Euro BioImaging
Preparatory Phase II Project

D7.4 First list and description of identified sites for EuBI user training

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Abstract

With the aim to set up the future EuBI training portfolio, a first list of identified training sites for user training has been established and is presented in this report. Also, the forms and data collected during the process of identification are presented.

The present report constitutes the deliverable D7.4 of the Euro-BioImaging Preparatory Phase II project.

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Introduction and framing of Deliverable D7.4 within Task 7.1

Euro-BioImaging (EuBI) will coordinate and support several levels of training, becoming a one-stop shop for the imaging community's needs for advanced training. By having Europe's best imaging experts under the roof of its Nodes, Euro- BioImaging can offer training of the highest quality. The training strategy focuses on current and future users (Master and PhD students, post-graduates, senior scientists, technicians) as well as on staff of the imaging facilities across Europe.

The EuBI training programme follows a three-pronged approach, which covers general, specific and advanced training needs for users and staff. The user training programme will be
incorporated in the Euro-BioImaging open access procedure with hands-on-training for use of instruments designed to bring each user to the level required to use the technology, and successfully perform experiments at the Node and analyse results.

The user access to training in imaging technologies will support the participation of a broad scientific community in training in imaging technologies in Europe, to ensure there is no disconnect between what happens in the specialized core facility environment and the outer scientific society. Lack of experience in imaging techniques may translate into uncompetitive project proposals, or decreased efficiency during the course of experiments. Therefore, specific training actions aimed at users are required in order to achieve the most efficient access program.

The objective of WP7 Task 1 is to prepare the general coordination of user training in EuBI. This task firstly aims to set-up the portfolio of user training courses for different imaging technologies served by EuBI Nodes, with the corresponding procedures for the determination of required course topics and frequency in emerging technologies and for the set-up of the user application as well as the course evaluation. These procedures have already been presented in the reports of deliverables D7.2 and D7.3.

Based on this work, WP7 has identified and catalogued a first list of training sites within EuBI Nodes organizing training courses dedicated to user training. This first list is presented in the present report, along with the methodology and the forms used for data collection, and a brief analysis of the data collected.

Methodology

To establish the list of user and CFS training sites, WP7 organized a sub-working group dedicated to the elaboration of the training portfolio to allow and facilitate sharing expertise, communication and interaction directly between the WP7 partners and the EuBI Hub. Also, one of the first WP7 activities was to gather all the information and recommendations for the creation of a coordinated system of training in biological and medical imaging presented by the EuBI PPI WP13, as a base to define the different activities to be carried out in order to fulfil the WP7 objectives.

The main activity carried out was the implementation and launch of two surveys in order to identify training sites and collect information about the existing training course offer among

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the 29 Node Candidates. These surveys were conducted using the Survey Monkey tool (the account was provided by the EuBI PPII WP5 team).

This first training call also allowed to assess part of the European training offer situation and draw a first list of criteria for the future calls and the elaboration of the EuBI training portfolio. The first results were shared with the EuBI community during the first EuBI Representative of Nodes Meeting organized during the Global BioImaging Workshop in June 2016, and during the first EuBI Core Facility Staff meeting, held in Seignosse, France, on September 30th, 2016, organized by WP7 (see D7.1 and the minutes of the meeting).

The first survey dedicated to training site registration ran from May 19th to July 15th, 2016. In total, 37 responses were received, but only 30 were considered valid, the other responses corresponding to incomplete responses or tests.
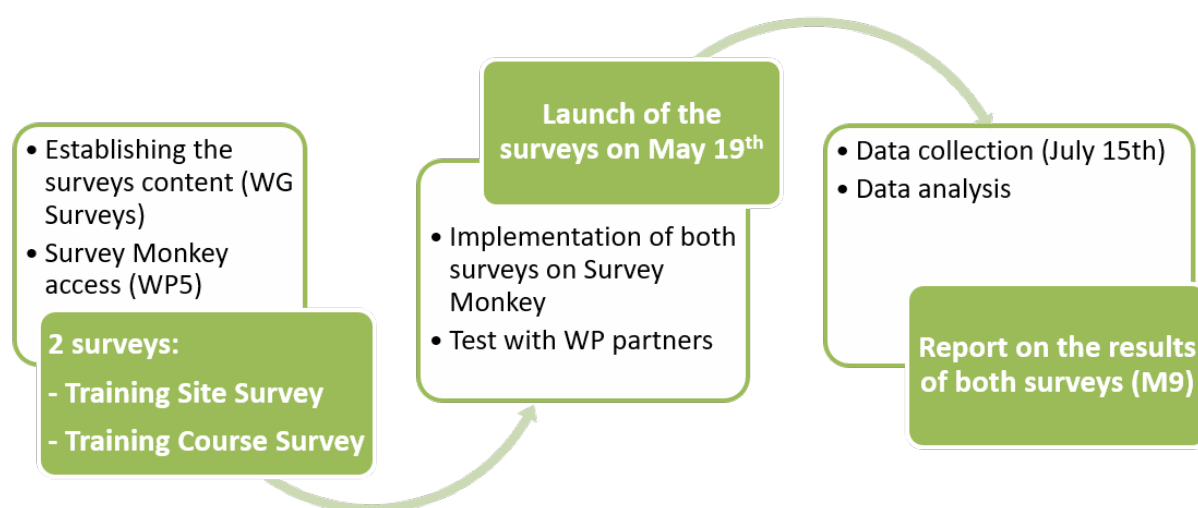

Figure 1 – Process and timeline for the elaboration, implementation and launch of the survey for training site registration.

In May 2017, a new call was launched in order to update the information collected in 2016, to apply the agreed-upon criteria for the evaluation procedure (D7.2), and register new training sites.

As the EuBI Web based system was not ready yet for the repository of training sites or courses in the WAP, WP7 resorted to Survey Monkey for new sites, and Excel documents for correction of previous information filled in 2016, so that training sites didn't have to re-fill in information they already gave in 2016. The WP7 team contacted them one by one to update the information submitted in 2016. Moreover, they could register new training courses through the new registration form.

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This call was open from May 9th to June 9th. During this last call, 8 new training sites have been registered and 10 update forms have been received.

Training sites survey: structure and content

The training site survey was based on a form designed to be as close as possible to the future training site registration form and interface, collecting information that the future training platform data base would have to gather to build a resourceful and sustainable training portfolio.

In total, the training site form had 45 questions on the following items:
- Site identity and contact information
- Existing training activities
- Administrative aspects
- Local infrastructure

Skip logic was applied to the survey to create a custom path through the survey that varies based on a respondent's answers.

Also, the form prepared for the registration of new training sites in 2017 included the agreed-upon criteria for training site evaluation and additional information requests (e.g. description of the site, field of expertise).

The form is presented in annex (Annex 1).

Data analysis

As the outcome of both calls, 45 training sites have been identified, representing 22 Nodes Candidates, in 10 countries and at EMBL.

Figure 2 - Map of the training sites identified for the EuBI training portfolio.

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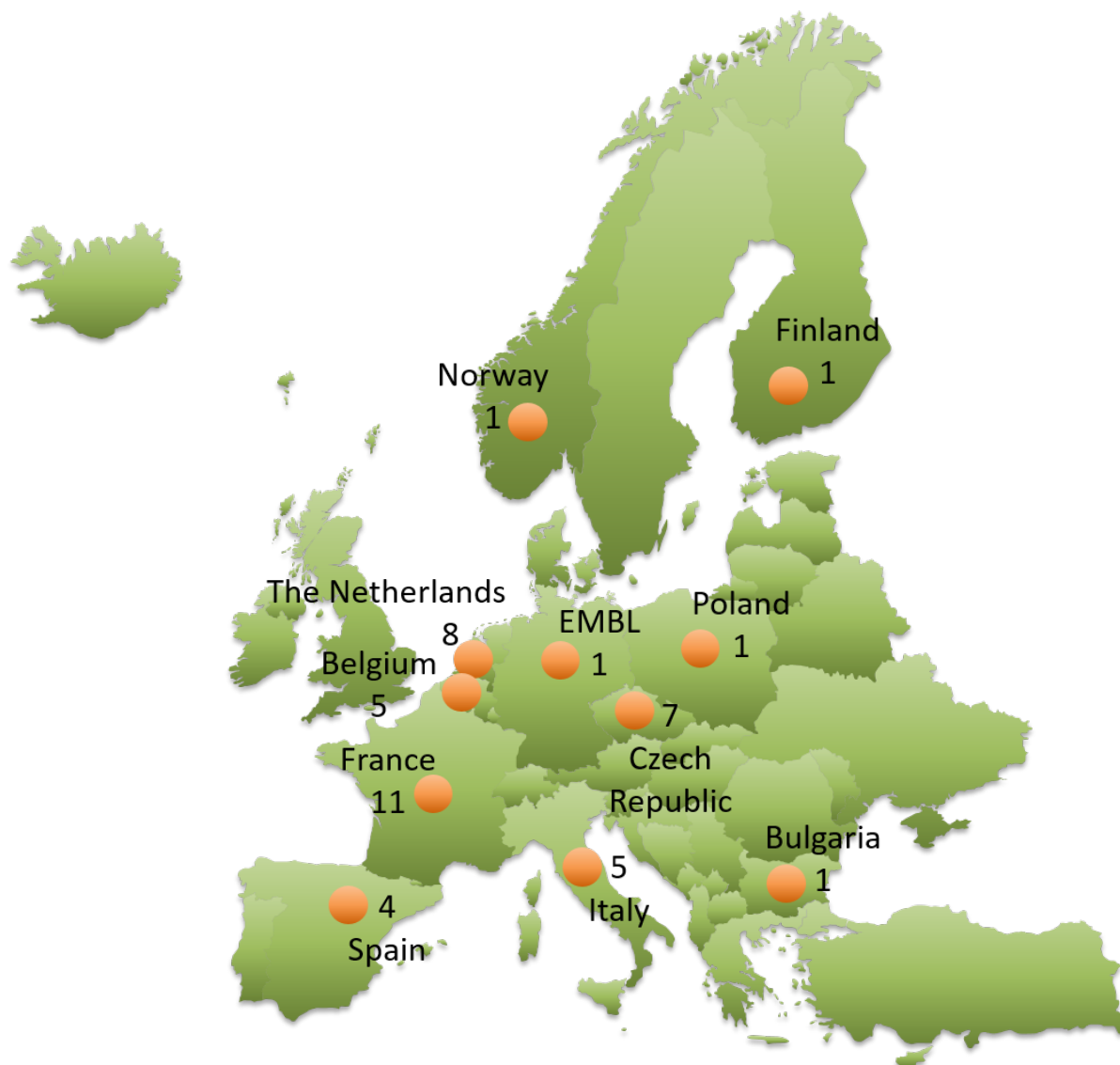
13 of those 45 training sites are not proposing training courses to be included in the EuBI training portfolio yet. Among the training sites proposing training courses, 19 propose educational training courses (part of Master/PhD programs...), 21 offer user training courses and 11 offer courses aimed at core facility staff. Although most of the training sites offer training courses aimed at more than one type of audience, 6 courses have been strictly identified as "user training courses".

Also, valuable information was collected regarding the infrastructure, course organization and administrative organization at the training site. This information could be used when evaluating the training sites. For example, the data collected through the survey indicates that almost 60% of the registered sites have a dedicated training administration or events office that takes care of training logistics.

List of training sites and description

The table below shows the 45 training sites for biological and medical training that have been registered up to now. The training sites are grouped by country and Node Candidate affiliation.

It seems rather difficult to identify training sites that will be strictly dedicated to user training as the training offer will likely change and develop, and that is why we choose to not categorize the training sites by target audience.

Country / Node Candidate / Training site	Number of training sites
Belgium	**5**
FLAMINGO - Molecular Imaging Belgium Node	**2**
University of Antwerp	
University of Antwerp - Bio-Imaging lab	
LIMBO - Advanced Light Microscopy Belgian Node	**3**
Antwerp Centre for Advanced Microscopy (ACAM)	
Ghent University, Department of Pharmaceutics	
VIB / KU Leuven	
Bulgaria	**1**
Sofia Euro Bioimaging Node	**1**
Institute of Molecular Biology	
Czech Republic	**7**
Advanced Light and Electron Microscopy Node Prague CZ	**3**
Imaging Methods Core Facility	
Institute of Molecular Genetics ASCR	
Institute of Physiology CAS	
ALM and Medical Imaging Node Brno CZ	**4**
CEITEC	
Masaryk University - CEITEC	
Masaryk University - Faculty of Informatics	
CEITEC - Brno University of Technology - Core Facility Experimental Biophotonics	
Finland	**1**
Finnish ALM Node - Advanced Light Microscopy Finnish Node	**1**
University of Turku, Åbo Akademi University	
France	**11**
France BioImaging Node	**11**
Bordeaux Imaging Center	
France BioImaging Paris Centre	
France Life Imaging - WP Training	
IBDM (Developmental Biology Institute of Marseille)	
Imagerie-Gif	
Institut Curie	
Institut Jacques Monod - ImagoSeine	

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IPAM-IGF (Montpellier Small Animal Imaging Facility - Institute for Functional Genomics)		
MARS (Montpellier advanced microscopy research and development facility)		
Montpellier RIO Imaging		
Université Montpellier 2 - IUT		
EMBL	**1**	
	EMBL	**1**
European Molecula Biology Laboratory (EMBL)		
Italy	**5**	
	Molecular Imaging Italian Node	**5**
Fondazione CNR/Regione Toscana "G. Monasterio"		
IBFM-CNR		
Institute of Biostructure and Bioimaging National Research Council		
SDN SpA		
Univeristy of Torino, Dept. Of Molecular Biotechnologies and Health Sciences		
The Netherlands	**8**	
	Erasmus MC OIC - Advanced Light Microscopy Rotterdam Node	**1**
Erasmus MC / Erasmus Optical Imaging Centre		
	Facility of excellence in imaging - ALM and Molecular imaging Node Maastricht	**2**
Maastricht University		
Maastricht University Medical Center		
	High Throughput Microscopy Dutch Flagship Node	**1**
Leiden University, Faculty of Science, LACDR		
	Population Imaging Flagship Node Rotterdam	**1**
Erasmus MC University Medical Center Rotterdam		
	Preclinical Imaging Centre (PRIME) - Molecular Imaging Dutch Node	**1**
Radboud Medical Center		
	The Van Leeuwenhoek Center for Advanced Microscopy (LCAM) - Functional Imaging Flagship Node Amsterdam	**1**
Van Leeuwenhoek Centre for Advanced Microscopy		
	Wageningen Imaging and Spectroscopy Hub (WISH) - ALM and Molecular Imaging Node Wageningen	**1**
Wageningen University		
Norway	**1**	
	NorMIC Oslo - Advanced Light Microscopy Node Oslo	**1**
University of Oslo		
Poland	**1**	
	Advanced Light Microscopy Polish Node	**1**
Nencki Institute of Experimental Biology		
Spain	**4**	
	Barcelona Live and Intravital - Advanced Light Microscopy Node (BLivIN)	**1**
University of Barcelona		

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Population Imaging Node Valencia	1
La Fe Health Research Institute	
SLN@BCN - Barcelona super Resolution Light Nanoscopy - Super Resolution Node Barcelona	2
Centre for Genomic Regulation	
ICFO - The Institute of Photonic Sciences	
Total	**45**

General information and description of the training sites are compiled in the Annex 2 *List and description of the training sites for the future EuBI training portfolio*, available at the following link: https://drive.google.com/open?id=0B3iy3cTc0JM8c2xGX3FScTlwOEU.

Training sites presentation in the EuBI training portfolio

The information collected for the identification and description of the training sites through the survey for now, and then through platform hosted on the EuBI WAP, will be used to feed the database of the training portfolio. Information about the training sites will be presented in the portfolio so the users will be able to clearly identify each training site.

Following the EMTRAIN "on-course" website model, the training site information could be presented as follows:

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Institute of Molecular Genetics ASCR

Node affiliation: Advanced Light and Electron Microscopy Node Prague CZ

Web address: www.img.cas.cz

Accreditation: Partially (not all courses are accredited)

Description

The Institute of Molecular Genetics, v. v. i. as a public research institution established pursuant to Act no. 341/2005 Coll., carries out scientific research in cellular and molecular biology and genetics. At IMG there currently work a total of 28 research groups in the fields of molecular and cellular biology, molecular immunology, functional genomics and bioinformatics, study of oncogenes, developmental molecular biology, structural biology, and mechanisms of receptor signaling. The IMG personnel includes approximately 550 staff members, including 100 postgraduates and 30 undergraduates.

Highlights & expertise

The Light Microscopy facility provides methodological and instrumentation background for flow cytometry and fluorescence microscopy techniques. The facility is equipped with two flow cytometers with high-through automated samplers and one polychromatic high-speed cell sorter. Laboratory facilities include also AutoMACS Pro magnetic separator for automatic rapid sorting of cells. Light microscopy instrumentation includes twelve microscopy systems which range from routine fluorescence microscopes, confocal microscopes up to high-end super-resolution microscopy systems STED and N-SIM. Most of the instrumentation in the laboratory is available on the self-service basis, for trained users. Big emphasis is given not only for data acquisition, but for image reconstruction, processing and analysis as well. Laboratory is running cell sorting service. Several offline analysis workstations are also available in the facility, for analysis of flow cytometric (FlowJo) and image data (SoftWorx Suite, Imaris, LAS AF, Huygens, ImageJ, NIS Elements). The Electron Microscopy Core Facility provides expertise and cutting edge equipment for a broad range of biological sample preparation and ultrastructural imaging techniques. The core facility deals with various biological samples: human and animal cell cultures, plant and animal tissues, worms, microorganisms, lipid micelles. The sample preparation techniques include routine chemical fixation and resin embedding, cryofixation using high-pressure freezing technique, freeze-substitution, plunge-freezing, cryosectioning, and immunolabeling, including simultaneous detection of multiple targets by our self-developed methods.
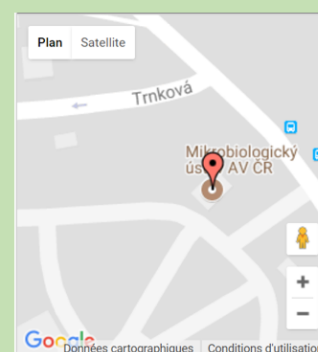
Location

Address
Videnska 1083
Prague 4
4222
Czech Republic

Liaison officer
Pavel Hozak
hozak@img.cas.cz

Training offer

- Processing and analysis of microscopic images in biomedicine
- Microscopy Methods in Biomedicine
- Transmission Electron Microscopy in Life Sciences
- Superresolution Techniques in Light Microscopy

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Bordeaux Imaging Center

Node affiliation: France BioImaging Node

Web address: http://www.bic.u-bordeaux.fr/

Accreditation: University/institution accreditation does not apply to courses from this training site

Description

Established in September 2009, the Bordeaux Imaging Center (BIC) is a core facility for biological imaging, member of the national infrastructure France-BioImaging and european infrastructure Euro BioImaging. The BIC provides services, training and technological innovation in cellular imaging to academic and private scientific communities, mainly in life, health and plant sciences. It is a core facility identified at the national level as "Infrastructure en Biologie Sante et Agronomie" (IBISA). The different components of the BIC are : PHOTONIC imaging, ELECTRONIC imaging, PLANT imaging.

Highlights & expertise

With a unique positioning in super-resolution microscopy, the BIC is an outstanding resource in imaging for researchers from the Aquitaine region that welcomes visitors from all over Europe. The facility gathers cutting-edge instruments and competences in electronic and photonic imaging, mainly in health and plant science fields. It offers a wide range of services from access to high-end instruments, to sample preparation and image analysis. The BIC provides services, training and technological innovation to both academic and private scientific communities.

Training offer

- Images reconstruction and 3D analysis with Imaris
- Tasks automation on ImageJ : the macros
- Java for imageJ: plugins
- Image treatment and analysis on ImageJ
- Introduction to the mobility mesurement of proteins by FRAP and SPT
- Metamorph advanced training
- Acquisition, treatment and image analysis with MetaMorph
- Super resolution in photonic microscopy
- Cryomethods (High pressure Freezing and the different freeze substitution approaches)
- Widefield and confocal microscopy

Location

Address
« Centre Broca Nouvelle-Aquitaine »
146 rue Léo Saignat
CS 61292 Case 130
33076 Bordeaux Cedex
France

Liaison officer
Caroline Thiriet
caroline.thiriet@u-bordeaux.fr

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Annex 1 - Training site application form 2017

EuBI Training Site Application Form

EuBI Training Site Application Form - Introduction

During the Euro-BioImaging Project Interim Operation, EuBI PPII WP7 is coordinating the identification of biological and medical imaging training sites for the future EuBI training portfolio

Training sites willing to apply to be identified as a EuBI training site are invited to fill out the following form no later than June 2nd, 2017.

Training sites that have already applied last year do not need to fill out this form again

This second call for training site application will gather information on the training site, existing training activities, administrative aspects and local infrastructure. The information collected will be then used for the implementation of the future EuBI training portfolio for users and core facility staff on the Web Access Portal.

Important: **In a first phase, only training sites affiliated to a EuBI Node Candidate will be able to apply to be identified as a EuBI training site and then register training courses for the future EuBI training portfolio. The next call for training site application could be expanded and more training sites could be considered.**

You can only fill out the form once, but you can return to the form to pick up where you left off and/or edit previous responses until you click on the "Done" button at the end of the form. To prepare, you can find the full content of the form here.

Only for multi-sited distributed Nodes: if you wish, you can complete one application form per site.

Questions marked with an asterisk (*) are required.

If you have any questions about the application form, please contact us:contact-survey@france-bioimaging.org

* 1. Please specify the institutional link to Euro BioImaging (Node Candidate):

[⬍]

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EuBI Training Site Application Form

EuBI Training Site Application Form - Institutional information

* 2. Name of the training site:

[   ]

* 3. Address

Street address   [   ]

City   [   ]

ZIP/Postal Code   [   ]

* 4. Country:

[⬍]

* 5. Institutional website:

[   ]

6. Parent institution(s) of the training site:

Parent institution 1   [   ]

Parent institution 2   [   ]

Parent institution 3   [   ]

Parent institution 4   [   ]

Parent institution 5   [   ]

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EuBI Training Site Application Form

EuBI Training Site Application Form - Proposer's information

* 7. Name of the proposer:

First name: [   ]

Last name: [   ]

* 8. Gender:

[▲▼]

* 9. E-mail address:

[   ]

* 10. Phone number:
(Enter your phone number as: 00"country dialing code""your number", and without spaces)

[   ]

* 11. Role of the proposer in the training site:

☐ Coordinator of Training Activity   ☐ Technical Head of Core Facility

☐ Core Facility Staff   ☐ Scientific Head of Core Facility

☐ Core Facility Manager   ☐ Training Officer

☐ Other (please specify)

```
[                                                                    ]
```

* 12. Administrative contact:

Name: [   ]

E-mail address: [   ]

Phone number: [   ]

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EuBI Training Site Application Form

EuBI Training Site Application Form - Description of the training site

* 13. Description of the training site (max. 600 characters, spaces included)

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[                                                    ]
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4

* 14. Highlights: description of specialities and expertise of the site in imaging training (max. 600 characters, spaces included)

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* 15. Please upload the site institutional logo.
  Please save the document as: "Name of the training site"_logo_2017

  File types accepted: PNG, JPG, JPEG, GIF, maximum file size accepted 16MB

  [Choose File]   No file chosen

EuBI Training Site Application Form
EuBI Training Site Application Form - Training information

* 16. How many training activities does your site organize currently per year?

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* 17. What is the percentage of external participants (not belonging to your institution) in the training activities? *(Do not include the percent sign in your answer)*

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* 18. What is the percentage of transnational participants (working normally in another country)?*(Do not include the percent sign in your answer)*

```

```

EuBI Training Site Application Form

EuBI Training Site Application Form - Administrative aspects

* 19. Is there a dedicated training administration or events office that takes care of activity logistics at your node?

◯ No

◯ Yes. Please provide more details:

[   ]

* 20. Is there specific local staff in charge of dealing with the financial organisation of the training?

◯ No

◯ Yes. Please provide more details:

[   ]

EuBI Training Site Application Form

EuBI Training Site Application Form - E-learning and e-training

* 21. Is the training site equipped with a virtual platform devoted to online/e-training?

◯ Yes ◯ No

EuBI Training Site Application Form

EuBI Training Site Application Form - E-learning and e-training

* 22. Please indicate what type of virtual platform is used:

◯ Moodle

◯ Blackboard

◯ A custom-made interactive web tool

◯ A combinaison of both commercial and custom-made web tool

◯ Another commercial platform. Please specify which one:

[   ]

* 23. Is there any "real-life" examples of tools and productions that are publicly available?

◯ Yes

◯ No

24. If possible, please provide a web address to access these "real-life" examples of tools and productions:

[   ]

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EuBI Training Site Application Form - Accreditation

* 25. Does the university/institution accreditation apply to training courses from your site?

◯ Yes

◯ No

◯ Partially (not all courses are accredited)

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EuBI Training Site Application Form - Local infrastructure details

* 26. How many suitable seminar/lecture rooms are available for training activities?

[   ]

* 27. Lecture room: Please indicate available audio/video equipments:

☐ Regular video projection equipment

☐ Regular black/whiteboard

☐ Digital whiteboard

☐ Audio/video recording capability

☐ Webcasting services

☐ Other (please specify)

[   ]

* 28. Lecture room: Accessibility/equipment for disabled audience:

☐ Wheel chair ramp

☐ Hearing magnetic loop

☐ Other (please specify)

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```

* 29. Wet lab for training purposes: How much wet lab space is available for training activities?

Number of rooms:

```

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Total number of lab benches:

```

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* 30. Wet lab: How many participants can your infrastructure accommodate for training activities?

```

```

* 31. Wet lab: Please indicate available audio/video equipments:

☐ Regular video projection equipment

☐ Regular black/whiteboard

☐ Digital whiteboard

☐ Audio/video recording capability

☐ Other (please specify)

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```

* 32. Wet lab: Accessibility/equipment for disabled audience:

☐ Wheelchair ramp

☐ Hearing magnetic loop

☐ Other (please specify)

```

```

* 33. Computer room for training purposes: Number of suitable computer rooms available for training activities?

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* 34. Computer room: Capacity of the computer rooms:

Minimum number of
working places per room:

Maximum number of
working places per room:

* 35. Computer room: Type and total number of stations:

Number of laptops:

Number of workstations:

* 36. Computer room: Technical description (Please describe computers' specifications, internet connection (wired/wireless), graphical card informations, available softwares etc...):

* 37. Computer room: Please indicate audio/video equipments:

☐ Regular video projection equipment

☐ Regular black/whiteboard

☐ Digital whiteboard

☐ Audio/video recording capability

☐ Other (please specify)

* 38. Computer room: Accessibility/equipment for disabled audience:

☐ Wheelchair ramp

☐ Hearing magnetic loop

☐ Other (please specify)

EuBI Training Site Application Form - Additional services

* 39. Please describe the accessibility of the training site (e.g. next airport, public transport, travel duration from closest airport ...):

* 40. Can the training site organize shuttles to/from the main common transportation infrastructures?

○ No

○ Yes. Please provide details or a link to indications:

* 41. Alternatively, do you have agreements with local transportation companies?

○ No

○ Yes, please specify:

* 42. Can the training site provide accommodation for the participants?

○ No

○ Yes, please specify:

* 43. Alternatively, could you provide information about accommodation options (e.g. agreements with local hotels, share-housing, renting)?

◯ No

◯ Yes, please specify:

> [ ]

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EuBI Training Site Application Form

EuBI Training Site Application Form - Training course inclusion into the EuBI training portfolio

* 44. Will you register one or more training courses to be included into the future EuBI portfolio during this application call?

◯ Yes

◯ No

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EuBI Training Site Application Form

* 45. How many training courses will you register?

> [ ]