



D7.1

Roadmap for industry interactions and establishment of industry involvement in EU-OPENSREEN's activities

for

H2020-INFRADEV-2018-1

(Development and long-term sustainability of new pan-European research infrastructures)

Research and Innovation Action (RIA)

Action Acronym:

EU-OPENSREEN-DRIVE

Action Full Title:

“Ensuring long-term sustainability of excellence in chemical biology within Europe and beyond”

Grant Agreement No.: 823893

Dissemination level: confidential, only for members of the Consortium (including the Commission Services)

Document Properties: v1

Deliverable	Task 7.1: Establish an Industry Liaison Office (ILO) MS7.1 -Title: Industrial Associate Liaison Office (IALO) established (Task 7.1 meets objectives 07.1 and 07.2.)
Partner responsible	USC, UiO
Author(s)	Beatriz Noya, José Brea and María Isabel Loza (USC)

CONTENTS

1	Definitions	3
2	Introduction	4
3	Aims.....	4
4	Roadmap definition for industry interactions.....	5
4.1	<i>Establishment of an Industry Liason Office (ILO)</i>	6
4.2	<i>Mechanisms for facilitating knowledge and technology transfer</i>	7
4.3	<i>Industry involvement in ERIC operations</i>	7
4.4	Link the ILO to the Industry Associate Group (IAG).....	8
4.5	<i>Accelerate European SMEs</i>	8
4.6	<i>Promotion of open access of EU-OPENSREEN and its recognition in the community</i>	9
4.7	<i>Training in best practices in knowledge transfer</i>	9
4.8	<i>Developing an innovation management plan</i>	9



1 Definitions

Partners (P) of the EU-OPENSREEN-DRIVE (EU-OS-DRIVE) consortium are referred to herein according to the following codes:

P1/ **EU-OS** - EUROPEAN INFRASTRUCTURE OF OPEN SCREENING PLATFORMS FOR CHEMICAL BIOLOGY EUROPEAN RESEARCH INFRASTRUCTURE CONSORTIUM (EU-OPENSREEN ERIC). **Coordinator**

P2/ **IMG** - USTAV MOLEKULARNI GENETIKY AKADEMIE VED CESKE REPUBLIKY VEREJNA VYZKUMNA INSTITUTE

P3/ **IMTM** - UNIVERZITA PALACKEHO V OLOMOUCI

P4/ **HZI** - HELMHOLTZ-ZENTRUM FUER INFEKTIONSFORSCHUNG GMBH

P5/ **IME** - FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.

P6/ **MEDI** - FUNDACION CENTRO DE EXCELENCIA EN INVESTIGACION DE MEDICAMENTOS INNOVADORES EN ANDALUCIA

P7/ **CIPF** - FUNDACION DE LA COMUNIDAD VALENCIANA CENTRO DE INVESTIGACION PRINCIPE FELIPE

P8/ **USC** - UNIVERSIDAD DE SANTIAGO DE COMPOSTELA

P9/ **UH** - HELSINGIN YLIOPISTO

P10/ **UiB** - UNIVERSITETET I BERGEN

P11/ **UiT** - UNIVERSITETET I TROMSOE

P12/ **UiO** - UNIVERSITETET I OSLO

P13/ **SIN**- SINTEF AS

P14/ **IMB** - INSTYTUT BIOLOGII MEDYCZNEJ POLSKIEJ AKADEMII NAUK

P15/ **IBCH PAS** - INSTYTUT CHEMII BIOORGANICZNEJ POLSKIEJ AKADEMII NAUK

P16/ **MU** - Masarykova univerzita

P17/ **DTU** - DANMARKS TEKNISKE UNIVERSITET

P18/ **CSIC** - AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS

P19/ **OSI** - LATVIJAS ORGANISKAS SINTEZES INSTITUTS

P20/ **IBB** - INSTYTUT BIOCHEMII I BIOFIZYKI POLSKIEJ AKADEMII NAUK

P21/ **IMIM** - FUNDACIO INSTITUT MAR D INVESTIGACIONS MEDIQUES IMIM

P22/ **CSC** - Csc-Tieteen Tietotekniikan Keskus Oy

P23/ **EMBL** - European Molecular Biology Laboratory

P24/ **MUAS** - Hochschule Mannheim

P25/ **TUM** - Technische Universitaet München

P26/ **NCSR** - National Center For Scientific Research "Demokritos"

P27/ **KI** - Karolinska Institutet

P28/ **IBMC** - Instituto De Biologia Molecular E Celular-Ibmc



P29/ **LUMC** - Academisch Ziekenhuis Leiden
P30/ **G-INCPM** - Weizmann Institute Of Science
P31/ **RCNS-HAS** - Magyar Tudományos Akademia Termeszettudományi Kutatóközpont
P32/ **ICT** - Institutul De Chimie Timisoara Al Academiei Romane
P33/ **EPFL** - Ecole Polytechnique Federale De Lausanne
P34/ **FVB-FMP** - Forschungsverbund Berlin EV

Grant Agreement: the agreement signed between the beneficiaries and the EU-OS for the undertaking of the EU-OPENSSCREEN-DRIVE project.

- **Project:** The sum of all activities carried out in the framework of the Grant Agreement.
- **Work Plan:** Schedule of tasks, deliverables, milestones, dates and responsibilities corresponding to the complete work to be carried out in the framework of the Grant Agreement.
- **Consortium:** The EU-OPENSSCREEN-DRIVE (EU-OS-DRIVE) Consortium composed of the above-mentioned legal entities.
- **Project Agreement:** Agreement concluded amongst EU-OPENSSCREEN-DRIVE partners for the implementation and execution of the Grant Agreement. Such an agreement shall not affect the parties' obligations to the Community and/or any other arising from the Grant Agreement.

2 Introduction

As stated in the EU-OS-DRIVE project proposal, for guaranteeing the long-term sustainability of EU-OS it is mandatory to engage industry instead of acting solely as a service-providing infrastructure. Thus, from the EU it is encouraged to identify industry needs and tailor user policies and practices for satisfying these needs. This can be achieved by attracting high-tech companies and specialized facilities by acting as innovation hubs in each region for upskilling the research infrastructure staff and user communities (see https://ec.europa.eu/research/infrastructures/pdf/swd-infrastructures_323-2017.pdf and https://ec.europa.eu/research/infrastructures/pdf/esfri/publications/esfri_scripta_vol2.pdf).

Therefore, through the EU-OS-DRIVE project, EU-OPENSSCREEN will establish itself as an innovation hub for the pharmaceutical and biotech sector development, specifically in drug discovery, using a model which is based on open innovation to drive business generation. Becoming such an innovation hub will be achieved by developing collaborations with industry and binding together public and private common interests, thus contributing to an open innovation ecosystem in drug discovery to create the new generation of knowledge/technology for efficient models of Public-Private-Partnerships (PPPs).

3 Aims

The objectives of WP7 are:

O7.1 Foster communication and engagement with industry



- O7.2 Establish continuous exchange with industry stakeholders
- O7.3 Enhance EU-OS's innovation management
- O7.4 Communicate best-practice in knowledge transfer
- O7.5 Promote joint projects with industry on specific scientific developments

4 Roadmap definition for industry interactions

The roadmap is devised as a continuously evolving model for collaborations based on the reality of this changing era of PPP in the open innovation landscape. Thus, we aim to implement the connection with local nodes (national and local networks or consortia) acting as EU-OPENSREEN innovation hubs: (https://ec.europa.eu/research/infrastructures/pdf/swd-infrastructures_323-2017.pdf). The roadmap aims at executing co-developments with the industry that may serve as a Proof-of-Concept for exemplifying the usefulness of EU-OPENSREEN for industry engagement (https://ec.europa.eu/research/infrastructures/pdf/esfri/publications/esfri_scripta_vol2.pdf). The current roadmap is depicted in **Fig. 1** and explained below. This roadmap will be redefined during the project execution by engaging more industrial partners and including their inputs.

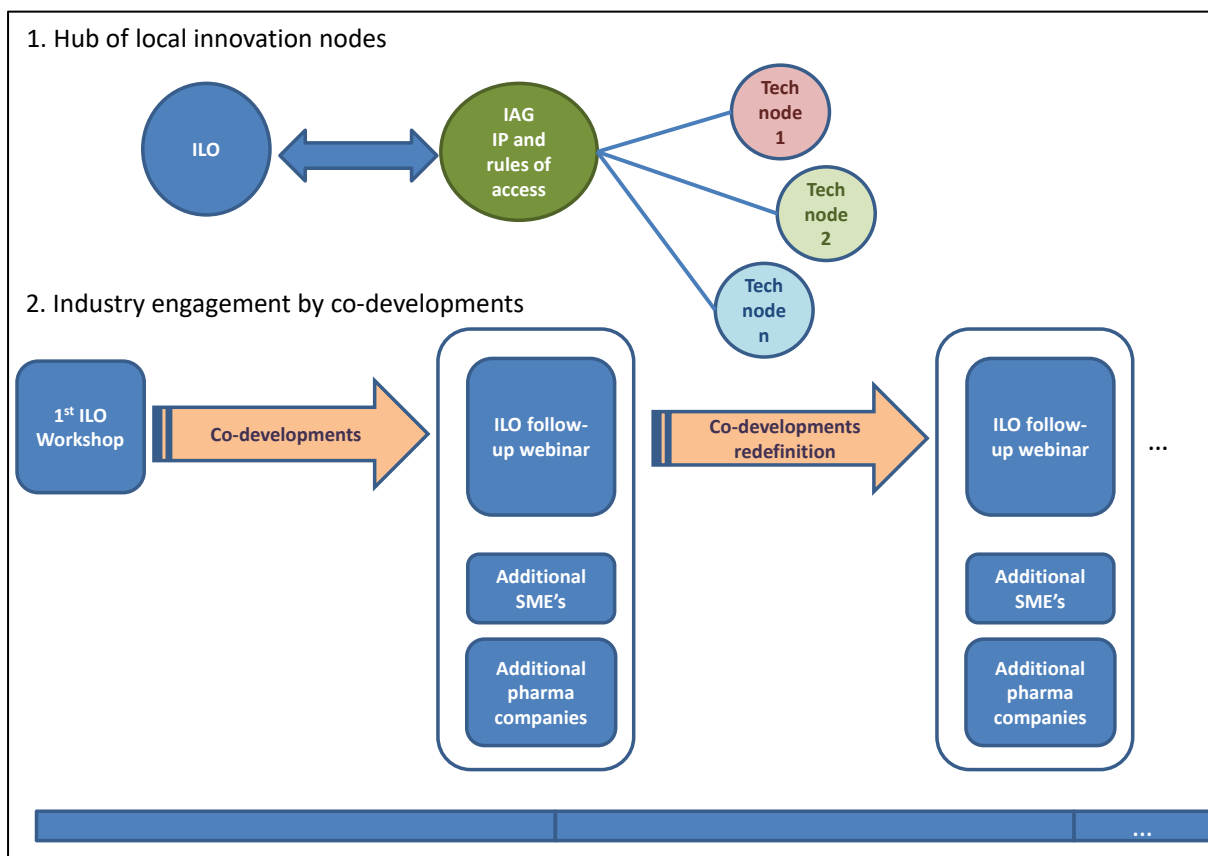


Fig. 1 Proposed Roadmap for industry interactions

4.1 Establishment of an Industry Liaison Office (ILO)

In order to facilitate becoming an innovation hub, we constituted a shared 'Industry Liaison Office' (ILO) comprising multiple EU-OS partner sites as well as industry representatives. The aim of the ILO is to establish a clear communication channel with industry (MS7.1) by facilitating to achieve objectives O7.1 to O7.5.

The feedback provided by those representatives of selected industrial organizations that constitute the ILO, will be part of the input for the new ERIC business plan for 2023-27.

It is expected that the partners of the ILO will be increasing in the first follow-up webinar by including SMEs as well as additional pharmaceutical companies interested in novel co-developments (see 4.3).

The industrial partners that have agreed to be a member of the ILO, and start working in the first co-developments, are those in the table below:

Company	Name of person contacted	Specialization	Accepted
AstraZeneca	Thomas Lundbäck	CETSA and drug screening	Yes
Almirall	Jorge Beleta	Drug discovery and development	Yes
Esteve	José Miguel Vela	Drug discovery and development	Yes
Promega	Gijs Jochems	Luciferase and NanoBRET assays	Yes
PerkinElmer	Volker Eckelt	High content imaging and detection methodologies	Yes
GSK	<i>To be defined</i>	Open Innovation	
GE-Healthcare	<i>To be defined</i>	Surface plasmon resonance and imaging	
Eli Lilly	María José Lallena	Drug discovery and development	Yes
Johnson&Johnson	<i>To be defined</i>	Drug discovery and development	

Thomas Lundbäck is the associate director of biopharmaceuticals R&D in AstraZeneca. He has a strong expertise in CETSA assay development and screening both from the public and private perspective. His role in the ILO is envisaged as that of an advisor for assay development and screening following industrial standard procedures, as well as for the development of CETSA assays as secondary screening approaches.

Jorge Beleta is the director of R&D alliances of Almirall, having a vast track record in drug development in the pharmaceutical industry. His role in the ILO is envisaged as that of an advisor for assay development and screening following industrial standard procedures, as well as for establishing strategic partnerships between industry and partner sites.

José Miguel Vela is the director of drug discovery and preclinical development at Esteve. He has a vast track record in drug development in the pharmaceutical industry. His role in the ILO is envisaged as that of an advisor for assay development and screening following industrial standard procedures, as well as for establishing strategic partnerships between industry and partner sites.



Gijs Jochem is the general manager of Promega Biotech Iberica with a track record of business development in assay/reagent/equipment provider companies. His role in the ILO is envisaged as member of an observatory for new assay co-developments of novel technologies and products within a public-private partnership, that would increase the EU-OPENSSCREEN capabilities in the future.

Volker Eckelt is the portfolio manager of multi-mode detection at PerkinElmer with experience in novel product development and developing strategies for their implementation. His role in the ILO is envisaged as member of an observatory for novel assay co-development, mainly focused in novel approaches for CETSA development, fragment screening or High Content Imaging. These novel products/technologies coming from the private-public partnership would increase the EU-OPENSSCREEN capabilities in the future.

4.2 Mechanisms for facilitating knowledge and technology transfer

The roadmap contemplates a first workshop of the ILO in order to agree the co-developments to be carried out between companies and partner sites. These co-developments will be periodically reviewed by means of webinars for agreeing their continuation, or redefining them, in order to meet industry requirements. A subset of the ILO will constitute the Industry Associated Group which will be focused in the implementation and execution of the co-developments working the local/technological nodes (see 4.4).

4.3 Industry involvement in ERIC operations

Industry will be involved by co-developing programs with the EU-OPENSSCREEN partners. There are two different models of co-development programs:

- 1.- Co-developments with pharmaceutical companies: These are devoted to develop innovative methodologies that provide benefits in compound screening and/or hit identification processes.
- 2.- Co-developments with reagents/instrumentation providers: These programs are devoted to complete the validation of novel technologies developed by these companies by screening the EU-OPENSSCREEN collection.

In DRIVE it was already agreed to run several co-development programs during the project duration as a proof-of-concept of the capabilities of the DRIVE project consortium. Further co-developments will be agreed by the ILO in the periodic follow-up webinars. In the future these co-developments will be financed by the industries involved, the EU-OS partner sites and their users.

The co-development programs currently agreed are:

- NanoBRET assays for measuring intracellular kinase activity in living cells. It will be co-developed with Promega that will develop and provide NanoBRET kits to be tested by employing the EU-OS library.
- CETSA assays for measuring ligand binding in cells lysates, living cells or tissues, by means of thermal stabilization of proteins by ligands. It will be co-developed with



AstraZeneca that will afford their vast expertise in this technology and PerkinElmer, that will provide the reagents needed for measuring the protein-ligand binding.

- MicroElectrode Array (MEA) for phenotypic characterization of neurons by measuring their electrical activity. These assays will be co-developed with Esteve, that will participate affording appropriate neuronal models and their expertise in these assays.
- High-throughput phospho-flow cytometry that enables mapping cellular signaling events at the single-cell level. It will be co-developed with GSK for immune phenotyping of control and patient samples.
- Microchip Validation for cellular assays with the company Aquarray.

4.4 Link the ILO to the Industry Associate Group (IAG)

The IAG will be constituted in February 2020 and it will define the IP and access rules between EU-OS and industrial partners. It will manage the work of the local nodes focused on a given technology. This will be carried out in collaboration with the ILO, through a continuous feedback about the status of the co-development programs. The IAG will act as a hub for local partnerships that will be directed to EU-OPENSSCREEN for the co-development of the local programs. This will allow enriching the already existing partnership by accessing an innovative environment that would yield novel products and technologies. An example of the former is the existence in Spain of two thematic networks at local/Galician and national/Spanish levels, REGID and REDEFAR respectively, who have the support of the corresponding public administrations (i.e., Galician and Spanish administrations). REDEFAR was the germ of an innovation community in Spain involving more than 140 public and private agents. These conform a map of coordinated capabilities and expertise covering all areas of drug discovery in Spain, allowing the development of synergies and promoting an increased participation and visibility of Spain in internal and external initiatives, as is now the opportunity represented by the ILO at EU-OS.

EU-OPENSSCREEN will facilitate the interaction between industrial partners and the partner sites belonging to the IAG that are offering technologies and technical expertise which are not available within companies.

4.5 Accelerate European SMEs

It is expected that EU-OPENSSCREEN will act as an accelerator for European SMEs by acting as the gateway to novel assays and tools that they cannot otherwise access. In this way the SMEs' involvement in the ILO is expected, in order to agree with them those co-development programs in which they may have an interest and to review with the IAG the terms and conditions of such collaboration. The ILO periodic webinars will allow reacting as quickly and flexibly as possible by translating into actions / measures the feedback that these particular stakeholders transfer to us.



4.6 Promotion of open access of EU-OPENSREEN and its recognition in the community

The ILO will strongly promote the open access character of EU-OS and its recognition in the community, from local to national levels, through the organization and participation in webinars and workshops, for our peers in the scientific-academic and industry communities; informative and/or open doors days for the general public.

4.7 Training in best practices in knowledge transfer

This task will be carried out in coordination with WP8 in order to implement a course for knowledge transfer. This course will involve TTOs from the partner sites, as well as, industry representatives with a vast expertise in knowledge and technology transfer. It will be open to the whole community through an online webinar.

4.8 Developing an innovation management plan

The ILO will participate in developing an innovation management plan after analyzing the factors in the innovation ecosystem and the results of a SWOT analysis of the users' feedback. This plan will allow the development of an updated business plan based on the proposed scheme depicted in **Fig. 2**.

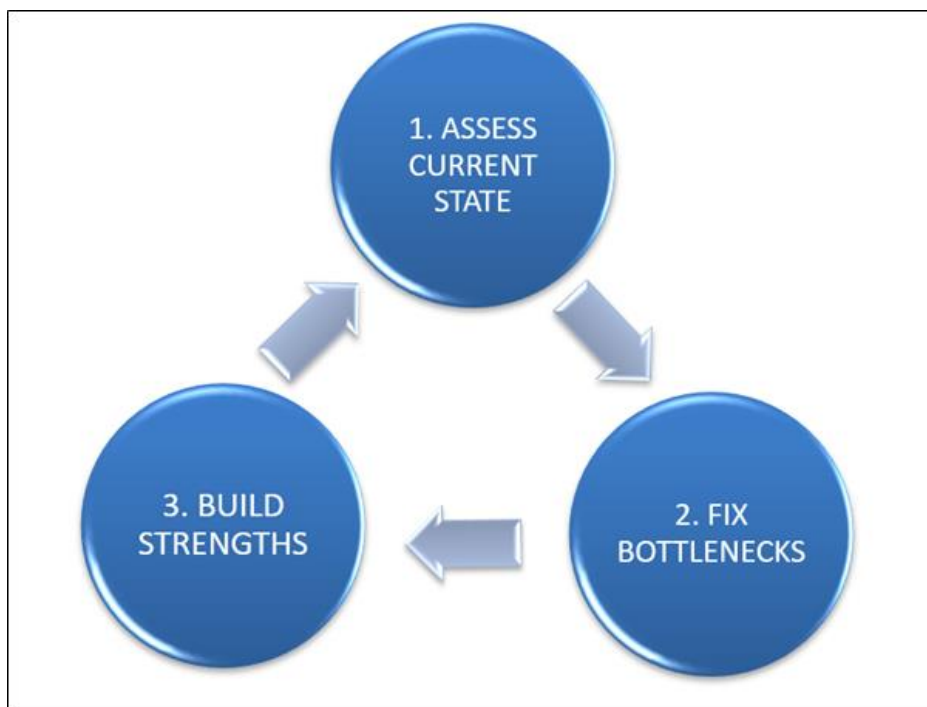


Fig. 2 Proposed Scheme for developing the innovation management plan

The starting point will be to assess the current state and then proceed to identifying the apparent bottlenecks in the organization's innovation work. The next step will be to focusing

on building our capabilities in different key aspects such as strategy actions and /or capabilities meaning different abilities and resources the organization has for creating and managing innovation.

