# Deliverable D3.2

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| Contributing partners: | | |

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## Contents

# 1 Executive summary

This document reports on a round table event that was co-organized by iNEXT and West-Life in the frame of the 2nd iNEXT Annual Meeting. The round table took place in Brno, Czech Republic, on May 24th (https://www.structuralbiology.eu/content/bringing-together-the-bio-medical-scientific-communities-the-role-of-research-infrastructures). The panellists included representatives of several BMS RIs and H2020 health related projects. The overall goal of the round table was to develop ideas to foster usage of Research Infrastructures and thus to increase their impact and role for innovation. Therefore most of the discussion focused on the exploitation of Research Infrastructures in the area of Biomedical Sciences, both physical and electronic, by European researchers working in biological and biomedical sciences. The topics addressed included assessment of the services offered, the corresponding awareness by the target communities and the scientific community at large, existing/viable options for integrated offers, how to increase appreciation of RI services, and training of users. A summary of the discussion was circulated among the participants afterwards, with some proposals for possible concrete actions.

# 2 Detailed report on the deliverable

## 2.1 The Round Table

The round table took place in Brno, Czech Republic, on May 24th, 2017 (https://www.structuralbiology.eu/content/bringing-together-the-bio-medical-scientific-communities-the-role-of-research-infrastructures) with the following Agenda.

10:00 Introduction to the foresight meeting and to iNEXT
10:15 Introduction to West-Life
10:30 Presentations by participants
12:00 Round table discussion

The following participated in the round table as presenters:

1. Lucia Banci (iNEXT, chair)
2. Serena Battaglia (ECRIN)
3. Steve Brewer (Edison)
4. Susan Daenke (Instruct)
5. Antje Keppler (EuroBioImaging)
6. Hugh Laverty (IMI)
7. Vitor Martins dos Santos (ISBE)
8. David Morrow (EATRIS)
9. Antonio Rosato (West-Life)
10. Bahne Stechmann (EuOpenScreen)
11. Merlijn Van Rijswijk (Phenomenal)

The round table was open to all participants in the iNEXT annual meeting as well as to the participants in the subsequent biennial conference of INSTRUCT. Photos of the event are available at the Twitter account of West-Life (https://twitter.com/westlifesb).

Two surveys were part of the initial seeds for discussion:

- Medical Research Infrastructures & Users; feedback on activities and services – organized by CORBEL
- Report on the Consultation on Long Term Sustainability of Research Infrastructures – organized by the EC (http://ec.europa.eu/research/infrastructures/pdf/lts_report_062016_final.pdf).

Specific points for discussion had been circulated in the weeks before the round table took place, asking the presenters to include their thoughts on such items in their slides. This was a way to establish a common ground for the open discussion and make it easier to reach consensus on a set of specific topics. All presentations are available at https://b2drop.eudat.eu/s/2YTm9BP7Mtybsxj. During the open discussion, several comments/questions came from the audience (about 100 attendees). This was important to obtain a better grasp of the point of view of infrastructure users, including their perceived

bottlenecks and limitations of the current initiatives providing access to infrastructures (both electronic and physical).

After the round table, a document summarizing the consensus of the discussion (Appendix 1) was circulated among the participants for their comments and changes. Some action points were also proposed, as listed below:

- Creation of a database of all the services of the BMS RIs as a starting point for building a common web site of BMS RIs, integrating with MERIL-2, RISCAPE, RICH 2020 to ask them to improve the visibility of BMS RIs – e.g. by providing a dedicated space on the MERIL portal with more in-depth information;
- Preparation of a common document for EC, and later for other funding bodies, to be signed by BMS RIs representatives. The document will advocate the implementation of a top-down approach to actively encourage applicants to use RI services for the relevant parts of their projects, providing an additional budget to funded projects that can be spent only for costs directly related to visiting RIs;
- Provide clear value propositions for the various services offered;
- Create an interface with the EOSC Pilot to implement a preferential channel of communication with RIs, to make available the data produced at RIs and to collaborate on validation methods.

# Appendix 1

**Consensus from the discussion at the Round Table "Bringing together the bio-medical scientific communities: the role of research infrastructures"**

**Preamble**

The round table aimed at developing ideas to foster usage of Research Infrastructures (RIs), both physical and electronic, also in order to increase their impact and role for innovation. The participants included key representatives of several RIs in the biomedical sciences (BMS), IMI and H2020 projects (https://goo.gl/n4NLq0). Some possible themes to be addressed by the participants' talks had been circulated as part of the preparation of the event. This facilitated reaching a consensus on several aspects and identifying actions, as summarized in this report.

**Consensus**

*Scientists are not aware of the potentialities offered by BMS RIs*

The majority of scientists who are aware of the existence of RIs report to have learnt it through personal communications, according to a recent Medical Infrastructure/Users Forum (MIUF) survey. However, 30% of respondents are not aware of RIs at all and about another 30% feel that the BMS RIs do not cover appropriately their field of science. The same is true even in the narrower (with respect to the whole of BMS) field of Structural Biology. The limited success of personal communication in spreading awareness of infrastructure resources indicates that this method should be expanded. In addition to word-of-mouth, the feedback from the audience of the RT highlighted that the biomedical community would greatly appreciate a web-accessible resource providing easy access to a comprehensive view of all the services available via the RIs. To be truly useful, such a resource should also define clearly the procedures to gain access to the service(s) of interest to each researcher. A way to define the scope of this tool is to say, as suggested by the audience, that it should enable researchers to autonomously identify, and combine if needed, the solutions to their own needs. This would have more impact is there could be some standardization across the RI individual websites such that basic navigation routes were familiar at each RI website and information types were consistent. Making services more identifiable will also make outreach and publicity easier.

The first **action item**, which may be kick-started by the CORBEL initiative, is to **create a database** listing all the services of the BMS RIs, as described above, and to make it accessible via simple web forms as well as via predefined categories. Such a database, or the web form to query it, should be linked from the web site of each RI. This would have the advantage of raising the awareness of the users of each RI

regarding the services that other BMS RIs make available. RI users presumably have a lower barrier in addressing additional BMS RIs to fulfill their entire range of desired services.

It is relevant to point out that other initiatives have been funded by the European Commission to provide a mapping of the existing RIs across Europe. In particular, the MERIL portal (http://portal.meril.eu/meril/) and more recently, the RISCAPE project (http://www.riscape.eu/) have mapped major research facilities worldwide to identify synergies and opportunities for engagement between RIs beyond Europe. However, these frameworks do not provide opportunities for individual scientists to identify which RI is effectively providing the services of their interest or how to apply for access.

*Improve communication*

All BMS RIs have a commitment to communicating the opportunities they provide as well as their achievements to stakeholders beyond their reference scientific community. Such stakeholders include groups ranging from industries to funders, policy makers and neighboring communities. However, the level of investment and more broadly the effort deployed has been very different from RI to RI. In particular, the majority of RIs believe that they have significant margins to improve their communication aspects (with the most notable exception of EATRIS). It is likely that this is also due to the large prioritized effort involved in first setting up the governance and operational procedures of the infrastructure.

An improvement in communication can be tackled by a common strategy, at least partly. Such strategy could involve items such as:

- Disseminate success stories by RI users; users could be involved directly in this dissemination ("ambassadors");
- Develop videos explaining various aspects of each RI: from scientific applications to guides to e.g. applying for access;
- Define a common language (ontologies) allowing the different projects to be understood by broader communities, including non-scientists;
- Join efforts to tackle stakeholders and harvest new user groups;
- Improve and strengthen brand, also with respect to other projects in which RIs are involved (e.g. INSTRUCT vs. iNEXT vs. West-Life brands)

In general, the audience indicated that the communication by the BMS RIs needs to be simpler and provide outgoing messages that are easy to understand (including cost of services). **Clear definitions of value propositions are needed for all services offered** (**second action item**). Such simple and clear propositions would be important for the discussion in the context of the planning of FP9.

*Boosting usage and funding of services*

The current mode of operation by RIs is that potential users choose whether to apply to visit a BMS RI based on their specific needs, typically motivated by the lack of equipment and/or of technical skills for a specific measurement they need for their research project(s). As mentioned, such initiatives are often the result of personal contacts between the (prospective) user and other researchers who are knowledgeable about the RI, or between the user and RI staff. In this setting, the user may need to raise independent funds to cover e.g. travel expenses to the RI site or the costs of sample preparation (in particular when there is the need for samples to meet specific requirements). This is a bottom-up approach where usage of RIs is entirely driven by the users.

The panelists at the Round Table would welcome a complementary top-down approach in which funding bodies, starting with the European Commission, actively encourage applicants to foresee usage of RIs for the relevant parts of their projects. The rationale for funding bodies to do that is that RIs are in the position to ensure a consistent high level of the experimental data produced, thereby enhancing the quality of the funded research. Indeed, work is already underway to establish quality management standards and processes for the BMS RIs within the CORBEL project. Additionally, the top-down approach leverages the funding for top equipment already deployed at the RIs by national and European institutions. A reasonable way to implement this is to provide an additional budget to funded projects that can be spent only for costs directly related to visiting RIs.

*RIs ensure high data quality*

In the scientific community and even among the general public, there is presently a concern about data reproducibility especially in the medical and biological field. BMS RIs should become crucial players in this debate by leveraging their unique positions to guarantee the highest quality of scientific data produced. However, this is not sufficient to ensure that researchers can effectively reuse scientific data, even of high quality, to generate new knowledge. RIs could be involved in training and involving staff with the key skills from data stewards to data scientists in the biomedical sciences. More pressingly, the recent start of the European Open Science Cloud (EOSC) initiative makes it urgent for BMS RIs to position themselves as a privileged counterpart to generate and curate biomedical open data according to the FAIR principles, in collaboration with the existing major data science initiatives. This would enhance the visibility of BMS RIs and create an obligation to acknowledge RIs in research papers based on such data, beyond the single initial research project. RIs could further contribute to the high quality of all BMS data, including those not generated at RIs themselves, by fostering the development and adoption of validation tools, at least for large datasets or for domain-specific public repositories. A relevant example is that of the Protein Data Bank for the field of Structural Biology.