
# Euro-BioImaging

European Research Infrastructure for Imaging Technologies in Biological and Biomedical Sciences

WP1 Project Management

**Task 1.4**
Meetings

**Deliverable 1.8**
Stakeholder Meeting

**Task leader**
EMBL/EIBIR

**March 2012**

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## 1 Executive Summary


The 3rd Euro-BioImaging Stakeholder Meeting took place on January 30th/ 31st 2012 at EMBL in Heidelberg, Germany. 250 stakeholders from all over Europe and 4 members of the Euro-BioImaging External Advisory coming from US and Australia attended the meeting. The meeting aimed to inform the audience about the overall project progress in 2011 (Euro-BioImaging Survey, Proof-of-Concept Studies, national Euro-BioImaging related initiatives) and to discuss the progress, future perspectives and various initiatives in 11 parallel, work package specific breakout sessions chaired by the work package chairs.

The meeting started with a plenary session, in which the status report on Euro-BioImaging was presented by the Scientific Coordinators, Jan Ellenberg and Stefan Schönberg. Christian Renner (DFG) reported on the publication of ERA instruments on midsize instrumentation in the life sciences-ALM. Graham Cameron (ELIXIR, EMBL-EBI) presented the research infrastructure project ELIXIR-European life science infrastructure for biological information.

After the plenary session attendees split into smaller groups and participated in the presentations and discussions of 11 Euro-BioImaging work packages. The outcome of the breakout session discussions was presented by work package chairs in a concluding plenary session.

# 2 Report on 3rd Euro-BioImaging Stakeholder Meeting

## 2.1. Agenda

**Date:** January 30th/ 31st 2012
**Venue:** ATC, EMBL, Heidelberg, Germany

### January 30th , 2012

| | |
|---|---|
| 13:00 | Welcome |
| 13:15 | *Plenary lecture*: ERA - Instruments – *C. Renner (DFG)* |
| 13:45 | *Plenary lecture*: ELIXIR – *G. Cameron (EBI)* |
| 14:15 | Status Report Euro-BioImaging: *J. Ellenberg & S. Schönberg* |
| 14:45 | *Coffee Break* |
| 15:15 -17:15 | Break-out Session I (chaired by WP-leaders) |
| 18:00 | *Dinner at EMBL* |

### January 31st, 2012

| | |
|---|---|
| 9:00 | Break-out Sessions II (chaired by WP-leaders) |
| 11:00 | Coffee Break |
| 11:30 | Break-out Sessions III (chaired by WP-leaders) |
| 13.30 | Light Lunch |
| 14.15 | Summary of Break-out Sessions |
| 15:15 | Résumé and Closing |

## 2.2. Objectives and outcome of WP specific Breakout Sessions

All presentation slides are provided on project website (www.eurobioimaging.eu)

### *Session I - 30 January, 2012 (15:15 - 17:15)*

#### *Medical Imaging - From patient to population (WP10)*

Chairs: J. Frokiaer & L. Donoso

Objectives:

- Review of objectives of each task under WP10 and achievements up today
- Main findings from survey: discussion on limitations and ways to overcome them
- Ongoing proof-of-concept studies
- Strategies for involvement of key “champions” and institutions to feed the results from the project
- Future immediate actions (for year 2012)
- Other business

Outcome:

The session was attended by 50 - 60 participants from all over Europe.
For the 3 presentations updating the community of the results of the surveys there was a very lively discussion.

The major issues for debate were

- Reliability of the surveys due to limited number of respondents, how much can actually be concluded based on the numbers and were the questions provided sufficiently detailed for obtaining responses/answers useful for future actions?
- There was also a discussion on the meaning of Health Technology Assessment (HTA). There does not seem to be a uniform understanding of the importance of HTA among the community.
- With regard to image guided interventions there were various issues related to how broad image guided intervention should be. Questions as to whether i.e. radiation planning was included and what are the limitations for an image guided intervention infrastructure came up.
- There was an important demand for identifying where the WP is with regard to populations based imaging.

Based on this discussion especially on issue which was brought up both by Stefan Schönberg and others was whether the survey should be complemented by data from additional surveys within dedicated communities, e.g. HTA and clinical trial organisations (CTO).

***Access to Innovative Technologies- ALM (WP7)***

Chairs: R. Pepperkok & B. Geiger

Objectives:

- Major results of Euro-BioImaging Survey related to WP7
- Major results of Euro-BioImaging open call for Proof-of-Concept Studies related to WP7
- Bottlenecks for providing access to innovative light microscopy technologies
- Emerging imaging technologies – update

Outcome:

Major results of Euro-BioImaging Survey related to WP7:

- Community wishes to have access to survey data (put on web)
- Significant need for WP7 technologies exists
- Instrument, teachers and data analysis is mostly required
- Personnel and instruments are most limiting for providing access

Major results of open call for Proof-of-Concept Studies related to WP7:

Bottlenecks for providing access to innovative light microscopy technologies

- Several applications did not target the right technology (questionnaire for applicants, e.g. describe biological problem first then decide on technology), Better information on technology on web, training of users
- Users expectations go too far (discussion by phone before application, questionnaire for applicants), better information on technology on Web, training of users.
- Project will last for longer than POC period, general problem (science never ends)
- Project milestone program may help to terminate when needed

Emerging imaging technologies – update:

- Have an open discussion forum on EUBI Web page
- Stakeholder Contributions
- Digital holographic microscopy
- Intravital microscopy (WP8?)
- New technology to image morpho-functional intact neural networks

***Legal, Governance and Ethical Issues (WP2)***

Chairs: S. Schumacher & E. Beem

Objectives:

- Report on recent developments in WP2
  Evaluation of legal and governance models
  IPR and ethical issues: a policy for Euro-BioImaging especially in view of the medical imaging community
- Next steps
  Suggest one or more legal structures for Euro-BioImaging
  Define IPR and ethical policy
  Prepare Memorandum of Understanding

Outcome:

The breakout session was attended by ~30 participants from European research institutes and ministries. The meeting served to present to and discuss with the participants the results of previous WP2 meetings and in particular the contents of deliverable 2.1 “Evaluation of suitable legal structures”.
The evaluation took into consideration that Euro-BioImaging will become a distributed infrastructure in which the coordinating “Hub” will liaise with “nodes” hosted by research institutions in the Euro-BioImaging member states. The Euro-BioImaging Hub will need a legal structure that can receive international funding and employ staff, etc.

WP2 identified three possible legal structures that might be suitable for Euro-BioImaging, namely

- European Research Infrastructure Consortium (“ERIC”),
- International Consortium Agreement linked to a newly established legal framework
- International Consortium Agreement linked to an existing international organisation such as EMBL

Discussions during the breakout session mainly served to discuss the details of these options, especially their advantages and disadvantages.
The participants discussed and agreed on the following issues:

**Hub**

- Coordinating hub was necessary to guarantee for long term sustainability and to ensure the necessary coordination within the network; the hub would need to have or rely on a legal structure to carry out some of its activities
- The size of the hub: the hub should not be too small; it should be strong enough to establish and maintain a pan-European Infrastructure
- The size of the hub should not be the main criterion for the choice of the legal structure
- The Hub should be financed by the future members whereas the nodes would have to ensure funding for their activities at national level. Preferably the hub could distribute money to the nodes as well.

**Nodes:**

- The nodes would keep their own legal identities; concern was raised that this might lead to different conditions at European an national levels (e.g. regarding privileges and procurement)
- Nodes would be linked to the hub via bilateral service level agreements
- Nodes would have to undergo a selection process (open call and independent evaluation) to become a node

**ERIC**

- ERIC would allow to establish “affiliates” although it would be more likely that national institutes would keep their legal identity
- ERIC could be a future model but should only be established if it was envisaged as a viable long term model for all participating member states.

## Session II - 31 January, 2012 (09:00 - 11:00)

### *ALM- General Access (WP6)*

Chairs: A. Musacchio & J. Swedlow

Objectives:
- Report on 2011 meetings
- PCS Process Report and Progress Update
- Major results of the Euro-BioImaging Survey and WP6 Milestones for 2012
- Next WP6 Meeting (Autumn 2012)

Outcome:
Euro-BioImaging WP6 National Level Activities:

France BioImaging:
- Based on existing IBiSA.
- 5 local nodes in place & funded; Overall directed by MaiteCoppey-Moisan; Distributed Image Processing directed by Jean-ChristopeOlivo-Marin; distributed across 4 nodes.
- €26M over 10 years. €22M infrastructure; €4M running fees. (new funding)
- Start 1 Nov 2011, effective start 1 Feb 2012.
- Nodes chosen by existing IBiSA mechanism. Require 20-30% external? capacity.
- Focussed on biological imaging; medical imaging in progress.
- National process incl. community & funding bodies participated in site selection http://france-bioimaging.org/

NL-BioImaging:

- Appointed Project Mgmt. Team; call for €19.7M (new money)
- Meeting of NL participants
- 60 PI, 18 support staff; existing €60M activity
- Nanoscopy grant awarded €5.6M
- Phase II (2015-2022) replacement & upgrade— €119.3M; coinciding with EuBI construction phase
- Integrating with other NL activities; “life science & health” one of the national top-sectors
- URL?

Finland:
- €10M 3 years, starting in 2010. Targeted for open access facilities.
- National infrastructure network established, with local centres established. Three major medical imaging centres; six centres for biological imaging.
- Dialogue ongoing w/ Ministry of Education.
- http://www.biocenter.fi/

German BioImaging:
- National Roadmap process ongoing; application submitted Jan 2012 by Board representing biological & medical imaging. Proposal related to European level roadmap.
- Seven biological imaging nodes; two innovative, five general access. Five medical nodes. Require 50% access commitment.
- €144M requested (bio + med), matched by industry contribution of €43M; proposal for 5 years.
- €72M requested for biological imaging.
- Platform structure defined

- National Network of biological imaging facilities funded by German Research Foundation (€ 450.000 for 3 years). http://www.germanbioimaging.org

Israel:

- Funding through multiple Ministries (TELEF, ISM)
- Seven universities (80% of users w/in 30 mins distance)
- ~€25M, w/ additional institutional matching 5 year, starting w/in 2012-2013.
- URL?

Spain:

- Network founded
- Infrastructure & network funded from 2011; €24K & €192K awards for access and networking
- New gov't

Sweden:

- Governmental research infrastructure
- Proposal for 2012-2015, investments €20M; participation and networking €30M.
- Nodes defined.
- http://bioimaging.se&http://www.vr.se (roadmaps)

Denmark:

- Infrastructure in 2009 for biological (€4.9M) & medical imaging (?)
- Running since Jun 2011

***Access to Innovative Technologies- Medical Imaging (WP9)***

Chairs: J. Hennig & O. Speck

Objectives:

- Overview of WP9
- Report on status of innovative imaging technologies
- Report on Proof of Concept Studies
- Status of national imaging communities and infrastructure

Outcome:

First the results of the survey were presented and discussed. It is clear that the survey – although with more than 600 participants very successful – is more indicative than fully representative.

As main issues it was noted:

- The innovative medical imaging technologies represented within WP9 rank at the top of the list of the modalities for which access was sought for.
- Compared to the current practice the requested access was surprisingly high both in terms of numbers of requests as well as intensity of anticipated use.
- Regional differences do exist and need to be considered, as an example there is an intense unfilled need for 3T in Eastern Europe, whereas in Central and Northern Europe 7T is most sought after.
- There is some mismatch between the perceived need by users (which is mainly for access to the instrument) vs. providers (who put a stronger emphasis on services like training, methodological and technical support etc.)
- Training is very important.
- A subsidized cost model with some basic funding for providers plus access-oriented funding for users appears to be the most realistic case.
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In the following presentation of the imaging modalities it became clear, that most modalities (UHF-MR, PC-CT, MEGMRI, EPRI) are already very well organized. Each of these modalities has established a coordinated network with various meetings.

Consolidated drafts for basic terms of usage etc. have been worked out. It is very positive to note that Euro-BioImaging already had a significant effect in bringing these communities together and getting organized.

Items for future attendance:

- There has been discussion to watch out and add new evolving technologies (Magnetic Particle Imaging MPI, Hyperpolarisation).
- Overlap with other work packages needs to be noted. This applies to WP 8 (Molecular Imaging), since most of the modalities in WP 9 also have strong focus and application in small animal imaging. It also applies to WP 10, where apparently also a process has been started to evaluate new modalities for population based imaging.

The most important message for the further implementation of Euro-BioImaging is the recognition that innovative medical technologies need to be implemented in a spatially distributed and dynamic way. In the context of WP 9 it doesn't make sense to establish fixed and persistent centres. Innovation occurs at mostly unexpected places and cannot be fostered in large research 'factories', so the Euro-BioImaging infrastructure has to be realized in a dynamic and flexible fashion.

***Finance Planning (WP4)***

Chairs: W. Spek & F. Martens

Objectives:

- Introduction to Euro-BioImaging WP4 and status quo
- Update finance planning & activities
- Tour de table funders and views on financing Euro-BioImaging Research Infrastructure
- Concluding remarks & follow up

Outcome:
Prior to the Stakeholder meeting a Funders 'Tour de table' was organized by the WP4 working group.
Funders of 9 countries were present. Jan Ellenberg presented the mission and vision of Euro-BioImaging. Wouter Spek outlined the general principles of a possible funding model. The attending countries gave a summary of the interest in Euro-BioImaging and on the state of affairs in their respective countries. It was agreed that the WP4 working group will stay in contact with the attendees on the progress of Euro-BioImaging.

The WP4 break out session started with a presentation of Amanda Collis (BBSRC) of the recently finished report on the current funding sources in the different European countries. It was agreed that this document will be published on the website and that possibilities will be investigated to turn the report in a 'living', permanent up-to-date, document. A rough outline of requirements of a funding model was presented by Wouter Spek. Next this was discussed by the attendees, coupled to the situation in their own agency. This discussion focused on the way how funding for central activities, such as the development of a central strategy and coordination, might be arranged on top of local activities.

***Training (WP13)***

Chairs: P. Hozak & A. Frangi

Objectives:

- Presentation of the outcomes of the pan-European Euro-BioImaging survey important for WP 13
- Collection of the feedback from the stakeholders
- Identification of criteria for training activities under Euro-BioImaging umbrella (operational rules, access rules, quality control)
- Discussion on content for a model course for managers of Euro-BioImaging facilities
- Identification of imaging community requirements for an Euro-BioImaging training office
- Introduction of collaboration with the technical WPs on training issues

Outcome:

The break-out session was attended by around 20 participants. The session was chaired by Pavel Hozak, WP 13 co-leader. The main objectives of the session were: to present and discuss outcomes of the Euro-BioImaging pan-European survey in the area of training, to introduce and received feedback on a concept of Euro-BioImaging criteria for training activities and on a model course for managers of future Euro-BioImaging nodes. Furthermore, the WP 13 international committee for training portfolio and cooperation with other BMS ESFRI projects in training were introduced.

1. Presentation of the outcomes of the pan-European Euro-BioImaging survey related to training

The demand for training activities is well balanced regarding the types of imaging technologies but imbalanced regarding the levels of training activities. There is a significant request for training activities on advanced levels, and on “standard” techniques used by a majority of users in addition to some of the top technologies available. A high demand also exists for combined techniques, for example, correlative microscopy. In general there is a strong preference for face-to-face theoretical and practical courses or workshops. Respondents are highly interested in a centralized, standardized and quality controlled web repository of training activities and materials. As regards existing training activities, the key target group are graduate students and postgraduate fellows; consequently, the level of training provided is mainly at beginners/intermediate level. Evaluation and quality control systems are in place mostly at official education providers, typically universities, but the criteria are not uniform, and internal evaluation is heterogeneous. Consequently, the standards are difficult to assess at the moment, and it will be important to find a consistent solution which would be flexible enough to adopt by various training providers. A relationship with university training was discussed: Euro-BioImaging welcomes many training schemes running at the universities, and these could become a part of Euro-BioImaging training portfolio; however, Euro-BioImaging cannot subsidize these courses. Euro-BioImaging plans to develop a “quality stamp” for a training activity based on evaluation with specific criteria.
Participants of the break-out session in general confirmed the WP 13 conclusions. Moreover, the interest in “awareness/demo workshops” on emerging techniques was expressed. Aim of the courses should be to promote an awareness of new technologies when planning future scientific projects. Euro-BioImaging should also deal with training targeted at technical experts. Repository of courses and training materials should be “peer-reviewed”. A centralised training office will need to deal with all these tasks, however as the complexity is high, one could envisage also a distributed training office (at least to some extent).

2. Identification of criteria for training activities under Euro-BioImaging umbrella

The survey showed that evaluation and quality control systems are in place mostly at official education providers (typically, universities). The criteria are not uniform and internal evaluation is heterogeneous. This will have an impact on definition of operational rules training activities under “Euro-BioImaging framework“. The proposal of operational criteria at the institutional level and at the level of an individual training activity was presented.

During the discussion it was recommended to distinguish between courses provided by universities, which have to comply with formal requirements, and specialized courses (CPD). The participants suggested using ECTS credits as part of the criteria, but only optionally due to heterogeneity in higher education in the EU countries. Admission criteria should be defined by a provider, but an access model should be standardized at the Euro-BioImaging level. An optimal solution might be that a minimum external access is defined centrally. An evaluation process within Euro-BioImaging could run as follows: A standardized EuBI template (specific for a type of training activity) is provided by the EuBI training office. A provider completes the form based on the concrete activity content, and returns the form to the training office (this should be one of the pre-requisite for including a training activity under the Euro-Bioimaging umbrella). After a check of information by a training office, the training activity is inserted into EuBI information system. After the training activity finished, the activity provider collects feedback from participants, summarizes and comments collected information, and submits a report on evaluation to a training office for a final assessment.

3. A model course for managers of Euro-BioImaging facilities

A concept of a model course for managers of future Euro-BioImaging nodes was introduced. Stakeholders strongly supported this idea of a training module for managers of research infrastructures because such training does not exist yet and it is considered as crucial. It should become one of the most important activities of Euro-BioImaging. A course should be modular and scalable based on the size of a node and previous experience of a manager. A course designed as a continuous training would be suitable. In the future it should be clarified what areas of training might be covered by an EuBI training office.

4. WP13 International Committee for training portfolio

The role and composition of a WP 13 International Committee for training portfolio was presented. The committee should serve as a small and flexible advisory body of leading experts on training in biomedical imaging.

5. On-course database

The on-course database of biomedical post-graduate courses, designed by EMTRAIN project, was presented. The database covers also courses focused on imaging. All participants were invited to become testers of the beta version of the database.

## Session III - 31 January, 2012 (11:30 - 13:30)

***Molecular Imaging (WP8)***

Chairs: S. Aime, A. Jacobs, J. Sharpe, C. Schultz

Objectives:

- Status of the Euro-BioImaging Preparatory Phase in the field of Molecular Imaging
- Survey of resources and user needs in Europe
- Proof-of-concept studies
- Eligibility criteria for Euro-BioImaging nodes

Outcome:

More than 80 Stakeholders were registered and attended the WP8 Break-out session.
The main topics of the break-out presentation were (i) the results of the EuBI survey regarding MI technologies, (ii) evaluation of the Proof-of-Concept Study applications for WP8 infrastructure, and (iii) discussion on criteria for MI nodes within the EuBI infrastructure.
During the presentation of the survey data one issue that was raised was the lack of presentation of intravital microscopy within the current EuBI framework. Recent developments in 2-photon and multi-photon microscopy, however, make these technologies ideal to link basic biological with molecular imaging and finally clinical imaging research. Intravital imaging enables the detection of complex and dynamic molecular mechanisms ranging from intracellular, over tissue to whole body structures. Due to this high potential for translational research, it was suggested to integrate intravital microscopy within WP8, as this WP deals with integrated, multimodal molecular imaging. This could also strengthen the communication between the ALM and the MI community.

Another topic that was heavily discussed was the importance of imaging probes for the imaging community. Although MRI, PET and optical imaging modalities are highly dependent on imaging probes, the interest of stakeholders for probes seems to be often limited to what it is commercially available. It has been pointed out that a key task of EuroBioImaging will deal with organizing the access to probe repositories. Furthermore it has been commented that, especially within the optical field, innovative probe development is quite rare and probably due to the limited economic importance of such molecular probes for vendors, compared with other probes. In this regard, a survey on available and needed probes within the community could help to compile a repository of available probes that can be shared within the community.

Some comments of the plenary debate on criteria for MI nodes:

- What is the definition of a node: one site, a network, a region?
- Uniqueness of expertise is important, not the number of instruments
- Excellence in just one field can be enough to become a node
- Excellence needs to be ensured for all modalities within a node
- Nr of users should be valued against nr of instruments/facilities
- Broad range of instruments at one node with satellite centres for very advanced and innovative techniques
- Node should be able to do more than just the standard, must be able to tweak
- Flexibility must be possible over the full range of techniques, which can be different from country to country
- Quality of governance structure and management responsible for the node
- Defined rules for accepting visitors should depend on technique offered
- Nodes should have impact on the scientific community

***Process Plan (WP3)***

Chairs: K. Lohmann, I. Baines

Agenda & Outcome:

**Agenda:**

1. **Work recently completed or in process**
   i. Results of the Survey (completed)
   ii. Strategic Inventory Map (D3.4, due May 2012, draft circulated to WP Chairs by Pamela and Antje on 16th Nov, 2011)
   iii. Working Plan (D3.6, submitted on 30th Nov, 2011)
   iv. Strategy for integration of new future partners and methodologies (D3.7, submitted on 30th Nov, 2011)
   v. Tool box for eligibility criteria for new partners (D3.8, due May 2012)

2. **Update to Vision Paper**
   i. Please contribute your thoughts on how the current version has evolved and should be changed to reflect the maturation of Euro-BioImaging since the first version of the Vision Paper

3. **Business plan first draft (D3.11, due May 2012)**
   i. What should be included in the Business Plan
   ii. What should be included in the Working Plan for the Implementation Phase
   iii. How these two documents differ in content and purpose

1) The WP3 deliverables recently submitted or in progress were introduced and discussed with the audience.
i) - ii) The results of the Euro-BioImaging Survey have been summarized in the “Strategic Inventory Map” (SIM). After approval by the Steering Committee the SIM will be published on the Euro-BioImaging website. Bearing in mind that the survey did not attempt to be comprehensive or representative its results will – together with the proof-of-concept studies (PCS) and the input from the national imaging communities - serve to define the unmet needs of users, providers and industry as to technology, training and data management. It was stated that the survey had two prejudices: 1) it was prejudiced towards providers and 2) was more representative of cores. It focused on the user needs rather then a comprehensive inventory of the existing infrastructures. It was noted that while these limitations exist, the conclusions are nevertheless valid as long as they are qualified. For example, if a need is identified, it is clearly a true need. It was pointed out that it is very difficult or close to impossible to achieve comprehensiveness even after multiple cycles (this from other surveys and communicated by the DFG). The demand on instruments, technical support, training, wet lab space and support for data storage/archiving is the same for biological and medical imaging.

iii) The final working plan will be incorporated into the business plan. An impact analysis will be part of the working/business plan as well. The impact study will not only analyze Euro-BioImaging’s positive effects to the European imaging infrastructure landscape but should also make clear statements to funders what the consequences of not funding Euro-BioImaging are. Another approach might be to compare the results from not "quality-assured" facilities to the ones of quality-assurance facilities. For the first Open Call envisaged for Spring 2013, national initiatives can propose their “gold standard” facilities but the (truly) Open Call might additionally identify facilities that are still - as of the current date - missing. Importantly, it was also noted that Euro-BioImaging should assemble arguments during the first funding cycle for continuance of funding at the end of the cycle. In other words, implement output or success indicators to help in the future to provide arguments proving Euro-BioImaging's value.

iv) There was no additional input related to the (already submitted) strategy to maintain Euro-BioImaging's inclusive nature to future partners and methodologies.

v) The main principles of the Euro-BioImaging eligibility criteria are open access, scientific excellence and sustainable funding. The issue of multiple different criteria for evaluation was raised. For example, there are criteria established by and for ESFRI projects, by Euro-BioImaging and by the national road map initiatives such that Euro-BioImaging might have different eligibility criteria than the national or other initiatives (e.g. in regard to geographical distribution, infrastructure model). Overall, there are similarities between the criteria and it was noted that the ESFRI criteria will most likely be imposed/adopted on Euro-BioImaging. Quantitative and narrative criteria will be combined to provide the most effective evaluation framework. When developing the eligibility criteria there may be a danger of collecting too much data too early and this should be recognized. Besides the "general" criteria there will be some "specific" criteria taking special requirements in different technologies/fields of research into account.

Paul Beckers from the ESF introduced the MERIL project (Mapping of the European Research Infrastructure Landscape) and it's current status. MERIL aims to achieve a (to 75-80%) comprehensive inventory of research infrastructures of European relevance and make the information publicly available through an interactive online portal. It is funded by the European Commission under Framework Programme 7 and is being coordinated by the ESF. MERIL is also facing the challenge to extensively find out what infrastructures are out there (problem of coverage).

2) The first version of the vision paper might be completed by statements on the impact of Euro-BioImaging (see Impact Study in working plan) and how to constantly ensure the highest quality of the facilities by establishing Euro-BioImaging quality standards (Euro-BioImaging stamp/logo of excellence).

3) The business plan should also address the societal need for Euro-BioImaging (e.g. improving health and quality of life). Besides the economic need (improving economy, jobs and competitiveness) this is a major factor when deciding whether to invest into Euro-BioImaging or not, particularly when striving for political support.

***Data Storage and Analysis (WP11)***

Chairs: W. Niessen & M. Unser

Objectives:

- Preparation of the workshop on open source biological image analysis at ISBI 2012
- Preparation of the workshop on open source medical image analysis at ISBI 2012
- Current state and planning of WP11 proof of concept studies
- Current state and planning in data storage/access for biological data

Outcome:

1) The upcoming workshops of bio image analysis and medical image analysis at ISBI 2012 in Barcelona were discussed. The aim of these workshops is to discuss on the next generation of image processing tools for biomedical imaging researchers in Europe, from the biological and biomedical imaging perspective respectively.
It was emphasized that these workshops have an open character, and that contributions are welcome. Several representatives from industry expressed interest to participate in the discussions. Also, a number of relevant speakers were suggested.

2) The two pilot projects that are part of Euro-BioImaging WP11 were discussed. These are a challenge to objectively compare performance of deconvolution algorithms, and a challenge to compare performance of coronary CTA segmentation and stenosis quantification algorithms. The underlying idea of these challenges is not to only provide a framework for evaluating different algorithms, but also to make processed data and/or evaluated algorithms available to the community.

3) Currently many activities in WP11 are centered around bio image and medical image analysis. In several of the EU member states there are initiatives related to the centralized storage and access of biological and clinical imaging data. There are clearly different cultures and needs in the storage of these types of data. Experiences from projects in different countries were discussed. It was decided that it would be worthwhile organizing a workshop on data storage and access with different stakeholders, following a similar format as the image analysis workshops to be organized at ISBI.

***User Access (WP12)***

Chairs: J. Eriksson & K. Nikolaou

Objectives:

- Introduction on WP12 – progress report
- Survey outcome- User Access Policies
- Report and open discussion of survey results regarding access policies
- Proof-of-Concept Studies: First experiences from User Access to technology RIs
- Perspectives: User access policies to i) training and ii) data
- Outlook- webaccess portal:An integrated Euro-BioImaging webaccess portal

Outcome:

**Update on WP12 tasks:**

- Generation of an access pipeline model identifying different levels of access and factors affecting access –reiterated and developed until the end of the preparatory phase
- EuBI survey and our own PCS provider and user surveys has been and will continue to be very helpful
- Provider prePCS survey ongoing, follow-up survey of PCS providers and users to take place in the summer

**Critical open questions:**

- Proposal handling policies: most likely a mixed process between local and centralized procedures – task group for policy development to be formed during the stakeholder meeting
- Cost models: most likely/realistic: some kind of subsidized model
- Quality control: access policies and practices, instruments, and training
- Web access tools: could contain many aspects that are useful for users, providers, and also for marketing of EuBI

**Future perspective:**

- **"**Reversed access" – Access of innovative special technologies to users and biological applications**:** For special techniques, the access concept could also include providing "reversed access", i.e. access to users for innovative novel techniques that are in need of broader user base. This is an aspect that is very a favorable argument from the funders' point of view. ***Practical approach:*** Access site for adventurous users or possibility for RIs to feature special technologies by PCSs.
- EuBI to provide access to multimodal and multisite imaging initiatives, i.e. including medical and biological): from atoms to anatomy.
- EuBI access as gateway for other ESFRI initiatives: data, technologies, expertise – provides argument towards being in the fast lane in relation to the already initiated ESFRI networks
- EuBI access gateway for educational purposes (teacher and the like) and industry (tech transfer success stories)