General Criteria for Application for Euro-BioImaging Nodes (December 7th, 2012)

Introductory Notes

This document provides an overview of the General Criteria for future Nodes of the pan-European Euro-BioImaging infrastructure. Its purpose is to allow applicants to identify their eligibility for becoming a Euro-BioImaging Node and to provide criteria by which eligible applications can be reviewed. The criteria were developed by the Euro-BioImaging Consortium together with 19 national European imaging initiatives, and are an integral part of the overall infrastructure concept for Euro-BioImaging.

Euro-BioImaging anticipates and welcomes coordination and prioritization of Node applications on the national level. The criteria laid down in this document do not aim to pre-empt such national coordination but to allow the integration of the strongest contributions from all countries into a pan-European research infrastructure. The process of national coordination can be facilitated by national imaging initiative(s) – in the 19 countries where they are already present – who could receive a mandate from their national funders for identifying their strongest candidates for becoming part of Euro-BioImaging. However, the mechanism of national coordination and prioritization is entirely in the responsibility of each country.

The General Criteria will apply to all applications for Euro-BioImaging Nodes. Applicants are eligible to apply to become a Euro-BioImaging Node if they meet the five general eligibility criteria laid down in this document. Applications will be reviewed for their overall significance in the context of Euro-BioImaging using the general review criteria detailed herein and additional technology specific review criteria that will be published separately. The review will be carried out by an Independent Evaluation Board (IEB) of experts external to Euro-BioImaging.

This document does not address the process of the open call for Nodes, or the finance plan, cost model, governance model, legal model, industry relationships, etc. of the Euro-BioImaging infrastructure. These topics will be addressed in separate documents.

I. General Principles of the Euro-BioImaging Node Model and Terminology

Applicant: is a legal entity a) hosting an existing facility or b) planning to create a new facility based on a leading expertise and capacity/instrumentation in cutting-edge imaging technologies.

Categories of Applicants for Euro-BioImaging Nodes: Two categories of applicants are expected, which will be requested to fulfil different specific criteria according to their status:
a) The applicant **operates** a mature imaging infrastructure facility. For enabling open access, the applicant requires an upgrade of the facility capacity, to a degree depending on its current status.
b) The applicant aims to **create a** facility to now offer open access to imaging technologies. The applicant has leading expertise and capacity/instrumentation in this cutting-edge imaging technology but is not providing open access and services so far.

Euro-BioImaging Node: Is a facility in the field of biological or medical imaging which is upgraded or newly created for providing open access to imaging technologies in Euro-BioImaging after succeeding in an open call and securing of funding, if necessary.
A Node is a functional unit that provides an integrated service package to the user. The Node offers at least 50% of its new capacity to Euro-BioImaging users. The Node integrates all necessary user access and service aspects, so the imaging technology is served to the user in the best possible way. The Node provides transparent, instant and open access to the newly created capacity (instruments and services) including rapid evaluation of technical feasibility and a single-point of contact at the Node for Euro-BioImaging users.

The Node is part of the pan-European distributed research infrastructure Euro-BioImaging and is legally responsible for the performance of all services offered as a contractual partner of Euro-BioImaging. The Node constitutes a legal entity and lends itself for assessment and evaluation by the Euro-BioImaging Member States and is able to make use of European-level funding streams at the Hub. The tax status and Node model are clearly defined for funding and fees transfer between institutions that jointly form a node, if required.

Based on the ***number of sites***, there are two types of Nodes:

a) *Single-sited Nodes* providing the complete service package in a single location,
b) *Multi-sited Nodes* providing an integrated service package with a single point of entry for the user.

Several institutions can collaborate to put together the complete package needed for the Node. 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 neighbouring chemistry department. However, the user access to the combined service package is expected to be integrated into a single facility, where the projects are conducted.

For scientific reasons, in particular within the medical imaging community, a multi-sited node model is valuable and may achieve performance needs that are essential within the scope of Euro-BioImaging.

If the typical user access requires it or may benefit, a multi-sited Node comprising several facilities integrated into a legal structure can therefore be useful. If partners of a multi-sited Node cannot fulfil the currently established single legal entity model, new legal structures for multi-sited Nodes composed of different legal entities can be developed in the future and included when ready, whether today, tomorrow or within a number of months. Such contractual arrangements need to enable the different legal partners of a multi-sited Node to act as a single contractual partner of Euro-BioImaging

with all partners being legally accountable for the performance of their service towards Euro-BioImaging.

Based on the ***offered imaging technologies***, there are two types of Nodes envisaged:

Single Technology Flagship Nodes would offer an innovative technology at European leading level. If a Node-applicant wants to offer more than one innovative technology as flagship capabilities, it would have to submit a single application, which contains detailed documentation for each technology to allow reviewing each technology by the suitable expert groups of the Independent Evaluation Board.

Multimodal Technology Nodes would provide excellence by the integration of multiple imaging technologies at one site. This may be an especially suitable node type to consider for new member states that wish to build up their imaging infrastructure.

Euro-BioImaging User: is a scientist who proposes a research project to be carried out in the infrastructure and submits it to the central online web access portal of Euro-BioImaging. The proposal will first undergo independent scientific evaluation (as will be specified in the Euro-BioImaging access policy) before being forwarded to the Node offering the requested technology for assessment of technical feasibility.

Imaging Technology: In Euro-BioImaging technology stands for imaging technologies such as super-resolution microscopy and imaging applications such as imaging in clinical trials and image processing technologies.

II.a General ELIGIBILITY criteria

The applicant is the legal entity that will host the existing or planned Euro-BioImaging Node.

1. Applicants from all **ESFRI countries** are eligible.

2. The applicant demonstrates the **user need** for the proposed capacity**:** the applicant submits Letters of Intent (LoI) from at least 50% of potential Euro-BioImaging users for which open access capacity is planned for the first two years of operation, or from 30 users, whichever is less[1]. A LoI template that can be used will be provided by Euro-BioImaging: "…If APPLICANT is upgraded and can provide open access to Euro-BioImaging users I intend to apply with my research project to access this facility because .".
A very brief outline of the user projects in the LOIs shall provide information about the field of science, scientific excellence of the project and its expected impact on the user's current and future research, and user's expertise (templates will be provided).
Based on all user LOIs received, the applicant will summarize the expected impact of the granted 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 Euro-BioImaging users/projects for the first two years of operational phase. It is expected that a significant fraction of those users are transnational.

3. The applicant guarantees to provide **open access** for Euro-BioImaging users to at least 50% of the newly created capacity for Euro-BioImaging. In addition the applicant describes how the less than 50% will be used e.g. internal users of the institutes, national infrastructure. Full degree of capacity utilization, not counting maintenance and downtimes, is expected.

4. The applicant demonstrates that the single-sited or multi-sited Node will constitute a **legal entity**, which in its entirety will become part of the pan-European distributed research infrastructure Euro-BioImaging and as such a legal contractual partner of Euro-BioImaging[2].

5. The applicant demonstrates the **dialogue with funders** for the participation in Euro-BioImaging by sending a letter from the funder or any other documentation (e.g. national roadmap with reference to the Node proposal; recently submitted or granted research infrastructure proposal(s) related to this Node application, …) which demonstrates that the Applicant and the funder have communicated about this Node proposal regarding e.g. its context in the national infrastructure and potential funding opportunities for Node construction and operation as part of Euro-BioImaging. Funders in this context stands for any financing body, e.g. international, national or regional funding agency, university board, charity foundation, government, etc.

[1] *Example: A smaller facility expects to host 16 Euro-BioImaging users in the first two years of operation as a Euro-BioImaging Node. Therefore it is expected to provide 8 Letters of Intent along with its application. A large facility expects to serve more than 90 Euro-BioImaging users in the first two years of operation as Euro-BioImaging Node. Therefore it will be requested to provide 30 Letters of Intent.*

[2] *Note: as described previously, new models that permit nodes composed of several different legal entities to act as a single contractual partner of Euro-BioImaging may be developed and will be made available to all Euro-BioImaging partners*

II.b General REVIEW criteria

1. The applicant describes the **scientific and technical excellence** of the existing/planned imaging infrastructure. For already operating facilities, the applicant should submit all relevant publications from the last five years demonstrably resulting from science enabled by the infrastructure of the applicant, highlighting the five most important ones.

2. The **quality and field of the academic environment** is described by indicating in which scientific fields the applicant has proven track record in: SCIENTIFIC FIELD e.g. Structural Biology, Cell Biology, Neurobiology, Preclinical/Animal Research, Clinical Research and Clinical Studies, Interventional Radiology, etc. (for each field, list up to five most important publications of the last five years). The institution hosting this expertise may attach 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 Euro-BioImaging users of the future Euro-BioImaging Node."

3. The **geographic coverage** of the existing/planned infrastructure is described in the national and international context.

4. Maintenance and update. 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.

5. 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 unique or outstanding in the European imaging facility landscape (e.g. imaging for specialized functional animal models). The applicant is requested to describe its **national significance**, e.g. by its role in or a dialogue with the national imaging initiative if such an initiative exists for the respective imaging community and country. If no initiative exists, the applicant may lay out a plan to establish one.

6. The applicant demonstrates in detail how the proposed single- or multi-sited Node will integrate all necessary user **access and service** aspects into a single package, so the user is served the imaging technology(ies) in the best possible way. The applicant provides a detailed strategy how the Node will meet Euro-BioImaging user expectations regarding transparent, instant and open access to instruments and services including rapid evaluation of technical feasibility and a single-point of contact at the Node. The applicant will describe in detail the foreseen user access management as well as all relevant aspects of administration and coordination of Node construction and operation.

7. For already operating facilities, 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. Applicants should have established or provide a plan for a system for **quality assurance** (covering functionality of instrumentation, services and procedures) and quality control (covering monitoring of user satisfaction and project success in terms of published results).

8. The applicant describes and demonstrates its capacity in **user training** in imaging technologies (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).

9. If investments in the Node have already been made or are anticipated the applicant is invited to provide respective evidence e.g. Letter of investment from funders. The degree of funding commitment by national funders will be considered in the review for applications.

To summarize, the above description of the General Review Criteria defines the following sub-headings that should be addressed in each application:

1. Scientific and technical excellence of the infrastructure Node
2. Quality and scientific field of the academic environment
3. Geographic coverage
4. Maintenance and update
5. European and national significance
6. Access and service package
7. Use and quality assurance
8. User training
9. If applicable, evidence of funding commitment by national funders