



Recent advances on the European research infrastructure MIRRI and its involvement in European projects

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European Strategy Forum on Research Infrastructures

The European Strategy Forum for Research Infrastructures (ESFRI) was established in 2002 to support a coherent and strategy-led approach to policy-making on research infrastructures in Europe with goals to:

- Facilitate multilateral initiatives leading to the better use and development of research infrastructures, at the EU and international level
- Develop pan-European structures to drive innovation to provide the resources, technologies and services as the basic tools necessary to underpin research
- o Overcome the limits due to fragmentation of individual policies

MIRRI was included in the 2010 ESFRI roadmap







Why MIRRI ?

ESFRI European Strategy Forum on Research Infrastructures

EU initiative on the building of sustainable pan-European Research Infrastructures (in particular, Health and Food RIs)

To valorize the most numerous and diverse microbial resources To valorize expertise acquired over more than a century (storage, characterization, knowledge...) Unregistered exchanges of resources ng to loss of tral and significant genetic drift

Need for Europe to keep its competitive advantage Expertise (taxonomy) to explore unknown biodiversity (microbiomes...)

A small proportion of studied strains are deposited in BRCs and CCs (less than 1% of bacteria used in research in 2008) Fragmentation of resources, data, services, training, access...



Mission and objectives of MIRRI

Mission

serve Bioscience and Bioindustry by providing biological resources and associated data, long-term sustainability of microbial biodiversity, knowledge and professional development.

Objectives

- facilitated access to genetic resources via a single entry point portal, for material, data and expertise;
- interoperability of data with facilitated data mining of trusted data;
- legal compliance;
- broader coverage of genetic resources
- > improved service offer with coordinated or tailor-made services.

Integration + Visibility => valorization for research and bioindustry



Towards MIRRI-ERIC: what's new ?

2012-2016: Preparatory Phase

2016-2019: Transition Phase: establish MIRRI as an ERIC (European Research Infrastructure Consortium) under EU law
Oct. 2018: choice of the MIRRI-ERIC statutory seat (Portugal & Spain)
Nov. 2018: first step submission : Statutes and Technical Scientific Description
April 2019: feedback from the EC
Autumn 2019: formal submission

End 2019-...: Operational phase



Towards MIRRI-ERIC: what's new ?

- \Rightarrow Submission of a project IS-MIRRI21 in response to the INFRADEV-03 call
- \Rightarrow Increase of the size of the MIRRI consortium with Italy and Russia (+22 CCs)
- \Rightarrow Participation in two cluster H2020 projects: RI-VIS and EOSC-Life
- \Rightarrow Participation in the H&F RI Strategy Board with 12 other ESFRI RIs



Partners, resources and domains of interest of MIRRI-ERIC

	Countries	Partners		Partner RPCs	
	Belgium	BCCM			ind animal c strains,
				Belgium	
	France CIRM-In		stitut Pasteur	BCCM (7 BRCs)	alth, plant
				France	
	Greece	ATHUBA, ATH	IUM. UOA-HC	CIRM-Inra (5 BRCs), Institut Pasteur (4 BRCs)	alth, plant
		BPIC		Greece	diagnostic testing of
				ATHUBA, ATHUM, UOA-HCPF, ACA-DC, BPIC	plomics)
				Italy	alth, plant
10 countries 57 BRCs/CCs Over 300,000 isolates				10 BBCs (incl. MUT)	
			sity of Latvia		iology and
				Latvia	y, biofuel
			stitute	NISCL, UNIVERSITY OF LATVIA	ant health, les, insect
				Netherlands	
		-		Westerdijk Institute	ters), food
			VI, NPD	Poland	piology &
				IAFB-KKP, PCM, KPD), general ostic tests,
				Portugal	
	Portugal	Pt-mBRCN, ii	including ACO	Pt-mBRCN, including ACOI, LEGE-CC, MUM, PYCC, UCCCB	nental and
		, ,		Russia	
Russia		12 collections		12 collections (incl. VKM)	iomy, wine
				Spain	, culturer,
	Spain	in BEA, CECT			aries, bio- otics, food
				BEA, CECT	stic tests),
				1,700 isolates.eyanobacteria, microalgae	



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RI-VIS

Increasing visibility of research infrastructures



Expanding Research Infrastructure visibility of European to strengthen strategic partnerships

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Institut Pasteur



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RI-VIS is a Horizon 2020 funded project to increase the visibility of European research infrastructures (RIs) to new communities in Europe and beyond.

The RI-VIS consortium has main membership from the life sciences RIs where there is urgent need to improve outreach and strategic partnerships. Partner RIs in other thematic groups ensure that outcomes are relevant to all.

The objectives of RI-VIS are to:

- Map RI services to **new target communities** and identify routes to maximize exchange of information and bases for **new partnerships**.
- Create an **outreach programme** to provide information, bring research infrastructures together with new target communities and facilitate **collaborative engagement**.
- Create a collection of **tools** that are freely available to all research infrastructures that have demonstrated efficacy and impact in facilitating new cooperative relationships.



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Coordinator



- 12 RIs working in the fields of biomedical sciences, social sciences and environmental sciences.
- 13 Partners and Expert advisors from the Physics sector, and from einfrastructure.

Beneficiaries









- February 1st 2019 marked the official start date of the project RI-VIS.
- Kick-off meeting : 25-26th February 2019 in Oxford, UK.
- RI-VIS Work Package 5 Workshop#1 Communication Toolkit: 12-13th June 2019 in Faro, Algarve, Portugal:
- Identifying factors with implications for the communication of EU RIs;
 Definition of communication goals for the Communication Toolkit
- Target audiences, definition of messages, selection of communication channels







MIRRI activities in RI-VIS



• WP2 – Mapping and enabling new partnerships

Mapping the RIs and services and learn from existing cooperation of the European RIs with third countries partners and with industry partners, to identify **gaps in terms of communication** and determine opportunities for **new cooperation** and the conditions to develop such cooperation.

• WP3 – Outreach events

Increase the international **visibility** of European RIs, organise **outreach and partnering events** with international science policy stakeholders, funders and RIs and ensure awareness of the project's aims, goals and context with all stakeholders in order to achieve **productive engagement**.

• WP4 – International cooperation

Delivering **outreach tools** by utilizing the information gathered and strategies developed within WP2 and WP3 as a communication framework.

• WP5 – Long term sustainability of RIs

To develop a **common communication framework** for RIs; To communicate the scientific and socio-economic value of RIs on a **global scale**; To **exchange good practices** between RIs of the EU and those of third countries; To establish opportunities for **future engagements of the EU and third country RIs**.



MIRRI participation in RI-VIS

2,5 year Project (~ 1,5 M€)

Two MIRRI partners :

- Institut Pasteur (CNCM), France
- BELSPO, Belgium

RI-VIS Increasing visibility of research infrastructures

- Contacts:
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Contacts











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MIRRI participation in EOSC-Life

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EOSC-Life: An open collaborative space for digital biology in Europe

• Important **discoveries** are now made at the **interface** between different Life Science disciplines through **complex projects** leveraging on a **variety of technologies** and studying life at **different scales**.



- The European Open Science Cloud (EOSC) is an initiative towards sharing open and metadata rich information in the cloud
- Health and Food Research Infrastructures provide a wealth of high quality, validated information to their users.
- **Interconnecting** such information and make it **accessible and exploitable** through the **EOSC** is the aim of the project.



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EOSC-Life Consortium

- 13 ESFRI Health and Food Research Infrastructures
 - 46 Partners and 17 linked 3rd parties
 - Sourcing e-Infrastructure services from EOSC (Cloud, AAI,...,





EOSC-Life aims

- **Publish FAIR** (Findable, Accessible, Interoperable, Reusable) life science **data resources** in EOSC
- Create an ecosystem of innovative life-science tools in EOSC
- Build and archive pipelines for data retrieval and analysis
- Build demonstrators
- Enable **data driven research** by connecting scientists to interoperable European clouds via **open calls** for participation





EOSC-Life concept

- Health & Food RIs are **distributed** with many **hundred facilities**
- Health & Food RIs have a large community of tools developers





How to get value from these data?



EOSC-Life in practice

- EOSCpilot project: EDMI standard for harvesting FAIR data and tools
- EOSC-Life: Populate the life-science registries that will feed the EOSC catalogues



MIRRI activities in EOSC-Life

- Participate in the **definition of metadata** and shared standards for **microbial information**
- Publish FAIR microbial data in EOSC through the MIRRI Information System (under development)
- Support interoperability of microbial data by implementing APIs and a devoted Galaxy server
- Develop data pipelines devoted to the needs of users of microbialrelated information
- Define requirements for an appropriate Authentication and Authorization Infrastructure (AAI) for access to microbial resources and services
- Enable data driven research by **supporting participation in open calls** for its users







MIRRI participation in EOSC-Life

- Four partners and one sub-contractor:
 - INRA, FR (CIRM) (Leader)
 - **IBPM / RAS**, RU (VKM)
 - Westerdijnk Biodiversity Institute, KNAW, NL (CBS)
 - University of Valencia, ES (CECT)
 - Ospedale Policlinico San Martino, IT (MIRRI-IT)
- Participating in:
 - WP1: **Publishing FAIR** RI **data** resources in EOSC
 - WP2: **Deployment** of life-science **data integration and analysis workflows** in EOSC
 - WP5: User management and access services
 - Open calls for new demonstrators





MIRRI contacts for EOSC-Life

Contacts

- EOSC-Life: Serge Casaregola (INRA)
- WP1: Vincent Robert (KNAW)
- WP2 & WP5: Paolo Romano (USMI)



Many thanks for your attention!