Euro BioImaging
Preparatory Phase II Project

D4.1 Hub operational costs/budget

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Abstract

Deliverable D4.1 outlines the EuBI ERIC Hub basic operation and the related tasks, staff and cost implications. This document for information is based on the approved EuBI Hub Proposal (8th IB meeting in Turku – 21 Oct 2015) and the approved basic budget for operation (10th IB meeting in Frankfurt – 25 Apr 2016).

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1. Introduction

This document provides information on the operation of the EuBI ERIC Hub for 2017-2021 and outlines the indicative resource requirements associated with the service, coordination and support activities provided by the EuBI Hub as part of the distributed research infrastructure EuBI ERIC. It prepares for the drafting of the first Financial Plan for the EuBI ERIC, which will be an indicative scheme for planning purposes and provides transparency on long-term costs for the Member States.

The document presented here is based on the approved EuBI Hub proposal (8th IB meeting in Turku – 21 Oct 2015) and the approved basic budget for operation (10th IB meeting in Frankfurt – 25 Apr 2016) as well as the IB decision, that the EuBI ERIC will start to operate when at least 60% of the basic budget for operation is available by financial contributions from the EuBI ERIC member countries.

2. EuBI ERIC Hub - Basic Operation: Tasks, staff requirements, and scalability

2.1 EuBI ERIC Hub – Basic Operation: Support, service and coordination activities

The EuBI ERIC is a distributed research infrastructure with Nodes located at existing research institutions in EuBI Member States and the EuBI ERIC Hub hosted by the three Hub partners Finland, Italy and EMBL, which all provide the space for hosting the Hub activities in kind. Thus there will be no cost for construction for the EuBI ERIC, and the indicative resource requirements for 2017-2021 only foresee operational costs for basic operation of the following EuBI ERIC Hub service, coordination and support activities:

For **researchers**, the EuBI ERIC Hub will provide the following services:
- Hosting and maintenance of the EuBI ERIC web access portal, as the central entry point and communication tool of the infrastructure for users
- Serving as first point of contact for advice and requests from EuBI users
- Coordination and support of open physical access to imaging technologies at Nodes
- Provision of open access to repositories for image data of public interest, software tools for image data processing, cloud storage and computing services
- Coordination and support of training activities for users
- Support users to realize funding opportunities for transnational access
- Quality assurance systems for all provided services
- Evaluation of user satisfaction with Node and Hub services
- Entry portal and evaluation system for novel imaging technologies to be tested in proof-of-concept studies, and if passed to be offered for the whole European community
- European-level coordination and integration activities for EuBI's scientific communities

The EuBI Hub ensures that users receive the optimal service package appropriate for their research needs and that they will successfully complete projects with high-quality results suitable for publication in top-tier journals. The Hub will also make sure that users and Node experiences are used to continuously refine the EuBI ERIC's services.

For **EuBI ERIC Members** and their **Nodes**, the Hub will provide the following services:
- Support the Nodes in continuously optimizing their services
- Provide the Nodes with comprehensive information about new technology developments and user needs
- Offer training for the Nodes' service staff in the latest imaging technologies
- Promote the Nodes' visibility in the global landscape of cutting-edge imaging platforms
- Network Node staff across Europe and beyond
- Network Nodes with the relevant imaging technology producing and using industries
- Generate new knowledge and collaborations between national research institutes and visiting international scientists
- Promote imaging technology in the life sciences on national roadmaps and on European-level and global research infrastructure funding agendas
- Help to leverage research funding opportunities for national users when accessing EuBI Nodes abroad

- Provide a common platform for ERIC members to coordinate their future national efforts in imaging infrastructure investments, minimize duplication of efforts and share infrastructure for common access

In addition, the EuBI Hub will provide the management backbone of the EuBI ERIC, supporting its smooth governance and an effective communication to deliver its services to the ERIC Members. The Hub will furthermore represent the EuBI ERIC in the European Research Area and internationally.

Before the ERIC starts, EuBI is already providing part of its planned services during Interim Operation, in particular physical user access to the first generation of Node Candidates. After the launch of EuBI ERIC, the service portfolio will be extended to the training and data services, and the sustained user access might translate into a gradual growth in Hub activities and resources that match the number of EuBI Nodes and users. Therefore approved Hub proposal foresees a scalability model (see 2.3 below), with the clear rationale of only expanding Hub activities when required based on user access.

2.2 EuBI ERIC Hub – Basic Operation: Staff requirements

The proposed EuBI ERIC Hub will need to employ the following minimal staff for conducting the service, coordination and support activities required to operate the EuBI infrastructure on the European level in basic operation modus. The listed positions are regarded essential for infrastructure implementation and operation in the first years of operation, supporting ca. 15 EuBI Nodes with up to 500 users per year.

Executive management (EuBI ERIC Seat - Turku, Finland)
For executive management and overall coordination and administration of the Euro-BioImaging Hub at the EuBI ERIC seat, the staff will comprise:
- Director General (Turku)
- Administrative Manager for EuBI ERIC (Turku)
- Legal advisor (outsourced to EMBL)*
- Finance administrator (outsourced to EMBL)*
- Senior officer for stakeholder, public, and political relations (outsourced to EMBL)*

* The need for outsourcing will be periodically evaluated.

Web Access Portal and Quality Management (EuBI ERIC Seat - Turku, Finland)
For coordinating and hosting the web access portal (a central tool in EuBI for user management, user access evaluation and coordination, quality management, feedback systems, Node performance and results monitoring, and internal information dissemination) and for quality management both centrally and at the Nodes, the EuBI ERIC Seat will engage:
- Senior technical officer (Turku)
- Technical officer (Turku)

Common image data repository and services (EMBL-EBI, Hinxton, UK)
For running and maintaining common image data services, such as image data repositories and an imaging resource portal, and for supporting the Nodes in their activities related to image data management and infrastructure, the Hub will employ:
- Data infrastructure coordinator (EMBL-EBI)
- Senior technical officer (EMBL-EBI)

Community-specific sites for biological and biomedical imaging (Bio-Hub at EMBL Heidelberg, Germany, and Med-Hub at University of Torino, Italy)

For conducting community-specific EuBI activities in biological and biomedical imaging, such as support for user access, coordination of training activities, strategic support of the Nodes, and community-specific public relations and management, the Bio-Hub and Med-Hub will employ:

- Section Director of the community-specific section Bio-Hub
- Senior technical officer for the Bio-Hub

- Section Director of the community-specific section Med-Hub
- Senior technical officer for the Med-Hub

2.3 Scalability Model

Based on the de facto number of users accessing EuBI services, it is anticipated that during its first years of operation EuBI ERIC will grow until it reaches an optimal balance between user need and available capacity. In particular, user requests will determine the number and type of EuBI Nodes, and the number of Hub staff needed to support the access to these Nodes. At its 8th meeting in Turku (21. Oct 2015), the Interim Board approved the following scalability model based on user numbers.

To start operation, the EuBI ERIC Hub will install the minimum number of staff needed for providing its initially foreseen services to users, Nodes, EuBI member states and stakeholders, as described above. This Hub staff contingent will be sufficient to support basic operation of EuBI, with up to 500 requests for physical user access per year to 12 to 15 different Nodes. This is a conservative scenario is based on the extensive experience of the over 100 user accesses during EuBI proof-of-concept studies, leading to the estimate that 1 FTE senior technical officer will be able to support 200 individual user access requests per year at the level of the community specific sections. Similarly staff capacity for training and data management activities at the Hub will need to be adapted to increasing user numbers. The scalability model for the EuBI Hub is thus fundamentally user demand driven, and translates user numbers into the required Hub staff. Additional access support staff at the sections will be needed with approximately 1FTE per 200 users, a second senior technical officer for supporting the web-access portal and quality assessment tasks at the Seat will be needed with approximately 1FTE per 500 users and additional IT support staff for the Hub data services will be needed with increasing demand for the common data services scaling with the volume of storage and compute requests. The future EuBI Board will take all decisions regarding any increase of capacity for Hub activities.

3. Costs and Budget for Basic Operation

To enable the EuBI ERIC Hub to provide the described services, coordination and support activities for researchers, EuBI ERIC Members and their Nodes, at their 10th Meeting (25 April 2016) the EuBI Interim Board decided on the annual budget for basic operation of EuBI ERIC for the first five years of operation. The costs for basic operation based on the jointly hosted Hub by Finland, Italy and EMBL comprise the costs for staff and other costs (including costs for travel, meetings, web access portal, training).

Table 1: Costs at EuBI ERIC Hub during basic operation. The detailed table for all type of costs is included in the Annex. Here, staff costs include other costs.

Staff type and location	Annual costs during basic operation (in €)
EuBI ERIC common activities (8,5 FTE: Director's office and technical staff at ERIC statutory seat; legal, communication, finance; data management staff)	866.276
Bio-Hub (EMBL Heidelberg) (2 FTE; Section Director, technical officer)	221.284
Med-Hub (Torino) (2 FTE; Section Director, technical officer)	224.600
Staff positions - TOTAL	**1.312.160**
Other Costs (travel, meetings, webportal, training)	229.200
Hub budget – Basic operation - TOTAL	**1.541.360**

The following financial scenario 1 foresees that all current 15 countries represented in the EuBI Interim Board sign the EuBI ERIC statutes in the first year of the ERIC.

At their 10th meeting, the IB also decided that the EuBI ERIC will start to operate when at least 60% of the basic budget for operation is available by financial contributions provided for by the future EuBI Member Countries, launching the EuBI ERIC. Financial scenario 2 takes this slower start of the ERIC into account, when fewer countries join the EuBI ERIC in its first years than currently anticipated.

3.1 Financial Scenario 1: Budget for basic operation is completely available from the start of EuBI ERIC (100%)

If all current IB Member Countries sign the EuBI ERIC statutes in the first year of launching the infrastructure, the complete budget as now approved will be available for the EuBI ERIC Hub over the first five years of basic operation. In this case, the EuBI ERIC Hub can provide all foreseen services, support and coordination activities as described in paragraph 2. The five years comprise a brief ramp-up phase in the first year (87,5 % of basic operation), until full-fledge basic operation will be reached in the second year (100 % basic operation). As for the following years a constant growth rate in numbers for user access to Nodes and number of Nodes, as well as for the EuBI image data and training services is expected, the planned budget provides minimal flexibility for growth in the fourth and fifth year, in the frame of the approved budget.

Annual budget for basic operation: **€ 1.541.360**

Table 2: Distribution of budget for basic operation over first five years of operation.

	1. Year (87,5%)	2. Year (100%)	3. Year (100%)	4. Year (105%)	5. Year (107,5%)
Basic Budget	€ 1.348.690	€ 1.541.360	€ 1.541.360	€ 1.618.428	€ 1.656.962

3.2 Financial Scenario 2: Operation of EuBI ERIC starts when at least 60% of the budget for basic operation are available (60%)

The number and type of launching members of the EuBI ERIC remains unknown until the actual signature of the ERIC statutes takes place after EC approval of the ERIC application. For this reason, the IB has decided that the EuBI ERIC will be launched and start to operate when at least 60% of the basic budget for operation is available by financial contributions provided by the first generation of launching EuBI Member Countries. This implies that the EuBI ERIC cannot provide all services required for basic operation at the start, and it will have to prioritize its activities according to the limited resources (see details in Table 4, below).

Table 3: Budget for reduced level of Hub services over first five years of basic operation

	1. Year (60%)	2. Year (60%)	3. Year (60%)	4. Year (60%)	5. Year (60%)
Basic Budget	€ 924.816	€ 924.816	€ 924.816	€ 924.816	€ 924.816

3.3 Prioritization of staff positions based on available budget for EuBI ERIC Hub

The following table summarizes the prioritization of staff positions for the EuBI ERIC Hub services, support and coordination activities, which shall be provided based on the available budget (60% - 80% - 100%). Here, the core activity of providing user access to the EuBI Nodes and the legal services are regarded most essential, to be continued smoothly from Interim Operation into operation of the EuBI ERIC.

Table 4: Prioritization of staff positions based on available budget for basic operation.
Legend regarding foreseen staff capacity:

All staff for this task in place.
0.75 of foreseen staff for this task in place.
0.5 of foreseen staff for this task in place.
No staff for this task in place.

Available Budget (Basic Operation: 100% = € 1.54 Mill)	60% Budget available	80% Budget available	100% Budget available
Leadership (EuBI ERIC Director General, Section Directors)	0.5	0.75	All
Administrative Management (EuBI ERIC; EuBI Board; SAC; etc.)	0.5	0.75	All
Legal Services	All	All	All
External relations	None	0.5	All
Finance administration	0.5	0.5	All
Technical Officer (Web Access Portal)	All	All	All
Senior technical officer (Access) – Bio-Hub	All	All	All
Senior technical officer (Access) - Med-Hub	All	All	All
Coordinator (Image Data)	All	All	All
Senior Technical Officer (Image Data)	None	None	All
Senior technical officer (Quality Management)	None	0.5	All

ANNEX

Annex - Table 1: Basic Operation - Staff at the Hub (blue: administrative tasks; red: technical tasks)

Task	Staff profile for this task	Type of activity	Location of staff
Director General, legal representative of Euro-BioImaging: prepare, propose and execute the Board's decisions.	Director General	Common activity	ERIC seat - Turku
ERIC seat & Bio-Hub in collaboration: Strategic support of upgrade and maintenance of research infrastructure Support and interlink for all national imaging initiatives: CSS - Public relations, strategic support of bio-EuBI Nodes and support of national imaging initiatives Dissemination and advertisement of EuBI training courses	Section Director	Biological Imaging Community Specific Activity (Bio-Hub)	EMBL Heidelberg
ERIC seat & Med-Hub in collaboration: Strategic support of upgrade and maintenance of research infrastructure Support and interlink for all national imaging initiatives: CSS - Public relations, strategic support of bio-EuBI Nodes and support of national imaging initiatives Dissemination and advertisement of EuBI training courses	Section Director	Medical Imaging - Community Specific Activity (Med-Hub)	University of Torino
Administrative support of the Director General, Section Directors. Organizational framework for governance: organization of Euro-BioImaging Board meetings, support of Board members, preparation of meetings Support and coordination of SAB and other advisory bodies once established	Administrative Manager	Common activity	ERIC seat - Turku
Public relations and communication: stakeholder, public and political relations with EuBI and new member states, European Commission, ESFRI.	Senior officer for external relations	Common activity	Outsourced from ERIC seat to EMBL
Legal Affairs and IP Management: responsible for service level agreements with Nodes, legal support for broadening EuBI ERIC membership, internal EuBI ERIC policies, legal advice for Board and Director	Legal Advisor	Common activity	Outsourced from ERIC seat to EMBL
Finances and audit: administration of Hub operational budget, i.e. administration of national contributions and costs at Hub; support for financial reporting	Financial Officer	Common activity	Outsourced from ERIC seat to EMBL
Assistance to the Director General	Personal assistant for Director General	Common activity	ERIC seat - Turku
Set-up and maintenance of Euro-BioImaging web access portal; Submission system for user project proposals in the web access portal	Technical Officer	Common activity	ERIC seat - Turku
Quality control: facilitate and coordinate quality control (QC) functions and support quality assurance (QA) measures at the Nodes as determined by the Euro-BioImaging Board	Senior technical officer	Common activity	ERIC seat - Turku
Bio-Hub	Senior technical officer	Biological Imaging	EMBL Heidelberg

Common first consultation point for users, technical advice to applicants, user management at EU level. Administrative framework for transparent scientific evaluation of user projects. Coordination and support of user training activities.		Community Specific Activity (Bio-Hub)	
Med-Hub Common first consultation point for users, technical advice to applicants, user management at EU level. Administrative framework for transparent scientific evaluation of user projects. Coordination and support of user training activities.	Senior technical officer	Medical Imaging - Community Specific Activity (Med-Hub)	University of Torino
Provision of access to standardized, annotated data repositor(ies) of general relevance for the research community. Access to common European repository of standardized and quality controlled tools for image data analysis. Coordination of common European cloud computing services for standardized image processing	Image data infrastructure coordinator & Image data infrastructure officer	Common activity	EMBL-EBI - Hinxton

Annex – Table 2: Projected costs per year for EuBI ERIC basic operation at each Hub site (100%)

ERIC statutory seat, Turku

Type of costs	Basic Operation Costs (100%)
Staff: Director General (DG) Administrative Manager Technical officer (WAP) Senior technical officer; QA, QM for Nodes	272.600
Meetings (€ 800 per meeting of 10 persons)	6.400 (2 meeting à 20 persons, plus 4 à 10)
Euro-BioImaging Board meetings (€ 1000 per meeting of 10 persons)	10.000 (2 meetings à 50 persons)
Scientific advisory board meetings (€ 1.000 per person)	7.000 (1 meeting à 7 persons)
Travel (€ 600)	52.200 (48 trips DG, 12 trips manager, 3 trips officer, 24 trips senior tech. officer)
Web access portal (years 1-2: developmental costs, year 3 onwards: maintaining costs)	40.000
Other (infrastructure costs: includes (*) cost categories)	147.200
Total	**535.400**

*Data infrastructure running costs, maintenance, electricity, heating, building maintenance etc.

ERIC Seat – Common activities (outsourced to EMBL)

Type of costs (in €)	Basic Operation Costs (100%)
Legal Advisor; External relations officer; Finance officer	184.689
Meetings (€ 800 per meeting of 10 persons)	3.200 (1 meeting à 20 persons, plus 2 à 10)
Travel (€ 600)	28.800 (48 trips)
Other (infrastructure costs: includes (*) cost categories)	55.407
Total	**272.100**

*Data infrastructure running costs, maintenance, electricity, heating, building maintenance etc.

ERIC Seat – Common activities (data infrastructure support by EMBL-EBI)

Type of costs (in €)	Basic Operation Costs (100%)
Staff Coordinator - Data infrastructure Senior technical officer - Data infrastructure	158.754
Meetings (€ 800 per meeting of 10 persons)	800

	(1 meeting à 10 persons)
Travel (€ 600)	3.600 (6 trips Coordinator IDR)
Other (infrastructure costs: includes (*) cost categories)	47.626
Total	**210.780**

*Data infrastructure running costs, maintenance, electricity, heating, building maintenance etc.

Bio-Hub, EMBL HD site

Type of costs (in €)	Basic Operation Costs (100%)
Staff Section Director Senior technical officer	170.218
Meetings (€ 800 per meeting of 10 persons)	3.200 (1 meeting à 20 persons, plus 2 à 10)
Travel (€ 600)	14.400 (24 trips SD)
Training activities	21.000
Other (infrastructure costs: includes (*) cost categories)	51.065
Total	**259.880**

*Data infrastructure running costs, maintenance, electricity, heating, building maintenance etc.

Med-Hub, Torino site

Type of costs	Basic Operation Costs (100%)
Section Director Senior technical officer	173.400
Meetings (€ 800 per meeting, 10 persons)	3.200
Travel (€ 600)	14.400 (24 trips SD)
Training activities	21.000
Data infrastructure running costs, maintenance	5.000
Electricity, heating, etc.	36.000
Building maintenance	10.200
Total	**263.200**