magazines	5 popular articles	None	
<b>Off line tools</b>			
Project introductory brochure	1 brochure with a total of 60 views	34 views	57%
Poster/Banner	1 banner & 1 poster	1 poster	50%



Fact Sheets	2 fact sheets with a total of 200 views	94 views	47%
Results brochure	1 brochure with a total of 500 views		
Profile raising events	5 stakeholder events participation with a total 500 participants		
<b>Dissemination measures</b>			
Peer reviewed publications	15 articles	5 articles	33%
E-book of abstracts	1 e-book of abstracts containing indicatively 45 abstracts		
Policy brief	4 policy briefs		
Participation to workshops and conferences	Participation to 30 conferences with a total 3.000 participants	Participation to 8 international conferences with a total of 1700 participants	27%, 57%
Organization of conference sessions	240 scientific participants in 4 conference sessions	80 participants in 1 workshop	30%, 25%
Organization of the final conference	150 participants		



## 7 Annual Outreach, Dissemination and Training plans

This chapter summarizes the activities planned for each year of the GENE-SWitCH project. Upon completion of the first year, it will be updated with each subsequent year in order to properly monitor and evaluate the progress.

### 7.1.1 Year 1 (01/07/2019-30/06/2020)

Table 14: Deliverables and milestones of WP6 for year 1

DELIVERABLES / MILESTONES	RESULTS
<b>D6.1 Outreach, dissemination and training plan</b>	D6.1 will be used to implement and evaluate the progress of the activities targeted to relevant stakeholders.
<b>MS22 Project identity package</b>	Project identity and templates prepared and communicated to all project partners
<b>MS23 Project website</b>	Project website published

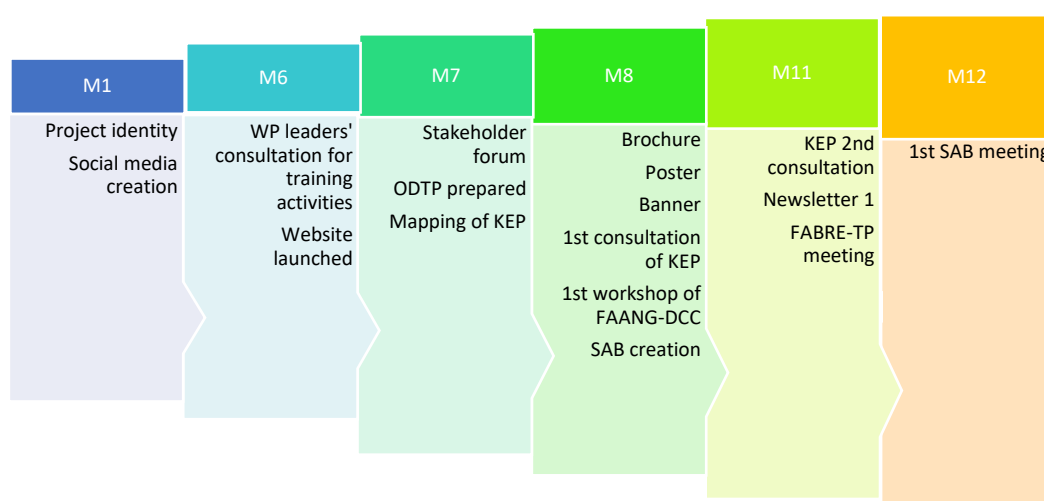


Figure 9 Timeline of outreach and dissemination activities and tools for year 1

### 7.1.2 Year 2 (01/07/2020-30/06/2021)

Table 15: Deliverables and milestones of WP6 for year 2

DELIVERABLES / MILESTONES	RESULTS
<b>D6.1 Outreach, dissemination and training plan (M18)</b>	D6.1 will be updated to cover the recent changes in the implementation of the communication strategy due to Covid-19 restrictions and progress of the project.
<b>D6.4 Knowledge Exchange Platform recommendations report</b>	The recommendations from the first SAB consultation will be summarized.
<b>D6.5 Report of communication materials</b>	Reporting the communication materials up to M18.

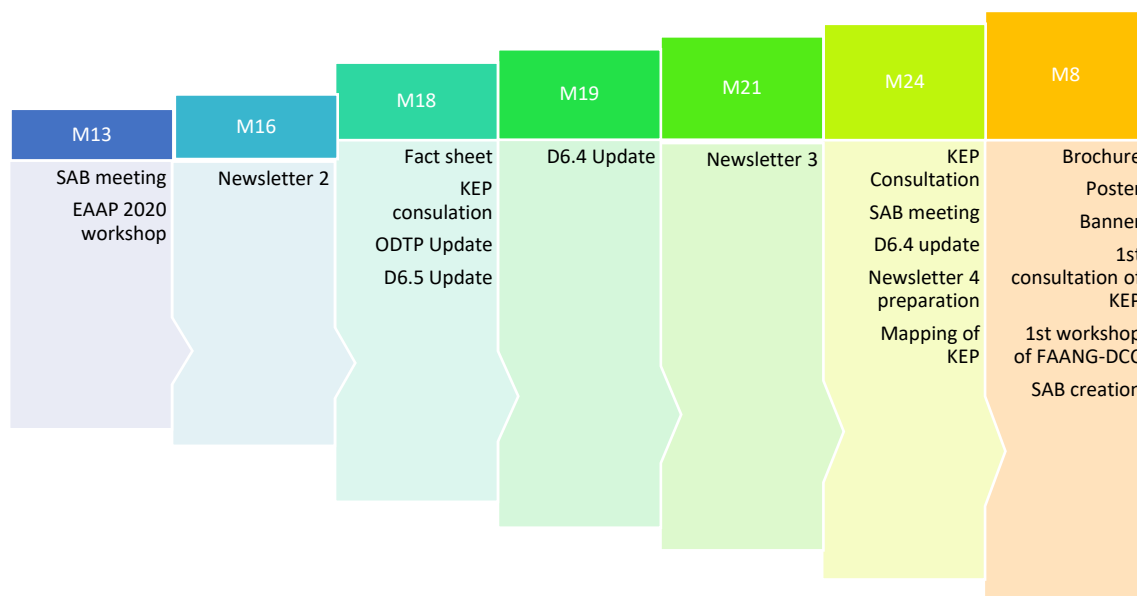


Figure 10 Timeline of outreach and dissemination activities and tools for year 2



## 8 Expected Outcome & Impact

The main purpose of the outreach, dissemination and training plan is to ensure the engagement and knowledge exchange with the stakeholders throughout the animal production chain, from breeders to consumers, enabling an increased understanding of the value of genetic information produced under the GENE-SWitCH project. The ODTP aims to maximize the expected impacts of the project through making use of various forms of dissemination materials and tools targeting different audiences as given in Figure 7. The summary of results and implications per expected impact is given in the table below (Table 15).

The GENE-SWitCH Outreach, dissemination and training plan proposed in this document will be updated periodically throughout the lifetime of the project.



Table 16 GENE-SWitCH key outreach objectives, tools and associated impact per target audience

	Audience	Impact	Tools
PUBLIC TO FACE	Partners, multi-level Knowledge Exchange Platform (KEP)	Contribute to the multi-actor approach aiming at co-designing the technological breakthroughs, to increase their impact	Kick-off meeting organised as an interactive meeting with KEP members to collect initial views
	KEP, SAB	Collecting views on specific needs and concerns, feedback on the project results to increase project outcomes' applicability	Bi-annual consultation to collect specific stakeholders' views
	Academics, researchers	Spread the GENE-SWitCH results and methodologies into the scientific community	Participation to international scientific congresses
	All stakeholders, general public, policy makers	Communicate about GENE-SWitCH scope, research and outputs to ensure awareness and increased uptake	Participation to public events
	Young researchers and technicians from industry and academia	Communicate and disseminate GENE-SWitCH to ensure the uptake of the results and outputs	Training in Bioinformatics and training workshops organised at major conferences
	Scientific and industrial stakeholders	Disseminate GENE-SWitCH outputs and methodologies	Final GENE-SWitCH Conference
PUBLICATIONS	Academics, researchers	Spread the GENE-SWitCH results and methodologies into the scientific community	Scientific papers published in international (ISI ranked) journal. Open-access journal will be given priority.
	All types of audience	Inform on GENE-SWitCH philosophy, results and methodologies to improve acceptance by the society at large of breeding strategies that utilise production efficiency related traits and genomic tools toward balanced breeding goals	Publications and communications in general public journals and press, magazines, exhibition where stakeholders are participating
DIGITAL MEDIA	Academics, business, policy makers, general public	Search engines will pick up these pages	Website (with links to all partners, SAB, and the EU H2020 site)
	General audience, industry stakeholders, policy makers	Enhance the understanding of the value of genetic information	Video material with fundamental and innovative principles and techniques explained in lay-man terms
	Academics, business, policy makers, industry stakeholders and the public sector	Build and manage the GENE-SWitCH community, future users of innovative technologies issued from the project	Newsletter generated every six months from the activities, achievements and up-to-date results
	Online followers and social media that could include all types of audience	Build and enhance knowledge in a wide range of stakeholder groups. Participants will be able to provide feedback on the project results and interject their own priorities	Interactive webinars focusing on the value of genetic information
	Partners only	Increase the knowledge, data and tools exchanges between partners	Internal collaborative platform, to share resources internally
	Policy makers, industrial stakeholders, young scientists, educators	Stimulate reflection and constructive dialogue, education.	Lectures published (e.g. YouTube)
	Policy makers, scientists, businesses, breeders	Cost-effective communication towards a large group of interested audiences	GENE-SWitCH e-book of abstracts to be further distributed using the partners' and KEP's communication channels
	General audience, stakeholders, businesses	Wide communication towards a large community of interest	Social Networks (LinkedIn, Facebook, Twitter, YouTube)



## 9 Glossary

### *List of acronyms and abbreviations*

Abbreviation	Description
AM	Annual Meeting
BBSRC	Biotechnology and Biological Sciences Research Council
COST	European Cooperation in Science and Technology
DCC	Data Coordination Centre
EC	European Commission
EIP-AGRI	Agricultural European Innovation Partnership
EU	European Union
FAANG	Functional Annotation of ANimal Genomes
FABRE-TP	Farm Animal Breeding & Reproduction Technology Platform
FM	Final Meeting
KEP	Knowledge Exchange Platform
KoM	Kick Off Meeting
MS	Milestones
NBT	New Breeding Techniques
NGO	Non-governmental organizations
PAG	Plant & Animal Genome Conference
R&I	Research and Innovation
SAB	Stakeholder Advisory Board
WCGALP	World Congress on Genetics Applied to Livestock Production
WP	Work Package