Criteria for Euro-BioImaging Nodes – Version 140612

The following draft for the criteria for future Euro-BioImaging nodes is a starting point for the

- Work Package specific preparation of criteria for each imaging technology,
- Euro-BioImaging business plan,
- and thereby, preparation of the open call for future Euro-BioImaging nodes.

It comprises, first, **general criteria** which will be valid for all Euro-BioImaging nodes, and, secondly, a table of questions to facilitate the drafting of **imaging technology specific criteria**, which will differ e.g. in user numbers, necessary user and staff training and data storage capacity depending on the individual imaging technology which the applying facility is offering to host as future Euro-BioImaging node.

For the application process, two categories of applying nodes (applicant) are expected, which will be requested to fulfill different specific criteria according to their status (still to be defined and distinguished in chapter 2.):

a. The applicant **operates** a mature imaging infrastructure facility. For enabling open access, the applicant requires a significant upgrade of the facility capacity.
b. The applicant has leading expertise and instrumentation in a cutting-edge imaging technology but is not providing access and services so far. The applicant **aims to create** a new facility to offer open access to this imaging technology.

It is expected that the applying nodes will comprise imaging facilities that are single-sited at one location and that successful node applicants will become direct legal partners of the future pan-European Euro-BioImaging infrastructure that will be negotiated with the participating member states. A single-sited node that gives physical access to users can be operated by one or by several institutions which are in the same location, e.g. an imaging facility could be run by a University department jointly with a research institution,

or an imaging facility could provide not just access to the imaging instrument, but also excellent support with the needed fluorescent reporters available in a neighboring chemistry department. However, the user access to the combined service package is expected to be integrated into a single facility.

The following suggestions are based on experience from biological imaging facilities. Therefore, it might be necessary to add or adapt criteria for medical imaging facilities.

Annex to this document: *Deliverable D12.5 First release of web-based access portal*

1. General criteria (valid for <u>all</u> future Euro-BioImaging nodes)

Eligibility criteria

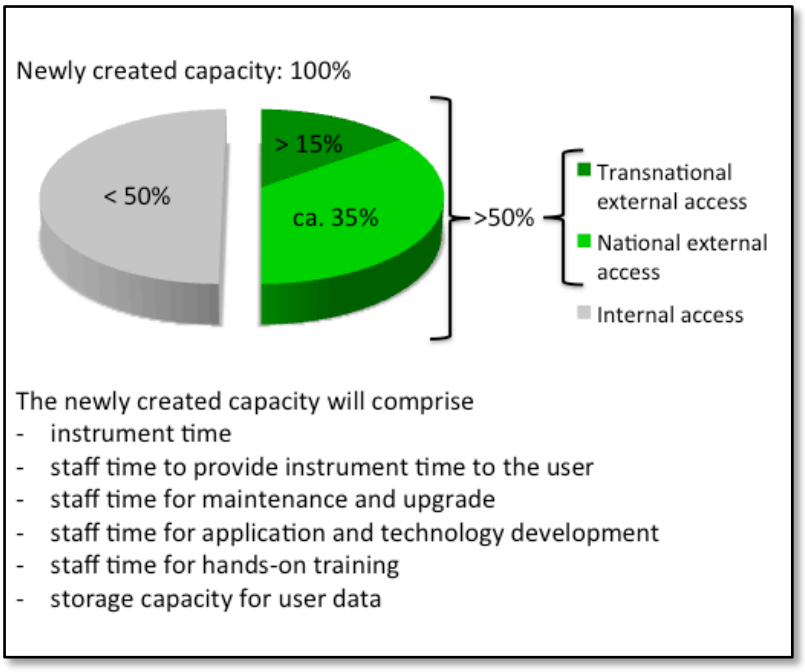
I. Applicant = Legal entity hosting the existing or planned imaging facility.

II. Applicants from all ESFRI countries are eligible.

III. The applicant demonstrates the **<u>user need</u> for the proposed capacity:** the applicant submits Letters of Intent from at least 50% of users for which open access capacity is planned and who wish to use the created capacity during the first two years of operational phase. For facilities expected with huge user numbers e.g. more than 75 users in the first two years, 30 LOIs from users are a target number. A LOI template will be provided by Euro-BioImaging: "…If APPLICANT is upgraded and can provide open access to external scientists I intend to apply with my research project to access this facility because …."

The brief outline of the user projects in the LOIs shall inform about the field of science, scientific excellence of the project and its expected impact on the users current and future research, and user's expertise (template provided, based on PCS application form).

Based on all received LOIs from its users the applicant will summarize the expected impact of the open access to its imaging facility e.g. for the addressed research field and other fields, the technological progress, industry relationship etc.



The applicant is requested to provide a substantiated estimate of the number of external users/projects for the first two years of operational phase. It is expected that a significant fraction of those users are transnational (transnational users access at least 15% of newly created capacity).
For already operating facilities (category a.), the applicant is requested to provide numbers demonstrating the use of the currently available capacity and the fraction of external users served so far, if any (see 2.1.).

II. The applicant guarantees to **provide open access to at least 50% of the additionally created capacity for external users** as documented in the attached Letter of Commitment. In addition the applicant documents how the less than 50% capacity planned for internal users will be used. Full degree of capacity utilization is expected.

III. The applicant demonstrates the **support of funders** for the participation in Euro-BioImaging by
a) Letter of **Investment** from funder: "APPLICANT has the required funding for the capacity upgrade as described below" (letter attached, stating EUR XY for construction and EUR XY for XY years operation)

b) Letter of **Commitment** from funder: "…if APPLICANT is successful in this call for Euro-BioImaging nodes, the funder will invest in the capacity upgrade as described below starting in the next 24 months after publication of the results of this call" (letter of commitment from funder attached).
c) Letter of **Intent** from funder: "…if APPLICANT is successful in this call for Euro-BioImaging nodes, the funder intends to develop funding instruments to invest in the capacity upgrade as described below…"

Templates for the different categories of letters will be provided by the Euro-BioImaging project management.

Review criteria

In addition to his eligibility, the applicant describes and demonstrates the **technical excellence** of the existing imaging infrastructure and the **scientific excellence** of its academic environment: in addition to a brief description (1 page) facilities in categories a. and b. above submit all relevant publications from the last five years demonstrably resulting from science enabled by the applying facility to document its technical excellence, highlighting the five most important ones. The applicant lays out a sustainable strategy for keeping the imaging facility cutting-edge: therefore, the application includes a brief description of the maintenance and update plans for the first 5 years of operation.
Furthermore, the applicant demonstrates the scientific excellence by indicating in which scientific fields the applicant has proven track record in: SCIENTIFIC FIELD e.g. Neurobiology, Structural Biology, Virology, Cell Biology, Plant Biology, Developmental Biology, … (for each field, list of five most important publications of the last five years). The institution hosting this expertise attaches a letter of commitment stating "…if APPLICANT will be selected as Euro-BioImaging node this institution will provide its expertise in SCIENTIFIC FIELD and related infrastructure (e.g. animal facilities, ….) for supporting the external users of the future Euro-BioImaging node."
The applicant demonstrates European significance, e.g. by providing access to at least one innovative imaging technology (as listed in the open call) or area of biomedical research for which their expertise and service is outstanding in the European imaging facility landscape.

The applicant describes and demonstrates its user training capacity in imaging (e.g. number of training activities, number of participants, and list of training activities in the last three years, outlook of training activities within next two years).

2. Imaging Technology specific eligibility criteria (elaborated by each technical Work Package WP6 – WP11 based on survey, PCS and community communication)

2.1 General requirements

In general, the applicant should have demonstrated capability to offer user access and support for several years, and has already provided service for external users in a specific imaging technology. The applicant provides hands-on user training to external users for instrument use, and organizes regular training activities on imaging technologies. Furthermore, the applying facility supports their users in image data processing and analysis and provides the required capacity for data storage and compute to use the offered imaging technologies during access.

2.2 Questions regarding existing imaging infrastructure

(The specific criteria will be elaborated by WPs based on a model infrastructure for each technology!!)

	Question to applicant	**Minimum criteria for being eligible as Euro-BioImaging node**
	Existing capacity	
	Please list type and number of different imaging platforms in your facility including state-of-the art instruments.	*List*
	a) Total hours of usage per year per equipment b) The usage has increased from [#] to [#] hours between the years 2008 and 2012	*e.g. 3000 h*
	Additional infrastructure in place: • Cell culture facility for users available (yes/no) • Sample preparation for users available (yes/no) • Building: Type (microscope room, cell culture, office, …) and number of rooms occupied by core facility • Housing for guest scientists available	

	• Other	
	For respective imaging technologies: repository of probes (synthetic dyes, genetically encoded reporters, etc.)	
	Facility users and access policy	
	a) Total number of facility users 2008 - 2012 (I. internal, II. external national, III. external international, IV. Industry) b) Total number of projects conducted 2008 - 2012 (if different of user number)	*e.g. 500 internal users* *e.g. 48 internal projects*
	In 2012, external users covered about [#]% of the total usage of the facility.	*e.g. 15%*
	Has the imaging facility an access policy for internal/ external users in place? If yes, please describe.	
	How do you attract external users? (website, submission of user project, personal contact, ..)	
	Training	
	Please list training activities for external users (training available before arrival, e-learning, manuals, introductory training – hands-on user training for instrument use, help-desk for users, support by expert etc.)	…
	Data	
	Data storage and analysis • Image data storage and analysis services • Number of computer workstations/ CPUs for image analysis by users • Available data storage volume for user images	
	Staff, evaluation and management	
	Please list type and number of FTE running the core facility	*Supported by staff with high-level expertise*
	Good English command including technical and reception staff	
	Management and facility evaluation	
	Has the facility a clearly defined operational model? Please describe.	
	Is there a clearly defined management structure? Please describe.	
	Is the facility autonomous?	
	Is quality control and evaluation of services in place? If yes, please describe.	
	Funding	
	How is the ratio (in %) of internal to external funding of your infrastructure?	Internal: External:
	How are operational costs funded?	
	Framework agreement in place that ensures national government financial support	
	Support by funder (Ministry):	

	% basal funds	
	% competitive funds	
	% private funds	
	Financial sustainability of the facility	
	Economic impact of facility	
	Creating new jobs in the area	
	Funding:	
	> Is there stable funding for >= 3 years	
	> Staff: microscope ratio (>1:8)	
	> Staff: use ration (>1:10)	
	Location	
	Affordable accommodation nearby (especially for general access)	
	Pre-travel detailed assessment of needs and instrumentation setup	
	Physical location of the infrastructure (airport / easy access)	
	Coverage in area/ country	
	Geographical balance	
	Collaboration with other pan-European RI projects (e.g. ESFRI BMS RIs)	

Further questions for criteria:

- *How is your core facility embedded in the hosting institution (part of specific department, institute,…)? Are there collaborations with imaging technology developers or users at the cutting edge of the field in your institution? Outside your institution? Are there on-campus collaborations with other core facilities (animal facilities, cell culture, repositories of small molecules, chemistry labs), which are accessible for your users?*

- *How many peer reviewed articles did internal / external users publish with data resulting from using the core facility (estimation for last five years).*

- *Which technological expertise is necessary for the preparation, construction and operation of the research infrastructure? Which skills does the involved staff have?*

- *Existing relationships with industry. Does your core facility collaborate with industry (manufacturers of optical instruments, software companies, pharmaceutical industry, biotech companies, etc)? If yes, please describe briefly the kind of relationship. Would the relationship with industry benefit if the facility was upgraded? If yes, please describe briefly how. Please provide a letter of support from your industrial partner, if applicable with concrete statement of support in terms of collaboration, equipment, software etc. (template letter attached).*

For information purposes only:

- *Which cost model for users do you apply for internal/external/industry users (full cost, subsidized, running costs, free access)? Do you have special measures in place to enable access of junior researchers? Do you have a system to prioritize users if capacity is limiting? If yes, describe the system.*