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# ERASMUS MUNDUS



**EMQA - Erasmus Mundus Quality  
Assessment 2012**

**Handbook of Excellence - Doctoral  
Programmes**

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## List of Abbreviations:

|       |  |
|-------|--|
| CV    | Curriculum Vitae   |
| EACEA | Education, Audiovisual and Culture Executive Agency            |
| EAIIE | European Association for International Education               |
| EC    | European Commission  |
| ECTS  | European Credit Transfer System                                |
| EHEA  | European Higher Education Area                                 |
| EM    | Erasmus Mundus   |
| EM-A  | Erasmus Mundus Student and Alumni Association                  |
| EMBN  | Erasmus Mundus Brand Name (Master Course)                      |
| EMJD  | Erasmus Mundus Joint Doctorate                                 |
| EMJP  | Erasmus Mundus Joint Programme                                 |
| EMMC  | Erasmus Mundus Master Course                                   |
| EMQA  | Erasmus Mundus Quality Assessment                              |
| ENQA  | European Association for Quality Assurance in Higher Education |
| ESMU  | European Centre for Strategic Management of Universities       |
| EU    | European Union   |
| EUA   | European University Association                                |
| HE    | Higher Education   |
| HEI   | Higher Education Institution                                   |
| JERP  | Jointly Executed Research Project                              |
| NARIC | National Academic Recognition Information Centre               |
| OMC   | Open Method of Coordination                                    |
| USP   | Unique Selling Point/Proposition                               |

**Annex C** contains a list of the **Doctoral Programmes (Acronyms and Descriptions)** that were operative during this phase of the EMQA Project



# 1 Introduction – Critical Paths

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## 1.1 Background

Between 2008 and 2010 the Erasmus Mundus Quality Assessment (EMQA) project built and refined what has become known as the ‘Landscape of Excellence’ for Erasmus Mundus Joint Programmes (EMJP) in the area of taught Master programmes (EMMC).

The core objectives of the activities were to understand how EMMCs ‘performed’ excellence. The very diversity and complexity of an EMJP (multi-disciplinary, multi-national, multi-organisational etc.) meant that existing international quality assurance metrics were too generalised to be useful. So an extensive series of direct visits to Programmes was organised where intensive dialogue and debate with the Programme actors (academics, administrators, doctoral candidates etc.) helped to uncover the sophisticated landscape of excellence that existed across EMJPs.

That landscape provided a descriptive overview of the range of quality practices. However, what it did not do was to provide current and prospective EMJPs with a clear sequencing of activities that would help to build a high quality Programme that successfully delivers excellent research outcomes.

Providing clear sequencing of activities has been a primary task for EMQA activity in 2012. Furthermore, this is the first time that the EMQA process has been able to study in depth the new EM Doctoral Programmes (EMJD). A key outcome of that work has been an understanding that the Doctoral Programmes have some very different quality needs and characteristics than do the Master Courses. For example the issue of doctoral research programme and its supervision requires much more personalisation of learning and mobility paths, different approaches to assessing work, and often complex negotiations about examination policy. The focus on research means that the research programme could possibly generate innovative and commercially lucrative outcomes, so attention needs to be given to intellectual property rights.

Overall the Doctoral experience is more personalised and ‘intimate’ than with a Master Programme, so there are two separate Handbooks produced. However, many of the sub-components are the same for both, and in those cases material from Master Programmes may be included in Doctoral programmes where it adds value. Annex A presents an overview of the research and policy literature that provide a background to the doctoral processes within the Bologna Process.

There are particular challenges for an EMJD. Students on a Master Programme tend overall to follow a similar programme of learning, and numerically there are more of them. It is therefore easier to develop a sense of **group identity** on an EMMC. An EMJD by contract focuses on the close **relationship between supervisors and doctoral candidates**<sup>1</sup>, the doctoral candidate’s **identity within a research group**, the group’s **identity within the institution**, and then there is the overall challenge of the doctoral candidate’s **identity with other doctoral candidates across the EM programme**. To avoid a doctoral candidate becoming isolated into a local setting there need to be activities that embed them academically

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<sup>1</sup> Terms may be used interchangeably: **research student, doctoral student, doctoral candidate, fellow** etc. However, it is acknowledged from the outset that these terms all infer what is required by the EMJD conditions. These terms all mean ‘young professionals who are undertaking doctoral research with the objective of achieving a PhD’. Therefore there is a clear difference between the students at Master level because the research students are employees of the institutions. Throughout this Handbook we aim to use **doctoral candidate**.



and socially across institutions and countries. However, the intimacy of the research project (doctoral candidate and supervisors<sup>2</sup>) needs also to be protected, while providing the doctoral candidate with a much richer research experience than they would receive through a more conventional mono-disciplinary and single-institutional setting.

So the starting point for the quality process is a simple question – ‘what is special about this EMJD’ in terms of its disciplinary focus, institutional setting, research school interactions, and ‘what will be the world-class value’ for those who participate, from academics to doctoral candidates to institutions and to the ‘European context’.

## 1.2 How to use this Handbook

This document is not designed to be a complete and authoritative guide to setting up a successful EMJD. It is meant to provide you with a structured journey through the key stages from identifying a possible Programme through designing and delivering it, to the issues relating to alumni

The Handbook starts with a **high-level overview** of the main quality actions – these are introduced in the next section. Then the actions are disaggregated into a set of ‘**critical paths**’ that take you briefly through the ‘journey’ that is undertaken across the main quality actions. Then the four main sections show in detail the **detailed quality areas** that Programmes have considered and provides a checklist of main actions and then identifies some of the **good practice** (and some cautionary examples) that have been communicated by EMJDs, from staff to doctoral candidates.

This Handbook is therefore not a definitive guide. It shows you **what was being ‘performed’ across some of the EMJDs in mid-2012**. There is no guarantee here that everything excellent is noted, and indeed the innovative nature of Erasmus Mundus Programmes means that you may introduce some radically new good practice. What this Handbook hopefully does, like previous versions for the Master Programmes, is to stimulate current Programmes to learn and improve, and also to share experiences.

As with previous versions the ‘agreement’ with respondents to the survey and interviews was that if good practice is quoted then we name (and praise) the Programme. We also wanted Programmes to be honest about problems, because part of quality practice is to **identify and overcome challenges**. Here the agreement was that we would anonymise these issues as ‘learning lessons’ within the good practice examples.

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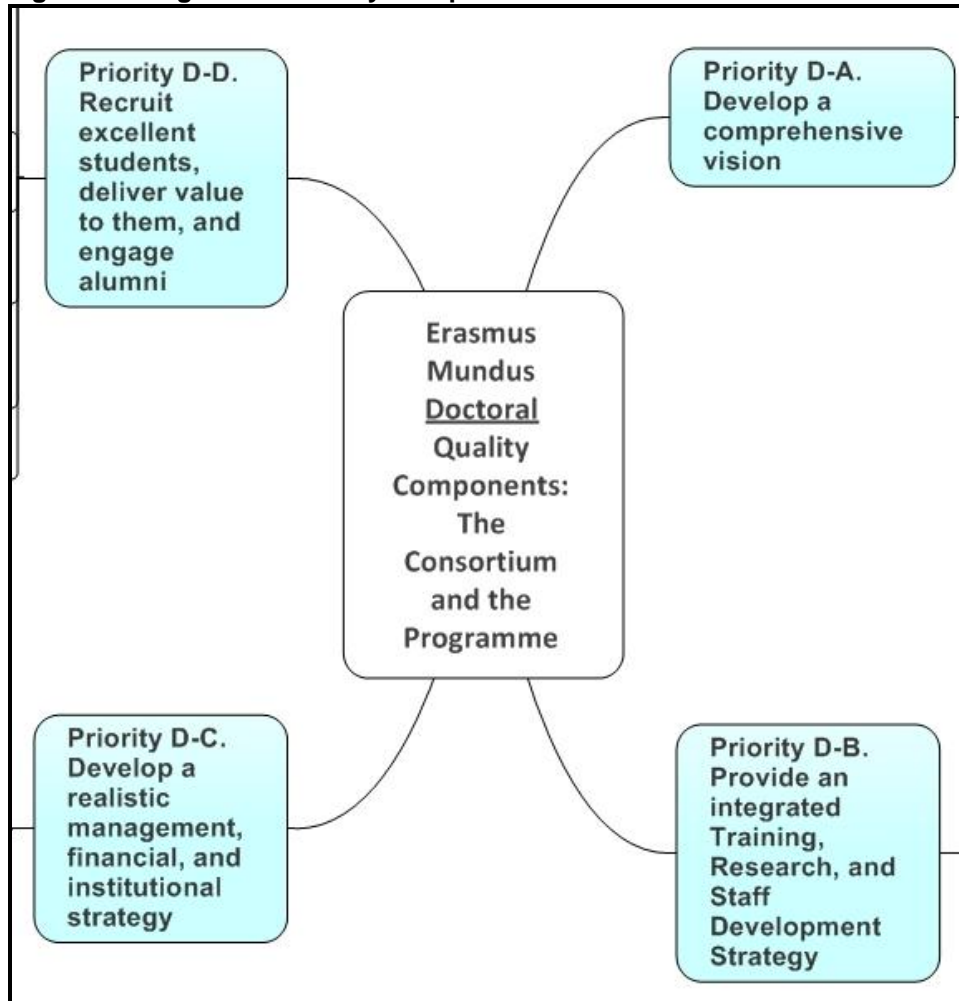
<sup>2</sup> So, an ‘a priori’ expectation of an EMJD is that there is a close and effective research relationship between the supervisors of a student.



### 1.3 High-Level Quality Actions

This Handbook starts with the four ‘high level’ actions that form the process of building quality across an EMJD (Figure 1.1):

**Figure 1.1: High Level Quality Components**



At the heart of the process is the identification of a world-class vision for the programme, which fundamentally justifies why it is ‘Erasmus Mundus’ in its detailed make-up. The considerations at this stage include questions such as ‘why is this Programme needed, why should this consortium deliver it, how do we use mobility paths to provide excellent research opportunities, how will we examine doctoral theses, who needs our graduates, and how do we ensure that the degrees will be recognised?’

The second high level consideration understands how the vision can be ‘enacted’ by the consortium. Questions here range from ‘how do we all supervise our doctoral candidates, how do we provide really integrated and joined-up training and skills, how do we monitor progress and assess work, and how do we ensure that all the staff who deal with doctoral candidates are sensitised to international cultures?’

Once it is understood that the programme is robust and that the consortium can deliver it efficiently and effectively, the third high level consideration looks at the institutions that will be involved. It is here that the consortium shows its effectiveness in making sure that the EMJD is ‘championed’ at the highest level





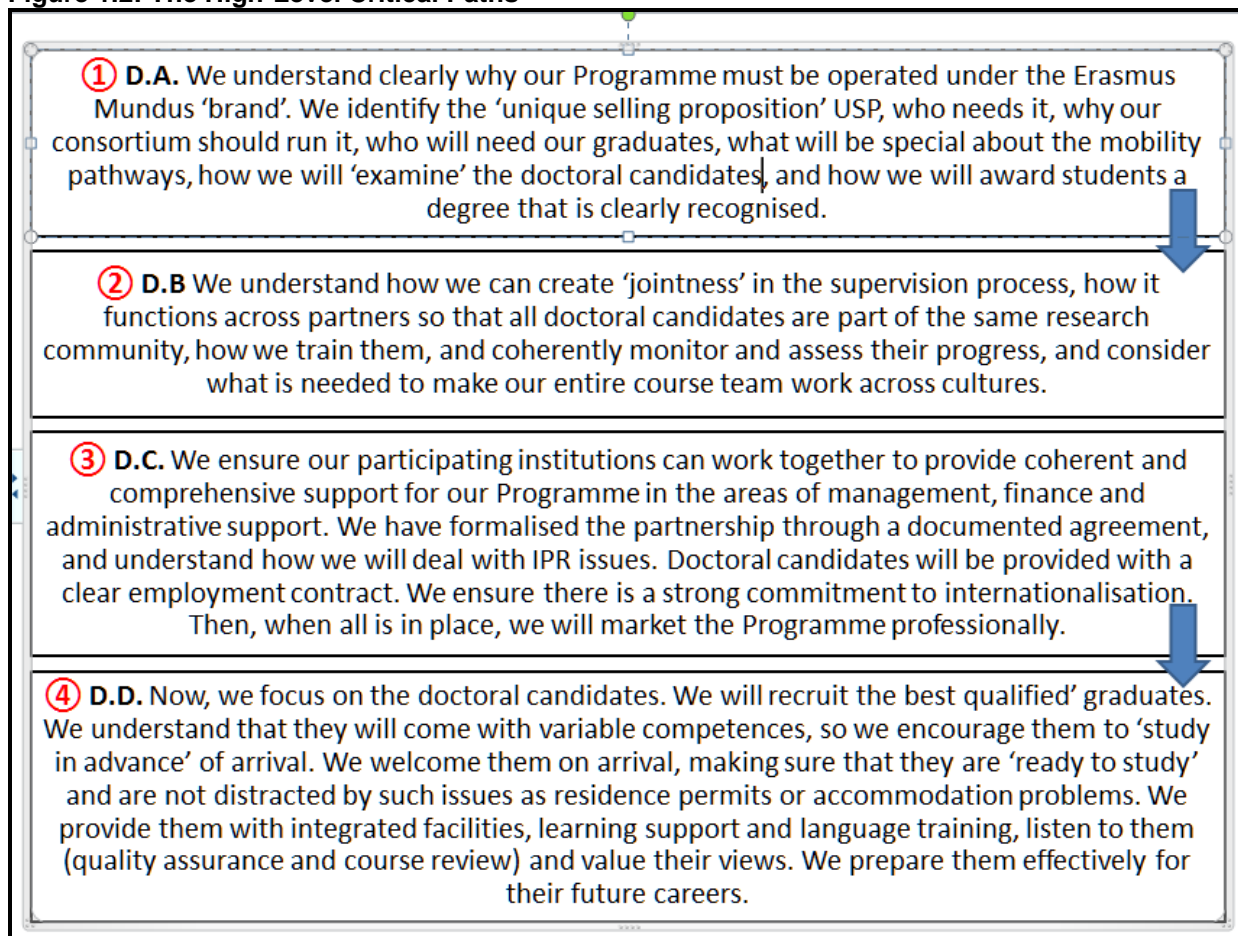
by senior staff in all participating institutions. Questions here range from ‘how do our administrations work together, how do we administer the Programme across our consortium, how do we provide clear employment contracts to doctoral candidates, how do we built coherent and comprehensive quality assurance, how do our institutions envision this Programme within their internationalisation strategies, and how do we market the programme’?

With the first three components in place (excellent Programme, coherently delivered by the consortium across effectively connected institutions) the ultimate challenge is to deliver it successfully to doctoral candidates. They need to apply, to be selected, prepared, welcomed, inducted, supported, trained, and prepared for their future careers. Once they leave, they become valuable alumni with whom the Programme, consortium and institutions need to have a long-term relationship.

## 1.4 Critical Paths

The high-level components can then be disaggregated into component quality ‘actions’ that can be considered when building an excellent Erasmus Mundus Programme. These describe a sequence of actions along ‘critical paths’. The overall ‘flow’ of actions across the four components is summarised in Figure 1.2:

**Figure 1.2: The High-Level Critical Paths**





Each of the higher-level components contains a series of more specific actions (sub-components). These are more specific sets of actions that help a Programme to build its overall quality. Their ‘flow’ is designed to help prioritise activities. It does not so much say ‘do this then do this’, but more it shows the range of actions that need to be considered before moving energies to the next component. That said, the first sub-components of D.A in Figure 1.2 are critical. Unless you can realistically justify that your proposed Programme is unique, that it is explicitly ‘Erasmus Mundus’ in its characteristics, that it will deliver world-class research programmes for doctoral candidates who are clearly needed in the labour market, then there will be little to be gained in progressing much further. Erasmus Mundus is about a comprehensively integrated Doctoral Programme.

The high-level paths in Figure 1.2 provide an initial check-list when building a Programme. They show in general the range of practice that will need to be established to deliver a successful Programme. Across each of the four components there are sub-components which provide a more detailed pathway through the actions needed, and these are detailed in Figures 1.3 to 1.6

**Figure 1.3: Critical Paths for ‘Programme Vision’**

|  |
|--|
| <b>D.A. ①</b> We specify clearly what is the ‘Unique Selling Proposition’ of our Programme.  |
| ② We identify the key research goals of the programme, and communicate how our consortium research excellence will deliver it through mobility paths that are designed to maximise research excellence.        |
| ③ We detail the plans to build on our USP to ensure that the Consortium and Programme is sustainable beyond EM funding.  |
| ④ We identify why it is important that our consortium should deliver the Programme. We state the European and Global value we bring, and how we will ‘join up’ our value through our shared academic cultures. |
| ⑤ We document our detailed understanding of how our graduates are employable, and by who and why.  |
| ⑥ We have researched the doctoral examination processes that are in place across our consortium and clearly identify doctoral examination processes that will be used for every mobility path.                 |
| ⑦ We show how doctoral candidates are provided with recognisable degrees and associated information such as Diploma Supplements. We identify how these are effectively ‘joined up’ across all partners.        |



Figure 1.4: Critical Paths for 'Integrated Academic Strategy'

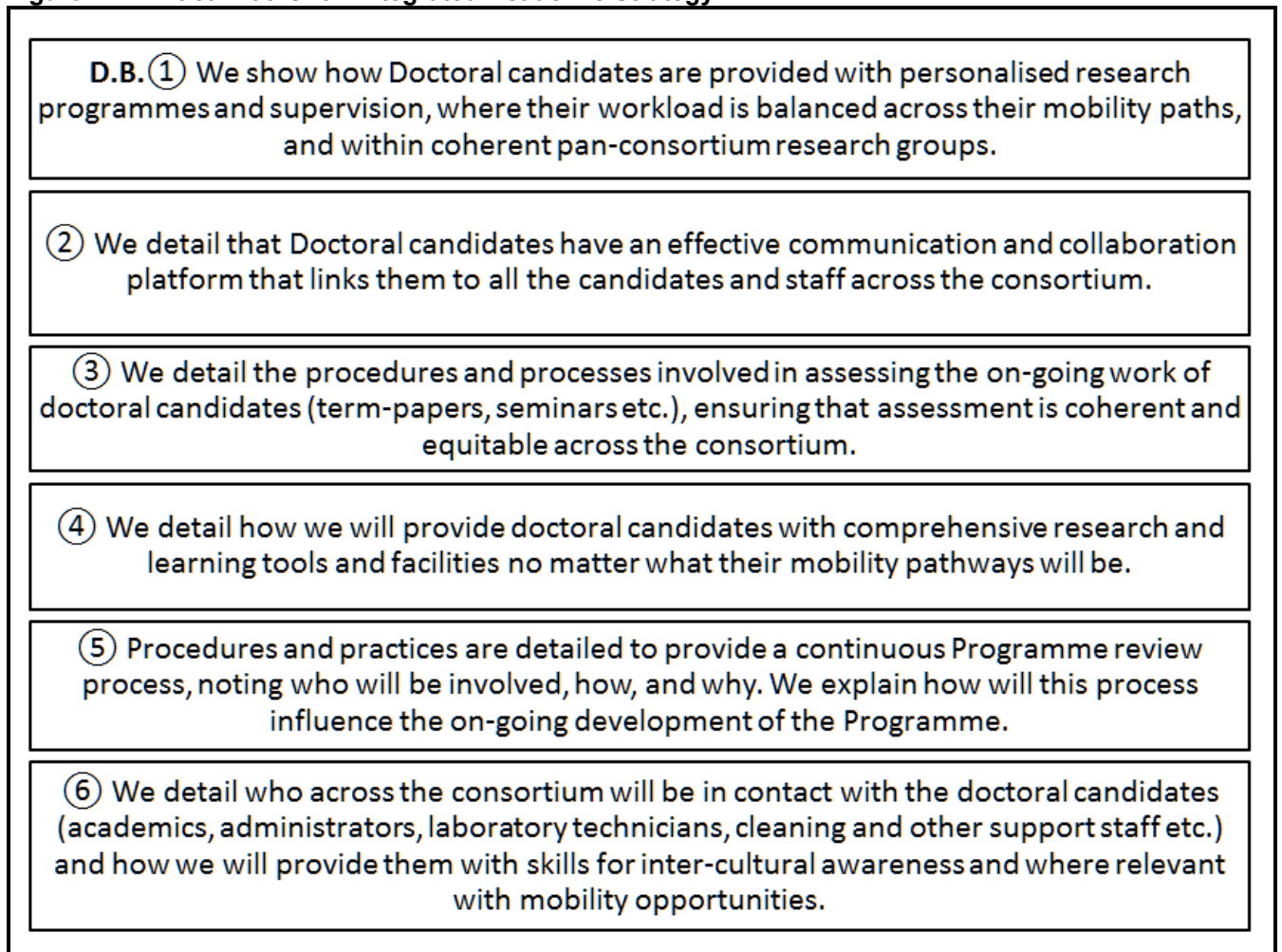




Figure 1.5: Critical Paths for 'Integrated Institutional Strategy'

|   |
|---|
| <p>D.C. ① We will provide a coordinated and joined-up administrative support process for doctoral candidates, being clear about which administrative units (for example research offices or teaching and learning units?) across the institutions will be responsible.</p>    |
| <p>② We show how we will set fees and manage the finances across the consortium in a coordinated manner, and how we will plan for financial contingencies including the way we will resource the fourth year of doctoral research.</p>  |
| <p>③ We have developed in detail a planned consortium agreement. We have our institutions 'signed up' to the jointness needed to deliver a successful EM Programme, with clear agreement about how we will manage intellectual property rights arising from the research.</p> |
| <p>④ We show how doctoral candidates will be provided with employment contracts that full comply with the requirements of Erasmus Mundus, covering all necessary issues such as visas, work permits, maternity leave and sickness benefits.</p>                               |
| <p>⑤ We detail a Programme-wide quality assurance process, and show how it will build on institutional, professional and national processes.</p>  |
| <p>⑥ We identify how the internationalisation strategies of the consortium institutions will contribute to enabling us to deliver the Programme effectively and efficiently.</p>  |
| <p>⑦ We detail a clear and comprehensive marketing strategy. We show how we will market the Programme, specify the key content, the distribution channels, and the target markets.</p>  |





**Figure 1.6: Critical Paths for ‘Value for doctoral candidates’**

|   |
|---|
| <p><b>D.D. ①</b> We have put in place a global strategy to recruit excellent doctoral candidates. We have an application process that is sensitive to applicants’ access to ICTs. We have robust consortium-wide processes to validate their qualifications and competences, interview them, and select them. Applicants are kept informed transparently about the progress of their application.</p> |
| <p>② Once applicants have been selected, and before they arrive to start their studies, we provide them with the opportunities to upgrade their competences to meet the expected level that will be needed to start their research. We collaborate closely with them to ensure that important logistical issues are overcome such as visas, residence permits, and accommodation.</p>                 |
| <p>③ When doctoral candidates arrive at our location we welcome them, help them to integrate into the local community, encourage them to share their cultural diversity with other doctoral candidates, provide them with transversal academic skills (e.g. plagiarism avoidance, bibliographic skills) that will enhance their research experience.</p>  |
| <p>④ We show how we will coordinate resources across partner institutions (libraries, IT facilities) so they are ‘joined-up’ and the doctoral candidates are provided with a coherent set of resources.</p>   |
| <p>⑤ We provide a rich set of language learning opportunities for doctoral candidates, for example acknowledging language achievements through ECTS credits. We value communication and interaction with them and provide suitable communication and consultation channels for them.</p>  |
| <p>⑥ We provide training in soft-skills and transversal competences that employers value. We build strategic links with key employers who can provide opportunities such as internships, research support, or sponsorship.</p>  |
| <p>⑦ We aim to have a life-long relationship with our doctoral candidates. We provide the means and motives for our alumni to stay ‘connected’ with our consortium and Programme.</p>   |

This Handbook now presents the **four components of excellence** in their progression introduced above, and in detail.

For each of the sub-components there is an **overall challenge** which is the critical path element that is noted above.

The challenge then links to a short **check-list of actions** that can act as an ‘aide memoire’ for those who are involved in a quality review of the Programme. The check-list of actions relates as closely as possible to the Award Criteria of the 2012 Call for Proposals<sup>3</sup>, and in particular to the detail contained in the Expert Assessment Manual<sup>4</sup>.

The check-list is followed by **examples of good practice** developed by the first generation of EMJDs, and which were gathered through a survey, interviews, meetings and desk research.

The final resource for Programmes is a set of **indicators** that have been developed for the online self-assessment [www.emqa.eu](http://www.emqa.eu) and which relate directly to the components, challenges and check-list. The indicators are provided as a set in Annex B and they complete the inter-linked quality approach that EMQA has built in the 2012 phase.

<sup>3</sup> [http://eacea.ec.europa.eu/erasmus\\_mundus/funding/2012/call\\_eacea\\_42\\_11\\_en.php](http://eacea.ec.europa.eu/erasmus_mundus/funding/2012/call_eacea_42_11_en.php)

<sup>4</sup> [http://eacea.ec.europa.eu/erasmus\\_mundus/funding/2012/documents/a1/a1expertmanualcfp2012.pdf](http://eacea.ec.europa.eu/erasmus_mundus/funding/2012/documents/a1/a1expertmanualcfp2012.pdf)

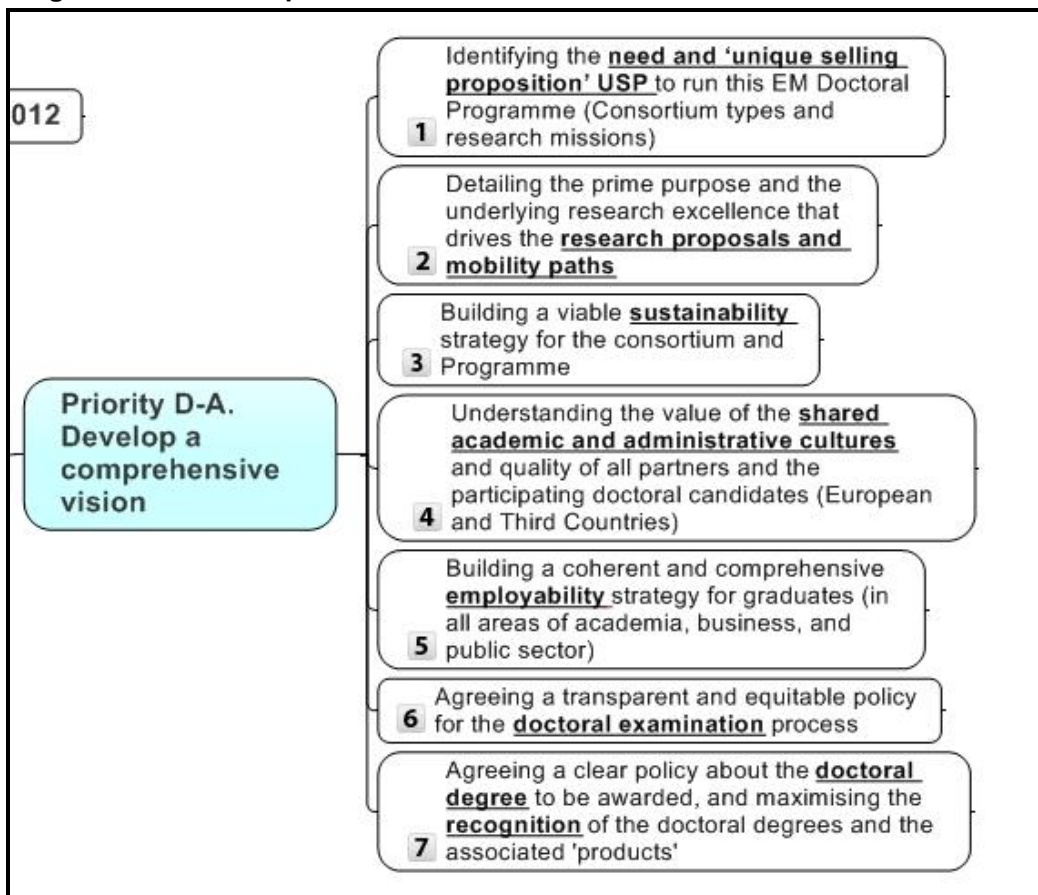


## 2 Develop a Comprehensive Vision

### 2.1 Overall Mission:

- We understand clearly why our Programme must be operated under the Erasmus Mundus 'brand'. We identify the 'unique selling proposition' (USP) that makes it essential to run this Programme within the Erasmus Mundus Brand, who needs it, why our consortium should run it, who will need our graduates, what will be special about the mobility pathways, how we will 'examine' the doctoral candidate, and how we will award doctoral candidates a degree that is clearly recognised.

Figure 2.1: Sub-Components for 'Vision'



### 2.2 Unique Selling Proposition (USP)

#### 2.2.1 Overall Challenge

- We specify clearly what is the 'Unique Selling Proposition' of our Programme, and detail why it is clearly designed to be operated under the 'Erasmus Mundus' brand.



## 2.2.2 Checklist of Actions

The actions at this initial stage focus on the ways in which the proposed Programme is shown to be multi-disciplinary, that there is convincing evidence that it meets the needs of its 'target market', that there are not any similar programmes already active (or that it is sufficiently different and innovative in comparison to such programmes).

- ✓ Clearly documented objectives are provided for the Programme, they justify its USP through robust market research, and they identify the particular niche market for the Programme;
- ✓ Programme documentation shows that academic content is consistent with contemporary knowledge in the relevant disciplines;
- ✓ The integrated and multidisciplinary research/learning focus of the Programme is clearly detailed, particularly in the context of new and rapidly emerging research fields;
- ✓ It is detailed how the Programme addresses current and developing European policy objectives, and delivers European 'added value';
- ✓ The Programme clearly identifies how and where it delivers economic and societal value;
- ✓ The Programme actively monitors, discusses and analyses how it is benefitting all stakeholders.

## 2.2.3 Good Practice

Erasmus Mundus demands a focus on inter-disciplinary, inter-sectoral partnership and institutional internationalisation. The AGRTAIN Programme identifies its opportunity to build a **unique interdisciplinary and international research network**:

*"The main objective of the AgTraIn programme is to develop an elite European school within the topic of successful development and transformation of farming systems in the developing world. Thematically, the AgTraIn programme deals with agricultural production chains, the natural resource base and the involved communities. The scope of AgTraIn will range from the technical aspects of agricultural production, over post-harvest management, processing and value-addition, to market access and commercialisation. A key feature of the programme is the involvement of key stakeholders in identifying research questions and participating in project formulation. The emphasis is on applied research".*

The Programme from the outset has a clear **intersectoral focus**, and **embeds stakeholders and beneficiaries in the research design**. This theme continues to the **production of international and interdisciplinary researchers**. For example the EDIM Programme notes:

*"The European Doctorate in Industrial Management (EDIM) is a four-year state-of-the-art doctoral research program for doctoral training addressing managerial issues of significance for the future competitiveness and sustainability of the industrial companies of Europe. The mission of the program is to generate **cutting-edge knowledge at the intersection of engineering and management**. Our ambition is to produce doctors with a new European profile reflecting a wide scientific and international breadth in engineering and management".*

And other Programmes such as SETS underline their clear **policy relevance** both at European and global levels, producing a new type of research professional to address the policy needs:

*"The general subject of SETS Joint Doctorate is sustainable energy, technologies and strategies. Research in this area will contribute to **addressing the aforementioned European energy***





*strategy needs, taking on the challenge of providing the same level of power while consuming less energy and reducing the dependence on fossil fuels. Defeating this challenge will entail a renewed European joint effort with a **new global approach** to energy. The main goal is the education and training of a **new generation of researchers and high-level professionals** with the knowledge tools and research skills required to contend successfully with these challenges in an international and multidisciplinary research environment”.*

The integrated and extensive nature of an EMJD can then create greater **international credibility and visibility** for the consortium:

*“EMJD-DC intends to become a permanent reference model for **international doctoral studies** in Distributed Systems and beyond. Students carry out their research work over up to four years in two universities from different countries, with additional mobility to industry in most projects. Joint training schools will cover both scientific topics and transferable skills, such as project and scientific management, communication, innovation techniques”.*

High-quality Programmes enable opportunities to recruit extremely high-calibre graduates and to produce **internationally-skilled graduates**. The EURPHOTONICS EMJD identifies the state-of-the-art research produced across multi-national and multi-disciplinary partners:

*“The goal of the program is to involve doctorate students in **cutting-edge research projects** profiting from the **complementarity between the five partners**, and from a wide range of research training and teaching plans that includes fundamental and general sciences, technology, languages and communication, research and industrial management, technology transfer, career exploratory support, international meetings, workshops and conference participation”.*

**Doctoral candidates also need to identify their USP.** Undertaking Erasmus Mundus mobility in a doctoral programme is very different to mono-disciplinary and single institution models. Because a frequent career progression tends to be into post-doctoral research there is a risk that unless the EM Doctorate is clearly linked to specific disciplines or departments then it may be more difficult to secure a post-doctoral academic pathway – this is somewhat ironic because industry and many other employers actively seek inter-disciplinarity. Therefore **an EMJD must ‘sell’ its USP to prospective doctoral candidates** who will spend the next 3-4 years on the research programme.

One example was a doctoral candidate on the EDLE Programme. After completing early studies he worked in a law firm. However, he concluded that he was not keen on spending his career in a private firm and, motivated by a desire “to do something good for society”, decided to embark on this doctoral programme. He was also motivated to “work for Europe” and to **contribute to the objectives of the EU**, hoping to look back in later life and to be able to say “I did my best” to help Europe to realise its goals. The doctoral candidate showed strong engagement in the aspiration of the Erasmus Mundus programme and in the complementarity of law and economics.

Another doctoral candidate on the EUROPHOTONICS Programme was attracted by the “international” character of this programme. Previously he had been an Erasmus student and also followed an Erasmus Mundus Masters programme and was very satisfied with the previous Erasmus experiences. After his Master he took a year off to go to the States and look at possible PhD courses over there, and also considered Japan where he had done part of his Masters. But the EM Doctoral programme was the best proposition because it had the attraction of the **complementarity** of the courses offered by Marseille and



Barcelona which suited the **multiple aims of the planned research** (theoretical in the one, “fabrication” in the other) and because of its **cultural attractions (language learning, studying with other international students** etc.), as well as the level of the scholarship.

The overall objective description for the EXTATIC Programme brings together the wide range of USP elements described above, and underpins that ‘starting point’ when building an EMJD, in that without a clear mission, and unless the proposed Programme covers the wide range of USP elements, then there is little point progressing further in the planning process:

*“The overarching objective of this EMJD is to provide **high-level training** in Extreme UV (EUV) and X-ray science to a **new generation of high achieving graduate students** to provide them with the **transferable skills** necessary for thriving careers in a burgeoning area that underpins **innovative technological development** across a range of **diverse disciplines**. This goal will be achieved by a **unique combination of "hands-on" research training, industrial placements and courses and workshops on scientific and complementary so-called "soft" skills** facilitated by the **academic- industrial composition** of our network”.*

## 2.3 Research Proposals and Mobility Paths

### 2.3.1 Overall Challenge

- We identify the key research goals of the programme, and communicate how our consortium research excellence will deliver it through mobility paths that are designed to maximise research excellence.

### 2.3.2 Checklist of Actions

Mobility is at the core of EMJPs. With the Master courses the mobility paths can sometimes be very complex because the multi-disciplinary learning objectives for a cohort of doctoral candidates can be diverse. For the Doctoral Programmes, however, the mobility paths need to focus more on the research objectives that are built up by them and the consortium. This is the research proposal, and it needs to link clearly to the mobility paths, and the mobility paths need to be fully justified in the context of the programme’s mission and USP. The checklist here concerns:

- ✓ The competencies and skills (core and transferable) to be developed by doctoral candidates are communicated clearly and can be acquired across any of the mobility paths;
- ✓ The timings of the mobility paths are coherent with the Programme academic objectives;
- ✓ The mobility paths are designed to allow maximum academic flexibility while also providing ‘plenary’ opportunities for all doctoral candidates and staff to meet and to renew the overall Programme ‘culture’;
- ✓ The research proposal for each doctoral candidate is developed through a clearly defined and transparent methodology;
- ✓ The research proposals across a cohort of doctoral candidates are fully complementary to the overall research strengths across the whole consortium;
- ✓ The mobility paths for doctoral candidates are determined by the research proposal needs, and not the reverse.



### 2.3.3 Good Practice

Who should **identify and scope the research proposal**, the doctoral candidates, the academics or both? If the doctoral candidates scope it then they have to search for the ideal combination of academics and institutions who can supervise it. If the academics scope the research areas then they need to search for the ideal doctoral candidates to undertake it. Overall with EMJDs are not a single approach, but what is immediately clear is the importance of very clearly communicating how the research proposal is to be developed. Some of the issues to be addressed in this process are:

- The types of groups;
- How the research **groups** are arranged physically at each location and how they form a complementary physical and virtual group across consortium;
- The **mobility paths that match the objectives of the research proposal**;
- How doctoral candidates are to be part of a coherent research group, and **integrated in the activities of the group**;
- How are **associate and industry partners involved in the research design**? For example at KTH Stockholm a doctoral thesis must include empirical work by candidates in companies and organisations;
- How the research group can be the **source of funding for the fourth year**<sup>5</sup>.

Some of the solutions developed by EMJDs include:

- A research proposal is **co-constructed by the doctoral candidates**, the research supervisor(s) and groups;
- A **proposed research programme is advertised and prospective doctoral candidates apply to follow it**. This is the case for FONASO, where the consortium announces topics on Website home page and doctoral candidates apply to the topic. FONASO does not identify potential supervisors to avoid doctoral candidates 'shopping around' for academics, rather than 'shopping' for the research topic. Other Programmes provide CVs of staff that are partly anonymised so that candidates focus on research objectives rather than on 'named superstars';
- Candidates can **apply to broad areas of research** and then once they are accepted they develop (with the research groups) proposals for JERPS - **Jointly Executed Research Projects**. Candidates must identify the link between their proposal and the objectives of the JERP group. Potential supervisors accept a proposal and work it up with candidates. In this context JERPS are 'co-located research groups' more along the lines of an EIT KIC than a Master course consortium;
- A **'Supervisor Catalogue'** is provided online - one page CVs and proposed research topics (max. 6) co-proposed with supervisors from other partner institutions;
- Some programmes give a **range of research opportunities with pre-defined mobility paths**;
- Some programmes **develop the research proposal only when a doctoral candidate is short-listed**. Here they develop a proposal with the supervisor(s) to ensure successful start to the research;

<sup>5</sup> The EM funding is for three years of research, but doctorates can take four years, and it is expected that the doctoral candidates will be provided with access to funds for the fourth year.



There is then the challenge of **evaluating research proposals** in an integrated fashion which clearly matches candidate quality and objectives with research and supervision expertise. Approaches include:

- 'Blind' peer review - practices range from anonymising applications for initial screening - looks only at academic quality;
- Applicants to the FONASO Programme develop a proposal which is assessed by two academics. The top 50 are then assessed by 6 academics. The top 25 applicants are asked to develop full proposal, invited for interview (they are paid expenses) and then FONASO offer places to the top 10 after interview;
- Some Programmes involve potential supervisors, others do not – for example where for ethical reasons they want to separate the selection of the candidate quality from possible research proposals. Here the objective is to secure the most outstanding candidates and then design a proposal around the candidate and the research groups;
- And should the potential supervisors be able to say 'no' to an applicant that the Programme wishes to accept?

Above all of this practice is the formal process by which candidates are 'accepted' by the Commission through the EACEA. Programmes are aware that recruiting the best doctoral candidates is a globally competitive process, and there are outstanding people who are also being offered places by other institutions internationally. So the starting date of the formal administrative offer process can be problematical if it risks losing excellent candidates to competitors. Coordinating the scientific phase of recruitment with the EACEA administrative phase is challenging.

Specific examples of practice by programmes include EGSABG where:

*"PhD projects are jointly elaborated between two potential supervisors, not by the doctoral candidate. Thus, the continuity of research programme is implemented since the very beginning. Supervisors are in constant contact with one another, even when the doctoral candidate is not yet in their institution, so there is no handover process: there is not a succession of supervisors but a joint supervision. Also, the mobility is a consequence of the PhD project, not the other way around".*

EGSABG selects candidates through a process where:

*"The PhD projects are assessed by two external experts, selected for their experience in the academic field of the project. This evaluation follows common criteria, formalized by an evaluation grid to be filled by the experts. In the same way, all applicants are evaluated by representative of the Consortium, on documents and, for the best 25 ones, by interview".*

What emerges across the EMJDs is that the process can be strongly dependent also on the particular inter-disciplinary focus. With EUDIME:

*"The programme, mainly laboratory-based, also includes two mandatory mobility periods in two different Universities of the consortium, scheduled as **relevant and instrumental to the fulfilment of the research activities of the doctoral candidate**. Teaching/training activities provide general knowledge on membrane science and technology, technical skills in specific thematic fields, transferrable skills in terms of intellectual capital management, valorisation, commercialisation and entrepreneurship. In order to address the professional career development and employability of PhD students, the **industrial companies involved in the programme will play a key role in orienting research projects and in co-supervision activities**".*





AGTRAIN communicates pre-defined research possibilities:

*“The programme is based on the publication of **a catalogue of joint research projects that the consortium wants to undertake** (each of them between 2 of the partner universities). Candidates then apply for one of the projects, already knowing what the work programme and the itinerary are. This means that each fellows work is clearly signposted from the beginning, but also that it may be very different from that of another student working on a very different programme (with respect to the main discipline, the universities involved and the country/continent where the project is expected to take place)”.*

The MoveAge Programme specifies a detailed specification for developing the research:

*“Candidates apply for (up to two) predefined projects that are jointly prepared and conducted between 2 universities (this model seems to be quite common for PhDs in Medical Science). The work is nonetheless shared between all partners by means of the “Board of Education” that plans activities and supervises all PhD supervisors (this is seen as more important and more effective than supervising the candidates)”. Research programmes are predefined by the bilateral team of professors; in most cases, there is clearly a lead university per project (students tend to spend no more than 6 to 12 months at the host university). Projects are screened by the Board of Education before they are proposed to applicants by means of an open call. There is an inception course common to all students, and several other joint activities (annual conferences, joint modules, progress reports for all students).*

The TEEME Programme notes its intersectoral focus:

*“All of these are priorities: research excellence, internationalism, comparative study, mobility. One unique aspect of our programme is the cooperation between HEIs and non-HE partners in the cultural and creative industries, unusual in the Humanities. This cooperation is a structural element of the programme”.*

In most cases the mobility paths for doctoral candidates are defined by the research proposal. For EDIM:

*“The mobility takes place mainly at the two co-supervisors’ Universities. Thus continuity of research is preserved. Research outcomes include joint publications by the candidate and her/his co-supervisors. Individual Study Plan includes mobility preparation. Material/reports are presented informally at each quarterly Workshop and formally every six months”.*

But while mobility paths can be designed specifically for the research proposal, some of the EM rules mean that actually delivering the ideal mobility can be difficult. AGTRAIN notes that their Programme is:

*“focused on developing countries, but the mobility period beyond Europe is only 6 months for non-EU students, even if they have been resident in Europe before taking up the scholarship.”.*

Designing the ideal research proposal is one challenge. Delivering it effectively with doctoral candidates is another, and a recurring theme that runs throughout this Handbook is ‘verifying the quality of the outcomes’ – did doctoral candidates receive what was planned?



Doctoral candidates responded with their experiences of ‘practice’. A doctoral candidate on EDLE communicated a clear mobility experience:

*“My Home-University is in Rotterdam, specialized with Antitrust law and economics, which is my research topic. I went to Bologna University more specialized in the economics part and I will go to Hamburg University more specialized in the international law part. I may also go to Mumbai University specialized in Developing countries economics”.*

But Programmes need also to consult clearly with doctoral candidates and to be aware of problems, evaluate risks, and put in place corrective action. For example one doctoral candidate notes that:

*“Another aspect we are dissatisfied with is that fellows’ choice of the second institution is only confirmed only half way into first year, in February. Since PhD fellows tend to be more mature than Master students, most of us have to plan not only for ourselves but also our partners. We would strongly prefer to know both institutions from the beginning”.*

A doctoral candidate on EUROPHOTONICS was much more positive:

*“The prime focus of my research prioritises research excellence across recognised research laboratories. The aim of my work is also to connect and develop the relationship of two different groups that work in one side on theoretical studies and on the other side on fabrication and characterisation studies”.*

## 2.4 Sustainability

### 2.4.1 Overall Challenge

- We detail the plans to build on our USP to ensure that the Consortium and Programme are sustainable beyond EM funding.

### 2.4.2 Checklist of Actions

- ✓ There is a clear understanding of how sustainability has been considered across EMJPs, and the **EACEA Clusters Recommendations**<sup>6</sup> for sustainability have been reviewed and relevant recommendations are adopted for this Programme.

### 2.4.3 Good Practice

The EACEA Clusters Recommendations are the main source of good practice for sustainability and the link is provided above to the report.

Some specific examples of sustainability approaches for EMJDs include the **identification of potential commercial funding** by SETS, especially to **cover the costs of the fourth year of the research activities**:

*“It takes part of a greater collaborative scheme, including the participation of industrial partners interested in the results of the doctoral work. Private funding is involved in the design of the*

<sup>6</sup> [http://eacea.ec.europa.eu/erasmus\\_mundus/clusters/sustainability\\_en.php](http://eacea.ec.europa.eu/erasmus_mundus/clusters/sustainability_en.php)



programme since its inception, even for Erasmus Mundus Fellowship holders, considering that it is a 4 year PhD and the EU funding covers no more than 3 years”.

EDIM takes a **‘portfolio financing’** approach, seeing Erasmus Mundus funding as being strategically important, but also time-limited:

- “Sustainability will be assured by a mix of concurrent measures and contributions providing additional scholarships or funding for running the programme, more specifically the following opportunities are under development or envisaged:
- National Foundations and cultural institutions funding excellent training programmes focused on internationalisation of HEIs;
- Industrial associated members funding scholarships on specific topics;
- Academic associated members interested in offering high quality doctoral programmes to their talented students within a framework of collaboration with EDIM partner universities in both training and research;
- At least a couple of the national funded scholarships (about 12 per year) will be devoted by POLIMI to support EDIM Programme and will be offered to top-notch international Doctoral candidates”.

For the EGD-ABG Master the **third country partners** are targeted as possible co-funders in the second phase of activity, when it aims to be **established as a leading graduate school** where (if renewed after the first phase) there is less finance than in the first phase and **a clear horizon beyond which Erasmus Mundus funding ceases** for the Programme:

*“The mission of EGD-ABG is to become a highly recognized European PhD graduate school in animal breeding and genetics that will be sustainably open to any ABG doctoral candidate from within or outside our universities. The aim of EGS-ABG is to be the core of this training scheme, and to enrol new European and non-European universities. A first step is to include partners of the EMMC in animal breeding and genetics. Partners from third countries will be approached in a second phase. It is expected that the animal breeding **industry will increasingly realise the impact of EGS-ABG and will subsequently offer financial support** in forms of doctoral candidate fellowship funding”.*

The INTERZONES EMJD has two main approaches to sustainability, which are the **scientific reputation that encourages self-funded doctoral candidates** to apply, to expand the degree awarding powers in the consortium, and to **establish a foundation that becomes the focus for income generation**:

*The scientific visibility of our activities (as in our field, it is not so much administration and money that matters) but the fact that students know they have access to many of the most famous universities and research centers, publication, conference and meetings. That is why our day-to-day concern is not to be swamped by administrative details and problems but to solve them immediately as they come so that we can concentrate on publications and conferences and attracting outstanding personalities to collaborate so that this becomes the **real added value** to our programme (the number of paying students to our programme grows exponentially).*

*We decided to make it possible (a time and energy-consuming mission) for our **associate members to become degree-awarding partners for the paying students** (those who do not come with an EM fellowship as this is impossible to change). We will celebrate and launch this*





*new institutional arrangement (out of our 11 associate members 5 have made the necessary arrangements to be in a position to become degree awarding, in Europe and outside Europe). It is important to note that from the start we consider our 11 associate partners as “almost” full partners (except the degree awarding mission). The 16 members of the consortium are not only the providers of training etc. but also the potential employers*

*We have **set up a foundation** in Italy (country of the coordinating university) with all the necessary administrative and legal requirements. We have a group of potential donors but we must admit that now our big problem is to have the human resources (a truly international PR person) to do that very professionally if we want to make big money. The point of the sums collected would be to create our own fellowships to certain candidates that do not fulfil the EM requirements, and also have some more **budget for more collective action at consortium level.***

## 2.5 Shared Academic Cultures

### 2.5.1 Overall Challenge

- We identify why it is important that our consortium should deliver the Programme. We state the European and global value we bring, and how we will ‘join up’ our value through our shared academic cultures.

### 2.5.2 Checklist of Actions

- ✓ The academic, administrative and professional skills of the staff are detailed, and their combination clearly underpins a high-quality international joint Programme;
- ✓ The inter-linking of the research missions of each consortium partner delivers specific value to the overall coherence of the Programme;
- ✓ The respective academic, professional, organisational and sectoral cultures of each consortium partner institution are understood and it can be identified where each delivers value to the overall integrated Programme.

### 2.5.3 Good Practice

Unlike an EM Master Programme, where the teaching and learning culture need to be explicitly and coherently joined up across a consortium, the emphasis for an EMJD is on the overall **coherence of the research culture** as it is to be experienced by the doctoral candidates who will normally have an intense relationship with two consortium institutions, and may only meet other partners and doctoral candidates at ‘plenary’ activities such as summer schools or consortium-wide training activities.

The SMART EMJD consortium identifies their **research expertise and synergies that enable their EM interdisciplinary focus**:

*“All SMART partners have **internationally recognized**, long, track records in research and higher education, with **complementary areas of expertise** (Trento: environmental engineering and hydro-morphodynamics; London: geography and biogeochemistry; Berlin: freshwater ecology and biology), offering a unique set of instrumented field sites and experimental facilities for challenging research”.*



EDLE adds a further managerial culture focus, noting that a **complex and challenging Programme** needs to be **underpinned by a clear and effective administration**:

*“The complex structure of the Programme and its **ambitions of excellence necessitate extensive coordination for the management of the academic, administrative, and financial aspects**. While being firmly committed to exchanging information and cooperating on an informal basis anytime this is necessary, the Partner Universities have established a **well-defined management structure** (such as Scientific Council, Coordination Board, Chairperson, Erasmus Mundus Coordinator and Advisory Board) that ensure the regular managing of the programme.*

EDLE also **embeds associate members extensively** into the Programme’s ‘culture’ and activities:

*EDLE can count on several Associate Members who **play a role in the knowledge transfer** by offering seminars on occasional basis and offering short-term research visits or internships within their institutions. Associate Members are also invited to attend seminars and lectures organised within the Programme. Individuals of the cooperating institutions can also join some research projects, for instance by co-authoring papers or by being involved as additional advisors”.*

The INTERZONES EMJD shows that an effective academic and managerial culture requires **time to build and maintain trust through interpersonal dialogue**:

*“All our partners are specialist experts in intercultural dialogues so this has not been so difficult. The real issue in the case of Interzones was to find the time and money for the main actors (general coordinator, assistant and a few people in the coordinating university) to be available for meetings and events everywhere to enhance the interpersonal dialogue to represent / embody the consortium and make things happen”.*

This brings into consideration the **central role of the Programme Coordinator in providing the key focus** for all the partners. The earlier work with the Master programmes had shown the pivotal influence of coordinators in energising a Programme, and this is also evident in the newer EMJDs. The TEEME programme explains, by:

*“talking a lot. A LOT, and trying to find compromises, to overcome stubborn resistance to change, and by never giving up. The eventual prize had to be attractive enough to work as an **incentive for all partners to carry on, despite what seemed like insurmountable difficulties at times**. The Erasmus Mundus label is a very attractive prize, though it is valued differently at each institution. The complexity of the application process can also act as a deterrent. I have heard from many colleagues that they have decided against an application because they thought it wasn’t worth the effort. In my own institution the arguments **“excellence” and “prestige”** carried just about enough weight to **convince senior management** that the project was worth it, even though for a UK institution the programme is not financially viable”.*

Once the integrated culture is established it needs to be **experienced coherently by the doctoral candidates**. This can be very challenging, because doctoral candidates need to be academically and administratively embedded in their mobility institutions, and also to feel embedded in the overall EMJD culture of research. As one doctoral candidate mentioned:



*“As a rule, doctoral students are supposed to travel in one of the partner institute in their third year of the PhD. Although, some of the students are already at their partner institute for PhD work and I am one of them. On our last annual meeting, we discussed that the **quality of all the partners are quite similar but the academic culture is really something to deal with**”.*

And another doctoral candidate observed:

*“I am working only in Europe and till now I think I am managing to work across the two institutions, I am facing the triple of constrains due to the fact that I have to **fulfil all the formalities from the two different institutions and the one of being EM**. The door of simplification is opening but as first PhD student in this project everything was tougher than expected. Probably the life of the student of next academic year will be easier since the coordinator is putting a lot of effort in this direction”.*

In many ways the EMJDs surveyed in 2012 are the pioneers of these new doctoral offerings. They have little prior practice on which to base their activities, and while the EMQA project has developed a clear understanding of the Master Programmes and their excellence, the quality landscapes of the doctoral programmes are often very different in their characteristics and priorities.

## 2.6 Employability

### 2.6.1 Overall Challenge

- We document our detailed understanding of how our graduates are employable, and by who and why.

### 2.6.2 Checklist of Actions

- ✓ There is a clear understanding of how sustainability has been considered across EMJPs, and the **EACEA Clusters Recommendations** for employability<sup>7</sup> have been reviewed and relevant recommendations are adopted for this Programme.

### 2.6.3 Good Practice

The Clusters report on employability contains a structured series of recommendations that mainly address the Master Programmes – when that study was undertaken the EMJDs were at a very early stage of operation. However, the recommendations often are directly relevant to EMJDs.

There are, however, some particular doctoral challenges. While the focus of Erasmus Mundus is on inter-disciplinarity the research disciplines within which candidates are 'based' often have employment pathways which are still strongly mono-disciplinary. So, **doctoral candidates need to build both multi- and mono-disciplinary specific profiles** through publications etc. In some cases Programmes observed that doctoral candidates may benefit more from a double degree than a joint degree if they wish to pursue an academic career, because employers are more often familiar with qualifications from single institutions.

<sup>7</sup> [http://eacea.ec.europa.eu/erasmus\\_mundus/clusters/employability\\_en.php](http://eacea.ec.europa.eu/erasmus_mundus/clusters/employability_en.php)



The research groups to which doctoral candidates are attached can help them **add activities that build up CVs**. Bridging between EMJD and other research projects in partner Universities gives opportunities to **participate in conferences, or publish**. There may be possibilities to have a publisher as an associate partner. Other activities include **tracking the careers of graduates** and put success stories on the programme Website. Tracking is important as feedback also for the value of the Programme to graduates, and some recommend sending surveys 15 months after graduation **“since that is when it starts to get interesting”**. Other approaches include integrating Associate partners on the Advisory Board so they “feel more responsible” for providing additional funding and **contacts for job placement**.

It is always particularly valuable to show doctoral candidates that there is a clear employability strategy that identifies a range of **documented career options**. For example the LAST-JD does this at length:

*“Upon completion of the doctorate programme, participants will be able to become:*

- *legal professionals in several specific ICT domains, e.g., privacy experts for biobanks or web sites; IPR experts on software, databases, robotic and genetic innovations; media law experts for web marketing companies and broadcasters; experts in patenting nanotechnology;*
- *team leaders who can manage research or applicative ICT projects in a holistic way;*
- *government officials able to manage innovative ICT and eGovernment, eJustice, eParliament projects;*
- *leaders or researchers in specialised laboratories such as medical genetic centres, nanotechnology centres, robotic laboratories, and high tech software houses where Artificial Intelligence is applied;*
- *members of ethic committees able to analyse ICT innovations and produce policy documents;*
- *computer forensics experts in government or non-government departments;*
- *security experts who can advice on privacy and data management topics;*
- *legal knowledge engineers for modelling normative knowledge in different applications”.*

The EGSABG Programme also provides explicit and detailed information about career prospects:

*“Each doctoral candidate will **develop a career development plan as part of their training plan**. Essential elements of this career development plan are:*

- **Early contacts of doctoral candidates with society and industry**, through participation to the Summer Schools and carefully planned internship periods
- **Early integration of doctoral candidates into research networks and associations**, Participation at international conferences

*The **partner institutions are known for producing well-qualified doctors, employed in leading positions throughout the world**. Special attention is paid to the employment of doctoral candidates after graduation, through **regular processes to record the position of each doctor after graduation**. The EGS-ABG will implement a **tracking and tracing procedure by setting up an alumni organization**. This organization will hold bi-annual surveys, by means of questionnaires, and publish these results on a dedicated page of the EGS website. Results from the surveys will be used to invite selected alumni to summer schools and **share their experiences with the doctoral candidates”**.*

The SETS Programme provides clear linkage to professional prospects:

*“The areas we offer in the SETS **research lines are “trending topics” for the industrial and institutional framework around energy and sustainability**, and include the industrial involvement within the consortium, so the employability of this programme is very high per-se. In*





any case we offer the candidates an **integral career advisory service** to enhance their skills and mentoring towards employability”.

And in conclusion, the TEMME Programme emphasises the integrated linkage with potential employers:

“The **close cooperation with our non-HEI partners** is our chief strategy. Students are brought into contact with these institutions from semester one and in semester four have to undertake a **work placement** in one of them. Work placement files will be available on the web to enable an informed choice by students. **Students also have to follow a dedicated skills strand** throughout the three years of the programme (of which the work placement is one element)”.

## 2.7 Doctoral Examination Process

### 2.7.1 Overall Challenge

- We have reviewed the doctoral examination processes that are in place across our consortium and clearly identify doctoral examination processes that will be used for every mobility path.

### 2.7.2 Checklist of Actions

- ✓ There has been a careful review of the doctoral examination policies and procedures in each partner country ;
- ✓ It is understood, and documented clearly, what examination process(es) will be applied, and to what mobility pathways.
- ✓ The doctoral examination process(es) to be used will (as far as possible) ensure equity across all partner locations and mobility pathways.

### 2.7.3 Good Practice

The challenge of agreeing a consortium-wide examination process is very complex. Consider two doctoral examination policies from Ireland and Germany:

- Ireland (Galway). External Examiner(s): Shall have expertise in area. Not be employed in the National University of Ireland system or the University of Limerick. A second external examiner is appointed when the candidate to be examined is a full-time member of staff of the University. Internal Examiner: Any current member of academic staff (but not supervisor). Chair of the viva: Normally the Established Professor of the relevant discipline but may nominate another staff member. If Established Professor is supervisor, then an alternate chair must be appointed. In the event of vacancy, the Head of School, after consultation, will recommend a chair. Chair must be approved by College.
- Germany. Submission of a written doctoral thesis. Oral examination in the form of either a Disputation or Rigorosum. Oral 1-2 hours, can be in a foreign language. 1 in 5 Departments allow a process combining several essays published in prestigious specialist journals as a cumulative thesis instead of an exhaustive monograph.

These are just two examples from a wide range of examination practices, and as a consequence any attempt to construct a single consortium policy for examination is remarkably challenging. There are fully integrated approaches, for example with EMJD-DC where the examination process is:



*“dealt with in the agreement between the universities; the system is based on a co-tutelle between the 2 institutions that will award the degree, but also on a Follow-Up Committee that will bring together annually the coordinators and students; this Committee also excludes persons external to the degree-awarding universities. The doctoral tribunal includes not only the 2 universities involved, but also representatives from the others. A basic principle in the programme is that each of the 4 universities is involved with each doctoral fellow, in different capacities”.*

Some EMJDs communicate the examination practice that they will apply to them dependent on their mobility pathways. For example, SETS acknowledges that national rules have to apply:

*“The SETS joint degree will be regulated by the certification authorities of each of the three Partners that award the joint degree Member States (Spain, the Netherlands and Sweden)”.*

And for EDIM:

*“The sharing of tasks between the 3 degree-awarding partners is clearly established, both concerning local responsibilities and common work and events; students get a double degree (not a joint degree) from a home and a host university and must meet all local conditions for each degree, on top of the joint requirements set by the consortium”.*

In other cases there are clear guidelines for practice at the coordination level in the consortium. For example the MARES Programme notes:

*“Assessment and examinations are the responsibility of the (single) Scientific Board of the Consortium; this body organises the monitoring process of all candidates, irrespective of the place where they are registered. On top of this, the Consortium has agreed on minimum conditions for all joint doctorates (i.e. co-tutelle, at least 10 credits in transversal skills, publish an article in a peer-reviewed review, attend all annual MARES meetings, etc.)”.*

And for INTERZONES:

*“The sharing of tasks is laid down in a detailed Consortium Agreement that includes rules about doctoral examinations; there is a joint Scientific Committee that deals with these rules and monitors their implementation; an important factor is that this Committee includes a highly respected external member (not belonging to any of the consortium members) who draws attention to possible issues and makes suggestions (seen as a “good practice” by programme coordinator)”.*

## 2.8 Doctoral Degree and Degree Recognition

### 2.8.1 Overall Challenge

- We show how doctoral candidates are provided with recognisable degrees and associated information such as Diploma Supplements. We identify how these are effectively ‘joined up’ across all partners.



## 2.8.2 Checklist of Actions

- ✓ The consortium agreement and the Programme Website clearly communicated which degree(s) will be awarded to graduates;
- ✓ The Programme clearly communicates to doctoral candidates how fast, and in what form, the Erasmus Mundus Degree will be awarded;
- ✓ Graduates are provided with full transcripts of doctoral candidate achievement in a format that can be accepted by institutions back in their home countries, using (where applicable for a Doctorate) ECTS, Diploma Supplement, and Europass standards;
- ✓ There is a clear understanding of how sustainability has been considered across EMJPs, and the **EACEA Clusters Recommendations**<sup>8</sup> for recognition have been reviewed and relevant recommendations are adopted for this Programme.

## 2.8.3 Good Practice

Beyond the Clusters recommendations EMJDs are 'informed' regarding degree award and recognition in many ways, for example:

- The Lisbon Recognition Convention on the recognition of qualifications<sup>9</sup>;
- The EUA Council for Doctoral Education<sup>10</sup>;
- When is the decision communicated to doctoral candidates, how is it communicated, when (and in what form) is relevant documentation made available to the graduate to use in job applications etc.?
- When is the Degree Certificate provided, in what forms and in what language(es)?
- How and where is the degree recognised?
- How does a Programme cope with non-degree awarding partners?
- Luxembourg law requires that all Diplomas must be signed in French;
- Minimum attendance regulations may exist. For example in Belgium Flemish legislation requires candidates to have a presence of at least 6 months to be awarded a joint degree. There is a need to have a clear definition of what is a Joint Degree. For example if the certificate is a paper signed by only 1 university then is it a joint degree?
- Some Programmes give the paper from the country where the candidate started and the other Rectors sign a paper in an Annex;
- Some Programmes consider a co-tutelle approach, with a diploma from each country where it is impossible from a legal point of view to have joint degrees.

As with the examination process the award and recognition of degrees is challenging EMJDs to find pragmatic solutions. For example:

*"IDS-FunMat will initially award **double degrees**; however, a '**Joint Degrees Task Force**' will study pathways to implementation of Joint Degrees".*

*"The Ph.D. 'MACOMA' is a 3 years programme running over two periods providing a Joint Doctoral degree in marine and coastal management. Students must complete 180 ECTS to be awarded the Ph.D. degree and at least 60 ECTS must be taken in a second EU Institution from the consortium".*

The EGSABG Programme has a consistent approach:

<sup>8</sup> [http://eacea.ec.europa.eu/erasmus\\_mundus/clusters/sustainability\\_en.php](http://eacea.ec.europa.eu/erasmus_mundus/clusters/sustainability_en.php)

<sup>9</sup> <http://www.enic-naric.net/index.aspx?s=n&r=ena&d=legal>

<sup>10</sup> <http://www.eua.be/cde/Home.aspx>





*“Each doctorate candidate will be awarded a double degree, i.e. two fully accredited and recognized degrees from both host institutions taking part in the project. However, there will be only one oral defence, taking part at the “first” institution. In addition, the doctoral candidate will receive a non-accredited “diploma” signed by the four partner institutions, in which the details of his/her education programme will be described (**diploma supplement**). Our ultimate goal is to deliver joint degrees in a near future. The legislations of France, Denmark, Sweden and The Netherlands are currently formalizing the awarding of joint degrees. The work on the implementation of a joint degree is led by AgroParisTech (Scientific Direction and a contact-person in the administrative services) with the **help of one contact-person in each Partner Institution**, who is able to relay legal and institutional information to the Consortium. AgroParisTech is working on this issue with EuroDoc’Agro, a platform working at the regional level for the different public institution dealing with higher education and research in the field of agriculture. The legal issues have been recently solved or clarified; the Consortium is now working on the institutional and administrative barriers”.*

And for doctoral candidates on ETeCoS3 *“Successful completion of the PhD programme will be awarded a **fully recognized and accredited joint Doctoral Degree** in Environmental Technology”. **The more complex the consortium is then the more challenging** it will be to identify a clear and consistent degree and recognition process. For FUSION-DC includes a wide range of partners where:*

*“One or more of the institutions (including the home institution) where the student performs training/research may be a **non-degree awarding research institute (NDRI)**. There, the student is guided by one or more mentors. An NDRI may appoint a (co-)promoter in a Higher Education Institute (HEI), which is a Consortium partner. This HEI needs to have a strong affinity with the NDRI (e.g. when the director of the NDRI or a mentor at the NDRI is also a professor at the HEI). This HEI then officially takes part in awarding the degree (this is already common practice in fusion research in Europe).*

*On successful defence of the PhD thesis, these HEIs award the double/multiple or, preferably, joint PhD degree. In the situation mentioned under item 2 above, it may happen that, although the NDRI where the training/research was performed is a full partner, the linked HEI that is appointed to jointly award the degree is an associate partner. In this case the associate HEI is required to agree before the submission of the thesis proposal that it will provide a double or joint degree. This will be an incentive to move even more universities toward co-tutelle”.*

Some Programmes set some medium to long-term goals to reach joint degree capability, for example with AGTRAIN:

*“The **ultimate aim is a joint degree from two universities for all students**, but this is not yet possible (e.g. at Wageningen, that requires that the defence takes place at Wageningen and sees a second presentation and defence of the same thesis as a form of “plagiarism”); yet students know from the beginning what their itinerary will be and from whom they will their degrees.”*

In general, however, the **mobility pathways will determine what type of degree is awarded**. For DCGC:

*“The degree students will get depends on their pathway; 3 of the 4 partners (except Budapest) are in a process of developing a joint degree; all students choosing Budapest will get a double (not a joint) degree. This is clear from the time of application: students submit a research proposal, including a pathway; in some cases, the Consortium may however make a counter-proposal, or request some changes as a condition for admission.”*

A similar mobility complexity is experienced by EDLE where the research programme is:

*“Joint between two partners (University of Bologna and University of Hamburg). The third partner (University of Rotterdam) awards an additional degree. Dutch legislation has recently changed to*



*allow for joint degrees. In Hamburg the Faculty of Law and the Faculty of Economics set up a joint regulation to stipulate the details of awarding the doctoral degree, not only to Hamburg based EDLE candidates, but also to the candidates, whose home university is Rotterdam or Bologna. A harmonisation with the thesis regulation at the partner universities has been taken into account”.*

DOCMASE notes that “*Doctoral candidates obtain a joint or double Doctoral degree awarded by the two universities they have attended and a **Joint European Excellence Certificate**”.* TEEME has:

*“four degree-awarding institutions in the consortium. One partner (FU Berlin) was able from the start to award joint degrees and required no special accreditation for this EMJD. Two partners (Kent, Charles University in Prague) were able to award joint degrees in principle but needed special accreditation for this programme. This has been achieved since. At Kent, where programme approval powers are delegated by royal charter to the institution, we could do this through the usual internal process. At Prague, we had to go through the **national accreditation process**. The fourth partner (Porto) was at the start of the EMJD prevented from awarding joint degrees by national legislation. This has since changed and our Portuguese partners have started the accreditation process which, like in the Czech Republic, is **overseen by a national agency**. Positive outcome expected soon”.*

It is **critically important that doctoral candidates are clearly and reliably informed** of the degree awarding and recognition processes. Facebook and Twitter communicate bad news very quickly and doctoral candidates can be upset when claims do not meet reality, for example:

*“So far, only two partners out of five agree for double degree but the rest of the institutes not. In fact, from my personal experience, I was denied enrolment at my partner institute in Germany and I was told that the universities in Germany DO NOT allow double enrolment as mentioned in Erasmus Mundus Programme Guide. I am currently dealing with this issue but I am not enrolled at the university I am attending at the moment. To mention, this particular issue is taking a lot time and concentration of mine since April, 2011 (when I moved to the partner institute)”.*

And “*He still does not know whether he will be awarded a double degree, although, as is stated above, this was one of the main reasons why he applied for this programme”.*

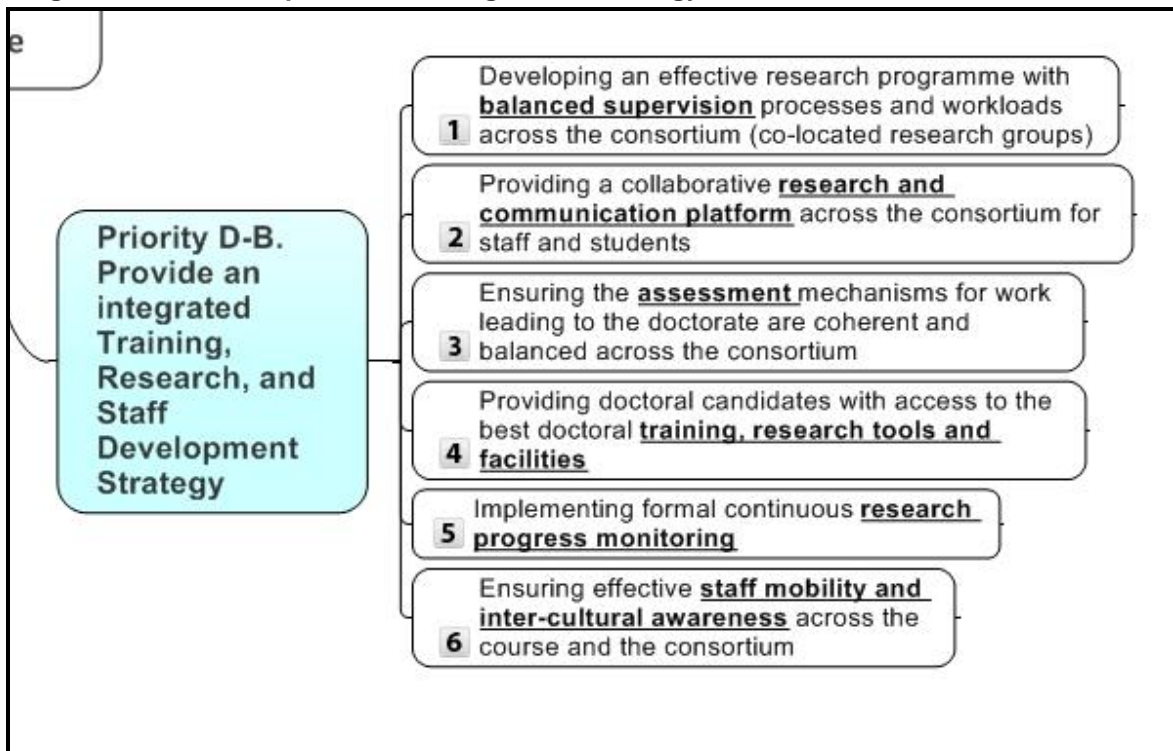


# 3 Integrated Training, Research, & Staff Development Strategy

## 3.1 Overall Mission:

- We understand how we can create ‘jointness’ in the supervision process, how it functions across partners so that all doctoral candidates are part of the same research community, how we train them, and coherently monitor and assess their progress, and consider what is needed to make our entire programme team work across cultures.

Figure 3.1: Sub-Components for Programme Strategy



## 3.2 Supervision

### 3.2.1 Overall Challenge

- We show how Doctoral candidates are provided with personalised research programmes and supervision, where their workload is balanced across their mobility paths, and within coherent pan-consortium research groups.



### 3.2.2 Checklist of Actions

- ✓ The Salzburg II recommendations of 2010<sup>11</sup> for international doctorates have been reviewed and our Programme aims to comply with them;
- ✓ Doctoral candidates are assured high-levels of contact with their supervisor(s) through a formally documented supervision policy that is consistent across the consortium.

### 3.2.3 Good Practice

How should doctoral candidates be supervised, and over what time period (3 or 4 years)? Spain has no law on length of doctorate. Sweden it is 4 years by law. And, even though only three years of funding are provided by the Commission the Erasmus Mundus conditions of the candidate must apply also to a fourth year. The majority of the 34 EMJDs running in 2012 are 3 year.

Institutional practices differ regarding supervision, so the consortium needs clear standard practices based on overall best-practice. This may involve a co-tutelle agreement specifying where overall practice differs at the institution levels, and explaining why. In general two standard setting documents can be considered. The first concerns **what is supervision and what is required**, and the document should be shared with doctoral candidates when they arrive so they get into the culture. The second concerns **what is expected as an EM supervisor**, and this can require formal documentation that is usually not the case in other PhD programmes.

The AGTRAIN Programme emphasises the individualisation of supervision while still ensuring that the doctoral candidate has a group identity, stating that there is a

*“Very strong consortium that has worked together for a long time and on many different projects. **Each research project is different**, but the Consortium seeks to **develop a strong interaction between the various candidates in order to allow them to learn from each other**; an important (but expensive and potentially difficult) tool for this is a compulsory **joint field-trip** in a developing country (in second year); there is also a **joint introductory course** (at beginning of first year) and a **joint dissemination course** (3rd year)”.*

For EDIM the supervision process is dynamic, where the

*“Co-supervisor at Home university is in charge of coordinating activities. - **A specific study plan is designed for each candidate and updated on a six months basis**. - Each candidate is requested to submit to the scientific committee a periodic report twice per year”.*

On the EDLE Programme there is regular and documented (by the doctoral candidate) interaction with both supervisors:

*“**Each candidate is constantly advised by two supervisors**. One is the main supervisor, who is in charge of advising on all aspects of the candidate’s education. The second supervisor is normally a professor of the institute currently hosting the candidate. Both supervisors report to the Coordination Board every six months. Associate Members can provide additional advice. The (local) supervisor is expected to **meet the candidate at least every three weeks**. When hosted in a different institution, **candidates send a monthly report**. **Supervision workload is***

<sup>11</sup> EUA. (2010). *Salzburg II Recommendations: European Universities’ Achievements since 2005 in Implementing the Salzburg Principles*. European University Association, [cited March 9 2012].  
[http://www.eua.be/Libraries/Publications\\_homepage\\_list/Salzburg\\_II\\_Recommendations.sflb.ashx](http://www.eua.be/Libraries/Publications_homepage_list/Salzburg_II_Recommendations.sflb.ashx)





*divided evenly across partners as the academic staff of each partner university supervises the equivalent amount of candidates. The first structure of the programme entailed: 50-50 research and course work in the first year, 100% research work in the second and third year. In view of the delays that this was causing, we have reduced the course work load in the first year”.*

DOCMASE distributed the supervision workload:

*“The work is shared out between the two cooperating professors; there is clearly a **lead university** and another one (sometimes the stay at the second university is just one semester); in addition to the **co-tutelle** the consortium **arranges a number of activities that are common to all fellows**, e.g. summer schools (each fellow must choose two) and a common database recording all activities of all students, access to associate partners as facilitators of data and research activities, etc.”*

EDS-ABG monitors supervision through a central consortium process:

*“Supervision is on a co-tutelle basis, but in addition **the Consortium Committee assesses the training programmes** before they are accepted and then **monitors the progress of all PhD candidates** (regular progress reports, seminars for the acquisition of transversal skills, field experience or 3-6 month internship, as well as a special Advisory Board for the supervision of theses)”.*

Doctoral candidates acknowledge the challenge of supervision across institutions and borders, and some of their responses show how it **can be difficult to match the planned ‘aspirations’ of the Programme with actual supervisor behaviours**:

*“Supervision for a PhD thesis is very time consuming and the criteria of Erasmus Mundus to have joint supervision is sometimes detrimental if the two supervisors working in two different countries do not think the same way about the research project. In this case, the research publications get delayed and also cause conflict of interest. The dilemma of student is then who to follow as the co-ordinator of the programme can only send emails to the given supervisors”.*

This doctoral candidate was in the first cohort on a Programme with two non-EU doctoral candidates. His perception is that the consortium (which was formed as a group of 5 universities for this EM programme) still needs to make progress in sorting out the balance across the consortium. His feeling is the coordinator was not finding it easy to establish common procedures with the other consortium partners. This small example of doctoral candidate frustration underpins the importance of **regular communication** with doctoral candidates, and the importance of **monitoring for problems and implementing immediate corrective action** – these issues are considered in part in the later section on quality assurance.

### 3.3 Research and Communication Platform

#### 3.3.1 Overall Challenge

- We detail that Doctoral candidates have an effective communication and collaboration platform that links them to all the candidates and staff across the consortium.





### 3.3.2 Checklist of Actions

- ✓ The Programme provides doctoral candidates with an integrated research and training platform that operates seamlessly across all partner sites allowing doctoral candidates to access teaching materials in an integrated manner, regardless of their geographical location. If an integrated system is not available, doctoral candidates are prepared effectively prior to their mobility, so that they are familiar with the different teaching platforms as soon as they arrive at a partner location;
- ✓ The teaching platform provides a communication platform where it consults and listens to doctoral candidates, and understands experiences and concerns. This activity feeds into the quality assurance process.

### 3.3.3 Good Practice

For the EM Master Programmes a centralised platform (involving both physical and virtual activities) is an important consideration for learning and teaching activities, and for access to documents etc. However, for doctoral programmes there often is a view that (as for EGS-ABG) “**Projects are too different to allow for a significant level of cross-learning between PhD candidates in different projects**”.

So the emphasis is more on how the doctoral candidates, each on their own specially designed research pathway, can interact with other doctoral candidates and staff across the consortium. For MARES:

*“The consortium has set rules and offers a **communication platform, courses where students may meet** with others, annual meetings where they all **meet and exchange information about their research**; but given the broad range of disciplines dealing with Marine Studies, it is rather seldom that two students share a common research project”.*

For EMJD-GEM the Programme Website is used:

*“The website of the programme was redesigned so we can have **online profiles with information about our research**. We have an official email with .eu extension. There are plans about launching an **online platform for exchanging expertise**. The Consortium has partnered with another EU-funded research network, GREEN, to allow us to publish in their **working papers series**”.*

INTERZONES has also created a central resource:

*“We forced everyone of our partners and associate members to **create a page on the activities of their research groups** (we also check that things are **updated regularly**) and we put all this on our website in the rubric ‘research network’. We are also very keen on **providing videos on the website** as this seems to be the only efficient tool now for visitors to go into the pages”.*

TEEME combines electronic and physical approaches:

*“An **electronic platform** after semester one taking the form of an **online workshop** for which students are required to produce a **coherent research output in collaboration**. Each workshop will focus on a specific topic that is of general interest to the TEEME programme, e.g. a broad research question (such as “transculturalism in early modern studies”) or a question in critical theory. The workshop is included in an academic learning platform and is open to all TEEME*



members. Contribution is obligatory for the respective cohort, voluntary for all other TEEME members.

**An annual conference.** This conference is a central event in the TEEME academic year. It will be entirely organized by students and bring together all cohorts as well as staff from each site to **encourage teamwork and scholarly exchange**. Each year these conferences will follow on from the launch of the new programme edition. They will be hosted in turn by each of the consortium universities and eventually involve all three cohorts: students in their first year who will have just started on the programme will be required to attend; students starting their second year will organize the conference and give presentations; **students in their third year will organize a panel discussing their placement experiences of the previous semester**".

Doctoral candidates acknowledge the challenge of providing coherent access to resources across institutional and national borders. Some have commented that they cannot access all the ICT from home devices or from mobility devices (android devices, linux devices, apple devices). Others note that while a Programme may have a Facebook page, the **main channel of communication** is the meeting in real life. The spring school helped a lot to meet in person the other PhDs and to know more about them and their research. In some cases doctoral candidates have 'self-organised' for example creating a Yahoo group where doctoral candidates can share experiences and concerns on a common platform. However, this is problematical for a Programme because the doctoral candidates then take their concerns outside the usual communication channels.

## 3.4 Assessment Mechanisms

### 3.4.1 Overall Challenge

- We detail the procedures and processes involved in assessing the on-going work of doctoral candidates (term-papers, seminars, thesis, etc.), ensuring that assessment is coherent and equitable across the consortium.

### 3.4.2 Checklist of Actions

- ✓ Assessment weightings take workloads (across modules) and doctoral candidate progression (across semesters) properly into account (and **where applicable** the assessment criteria clearly conform to the objectives and practice of ECTS);
- ✓ The consortium aims to balance the assessment loads and schedules for each partner site so that doctoral candidates are not overloaded with work or idle as they move across their mobility paths;
- ✓ The marking, assessment, and feedback criteria are consistent across the Programme and are transparently communicated to doctoral candidates. Transparent information is provided to doctoral candidates about timetables for formative and summative work submission;
- ✓ The doctoral work that will be assessed is clearly documented with the types of work (reports, discussion papers, papers for publication, thesis, drafts etc.), milestones and targets, assessment criteria, and relative weights communicated at the outset of the research process.



### 3.4.3 Good Practice

There is considerable debate about whether doctoral research ‘work’ should be considered under the Bologna processes of ECTS, or whether it is purely research work leading to a doctorate. For DOCMASE the **diversity across the research programmes** means that assessment practice is “*mostly left to the two professors involved, i.e. to those who drew up the project and carry it out. The projects proposed to fellows are very different from each other and the room for standardisation is very limited*”. This is not necessarily a problem for doctoral candidates, for example a respondent from EUROPHOTONICS welcomed the different approaches to assessment. No visible common approach exists, but in the view of the doctoral candidate it is not a problem because **a diversity of assessment approaches can be sensitive to the particular research specialisms**.

The EDIM Programme uses **ECTS** firmly as the basis for assessment with the main research project being allocated 50% of the overall assessment loading:

*“The basis for assessment are ECTS, i.e. 240 ECTS for a four-years PhD programme.*

*Essential requirements:*

- introductory and methodological courses at Doctoral level*
- thematic and specific courses*
- participating to the scientific community (schools, workshops, scientific conferences, ...)*
- research project (min. 120 ECTS)”*

INTERZONES also formalises assessment around ECTS:

*“Everything is in ECTS (or their equivalents, we worked on a **conversion system** when necessary) with the **non EU degree awarding partners** (Brazil and India) who are just important as the European ones”.*

TEEME uses consistently ECTS credits and six-monthly progress meetings, all of which is **formally documented in the doctoral handbook**, and “*the requirement about **collaborative work between the various campus also gives tutors an opportunity to co-assess doctoral candidates’ work and progress***”. For EDLE the assessment approach focuses clearly on **coordinating the assessment practice across the consortium**:

*“At PhD level, national requirements in term of assessment procedures are not that different. Admission to the second and third years of the programme are decided by the Coordination Board on the basis of the **interim reports of supervisors, the quality of the chapter submitted every year, and the results of the exams of the (mandatory) taught courses***”.

EDLE also uses a formally agreed marking translation table that is used by all partners. EGSABG also aims to agree a coherent assessment practice across the consortium:

*“The rules have been jointly defined by the consortium to meet the criteria of each national Graduate School. Each Partner Institution has agreed to these rules. The purpose here is to provide a **homogeneous and efficient management of individual doctoral programs** and to ensure a high quality level of PhD studies. The system enables all parties involved to create **transparency** on the progress of doctoral candidates in EGS-ABG and to make sure that **supervisors and doctoral candidates will discuss and tackle problems in an early stage and hence prevent major delays**. The monitoring of the doctoral programs, from the enrolment*



of doctoral candidates until their awarding, is **managed by the EGS-ABG Education Committee**".

EMJD-GEM provides a higher weight to the assessment views of the main supervisor, noting "agreement that in the evaluation Committee the professors from the first university (the one chosen from the beginning) will be *primus inter pares*".

## 3.5 Training, Research Tools and Facilities

### 3.5.1 Overall Challenge

- We detail how we will provide doctoral candidates with comprehensive research and learning tools and facilities no matter what their mobility pathways will be.

### 3.5.2 Checklist of Actions

- ✓ Doctoral candidates are provided with relevant learning tools, such as electronic bibliographic software, so that they manage reading and notes effectively and efficiently;
- ✓ Doctoral candidates will have meaningful experience of state-of-the-art laboratory and research facilities in partner institutions.

### 3.5.3 Good Practice

Providing the same training, resources, and research tools to all doctoral candidates is less of an issue with doctoral programmes than it is with Master programmes where all students take core modules and need a set of base competences. However, doctoral candidates also need a **base set of skills and competences**. Providing they will be the responsibility of the university where the doctoral candidate stays and depends strongly on each candidate's work programme.

EDIM provides a base set of training to all doctoral candidates: "*we assure that all the EDIM candidates are offered with the **same research and learning tools and facilities** of other doctoral candidates in partner universities*". SETS takes a more diversified approach where "*the **candidates are integrated in Research Groups** along their pathways, with the **required research tools to develop the doctoral work***".

TEEME provides mandatory core training through "***Induction sessions** at all four sites, **mandatory skills workshops** in semester one (and optional ones thereafter), a **dedicated TEEME research methods seminar** in semester one, regular supervision seminars in semester one and, if appropriate, thereafter*".

For –EGSABG "*The training of each doctoral candidate includes a **compulsory course on 'Ethics and philosophy in science'**, for at least 2 ECTS credits. Ethical issues when performing research with farm animals were addressed during the "Welcome" course*".

TEEME also provides more customised training focused on the specific research programmes:

*"Students choose their itinerary between 2 or 3 partner universities; but get **support according to local resources** (e.g. depending on the partnerships signed locally with museums, libraries, theatres, etc; in addition to the common electronic platform, there is an **annual meeting** of all*





tutors and all students of the same cohort; this meeting is being **organised by the students (with support from the universities)**, in order to give them an opportunity to work together; seems to be particularly effective once students return from their work placement and have concrete experience to share”.

For GEM all doctoral candidates have full access to training material and resources of their two universities and also at a third university where **doctoral candidates are visiting research fellows**. However, it was also observed by one coordinator that “students expect everything to be available in English at all universities (which is not the case and causes frustration)”. So, **expectations need to be carefully managed**.

Training also needs to be linked to the ‘real world’ needs of industrial and other partners. For the Joint Doctoral Programme in Interactive and Cognitive Environments training “*involves actual industry/academy joint research activities on projects in cooperation with leading ICT companies, typically under international institutional umbrellas, such as the European Research Frameworks*”.

MARES also provides professional training via a sector partner where “*Students have access to the resources and tools of their universities as well as to those of the Marine Institute of Flanders, a non-university partner of the Consortium that supports all candidates, wherever they are located, and offer them professional services*”.

EGS-ABG provides a **formal training programme** over 6 months, with a minimum of **30 ECTS credits to be obtained through training** by each doctoral candidate during his/her program. The **Individual Training Plan (ITP)** is extensively detailed through:

*“an agreement on supervision and training between the doctoral candidate and EGS-ABG, to which both parties owe rights and duties. The ITP is constructed on the basis of the knowledge and skills that the doctoral candidate must develop during his/her doctoral programme, according to his/her initial background and the thesis topic needs/requirements. It comprises, at least, the following points:*

- *An analysis of the requirements and the goals of the planned training.*
- *A list of courses to be taken by the doctoral candidate during his/her programme.*
- *A list of scientific meetings where the candidate intends to present his/her results (poster or oral).*
- *A tentative schedule for 4 years.*

*The implementation of the plan takes place after consultation between the doctoral candidate and his/her supervisor. During the first 6 months of the programme, the ITP is submitted by the doctoral candidate to the Education Committee. In given cases, the Education Committee can provide motivated recommendations to improve the plan. Upon validation by the national graduate schools involved and the EGS-ABG, the Education Committee sends an approval to the doctoral candidate and his/her supervisors, on one hand, and the Executive Board, on the other hand”.*

Some of the EMJDs take a more innovative approach to identifying training needs. Rather than following the conventional ‘directed’ approach (doctoral candidates have to follow what is prescribed for them) some programmes allow **co-constructed training**, where a bottom-up approach **invites doctoral candidates to identify training needs**. In this context a consortium can evaluate proposals from doctoral candidates and fund the training if accepted.





The doctoral candidate experience of training and resources and facilities can show clearly whether there is a logical provision by a programme. For example one doctoral candidate on EUROPHOTONICS confirmed that *"in my first institution I had the opportunity to utilize their pc and server with the annexed software to develop my research. In the second one I have been trained to work in the clean room and in the lab environment, having the opportunity to learn how to utilize the machines that are useful for my research"*.

But there are also clear examples where the provision was not provided coherently to doctoral candidates, and in one detailed case the response from a doctoral candidate was:

*"Provision depends on the institution. At xxx, where the library collection is astonishingly poor and almost no books in English are available, where journal subscriptions are few, and where library staff barely speaks English, the working conditions are disappointing. All our courses took place in a tiny room without windows and central heating (the university town is a warm place but sometimes temperature does drop below zero). Next to it was our "reading room", one for 20 students on the Programme and six seats, also used occasionally by people from the university administration. This was particularly unpleasant given that the university is one of the richest private universities in the country where fee-paying students are provided with excellent conditions. We were hinted that since we didn't pay fees, we should have been happy with what we had. The only facilities available to us were a printer and subsidized canteen; however, we weren't explained how to get a canteen card and had to figure it out ourselves. In general, there was no orientation when we arrived and no support with getting housing or residence permit"*.

This long remark from a doctoral candidate shows how important it is to validate from the coordination point that the resources that are planned to be delivered are actually delivered. This was not an isolated doctoral candidate who reported this experience, but the course representative. Again it emphasises that doctoral candidate expectations must be managed, promised resources must be provided, and doctoral candidates must be regularly consulted about their experiences through the quality assurance and monitoring process.

## 3.6 Monitoring Research Progress

### 3.6.1 Overall Challenge

- Procedures and practices are detailed to provide a continuous Programme review process, noting who will be involved, how, and why. We explain how this process will influence the on-going development of the Programme.

### 3.6.2 Checklist of Actions

- ✓ Procedures and processes exist on a consortium-wide and consistent basis for the regular monitoring of doctoral candidate progress.

### 3.6.3 Good Practice

Even within a single disciplinary department in a single institution the monitoring of doctoral candidate progress is challenging. There are fewer formal milestones where doctoral work is formally assessed, so the research monitoring process becomes more of a dialogue between doctoral candidates and



supervisors. In that context research monitoring is 'mutual', and the **supervisors need to be content with doctoral candidate progress**, and **the doctoral candidate needs to be content with the supervision process**. For an EMJD with its international consortium and research mobility the challenge is significantly greater. The SETS Programme has:

*“**joint monitoring mechanisms with a dual axis: integration and research monitoring.** Integration monitoring is performed at local level and supervised jointly every half a year. Academic monitoring is also performed locally and jointly every year, also celebrating a joint event with the candidates so to create a **joint collaborative culture within the programme**”.*

For the EGSABG there is **central overview** of all doctoral candidate progress monitoring:

*“The monitoring and assessment of individual doctoral candidate performance are under the responsibilities of the Education Committee. Academic requirements for the completion of the thesis are defined in a **common document, the “Supervision Rules”**. These rules are attached to the **doctoral candidate agreement, signed by both supervisors and the doctoral candidate** at the beginning of the doctoral program. The progress by the doctoral candidate is **evaluated yearly by the Education Committee**, based on the ITP and the recommendation of the Thesis Advisory Board. Evaluations of the performance of the doctoral candidates are scheduled at the start, mid-term, and end of their PhD program”.*

KTH Stockholm has a compulsory document - a study plan - which must be written by candidate and the two supervisors. Some Programmes have a more personal and informal initial process where the supervisor monitors a doctoral candidate in the first six months, and then there are four **workshops each year where supervisors and candidates sit together and discuss progress - a mutual learning process**.

Monitoring therefore combines **normative** assessment of doctoral candidates (some using ECTS, and other arguing that the use of ECTS is not appropriate for 'employees' since the doctoral candidates have employment contracts), with milestones and marks, and **non-normative** research and learning journey monitoring based on collaborative milestones. Both mechanisms must input in some way to the agreed institutional progression process(es).

These combine into a range of approaches by programmes. For EDIM there is a *“monitoring process and related tools (Personal study plan template, doctoral periodic report template, research project template) that is **recognised in each partner university to fulfil local or national requirements**”*. On the TEEME Programme there is **single monitoring process operating across all partners**, while AGTRAIN **engages the doctoral candidates directly into the monitoring process**:

*“At consortium level there is an organised system of regular (each semester) **reporting (by students about their progress, by tutors about students, but also by students about tutors)**. All reports are submitted to the Consortium's Steering Committee. For each thesis, one or two additional academic evaluators (preferably from the student's home country, usually in a developing country) will be added to the 2 tutors (sometimes this needs to be done electronically, because of high travel cost)”.*



For the MoveAge Programme there is high-level doctoral candidate involvement in the monitoring process:

*“The consortium has an organised monitoring process involving all partner universities and fellows (who need to **present a report each year to the single Board of Education and all must present at the annual meeting**); some rules are however more demanding in some countries (NL, BE) than in others. Projects are normally doable within 3 years (this is a criteria for them being selected by the Board of Education), but there is an agreement about the 4th year (which is traditional in e.g. NL and BE), which will be the responsibility of the “main” university; efforts in progress to secure funding in this case (e.g. from industry)”. “This is mainly the responsibility of **the Board of Education, which sets up and implements the progress report, organises the co-tutelle and sets up the thesis tribunals; the Board includes two PhD candidates**”.*

DCGC combines normative and non-normative approaches with key milestones:

*“There is an **Academic Board that meets twice a year to monitor the academic progress of all students**; but the work programme and the **concrete monitoring of students** through tutors depend mainly on the programme that was agreed at the time of acceptance of each candidate and on **local rules**. There is an informal agreement between all partners that **all students should be required to publish at least one article before they get the degree**; students are also “encouraged” to do an **internship at/with one of the associate partners** of the university where they stay (e.g. a court, social service or police station), but the Consortium prefers not forcing PhD students by making too many things formally compulsory”.*

One of the doctoral candidates from EUROPHOTONICS reported how the much richer Erasmus Mundus monitoring process delivered a good experience:

*“I participated last year to two compulsory PhD day to officially present my work, this spring I also participate at the first spring school where I presented my work with the form of an oral workshop. During this period I also participate to different conferences and present my work in form of a poster. Moreover I have been monitored directly from the debates with my supervisors in the form of personal meeting, exchange of information and the sending from my side of draft papers or working papers”.*

A doctoral candidate on another programme was very positive about the richness of the monitoring process, but also advised that some **cultural training** was necessary. For example where there is a need for vigorous debate in a doctoral candidate seminar presentation, doctoral candidates from cultures where there is not a habit of ‘speaking up’ or ‘criticising (even constructively) in public, need **specific training** and encouragement so that they interact and contribute.

## 3.7 Staff Mobility and Inter-Cultural Awareness

### 3.7.1 Overall Challenge

- We detail who across the consortium will be in contact with the candidates (academics, administrators, laboratory technicians, and support staff etc.) and how we will provide them with skills for inter-cultural awareness and where relevant with mobility opportunities.



### 3.7.2 Checklist of Actions

- ✓ All partners are aware of the different teaching cultures and practices, and offer documented advice to doctoral candidates about the different practices that they will experience;
- ✓ The staff at the 'front-line' (administrative, academic, library, support, laboratory technicians etc.) who deal with doctoral candidates are provided with training in 'working internationally', and can exchange experience and advice about 'European' teaching and learning practices and the issues arising from working internationally working;
- ✓ Staff mobility is embedded in within the teaching process, such as staff teaching on courses at other partner sites, giving joint-seminars at other partner sites, or providing pre-mobility teaching preparation to doctoral candidates while at other partner sites;
- ✓ There are processes to ensure that all members of staff in the consortium have opportunities for working together, for example through planned mobility, formal collaborative structures, joint research and teaching.

### 3.7.3 Good Practice

In the Handbook for the Master Programmes a particular example of good practice in this context has been the University of Newcastle (UK). There has been a goal to **internationalise all staff and students** in the University, so that international students can feel confident that whoever they meet across the University (academics, support staff, professional services etc.) has the skill-set to interact with global cultures. The University has an International Operational Working Group<sup>12</sup> which provides: Advice and support with International activities; Accumulation of information and knowledge around internationalisation; Developing and proposing strategic initiatives aimed at supporting internationalisation.

There is a range of good practice documented for the Master Programmes in the separate Handbook for them. For EMJDs there is developing practice such as EDIM where *“staff (supervisors and administrators) are covered by the EC funding for running the programme when participate to EDIM workshops. Members of the Scientific Committee are also covered for **attending management meetings, or for administrative and promotional activities**”*.

For other Programmes there is a more passive approach, focusing on interactions in Board and Consortium meetings, for example EGSABG-C where *“the mobility cost is covered the Coordinating institution using the lump sum. Each institution sends at least one representative to the Introduction week, the summer school, and two Consortium Committees each year (these events may happen in the same time and place to reduce the number of travels)”*.

For TEEME the University of Kent provides induction training for staff with international students through International Development, and *“other academic staff are encouraged to participate in TEEME events not happening at their sites and in progress meetings, when these are scheduled away from their home institution”*.

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<sup>12</sup> [http://www.ncl.ac.uk/res/about/director\\_support/teaching\\_learning/iowg.htm](http://www.ncl.ac.uk/res/about/director_support/teaching_learning/iowg.htm)





# 4 Management, Financial, and Institutional Strategy

## 4.1 Overall Mission:

- We ensure our participating institutions can work together to provide coherent and comprehensive support for our Programme in the areas of management, finance and administrative support. We have formalised the partnership through a documented agreement, and understand how we will deal with IPR issues. Doctoral candidates will be provided with a clear employment contract. We ensure there is a strong commitment to internationalisation. Then, when all is in place, we will market the Programme professionally.

Figure 4.1: Sub-Components for Institutional Strategy







## 4.2 Administrative Processes

### 4.2.1 Overall Challenge

- We will provide a coordinated and joined-up administrative support process for doctoral candidates, being clear about which administrative units (for example research offices or teaching and learning units?) across the partner institutions will be responsible and ensuring that they act coherently and consistently across the programme.

### 4.2.2 Checklist of Actions

- ✓ The Programme administration is centrally managed by the coordinating institution;
- ✓ Doctoral candidates are informed about their personal information that is stored by the Programme, with relevant assurances as required under data protection regulation(s). Doctoral candidates are able to view and validate their own personal information;
- ✓ The Programme administrators store doctoral candidate information (from personal details to Course/Activities selection, assessment and examination marks) efficiently and securely, for example in a secure IT facility with a robust content management system.

### 4.2.3 Good Practice

Without **coherent and well-organised administration** a Programme simply cannot function effectively across all consortium members. However, it is widely understood that **coordinating and administering an EMJD is a significant undertaking**, requiring extensive **interaction across the consortium, and also between the coordinator and the European Commission**. INTERZONES communicates this clearly:

*“Bergamo coordinating university takes all the risks, we pay the students every month, we pay the lump sum to partners and associate members at the very beginning of every year and we pay tuition fees once the semester is over and that they have done everything they should for this or that student”.*

The EGSABG-C Programme coordinating institution (AgroParisTech):

*“recruited two **dedicated staff** persons who work full-time on the two Erasmus Mundus programmes coordinated by AgroParisTech. They **work in relation with existing staff** such as in International offices, legal services, student administrative services, accounting services, doctoral schools, etc. when need arises”.*

The MoveAge Programme **deals centrally** with the financing process for all the doctoral candidates who *“are employed by the ‘main’ university throughout the project and are ‘on visit’ at the other university when they stay there; each gets a local contract, but the consortium tries to avoid big differences in the net income of fellows hired in different countries”.* And for DCGC finances are centrally handled from Kent and all contractual arrangements between universities and with fellows are arranged from Kent

Doctoral candidates can suffer from a lack of administrative coordination. A typical experience was reported where the consortium had not sorted out its administrative procedures before starting the programme. As a result doctoral candidates had not been able to enrol at their second university because of a lack of liaison with his previous university. As a result the doctoral candidates for a period



were not recognised as being valid doctoral candidates (no ID student card) which means they could not benefit from student concessions etc.

Running strongly through these short examples is the fundamental Erasmus Characteristic of **'jointness' and coordination**. It is fundamentally important that the coordination activity is coherent and consistent, and that the coordination point fully understands what is happening across the Programme on a very regular basis.

## 4.3 Financial Strategy

### 4.3.1 Overall Challenge

- We show how we will set fees and grants and manage the finances across the consortium in a coordinated manner, and how we will plan for financial contingencies including the way we will resource the fourth year of doctoral programmes when applicable..

### 4.3.2 Checklist of Actions

- ✓ Resource planning and allocation of finances are set through a formal and documented consortium policy which shows how finances cover management and administrative overheads and academic activities;
- ✓ Doctoral fee levels are fully justified by the costs per institution and by the way in which they underpin the delivery of the academic objectives;
- ✓ The fee levels are equitable in the context of the Erasmus Mundus scholarship levels;
- ✓ The financial resources are allocated transparently and efficiently across the institutions so that the money is linked to the delivery of the Programme objectives.

### 4.3.3 Good Practice

Erasmus Mundus Programmes are complex to manage, and to support the mobility and international working the finance needs to be managed across partners, across institutions, and across borders. Nothing is more sensitive to an institution than finance, and nothing worries an institution more than an activity that is not cost-effective and efficient. So the financial management of an EMJD needs to be formalised and it needs to operate efficiently and effectively.

For AgTrain the Consortium Agreement sets the operating rules:

*"The Consortium Agreement includes **detailed rules about the allocation of financial resources** both by the partners and the fellows (e.g. in DK and NL, the local university adds to the EM monies in order to **guarantee that fellows do not get less than the legal minimum**, in IT and ES this is not necessary; tuitions fees are very variable between universities/countries, but the programme wants to **guarantee a minimal net income to all fellows**)".*

On EGSABG there is a goal to ensure that each partner receives the funding that is proportionate to its activity on the Programme:

*"Finances are **first managed by the Coordinating institution**, which received the whole funds from the European Union. The Coordinating institution manages the use of the lump sum. The Coordinating institution directly manages the fellowships for the doctoral candidates enrolled*



there as a first host institution. **On a yearly basis, the Coordinating institution transfers to the other institutions the whole sum allocated based on their number of doctoral candidates, each Partner institution managing the fellowships of “its” doctoral candidates**”.

And a similar approach is taken by DOCMASE, which also identifies the responsibility for funding the fourth year of research:

**“Finance is allocated to each partner on the basis of the projects in which each is involved. Students are employed by the main university all along the project, even when they are abroad. Some special arrangements to overcome local restrictions and complexities (e.g. with respect to social security); the main university is responsible for finance when projects extent into a 4th year (which is expected to be quite often the case); there is a pot of money for students activities (trips, summer schools, some social activities)”**.

TEEME aims to “finance all programme costs through the lump sum shared between the partners and the remainder of participation costs not claimed in fees ...The Fellowship payments scheme includes a **contingency fund to cover any liabilities and social security provision**”. Finance is centrally managed from the University of Kent, which pays for all fellowships for all doctoral candidates over the 3 years. There is a contingency fund.

EDIM finances are operated through a larger international programme support service, and are

**“centrally managed from KTH; this programme is run in parallel to a Marie-Curie programme involving the same partners and where the participating universities are providing co-financing, but the co-existence of the two schemes seems not to create problems. There is an agreement that the 4th year is always being covered by the home university”**.

EGS-ABG aims to ensure that all fellows should receive the same gross salary, even though this means quite different net salaries, but it ensures that no-one receives less than the legal minimal wage in each country. The Consortium Agreement includes a clause that the **4th year will be guaranteed by the main university, either from its own resources or via sponsorship**. The research project requires field work in overseas countries and there is an issue about travel costs involved; the initial project proposal that is prepared by the two universities **must include information about the funding of these extra travel and related costs**.

MARES aims to ensure that there is equity for doctoral candidates, and:

**“Students pay from their allocation a small fee for the courses and for their travel to the annual meetings and the courses outside their home university; a part of this money is used to pay travel grants to some students. There is a contingency fund. The programme last 3 years; excess duration needs to be borne by the home university; this is made clear in the Consortium agreement”**.



## 4.4 Consortium Agreement

### 4.4.1 Overall Challenge

- We have developed in detail a planned consortium agreement. We have our institutions 'signed up' to the jointness needed to deliver a successful EM Programme, with clear agreement about how we will manage intellectual property rights arising from the activities.

### 4.4.2 Checklist of Actions

- ✓ There is a formal consortium agreement signed by all partner institutions;
- ✓ There are agreed protocols for conflict resolution;
- ✓ There is a formal process by which tasks within the division of labour are allocated and can be reviewed;
- ✓ The consortium agreement clearly documents information management and intellectual property rights policy and practice;
- ✓ The degree(s) to be awarded are clearly documented and are fully agreed by all partners;
- ✓ There are defined criteria for the expected performance levels of each consortium member, agreed quality standards and processes for removing a consortium partner if necessary, and clearly stated standards for potential new partners.

### 4.4.3 Good Practice

A theme that runs through much of the material covered to this stage is that of formalised agreement. The role of the consortium agreement cannot be underestimated. To agree the text of a consortium agreement requires **a challenging process of negotiation and understanding across all the consortium partners**. Even to reach that stage will deliver significant benefits in the context of more trusted interpersonal relationships between partners, a higher understanding of the value of Erasmus Mundus by institutional staff, and a consortium-wide understanding of the diversity of practice across partners along with the achievement of having **developed 'working solutions'** that enable EMJDs to operate successfully. Once an agreement is signed it signals that the **institutions have accepted their obligations**, and it becomes a critical reference point for the consortium if they need to overcome problems.

In summary, the consortium agreement **formalises practice** and provides **concrete evidence of the trusted working relationships across a consortium**. For EDIM "there is a detailed Consortium Agreement and a detailed agreement with candidates from the time of their admission".

However, an agreement does not have to be a set length, nor does it need to cover the same topics for all EMJDs. The DOCMASE Programme notes that "*there is a consortium agreement, but it is n purpose limited to main issues, in order to **leave a degree of flexibility according to each project and to local rules**, and because the partners know each other well; the fellowship agreement is seen as much more important*".

This practice is emphasised by DCGC: "*The **Consortium agreement seeks a balance** between what needs to be handled in common with common rules and what needs to be done in accordance to local regulations and practice*".



Of particular importance when research is involved is the exploitation of research results, and the ownership of **intellectual property rights (IPR)**. For some institutions the approach may be one of **closed innovation models** where IPR is legally and contractually managed and specifically owned and shared, resulting in spin-off companies etc. For others the approach may be through **open innovation models** where IPR is not constrained, but the benefits are left to those who exploit it – innovation and entrepreneurship.

For AgTrain there is an open approach where “*IPR not an issue- **the Consortium is actually keen to be copied and its methods to be copied**; data property is dealt with in the 3-year Employment contract in accordance with each country/university rules*”.

EMJD–DC takes a more distributed approach, considering IPR at the location where it is created, and where “*the consortium agreement deals with issues like IPR by **delegating IPR issues to each national partner** (e.g. in Barcelona, the sharing of IPR between university, tutor and doctoral candidate is regulated at the university level)*”.

Many other Programmes regard IPR more strongly as something to be protected formally. EDIM notes that “*we regulated IPR issues by recognising the policies of each partner university within the consortium agreement*”, and “*we have university rules on proper behaviour: plagiarism, mutual respect etc. **IPR issues are included in the Doctoral Candidate Agreement***”.

The ethics of IPR are also an important topic area. EGS-ABG has “*clauses about **ethics and data property** are part of the **agreement signed with each fellow**, if applicable*”.

And, TEEME has considered how ethics impact on a humanities programme:

*“Even though ethical issues are unlikely to arise in a historically-based Humanities research programme, the **Academic Board scrutinizes all applications for any research projects involving human participants and confidential materials, as well as for potential conflicts of interest with internal or external stakeholders**. While TEEME has no specific policy on ethical research for the time being, the consortium will **follow the relevant recommendations of national and European research councils** in all cases in which either the research topic or the behaviour of staff or students might give rise to objections of an ethical nature.”*

## 4.5 Employment Contracts

### 4.5.1 Overall Challenge

- We show how doctoral candidates will be provided with employment contracts that fully comply with the requirements of Erasmus Mundus, covering all necessary issues such as visas, work permits, maternity leave, sickness benefits, and support for accompanying family members.

### 4.5.2 Checklist of Actions

- ✓ The doctoral candidate contract states clearly the commonly agreed rights and the obligations of doctoral candidates and staff when participating in the Programme. The contract details a written code of practice which they sign and agree to comply with. The contract details rights and obligations of all parties in the Programme;





- ✓ The doctoral candidate contract has clear mechanisms for the communication of ethical problems, with a confidential and transparent process being used to evaluate and resolve the problems;
- ✓ Doctoral candidates are provided with a clear employment contract that meets the formal requirements of the Erasmus Mundus Programme regulations.

### 4.5.3 Good Practice

Doctoral candidates are ‘**young professionals**’ in the context of the Bergen (2005) Bologna Communiqué which stated “*participants in third cycle programmes are considered **both students and early stage researchers***”<sup>13</sup>. Whereas students on the Master programmes are registered in the conventional fashion as students attending an institution, with the EMJDs the doctoral candidates are to be regarded as employees of the Institutions, with all of the **associated employment rights** that accrue, such as sickness benefits, maternity and paternity leave, national salary awards and increases (when the scholarship is awarded at a flat rate). For some Member States (e.g. the UK) where the practice is to regard doctoral candidates still as students, this is a significant departure from practice, and for a consortium the employment contract challenge can be significant.

There are challenges for a consortium to balance national employment legislation and rules with the requirement to be consistent across the partner consortium. The fourth year of research, which is not funded through the EM scholarship, also needs to be considered. The first generation of EMJDs were pioneers in finding **solutions**, and they were very much determined by the consortium make-up and the extent to which the Member States involved had complementary or conflicting employment legislation and practice. Solutions have included contracts which are for 4 years with the 'home university', 3 years with coordinating university and 4th year with the 'home' university that funds it, or separate contracts at each mobility location. Another possibility is to choose the location with the most beneficial tax regime, or where the net purchasing power of the scholarship is the greatest for the doctoral candidates.

Other challenges include a situation where a candidate 'self-funds' the fourth year, but under the EM rules they are still required to have the full employment contract and conditions. Will this discourage self-funders? For example on AGTRAIN in Wageningen 75% of doctoral candidates extend their research period through taking on paying research activities, but this is not an option for EM candidates.

With MoveAge fellows are **employed by the “main” university throughout** the research project and are “on visit” at the other university when they study there. Each fellow is given a local contract, but the consortium tries to avoid big differences in the net income of fellows hired in different countries.

AgTrain acknowledges the challenge of doctoral candidates taking longer than the planned research duration:

*“All students have an employment contract covering the 3 years of the programme; but in most cases, students do not start on the first day of the programme and do other activities on the side, which means that most do not finish within 3 years (also because most projects require field work in an overseas country); The Consortium is exploring the possibility to move to a 4-year programme, even though there is funding for only 3 years. The 4<sup>th</sup> year must be guaranteed in the project proposal by the 2 universities that submit it. There is funding from industry in some cases”.*

<sup>13</sup> <http://www.ehea.info/article-details.aspx?ArticleId=144>



On DCGC all **doctoral candidates** have an **employment contract with the coordinating institution**, Kent, irrespective of where they stay. With DOCMASE all **doctoral candidates** are **employed by their main university** throughout the duration of the project, and this is also the case with EGS-ABG. With EDIM the coordinating institution adopted the **standard national employment contract for temporary research staff**.

On EDLE:

*“the University of Bologna was able to provide all Mundus students with an employment contract. As fellow researchers, they are subject to standard tax and security regulations. The Consortium has agreed to request EM candidates to purchase a **health insurance** (meeting the Mundus requirements) that fulfil the social health regulation. A contract with an insurance company was negotiated by the University of Bologna and proposed to EM candidates. European scholars who have provided documentary evidence that they are already covered by their National Health Service in the countries that they will visit during the programme (Italy, Germany and the Netherlands) were offered the option not to buy the insurance policy. This solution aims at treating candidates in a fair way”.*

On EGSABG:

*“We make a distinction in the sense that doctoral candidates are not students but **employees**, with a **work employment contract, a salary, and the rights and duties following this status**. There are **employed by their first host institution**”. All doctoral candidates sign an employment contract with their first host institution. **Each first host institution is responsible for paying the salary**. The **national law** of the relevant first host institution applies concerning taxes, social security and employment rights. The salaries vary among institutions according to the national taxes and minimum wages. The usual rule is that the salary (including employer and employee taxes) is minimum 2800€, and if the law requires a higher salary then **the institution adds funds to cover this extra cost**”.*

On MARES” *students do not apply for a programme, but for a **job position**. There is common basis throughout the consortium, but each university needs also to meet its local regulations which imply a minimal level of differentiation”.*

It is not surprising that doctoral candidates identify frustrations and challenges regarding this central process of the employment contract. For example, on an EMJD where each partner pays the scholarship locally to doctoral candidates resulting in different levels of finance (although these may be less different if cost of living is considered), and payments to social security that some third-country nationals regard as not relevant:

*“The amount of salary received by fellows at different universities varies dramatically. At LocationA, my host university, we have received 1800 Euro per month in the first year; in the second year, this amount has been reduced to 1700 Euro per month. At LocationB, fellows receive the full, untaxed amount of 2800 Euro. To regularize the situation, the Consortium has made a provision to tax all scholarship as salaries, although this is clearly not in fellows’ interests: **third-country nationals will never make use of social security payments since they will leave the country after graduating while private health insurance frees us from the need to use the local public healthcare system**”.*



The comments about social security show yet again how important it is to explain why the payments are made and to manage expectations.

Another doctoral candidate noted that the administrative handover on their mobility transfer was not handled well:

*“I am currently not receiving the monthly salary since January, 2012 as promised to me in the doctoral candidate agreement. My contract at my home institute has to be transferred to my host institute but the fellowship amount has not been transferred so far which is forcing me live without salary since January, 2012. To mention, I am not contracted as a PhD at the moment at any of the partner institution of the consortium”.*

This example shows how ‘jointness’ is one of the critical characteristics of an EMJD that will avoid such situations – jointness means ‘mobility without disruption’. In a truly joined-up Programme doctoral candidates will not see where the elements are joined-up, and instead will experience coherence. That said, there is much that the doctoral candidates (as ‘young professionals’) can do to improve the jointness of a Programme – that are not passive consumers of an educational product.

In general, however, doctoral candidates appreciate that the employment contract situation requires innovative solutions by the Programmes. A EUROPHOTONICS doctoral candidate noted:

*“My contract is effective, the only problem is that is physically in one country and some resources, rights or benefit are not available in the second country. Unfortunately the university itself is taking a little bit more than 600 euro for month from our salary and it varies from country to country, but this does not depend by the EM consortium but single universities regulation that goes in contrast with the general EM contract. The salary level is sufficient, comparable to the one of my French colleagues and a bit higher than my Spanish colleagues”.*

## 4.6 Quality Assurance

### 4.6.1 Overall Challenge

- We detail a Programme-wide quality assurance process, and show how it will build on institutional, professional and national quality assurance processes.

### 4.6.2 Checklist of Actions

- ✓ The programme formulates and implements a joint QA strategy;
- ✓ A regular internal quality assurance system is in place to assure the quality of joint provision and guarantee that the aims of the programme are met and standards upheld. Internal QA procedures include a continuous collection of feedback from doctoral candidates about the effectiveness of their research experience and on external placements and internships;
- ✓ A regular system of independent external review (using independent external specialists) of the Programme is in place, covering all aspects such as pedagogy, content, relevance for stakeholders, assessment, doctoral candidate experience etc.;
- ✓ A set of criteria for the internal and external evaluation of the programme, based on the ESG, is established;
- ✓ The institutions ensure adequate provision for teacher’s academic and pedagogical development;



- ✓ QA practices involve students, staff and other stakeholders from all participating institutions;
- ✓ QA includes the coordination of assessment across the whole programme to ensure that all of its expected learning outcomes are achieved;
- ✓ The programme develops mechanisms for follow-up and continuous improvement. There is a process where doctoral candidates, past and present, are active stakeholders in an on-going process of continuous quality improvement; and
- ✓ The reports on results of QA are publicly available.

### 4.6.3 Good Practice

Quality is an embedded characteristic of Erasmus Mundus, and this project has been identifying and communicating it for five years. For the individual Programmes the achievement of quality requires constant review and action. There are many components for a Programme to consider, but it is the processes and procedures by which quality is objectively and independently assessed that is important in this context.

Because of their interdisciplinary and international nature Erasmus Mundus Programmes are not well-suited to conventional quality assurance (QA) metrics. This project has identified a rich set of particular 'jointness' characteristics which form the components of excellence, so an EMJD needs to build a bespoke QA process. It may use an **external panel of assessors to carry out the process, involving business, academic peers, scientific and professional organisations**. It needs to evaluate **scientific, pedagogic and managerial quality**. It needs to understand how each institution assessed quality, as well as understanding national and disciplinary/professional QA policies and procedures. The process should **incorporate doctoral candidates in a quality board**, and understand the **impact of the doctoral programme** and the **research outcomes**.

EGSABG has a QA programme where:

"in addition to the regular **institution-level** regulations and mechanisms, an **International Advisory Board** provides EGS-ABG with external advising. **Doctoral candidates also evaluate the joint courses, and give written feedback**. Notably, it has been done for the EGS-ABG Introductory Week. For the other local courses, **local evaluation mechanisms** are used".

And:

*"AgroParisTech is one of the only universities in France to have its own **integrated doctoral school** (Abies). This, in itself contributes to the quality assurance of the programme by being able to **do a close follow-up of the students**".*

On EDIM "each Doctoral Research Programme has a specific **Advisory Committee** that meets at least once per year to evaluate the Programme and to **provide advice for improving it**". With EDLE "at the University of Bologna, doctoral programmes are assessed by the Nucleo di Valutazione (<http://www.unibo.it/nucleodivalutazione/default.aspx>). In the future, they will be assessed by the newly established **national evaluation agency**". In Rotterdam, doctoral programmes are assessed within the assessment procedure for the departments.

INTERZONES explicitly provides doctoral candidates with a voice that is listened to by the Programme. The Programme:





*“encourages students to take the power so there is regular feedback from them (**anonymous**) on what we do (for example the cycle of seminars during the induction semester) but they also developed all sorts of **forums and they organize events during which they criticize** everything we (and they!) do. This is part of training in a Doctorate in literature, philosophy, culture etc.”*

Europhotonics holds a “meeting of the whole consortium at a “summer” school held in April when students were engaged in discussion about the course and facilities etc.” INTERZONES also acknowledges the important of **customising the QA processes to suit the complex EMJDs**:

*“Usually the national and institutional QA policies are considering all doctoral activities in one university as a whole and when it comes to EMJD they feel it is wonderful but usually don’t want to get into detail because they find everything (these questionnaires, the EACEA follow up etc) far too technical and precise”.*

For SETS there is a three level quality strategy:

*“1. Each HEI conducts **local quality assessment once a semester**, pursuant to its comprehensive quality management system. 2. **Joint student survey**: analyses student perception of programme coordination and overall quality. This survey will be anonymous and conducted yearly among all SETS students, on-line or via e-mail. 3. **Joint ex-post alumni survey**: analyses students’ professional and research achievement. This survey will be conducted once every three years, after the first PhDs are awarded”.*

Importantly the findings will be transparently used by SETS (too often doctoral candidates have observed that they respond to quality surveys but seldom hear if anything happened afterwards):

*“The Supervision Board will review the results of the joint and ex-post surveys, along with SETS programme performance (dissertations, publications, projects, patents, and so on), and **propose corrective and preventive measures to ensure on-going improvement**”.*

SETS also aims to **conform to national accreditation procedures**, and has three **national doctorates certified**:

*“The degree-awarding institutions are subject to external evaluation and certification of their doctorate programmes by the Spanish, Dutch and Swedish academic quality evaluation bodies. The doctorates already certified include: 1. COMILLAS: Spanish National Certification Agency (ANECA), awarded honourable mention for quality. 2. TU Delft University of Technology: Netherlands-Flemish Accreditation Organization and Research School Accreditation Committee. 3. KTH: Swedish National Agency for Higher Education”.*

TEEME uses an “**Annual Monitoring Report** written by general coordinator with input from the Academic Board, to be approved by annual meetings of Advisory Board and Management Board”.





## 4.7 Internationalisation Strategy

### 4.7.1 Overall Challenge

- We identify how the internationalisation strategies of the consortium institutions will contribute to enabling us to deliver the Programme effectively and efficiently.

### 4.7.2 Checklist of Actions

- ✓ Host institutions see Erasmus Mundus as an opportunity to build their own international academic quality by bringing in the brightest and best qualified doctoral candidate;
- ✓ The partner institutions are sensitive to the opportunity costs experienced by those academics who commit significant time and energy to ensuring the success of the programme;
- ✓ The Programme has wide recognition at institutional level and is fully embedded into the institutional strategy and structures at each partner institution. There are senior officers in the partner institutions who can take on a role as 'champions' for the Erasmus Mundus Programme.

### 4.7.3 Good Practice

A key challenge for an EMJD concerning internationalisation is how to take the individual internationalisation strategies of their consortium institutions (and the strategies are often very **competitive**, aiming to position the institution more favourably than others) and make them **collaborative** so **internationalisation has clear jointness** for the EM Programme.

Indeed, there are **three levels of internationalisation goals** that must be considered by an EMJD. First there are the European Union goals set out in the terms of reference for the Erasmus Mundus Calls for Proposals. Then there are the specific goals of the participating institutions, where a common pathway needs to be found. Then these need to be set in the context of the internationalisation goals of the actual EMJD.

There are many good examples of institutional support for the internationalisation aspects. The EDIM coordinator at POLMI observed "*I received full support by my institution. EDIM programme is clearly in line with POLIMI's internationalisation strategy, particularly focused on **recruiting talented international young researchers (Post Docs)***". In other cases, such as with the EDLE partner at Bologna "the Alma Mater Studiorum University of Bologna provides us with **vital administrative support**".

The EGSABG coordination at AgroParisTech communicates the way in which the EMJD clearly meets the internationalisation objectives:

*"AgroParisTech strategy has two priorities: to **help the students to adapt to a global labour market**, and to **promote the international dimension of the research activities**. The participation to Erasmus Mundus goes along this strategy. The international office supports the Erasmus Mundus programmes as they increase the **international visibility** of the institutions, **strengthen partnerships** with other European and extra-European institutions and creates **flows of incoming international students and doctoral candidates**".*

The SETS coordinator observed that "*the **Erasmus Mundus doctorate is considered a cornerstone and a breakthrough** in our Universities strategies of internationalization, and is considered as a strategic challenge and leading programme for the future*".



## 4.8 Marketing Strategy

### 4.8.1 Overall Challenge

- We detail a clear and comprehensive marketing strategy. We show how we will market the Programme, specify the key components of the doctoral programme(s), the distribution channels, and the target audiences.

### 4.8.2 Checklist of Actions

- ✓ There is coherent promotion of the Programme and the Erasmus Mundus brand that attracts exceptional doctoral candidates, who are keen to study at high quality institutions, with high quality staff, on a Programme with relevant and excellent content;
- ✓ A professional website conforms to key EACEA guidelines, and is also designed to communicate a strong global brand of academic excellence and quality. The website effectively communicates the Programme information to potential doctoral candidates around the World, regardless of the bandwidth of their Internet connection. 'Mystery shoppers' are used regularly to test the site, and their feedback is used to refine the site design and content.
- ✓ Relevant professional bodies and international associations are engaged in the promotion and marketing of the Programme.

### 4.8.3 Good Practice

Marketing is a process of matching the offer (the EMJD) clearly to the key consumers (doctoral candidates) and promoting its wider value to other beneficiaries (associate partners, employers, sources of sustainable funding etc.). Achieving the market potential of an EMJD is, however, much more complex than the statement would indicate.

First, marketing can be expensive, particularly if (as is the case with EMJDs) the marketing campaign is global. So it is entirely logical that cyberspace should be a primary marketing channels, but the Internet is a 'noisy' environment and making your EMJD visible to the target customers requires an element of sophistication and innovation.

There are **multiple networks that can be considered**, ranging from a **professional and well-structured website** (but how do people 'search' for your site?) with a **clear brand identity** (logo and design etc.), to **online social networks, research networks, National 'correspondents'** (key colleagues based in other countries). **Alumni**, endorsement and support from **central Agencies in key Third Countries** (Embassies to EU Delegations and National Organisations), **direct email to key academics** (proven to be effective in attracting high quality candidates since they provide guidance), **professional associations**, associations with **strong links to business, National Structures** (some meet with regional authorities and university representatives when travelling to conferences in other world regions), and using **doctoral candidates as official promoters**, for example giving them credits for their efforts.

The examples of practice from the Programmes indicates that there is not a single solution – the **marketing strategy needs to be built around the EMJD objectives and strongly customised to reach the communities in the target market**. EDIM uses the *"IMIM web page, EMJD web page, through the participating universities' External and International Vice-Rectorates, and through the TIME association"*



For EDLE the approach involves:

*“Mainly the Internet is used as the marketing platform of EDLE [www.edle-phd.eu](http://www.edle-phd.eu). Moreover the consortium is in progress of renewing the website in terms of appearance as well as usability. During the application period the EDLE mainly advertises on the Internet (Google Campaign) and researches with it worldwide interested candidates. The EDLE also offers brochures and posters, which will be distributed amongst universities mainly all over Europe”.*

The EGSABG website is:

*“<http://www.egsabg.eu>. This website provides general information about the aim of the program, the ongoing PhD projects and the PhD candidates, the opportunities for a fellowship and the way to apply for it, the doctoral courses, etc. In the same time, a **logo** for EGS-ABG was created by the internal services of the Coordinating institution. An announcement by e-mail and/or with a flyer was sent via **professional distribution lists** (e.g., AgenMap, AGDG, Breeders, DadNet, etc.) and the own networks of each Partner institution. A newsletter was created to spread the information about the progress of the program. From the beginning of the program, we used only electronic documents for our communication. **It seems that online marketing is not enough** and, then, **a 4-page hard-copy document is under construction**. We plan to print it with some thousands copies. When it is available, it will be spread in the different Partners and Associated Partners”.*

In addition to the above written communication, the Coordinator of the programme and a representative of one of the Partners, jointly or separately, made **oral presentations** of the EGS-ABG programme to audiences **at a range of international meetings**.

TEEME also focuses on online and printed channels:

*“The two main tools for the promotion of the programme have been the TEEME website and the dedicated leaflet. The website has been set up following EM guidelines. It is maintained by the general coordinator and regularly updated with news about TEEME-related events. Current students on the programme have set up a **Facebook site and have developed a TEEME blog**, which is linked to the main site. The inclusion of **personalized student profiles** on the website has proved particularly effective, as prospective applicants clearly prefer to contact their peers in the first instance rather than write to an anonymous programme address or to an established academic”.*

And there are further channels used:

*“**Advertising the programme in key academic journals** such as the European Messenger, and on key websites. The Board also considered **the strategic targeting of MA programmes** in the field by liaising with relevant conveners. The possibility of **contacting education departments in third countries** with a view to having TEEME included on a list of national recommendations for PG study will also be explored. **Online postgraduate sites** such as GradSchools.com, FindaPhD.com, PostgradSolutions.com will continue to be used as promotional platforms, as well as **events** such as Open Days and Education Fairs”.*

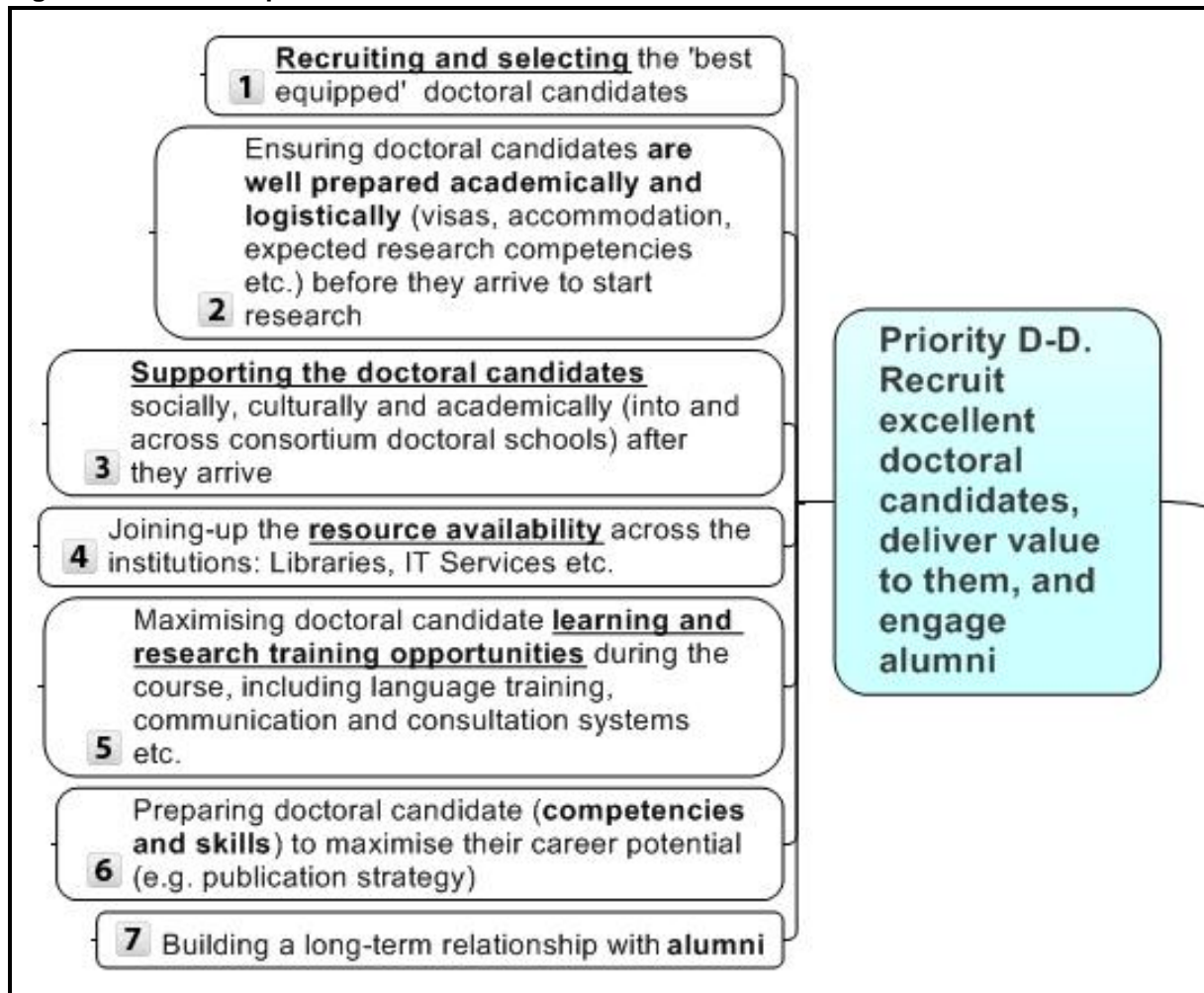


# 5 Recruit Excellent Doctoral Candidates, Deliver Value & Engage Alumni

## 5.1 Overall Mission:

- Now, we focus on the doctoral candidates. We will recruit the best qualified graduates. We understand that they will come with variable competences, so we encourage them to 'study in advance' of arrival. We welcome them on arrival, making sure that they are 'ready to study' and are not distracted by such issues as residence permits or accommodation problems. We provide them with integrated facilities, learning support and language training, listen to them (quality assurance and course review) and value their views. We prepare them effectively for their future careers.

Figure 5.1: Sub-Components for Doctoral candidates and Alumni







## 5.2 Recruiting and Selecting Doctoral Candidates

### 5.2.1 Overall Challenge

- We have put in place a global strategy to recruit excellent doctoral candidates. We have an application process that is sensitive to applicants' access to ICTs. We have robust consortium-wide processes to validate their qualifications and competences, interview them, and select them. Applicants are kept informed transparently about the progress of their application.

### 5.2.2 Checklist of Actions

- ✓ The Programme starts the applications process early to capture the attention of the best students, and marketing activities are carried out to specifically attract EU students;
- ✓ The selection criteria are transparently communicated to potential applicants. All consortium partners are actively involved in the candidate selection process;
- ✓ There is interactive support provided to applicants during the application and recruitment process (e.g. Skype etc.), for example relevant advice in areas of travel, visas, accommodation, finance and financial management.
- ✓ There is a use of international partners as 'local' points of contact for doctoral candidates, both to support doctoral candidates and to refine the selection process. Wider international research networks are used to develop innovative ways of verifying (recognition and accreditation) the qualifications of applicants.
- ✓ The Programme communicates selection decisions on applications in a clear and timely manner.

### 5.2.3 Good Practice

At the end of the last set of quality components was marketing. Once potential doctoral candidates are 'attracted' and are motivated to apply the task is to **ensure that excellent international doctoral candidates are most motivated to apply for your EMJD**, rather than another postgraduate research offering elsewhere in the world. The competition for the best doctoral candidates is intense, so any delays, difficulties, or failures on your part may lead to them looking elsewhere.

**Practice in supporting and advising applicants** ranges from ad-hoc to comprehensive strategies - the support is therefore defined in part by the programme objectives and the extent to which the programme wants 'the right candidates' (support and screening) or 'the most innovative candidates' (minimal support, forcing candidates to motivate their application).

The **application process needs to be clear, transparent, and with the minimum administrative burden**. Follow the **European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers**<sup>14</sup>. Email and low-cost communication facilities such as Skype can be used to provide advice, and can even be used for interviews. Be clear about the information that applicants must provide and in what formats it is needed, for example: Letters of application, a quality research project proposal, competencies, an academic CV, evidence of writing skills (some programmes publish a list of topics and ask applicants to write about the topics). Ask applicants to define flexible mobility tracks. Will you use NARIC Centres and other resources to validate qualifications of applicants? Must doctoral candidates have second cycle (Master) degree, or can they be recruited directly from first cycle?

<sup>14</sup> <http://ec.europa.eu/euraxess/index.cfm/rights/codeOfConduct>





Other programmes adopt a “**light approach**” with light requirements in terms of formality (i.e. scan documents instead of originals); tight **scrutiny comes at a later stage when they are shortlisted**. Involving the potential supervisors at the selection stage can produce good outcomes.

What weight is given to each of the application items? **How much credibility will be given to referees** references? Instead of written references some programmes are preparing an **online application tool** to send to **referees to rank applicants in a quantitative way**; others already have such a tool in place which allows them to compare candidates in a statistical way (2 forms per candidate).

**How will you manage category A versus category B applications?** The fact that category A is a priority because of the aim of EM to promote the EHEA worldwide, did not imply that you must choose a lower quality category A over a high quality category B in order to fill requirements. But if you are receiving more high quality category A candidates, then stronger efforts may need to be placed on promotion of the course in other world regions. How do you deal with the logistical challenges if a candidate drops out and another offer is made, meaning that the administrative process will not easily enable them to start with the others?

**How will you deal formally with appeals about rejected applications?** Check that all administration procedures were followed. Make all the processes clear on the webpage<sup>15</sup> so you can refer appeals to criteria that have not been fulfilled. Appeals often seem to be about “why not me?” EACEA emphasise that appeals should apply only on the level of procedures not on content. Internal procedures on what to do in case of appeals should also be put in place. Put a time limit on the date for appeal. Avoid communicating the ranking position of candidate.

In summary the application process has an overall flow:

- Awareness of potential doctoral candidates that a programme exists
  - Course 'visibility' to the World
  - Information Actions
- Levels of advice from programmes to potential applicants
  - Applicant means of information seeking
- Application process
- Eligibility checks
- Administrative validation (identity and other authentication)
- Academic validation (ranges from anonymous, to supervisor(s) to panels)
- Acceptance

The EDIM Programme uses (i) a **common application process and material**, (ii) individual candidate's interviews; (iii) **common evaluation procedures**; (iv) the participation of all partner universities.

For EGSABG the process also is a joint one:

*“**All Partner institutions participate**. Projects are, as a general rule, published on the EGS-ABG website from September 15th to November 30th. The **admission criteria and full list of documents to provide are available on the EGS-ABG website**. The application is submitted using an **online tool** managed by the coordinating institution. The Consortium (EGS-ABG Secretary) does the **eligibility check** and informs candidates of the results. Then the*

<sup>15</sup> For example for the TEEME Programme:

<http://www.teemeurope.eu/documents/Consortium%20Agreement/Annex%204%20Selection%20and%20Admission.pdf>



Consortium reviews the files of the candidates, using a **common set of criteria**. Each candidate is **reviewed by two assessors**, who can access the file online (using the application tool). After merging and harmonization of the results, a **first ranking is made**. The **top candidates are interviewed, using a common form and guidelines**. Each candidate is also **evaluated by the supervisors** of the PhD project(s) he/she applied to. The supervisors are also free to interview the candidates who applied to their topic. This process involving several actors leads to a set of information: **score of the evaluation** based on the quality of the file, **score of the interview** on behalf of the Consortium based on the ability of the candidate to perform a PhD, <http://ec.europa.eu/euraxess/index.cfm/rights/codeOfConduct> (file and, if applicable, interview) based on the suitability of the candidate to a specific project.”

INTERZONES takes a more ‘anonymous’ approach to applications to ensure that the application is viewed strictly from an academic quality perspective: **“Every application is sent without anybody’s imprimatur**. Each individual does the application on-line and the selection process is the same for everyone and all partners take part in it through the selection procedures (described at length on the website)”.

## 5.3 Preparing Candidates Academically

### 5.3.1 Overall Challenge

- Once applicants have been selected, and before they arrive to start their programme, we provide them with the opportunities to upgrade their competences to meet the expected level that will be needed to start their research and other activities. We collaborate closely with them to ensure that important logistical issues are overcome such as visas, residence permits, and accommodation.

### 5.3.2 Checklist of Actions

- ✓ A consortium-wide statement on core competencies is communicated to doctoral candidates once they are accepted. A pre-entry resource pack shows admitted doctoral candidates what level of knowledge (for example: sample of texts as a guide) and competencies (for example: active use of language and statistical mathematical level) are required;
- ✓ A travel (mobility) support process starts as soon as a doctoral candidate is recruited;
- ✓ There is provision for candidates to learn languages prior to their arrival in Europe, and prior to their mobility steps while on the Programme. Comprehensive assistance is provided for doctoral candidates to obtain visas, both for travel to the programme and for mobility within;
- ✓ Support is provided for insurances (health or others required by national legislation) and local residency regulations, or local registration requirements that might be required for doctoral candidates/researchers;
- ✓ Clear advice and support is provided to candidates about banking facilities and financial management arrangements for doctoral candidates before arrival at each partner location;
- ✓ The Programme ensures that the EU insurance scheme is comprehensive enough and if not, prepares for additional social security coverage;
- ✓ The Programme ensures that suitable accommodation is available to doctoral candidates. Doctoral candidates are clearly and transparently informed about accommodation arrangements (ranging from pre-arranged accommodation to self-organised accommodation);



- ✓ The Programme provides doctoral candidates with good quality and timely information about the institutions they are to visit, and about the particular local issues that may affect them;
- ✓ Knowledge gained from alumni and from former doctoral candidates is used to provide advice for incoming doctoral candidates. The welcome for newcomers is sensitive and responsive to the range of cultural and religious practices of all doctoral candidates.

### 5.3.3 Good Practice

In the visits to Master Programmes in phases 1-3 we always asked the students the following question: **“to what extent did you arrive in on your Programme ready to research and study?”**, and it was at this stage that students would communicate the extent to which their energies were being diverted into issues such as accommodation, local registration requirements, local acclimatisation (cultural adjustment) or other non-academic issues. More extensive examples of good practice are provided in the associated Master Handbook since the processes involved are largely similar with the EMJDs.

At the general level the Programme needs to ensure as far as possible that doctoral candidates:

- Obtain visas without problems;
- Arrive with accommodation arrangements in place;
- Can be met at their arrival place and escorted to the university;
- Are provided with orientation and cultural awareness;
- Are helped to socialise into the student community and the local community;
- Register for health services, banking, local registration requirements etc.;
- Are provided with rapid introductions to key resources such as libraries and IT services; and
- Are linked effectively to specialist services where needed, such as disability support and advice, religious and cultural needs (such as single-sex accommodation).

Doctoral candidates will quickly identify the problem areas. For example in some mobility paths doctoral candidates have difficulties in obtaining two residence permits - for example where the candidate will be in Sweden first semester but the programme kick-off workshop is in Madrid, and the short time to be spent in Madrid does not conform to the rules for the permit. There are some very basic but important tasks, such as preparing a list of doctoral candidates who have applied for the immigration services or authorities. Possibly have meetings with them to discuss how to establish better procedures to accelerate the visa process.

EDLE provides a typical example of the welcome package for new doctoral candidates:

*“At the University of Bologna staff are available to help doctoral candidates in solving accommodation problems, visa and residence permit issues, enrolment to the university. The staff organise special social events like “Welcome day”, dinners and so on. At the Hamburg Institute a contact person is available for organisational enquiries. Hamburg offers the students help with finding accommodation and installing themselves at the University of Hamburg, e.g. matriculation, library access, internet/wifi access, student reduction cards for the public transport etc. Further a German Language Course is offered”.*

The more the doctoral candidates can assimilate into their local environment the quicker they are ready to do the important research and learning. Erasmus Mundus mobility means that the assimilation must happen as quickly as possible.



## 5.4 Supporting Doctoral Candidates across their Mobility Paths

### 5.4.1 Overall Challenge

- When doctoral candidates arrive at our location we welcome them, help them to integrate into the local community, encourage them to share their cultural diversity with other doctoral candidates, provide them with transversal academic skills (e.g. plagiarism avoidance, bibliographic skills) that will enhance their research experience.

### 5.4.2 Checklist of Actions

- ✓ There is a comprehensive induction process including briefings and through documentation that is readily available to candidates on arrival, and readily prepares the doctoral candidates for the local learning environment. The induction process is culturally sensitive to the doctoral candidates' own social and cultural backgrounds as well as helping them to adjust to local culture;
- ✓ There is clear communication about the 'ways of teaching, researching and learning' within the partner institutions, and mechanisms exist to provide doctoral candidates with training in learning skills, including writing styles, plagiarism prevention, and presentation techniques;
- ✓ The Programme provides candidates with a clear 'study diary' for their semesters where lectures, labs, and work submission deadlines are clearly identified;
- ✓ Doctoral candidates are provided with a suitable range of bibliographic management tools to help them effectively structure their lecture material and readings;
- ✓ Assistance is provided to doctoral candidates on their mobility transitions from institution to institution, from the applications for visas, provision of accommodation, to ensuring the sufficient stability of the learning environment to support their learning;
- ✓ Doctoral candidates are provided with advice and support for their families, providing them with effective mechanisms to communicate with families in their home countries, and directing them to the necessary facilities and support services if their families are travelling with them to Europe.

### 5.4.3 Good Practice

To some extent this is an extension of the quality characteristic in the previous section. There the challenge was for doctoral candidates to arrive 'ready to research and study'. Here the challenge is that when doctoral candidates actually arrive they are **fully assimilated into the local environments**, particularly when they undertake their mobility. This is actually less of a challenge for the EMJDs. For Master Programmes, where doctoral candidates often have rapid mobility paths on a semester basis, the time-pressure to prepare them for mobility is significant. For doctoral candidates, who will move mainly on a yearly basis, there is more time to prepare. Nevertheless, the mobility transition can be just as challenging for the doctoral candidates.

Furthermore, not only do these activities need to help the sense of **local identity** but they also need to maintain a sense of **EMJD Programme identity**. They also need to provide all doctoral candidates with the **research and learning skills that are needed for a challenging European PhD programme**. On the Master programmes the training in bibliographic skills, writing styles, plagiarism avoidance, and communication skills is emphasised more strongly at the generic level. It could be expected that doctoral candidates arriving for doctoral research would have those competencies and skills, but there is still a





need to provide the training. However, as DOCMASE emphasises, “*students apply for a project, and there is no strong feeling of a community of EM fellows; the **integration is much more with the research team who hires the candidate***”, and it is through the close working relationships with the research team that the competences and skills can be acquired. That said, it can be generally expected that all doctoral candidates would have an opportunity **to attend institution-level courses** on areas such as quantitative and qualitative methods, IT skills, and core issues such as the philosophy of science (or whatever disciplinary area/areas they are working in).

EDIM emphasises the existing **international community of students** at POLIMI:

“(more than 50% are not Italian) and they have a **well-established and self-organised activity** inside and outside the university. Thanks to the **formal residential workshops** (4 per year) EDIM candidates, also of different cohorts, have the true opportunity of **sharing experiences and activities**”.

On EDLE at the University of Bologna:

“*doctoral candidates **share the same offices** and have the possibility to attend the seminars/courses together **with other doctoral students** from the PhD in Economics, another programme of the same school (Department of Economics). At the Hamburg Summer School in Law & Economics the candidates get in **contact with the Graduate School** on the Internalisation of Law & Economics, a second PhD programme which is located at the Institute in Hamburg. **All PhD students attend classes together** and therefore get the chance for exchange. Moreover the so-called Thursday Lecture on Law & Economic here in Hamburg is obligatory for both programme participants. The **EDLE Conference offers another possibility to get in touch with peers and discuss research topics**. The candidates are further encouraged to use the opportunity of participating in conference with relevance to their research interests to build up an academic network”.*

A process of **embedding doctoral candidates into the local doctoral community** is also followed by EGSABG:

“*They **work with the local doctoral students and research teams**. On a daily basis, no distinction is made between EGS-ABG doctoral candidates and other international doctoral candidates. The EMJD candidates are in contact with one another. They have a **student representative** that they freely choose among themselves. They also **meet for specific joint events**, such as the Introduction week and the Summer schools. Because they work in the same research area, they also follow courses abroad, and may meet one another on these occasions if the topic of the course is of relevance to several of them”.*

Programmes also take advantage of institution-level services, as with INTERZONES where “*each university is committed to **organising integration activities on its campus**, and there is a **support system for students to organise an external and an internal communication system** between the various campuses”.*

MoveAge has finance allocated for doctoral candidates to participate in conferences and to socialise together at annual meetings. TEEME provides “*various **opportunities for students to socialise, work together and learn from each other**, e.g. through the preparation of the annual meetings and the presentation of each student’s work there”.* The DCGC Programme:





*“pays specific attention to the integration of students, both as a specific group (mostly thanks to the joint first semester and regular meetings) and with the local community of doctoral students from other programmes and the wider community; there are **planned social activities** during the first semester and later one (and some money set aside for this) and (at least at Kent) all **EM students are offered the possibility to be accommodated on campus**”.*

Delivering the planned services and support successfully to doctoral candidates requires both strongly joined-up services, and doctoral candidates who are willing to make use of them. Doctoral candidate feedback is central to monitoring service success. An EDLE doctoral candidate summarised **“everywhere in Europe I feel like home**. There are most certainly differences between working habits within the different countries but academic culture is quite similar”. The doctoral candidates felt they could move easily between different countries in Europe. Some doctoral candidates however, particularly from some third countries are in need of extra care, particularly on administrative matters, and Programmes need to consider each doctoral candidate with sensitivity and flexibility. Indeed a key characteristics of EMJDs is the flexibility of approach to the doctoral candidates.

Doctoral candidates (and staff) noted that while a programme may have a well-organised induction process there are instances where the programme loses good candidates because the Commission takes too much time before deciding about admissions (although this can also be affected by programmes replacing doctoral candidates who have not taken up their offers), and this also makes the induction period more complicated for doctoral candidates and universities. This example is provided not to allocate blame, but to show how programmes need to have excellent and joined-up administration so that they can interface effectively with the administrative processes and procedures of the Commission.

It is important that joined-up facilities and services are provided to doctoral candidates to avoid their experiences such as *“getting information about these courses by the word-of-mouth”*. Other remarks have noted *“a delay in receiving my first salary payment”* (took 3 months). Another doctoral candidate was *“dissatisfied with reception facilities provided by my first supervisor”*. The doctoral candidate had actually visited the supervisor three months before the start of the programme so as to sort out arrival dates etc. The date was subsequently changed and the doctoral candidate was obliged to change the air ticket from India at their own expense. These may seem isolated examples, but each one highlights what is so special about the intimacy of the EMJD doctoral candidate and supervisor relationship. These are close working relationships that take place over long time periods (and hopefully extend into long-term collaboration), and with an EMJD the challenge to prepare doctoral candidates and staff effectively is much greater than conventional mono-disciplinary and single-institutional programmes.

## 5.5 Joining up Institutional Resources

### 5.5.1 Overall Challenge

- We show how we will coordinate resources across partner institutions (libraries, IT facilities) so they are ‘joined-up’ and the candidates are provided with a coherent set of resources.

### 5.5.2 Checklist of Actions

- ✓ The consortium shares teaching and learning materials and research tools electronically across all participants in the consortium. There is an online teaching and learning platform of key



material for learning and researching, for example documents, or well-maintained links to documents;

- ✓ There is consistent, coherent and good quality Programme documentation available in formats suited to doctoral candidates. The Programme maximises the consistency of style for key learning resources such as lecture notes, bibliographies etc. Reading lists and other core learning materials are updated consistently and coherently across the Programme;
- ✓ Doctoral candidates are allowed to maintain access to Library resources after they have moved to their next mobility location.

### 5.5.3 Good Practice

With the EM Master Programmes the emphasis in this context is on the generic provision of integrated resources. What the EMJDs communicate is that there is much more **customisation and individualisation of resources targeted at the particular doctoral research programme**.

AgTrain defined resources for each particular project and they are **arranged according to needs**, although there is a particular challenge for this programme concerning “*the funding and supervision of field research in developing countries*”. For DCGC the provision also “*depends on each student’s work programme; the Consortium emphasises the importance of formal links with non-academic partners*”. On EDLE “*doctoral candidates visit different institutions at different times in their path, and in any university they are allowed to access to the facilities reserved to all enrolled students*”.

There are, however, resource issues that are similar to EMJDs and EMMCs. For example, once a doctoral candidate leaves one location and arrives at the next mobility location do they still have access to the library and ICT resources in the previous institution. This has been a real issue with Master programmes where doctoral candidates are suddenly cut off from the previous facilities – how do doctoral candidates transfer email addresses for example, or do they have a single email address for all their mobilities? If these issues are not considered doctoral candidates will simply declare independence and use their personal emails.

Even more worrying, if doctoral candidates are suddenly cut off from the previous library resources (and they know this will happen) there is the potential for them to extract as much as possible in electronic form, put it into the Internet ‘cloud’ using free facilities such as DROPBOX, and to externalise their own virtual libraries. The doctoral candidates have a particular problem of accessing learning resources, and it is of little concern to them that the institutions may have an IPR and copyright problem. Doctoral candidates, as the good practice has shown, have remarkable abilities to self-organise. If a programme does not have a Facebook page the doctoral candidates will make one, and this will take much of the communication power away from the programmes.

TEEME aims for common provision where “*all students have access to IT services at Kent and to the services at those institutions that award their joint degree. All students have **full library access at whatever site they are studying***”. A EUROPHOTONICS doctoral candidate noted that there was **access to ICTs** where “*I am personally able to connect to the server of my first institution to run my simulation*”.



## 5.6 Languages, Communication and Consultation

### 5.6.1 Overall Challenge

- We provide a rich set of language learning opportunities for doctoral candidates, for example acknowledging language achievements through ECTS credits. We value communication and interaction with them and provide suitable communication and consultation channels for them.

### 5.6.2 Checklist of Actions

- ✓ The consortium understands the overall language requirements that will be placed on doctoral candidates throughout their mobility and takes a collective view on how best to deal with any issues arising from site to site. Language training is provided for doctoral candidates and this is acknowledged through ECTS credits;
- ✓ There is awareness of the language competencies needed while doctoral candidates are on internships in companies where only the local language is spoken;
- ✓ The consortium understands the differences between language competencies needed for basic local social interaction, and those needed for the academic programme, and makes a distinction in the training that is offered;

### 5.6.3 Good Practice

Multi-lingualism is one of the core characteristics of being 'Erasmus Mundus'. The Handbook for Master Programmes contains much relevant good practice in this area, but there are some particular differences in the emphasis on language with EMJDs because the mobility paths are not as frequent and as intense as the Master ones, and doctoral candidates will have had more time previously to gain language skills.

EMJD- GEM emphasises the more specialised nature of needs at EMJD levels:

*"Expectations are immensely different between fellows; **language is a problem for local integration of fellows** (they tend to be cosmopolitan persons speaking global English and expect the local community to be like this; creates frustration; response of the consortium consists in better explaining and **briefing student and explaining not only their rights but also their commitments**; fellows described as "not self-starters", you have to bring everything to them. Need to **explain subsidiarity to fellows** (they expect the consortium to be a set of absolutely equal, English-speaking universities and do not understand and accept the local differences and rules). There is a **student delegate at consortium level** (a single person, not one per generation) who manages a **fund of EUR 5000 for bottom-up activities aimed at integration of students**".*

For EGSABG:

*"The EGS-ABG working language is English. **Every candidate of the EMJD EGS-ABG program is offered the possibility to follow his/her entire education in English and high proficiency in English is a requirement for admission.** The Partner Institutions also **promote training in the national language.** Courses of national languages are provided for free for the EGS-ABG doctoral candidates in France, Denmark and Sweden. During the stay at a given host institution, taking a **course in the local language is strongly encouraged**, except for doctoral candidates whose native tongue is the local language. Upon request by the candidate and with*



*the agreement of his/her supervisors, **advanced courses in English may be taken**. No credits are given for language courses”.*

There is further customisation of skill needs, where according to the needs, **scientific courses may be taken elsewhere**, the decision being made on a case by case basis.

The strong emphasis on English skills relates to the multi-disciplinarity and global professional focus of the research programmes. The doctoral candidates will be **entering a ‘global research arena’ where communication skills are at a premium**. Consequently programmes emphasis that the doctoral candidate must be exposed to the **national and international scientific communities**. During the EGSABG PhD programme, each doctoral candidate must **attend at least three scientific conferences**, and at one they are **expected to give an oral presentation (the other posters)**. At least one of these conferences must be international.

## 5.7 Maximising Competencies and Skills

### 5.7.1 Overall Challenge

- We provide training in soft-skills and transversal competences that the labour market values. We build strategic links with key employers who can provide opportunities such as internships, research support, or sponsorship.

### 5.7.2 Checklist of Actions

- ✓ There is an agreed set of hard and soft skills and competencies that are to be provided to all doctoral candidates to prepare them for employment;
- ✓ Internships and placements take place at locations which are putting research into practice. There are clear and transparent criteria for the selection of placement/internship providers. The placement/internship system is flexible and diverse so that both the academic and career needs of the doctoral candidates are satisfied;
- ✓ Doctoral candidates have opportunities to develop business plans and research plans.
- ✓ Learning opportunities are provided for information management and intellectual property law and practice;
- ✓ Doctoral candidates have opportunities to work directly with staff on current research projects;
- ✓ All doctoral candidates receive the same training on core and transferrable skills no matter what their mobility path is.

### 5.7.3 Good Practice

This element of excellence is at **the interface between the doctoral candidates’ research and their careers**. It is not surprising that there is a rich set of practice across the EMJDs because the consortia themselves are at the interface between research and the wider stakeholders who can be the employers of doctoral graduates.

The emphasis here is on the **provision of transferable skills**, doctoral candidate engagement with external stakeholders, training on professional dissemination, such as writing for policy-makers and the media, soft skills like citizenship. This activity also goes beyond the access to the local job/career services of the university where they are, to focus on the particular **personalisation and customisation**





characteristics of an EMJD. This is essential to avoid the risk that research teams define their needs and hire doctoral candidates for a specific project without having a clear longer term perspective for them. An EMJD cannot in any way be a programme to hire cheap assistants fitting the possibly narrow needs of a research team.

On DOCMASE it is expected in all cases that doctoral candidates will **visit industry and participate in professional activities**. EMJD– DC also “foresees short and longer term stays (during the fourth year) at an industrial laboratory or in an enterprise, and these stays are expected to **significantly increase the employment perspective of fellows**”.

EMJD -GEM has “a **common publication policy and a coordinated publication platform** in order to allow fellows to meet the publication requirement of the programme (working paper/books series at consortium level)”. Publication is also emphasised by MARES where there “is an **agreed minimum policy about publishing**, but it is expected that students will go beyond this minimum”.

AgTrain communicates that it is specifically aimed at a sector which can employ the graduates, but also cautions that not all doctoral candidates may have the same opportunities. It has a:

*“strong emphasis on employability outside academia, and hence on applied research that is relevant to industry and to the local community on which it is focussed (usually a developing country); this is expected to foster employability, either in academia or (more commonly) in the agro-community of the students country of origin (usually a developing country). Some more concern about the employability of European students, since countries now tend to prefer hiring their own nationals when they have the right skills<sup>16</sup>”.*

INTERZONES formalises these activities were doctoral candidates “have **extra-curricular activities (60 ECTS in total out of 180)** to do so that means a lot of opportunities to do all sorts of things which prepare them to meet and collaborate with their future colleagues”.

TEEME puts emphasis on a work placement scheme, and:

*“The programme pays special **attention to employment prospects beyond academia** (in particular at cultural partner institutions like archives, foundations, charities, museums, theatres, etc); the cooperation with these partners also serves as an **alternative means to disseminate students’ research**”.*

EGSABG formalises the activities:

*“doctoral candidates fill a **personal training plan**. It includes a Project Plan, an Individual training plan (mandatory joint courses, advanced scientific courses, skill courses that should match the professional project, dissemination of knowledge, teaching and supervision, international conferences, seminars, workshops, presentations) and a supervision plan. They are also monitored closely by several supervision mechanisms”.*

EMJD–DC “foresees **short and longer term stays (during the fourth year) at an industrial laboratory or in an enterprise**, and these stays are expected to significantly increase the employment perspective of fellows”.

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<sup>16</sup> This is of course an expected outcome if one of the goals of Erasmus Mundus is to be achieved – that there is not the risk of brain-drain, and so students can have the opportunity to return home with their European experience.





INTERZONES notes that not all programmes will be able to focus on industrial placements:

*“in this programme in the area of Humanities/culture the **employment perspectives of fellows is mainly with the participating universities**; this is acknowledged by the consortium members, whose main aim is to **train professional academics with a global dimension**”.*

MoveAge also takes a more diversified approach, emphasising that:

*“Skills being developed through the programme are rather “project specific”, but there are some tools to develop more **generic, transversal skills**. That all universities must offer according to the Consortium Agreement. It is expected that there will be **two main profiles**, one more **academic** which will emphasise publications, and one more ‘**industrial**’ that will involve industrial and **social associate partners** in each country”.*

As the first generations of EMJD graduates emerge in 2012-2013 the impact of these activities will be seen in their career paths.

## 5.8 Our Alumni

### 5.8.1 Overall Challenge

- We aim to have a life-long relationship with our candidates who complete a doctoral programme.. We provide the means and motives for our alumni to stay ‘connected’ with our consortium and Programme.

### 5.8.2 Checklist of Actions

- ✓ A system is in place to build, and manage, a sustainable alumni association for graduates of the Programme;
- ✓ The alumni association is active and energised; for example, providing facilities for career advice, raising finance, providing placements and internships, and dealing with ‘post-doc’ issues for doctoral graduates.

### 5.8.3 Good Practice

On one hand this section is almost too early. As has just been mentioned the EMJDs are yet to produce their first set of graduates, so an alumni community is yet to be developed. On the other hand the existing doctoral candidates are ‘future alumni’ and will already be communicating their experiences to potential applicants. And, on many of the Programmes the institutional partners already have their alumni networks, and the Erasmus Mundus Students and Alumni Association (EMA <http://www.em-a.eu/en/home.html>) is the student-driven forum for all Master and Doctoral Programmes.

The real challenge for EMJPs will be identity management, and in that context the introductory comments in Section 1.1 can be recalled. In the context of the EMJD the graduates will need to identify with the Programme. In the context of their research the graduates may identify most with the (usually) two institutions they did their research in. In the context of their careers the graduates may identify with the specific research team(s) they worked so closely with. This is not the place to rehearse what is known about the importance of building and maintaining strong and sustainable relationships with



alumni, with all the benefits that can accrue to a university. But the development of alumni networks for EMJD will be an interesting development, and maybe future versions of this Handbook will review them.



## 6 Conclusions

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This Handbook for Doctoral Programmes is very much 'work in progress'. Even in 2008 when the EMQA project first started to review the Master Programmes there were graduates, and there was a strong development path evident. The EMJDs are yet to deliver cohorts of graduates, and even when they do their actual number will be less than those from the much larger group of EMMCs. At the time of writing there is some uncertainty also as to the future of EMJDs within the 'Erasmus for All' Strategy, and with their likely move to the Marie Curie Actions of DG Research their future shape is not known.

However, these pioneering international doctoral programmes will continue activity at least to 2018 (the 2012 Call for Proposals will see the next EMJDs starting in 2013 with a five year funding framework. So, there is still a significant amount of quality to be built, discovered and documented, and this Handbook will benefit from the on-going innovation of all the participants in the programmes.



## 7 Annex A: Links to other Material and Resources

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Erasmus Mundus doctoral programmes with their intense research focus are very different in their characteristics to the Master Programmes where the dominant emphasis is on teaching with some independent research for a dissertation. While there are similarities in terms of the institutional linkages and the wider 'jointness' that pervades Erasmus Mundus, the differences start with the linkages between the doctoral candidates and the staff. A Master 'experience' is more of a 'many to many' where a group of doctoral candidates interact with many staff across as they progress through the curriculum. A Doctoral research experience is a 'one to few' where a doctoral candidate has an intense relationship with a supervisor, or in the case of EMJDs, with a group of supervisors across their mobility locations.

The Doctoral Programmes are also at the cutting edge of the relationship between higher education and the Knowledge Triangle that is at the heart of the Commission Innovation Strategy. This was acknowledged in April at the Bucharest meeting of Ministers of Education across the EHEA where they concluded:

*"Study programmes must reflect changing research priorities and emerging disciplines, and research should underpin teaching and learning. In this respect, we will sustain a diversity of doctoral programmes. Taking into account the Salzburg II recommendations and the Principles for Innovative Doctoral Training, we will explore how to promote quality, transparency, employability and mobility in the third cycle, as the education and training of doctoral candidates has a particular role in bridging the EHEA and the European Research Area (ERA)"<sup>17</sup>.*

And in this context the Bologna Follow-Up Group (BFUG) has agreed:

*"To work with higher education institutions to increase the quality and relevance of mobility periods, ensuring that they contribute to high academic standards, to the employability as well as the linguistic and intercultural competence of graduates and to the excellence of academic staff"<sup>18</sup>.*

The focus on the Doctoral level was strongly emphasised by Ministers in their 2003 communiqué, where they in effect looked forward to what was to become the EMJD:

*"Ministers state that networks at doctoral level should be given support to stimulate the development of excellence and to become one of the hallmarks of the European Higher Education Area"<sup>19</sup>.*

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<sup>17</sup> EHEA. (2012a). *Making the Most of Our Potential: Consolidating the European Higher Education Area: Bucharest Communiqué*. European Higher Education Area, April 27, [cited April 28 2012].

<http://www.ehea.info/Uploads/%281%29/Bucharest%20Communique%202012.pdf>

<sup>18</sup> EHEA. (2012b). *Mobility for Better Learning: Mobility strategy 2020 for the European Higher Education Area (EHEA)*. European Higher Education Area, April, [cited April 28 2012].

[http://www.ehea.info/Uploads/%281%29/Mobility\\_Strategy\\_DRAFT%20FOR%20ADOPTION.pdf](http://www.ehea.info/Uploads/%281%29/Mobility_Strategy_DRAFT%20FOR%20ADOPTION.pdf)

<sup>19</sup> EHEA. (2003). *"Realising the European Higher Education Area": Communiqué of the Conference of Ministers responsible for Higher Education in Berlin on 19 September 2003*. European Higher Education Area, September, [cited July 21 2011]. [http://www.bologna-bergen2005.no/Docs/00-Main\\_doc/030919Berlin\\_Communique.PDF](http://www.bologna-bergen2005.no/Docs/00-Main_doc/030919Berlin_Communique.PDF)



By 2005 the Ministers had put further emphasis on the need both to bring a degree of consistency with Doctoral programmes, focusing for example on transparent supervision and assessment ... interdisciplinary training and the development of transferable skills” while also emphasising that “overregulation of doctoral programmes must be avoided”<sup>20</sup>. Looking back at their developing recommendations it is clear to see how the EMJD was developed to encourage consistent practice (the jointness component) with academic and research diversity (the multi-disciplinary component).

Following the 2005 communiqué the European University Association (EUA) has been tasked with the challenge of reviewing doctoral programmes and to report back to the 2007 Ministerial meeting (“to prepare a report under the responsibility of the Follow-up Group on the further development of the basic principles for doctoral programmes”). In a seminar in Nice in December 2006 some of the characteristics of what would become an EMJD were in their recommendations:

- *Structures including doctoral candidates only, around a research theme or a cross-disciplinary area & possibly including several institutions.*
- *Create synergies regarding transferable skills development (at institutional or at inter-institutional level)*
- *Multiple supervision should be encouraged, also at international level, through tutoring and co-tutoring by academic supervisors in different European countries.*
- *Joint doctorate degrees, European doctorates and co-tutelle arrangements should be further developed and considered as an important instrument of international inter-institutional cooperation*<sup>21</sup>.

The EUA report to the Ministers in 2007 reviewed the diversity of doctoral practice across the EHEA, placing the discussions in the context of the 2005 ‘Salzburg Principles’ for doctoral education and research that formed the basis of recommendations from the Bergen Ministerial meeting that year, and these principle clearly run through the requirements for being awarded funding to run an EMJD:

*I. The core component of doctoral training is the advancement of knowledge through original research. At the same time it is recognised that doctoral **training** must increasingly meet the needs of an employment market that is wider than academia.*

*II. Embedding in **institutional strategies** and policies: universities as institutions need to assume responsibility for ensuring that the doctoral programmes and research training they offer are designed to meet new challenges and include appropriate professional career development opportunities.*

*III. The importance of **diversity**: the rich diversity of doctoral programmes in Europe – including joint doctorates – is a strength which has to be underpinned by quality and sound practice.*

*IV. Doctoral candidates as early stage researchers: should be recognized as **professionals** – with commensurate rights – who make a key contribution to the creation of new knowledge.*

<sup>20</sup> EHEA. (2005). *The European Higher Education Area - Achieving the Goals: Communiqué of the Conference of European Ministers Responsible for Higher Education, Bergen, 19-20 May 2005*. European Higher Education Area, May, [cited July 21 2011]. [http://www.bologna-bergen2005.no/Docs/00-Main\\_doc/050520\\_Bergen\\_Communique.pdf](http://www.bologna-bergen2005.no/Docs/00-Main_doc/050520_Bergen_Communique.pdf)

<sup>21</sup> EUA. (2006). *Final conclusions of the Bologna seminar on Doctoral Programmes: "Matching Ambition with Responsibilities and Resources"*. European University Association, December, [cited March 5 2012]. [http://www.eua.be/typo3conf/ext/bzb\\_securelink/pushFile.php?cuid=2122&file=fileadmin/user\\_upload/files/EUA1\\_documents/EUA\\_Nice\\_final\\_conclusions.pdf](http://www.eua.be/typo3conf/ext/bzb_securelink/pushFile.php?cuid=2122&file=fileadmin/user_upload/files/EUA1_documents/EUA_Nice_final_conclusions.pdf)





V. *The crucial role of **supervision and assessment**: in respect of individual doctoral candidates, arrangements for supervision and assessment should be based on a transparent contractual framework of **shared responsibilities** between doctoral candidates, supervisors and the institution (and where appropriate including other partners).*

VI. ***Achieving critical mass**: doctoral programmes should seek to achieve critical mass and should draw on different types of innovative practice being introduced in universities across Europe, bearing in mind that different solutions may be appropriate to different contexts and in particular across larger and smaller European countries. These range from graduate schools in major universities to international, national and regional collaboration between universities.*

VII. ***Duration**: doctoral programmes should operate within an appropriate time duration (three to four years full-time as a rule).*

VIII. *The promotion of innovative structures: to meet the challenge of **interdisciplinary** training and the development of **transferable skills**.*

IX. *Increasing mobility: doctoral programmes should seek to offer geographical as well as **interdisciplinary and intersectoral mobility and international collaboration** within an integrated framework of cooperation between universities and other partners.*

X. *Ensuring **appropriate funding**: the development of quality doctoral programmes and the successful completion by doctoral candidates requires appropriate and sustainable funding<sup>22</sup>.*

The 2007 Ministerial communiqué<sup>23</sup> acknowledged the importance of stronger pan-European cooperation and action regarding doctoral programmes, and this was closely followed by the initiative of the European Commission to include Joint Doctoral Programmes in the proposal for a revised Erasmus Mundus Programme<sup>24</sup>, and the proposal was adopted by the European Parliament in August 2008<sup>25</sup>.

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<sup>22</sup> EUA. (2007). *Doctoral Programmes in Europe's Universities: Achievements and Challenges*. European University Association, [cited March 5 2012].

[http://www.eua.be/typo3conf/ext/bzb\\_securelink/pushFile.php?cuid=400&file=fileadmin/user\\_upload/files/Publications/Doctoral\\_Programmes\\_in\\_Europe\\_s\\_Universities.pdf](http://www.eua.be/typo3conf/ext/bzb_securelink/pushFile.php?cuid=400&file=fileadmin/user_upload/files/Publications/Doctoral_Programmes_in_Europe_s_Universities.pdf)

<sup>23</sup> EHEA. (2007). *London Communiqué: Towards the European Higher Education Area: responding to challenges in a globalised world*. European Higher Education Area, May, [cited July 21 2011].

[http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/London\\_Communique18May2007.pdf](http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/London_Communique18May2007.pdf)

<sup>24</sup> EUROPE. (2007a). *Commission staff working document - Accompanying document to the Proposal for a Decision of the European Parliament and of the Council establishing an action programme for the enhancement of quality in higher education and the promotion of intercultural understanding through co-operation with third countries (Erasmus Mundus) (2009-2013) - Executive Summary of Extended Impact*. European Commission, [cited August 6 2008]. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007SC0950:EN:HTML>

, EUROPE. (2007b). *Proposal for a DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing an action programme for the enhancement of quality in higher education and the promotion of intercultural understanding through co-operation with third countries (Erasmus Mundus) (2009-2013)*. European Commission, [cited August 6 2008]. [http://ec.europa.eu/education/programmes/mundus/doc/com395\\_en.pdf](http://ec.europa.eu/education/programmes/mundus/doc/com395_en.pdf)

<sup>25</sup> EUROPE. (2008). *European Parliament and of the Council establishing an action programme for the enhancement of quality in higher education and the promotion of intercultural understanding through cooperation with third countries (Erasmus Mundus) (2009-2013)*. European Commission, [cited August 16 2008]. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:204:0085:0088:EN:PDF>



Further context for these developments was provided through transversal research into doctoral programmes. For example in 2009 the EUA published an extensive study “*Collaborative Doctoral Education: University-Industry Partnerships for Enhancing Knowledge Exchange*”<sup>26</sup>, which provided “Twelve messages for developing collaborative doctoral programmes”:

1. Identify knowledge/technological **needs and challenges** which need R&D input
2. Exchange views on knowledge/technological challenges with **university/industry**
3. Plan medium-long term **R&D strategy** (e.g. within five years)
4. Develop **high quality** research proposals
5. Know the costs of your research and **identify funding sources**
6. Raise your awareness of the respective **research environments** in which to **collaborate** in your field (university, industry)
7. Develop/Participate in fora for soft ways of **interaction** between students, researchers and industry experts with good research content (conferences, fairs, etc.)
8. Organise small-size highly-specialised workshops/meetings **pooling experts from different research fields and sectors**
9. Seek the right expertise to assist you (**IPR issues, contractual issues**, etc.)
10. **Formalise doctoral collaborations** in solid and fair agreements combining structure and flexibility
11. Consider physical proximity as an asset to **develop mutual trust** - promote face-to-face dialogue
12. Commit to **excellence** in doctoral education, research and management<sup>27</sup>

Again, these characteristics pervade the requirements for EMJDs, and with the Salzburg Principles they provide an initial check-list for the Doctoral components of excellence which we discuss in a subsequent section.

Other contextual research provided insights into the challenges that those building EMJDs would experience. In the EUA messages above numbers 10 and 11 point to the tensions that may occur when building a doctoral programme that operates beyond traditional disciplines and departments. In a study of 45 interview with the actors involved in a US Neuroscience interdisciplinary programme Kari Holley concluded:

*“The point here is not that disciplines are completely homogeneous cultures, but rather that disciplinary structures provide a shared, institutionalized framework to transmit values, beliefs, and norms valued by members. The question of whose knowledge, values, beliefs, and norms are to be prioritized for student learning-not simply the knowledge within one discipline, but*

<sup>26</sup> Borrell-Damian, Lidia. (2009). *Collaborative Doctoral Education: University-Industry Partnerships for Enhancing Knowledge Exchange*. European University Association, [cited March 5 2012]. <http://phd.erasmus.org.pl/wp-content/uploads/2010/04/DOC-CAREERS.pdf>

<sup>27</sup> *ibid*



*across multiple disciplines, and in what way-is difficult for faculty in an interdisciplinary program to answer. It is not enough that the institution provides structural support or engages in rhetoric that supports collaborative knowledge. For practitioners of the disciplines, an interdisciplinary program transgresses the bounded cultural jurisdiction of academic communities”<sup>28</sup>.*

What was clear from this study is not just that the academics have a clear intention to work together, but that their institutions are clearly committed to help them along a journey that spans across disciplines, organisations, and research cultures. In a review of literature on the doctoral/industry interface Karan Thune noted that much of the rhetoric about employability is conditioned by time-bound needs stated by employers, but that “*more longitudinal research is also needed, as present research largely focus on the initial transition from university to work, and not on career trajectories as they develop over time*”<sup>29</sup>.

By the time of the 2009 Ministerial Bologna communiqué<sup>30</sup> Ministers emphasised again that “*Doctoral programmes should provide high quality disciplinary research and increasingly be complemented by inter-disciplinary and inter-sectoral programmes*”<sup>31</sup>, and this statement in effect acknowledged the February 2009 Erasmus Mundus Programme Guide<sup>32</sup> announcement of the call for proposals for the first EMJDs.

In a review of the first ten years of the EHEA, the EUA acknowledged the significant progress made in building European practice in doctoral programmes, but also noted that there were still significant challenges. For example the development of ECTS had been a significant benefit for first and second cycle degree programmes, enabling a level of comparability between assessment systems, but the use of ECTS had not been formally expected within doctoral programmes. However:

*“While some institutions use credits especially in relation to taught courses or transferable skills training many institutions oppose the use of credits in the third cycle, given that the major part of the Doctorate is constituted by original research which, it is widely felt, cannot be measured by credits”<sup>33</sup>.*

In March 2010 the Ministerial communiqué of Budapest-Vienna<sup>34</sup> did not explicitly address doctoral issues, and the focus was more on the strategic challenges being presented by the economic downturn and continuing needs to increase the HE participation of under-represented groups. By 2010, however,

<sup>28</sup> Holley, Kari. (2009). The challenge of an interdisciplinary curriculum: a cultural analysis of a doctoral-degree program in neuroscience. *Higher Education* 58 (2): pp. 241-255.

<sup>29</sup> Thune, Taran. Ibid. Doctoral students on the university-industry interface: a review of the literature. (5): pp. 637-651.

<sup>30</sup> EHEA. (2009). *The Bologna Process 2020 - The European Higher Education Area in the new decade. Communiqué of the Conference of European Ministers Responsible for Higher Education, Leuven and Louvain-la-Neuve, 28-29 April 2009*. European Higher Education Area, April, [cited July 21 2011].

[http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/Leuven\\_Louvain-la-Neuve\\_Communique%C3%A9\\_April\\_2009.pdf](http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/Leuven_Louvain-la-Neuve_Communique%C3%A9_April_2009.pdf)

<sup>31</sup> ibid

<sup>32</sup> EUROPE. (2009). *Erasmus Mundus 2009-2013: Programme Guide*. European Commission, February, [cited February 1 2010]. [http://ec.europa.eu/education/external-relation-programmes/doc/call09/guide\\_en.pdf](http://ec.europa.eu/education/external-relation-programmes/doc/call09/guide_en.pdf)

<sup>33</sup> Surssock, Andrée, and Hanne Smidt. (2010). *Trends 2010: a decade of change in European Higher Education*. European University Association, [cited January 24 2011]. [http://www.eua.be/typo3conf/ext/bzb\\_securelink/pushFile.php?cuid=399&file=fileadmin/user\\_upload/files/Publications/Trends\\_2010.pdf](http://www.eua.be/typo3conf/ext/bzb_securelink/pushFile.php?cuid=399&file=fileadmin/user_upload/files/Publications/Trends_2010.pdf)

<sup>34</sup> EHEA. (2010). *Budapest-Vienna Declaration on the European Higher Education Area*. European Higher Education Area, March 12, [cited June 24 2011].

[http://www.ond.vlaanderen.be/hogeronderwijs/bologna/2010\\_conference/documents/Budapest-Vienna\\_Declaration.pdf](http://www.ond.vlaanderen.be/hogeronderwijs/bologna/2010_conference/documents/Budapest-Vienna_Declaration.pdf)



there was considerable activity in the progress of reform in doctoral education and the first Erasmus Mundus Joint Doctorates had been awarded and were recruiting the first cohort of doctoral candidates. Individual HEIs were now formulating and communicating formal doctoral policies: for example KTH Stockholm<sup>35</sup> with an individual study plan approach, formal statements about supervision policy in NTNU-Trondheim<sup>36</sup>, or in the UK with Universities publishing formal statements about graduate employability<sup>37</sup>.

Different types of doctoral programme were emerging or being considered so that doctoral graduates had a high probability of quality employability. There had been concerns that the measurement indicators for 'doctoral success' needed to be aligned to measuring the right things, for example "*measurements and incentives might be changed, too. Some university departments and academics regard numbers of PhD graduates as an indicator of success and compete to produce more*"<sup>38</sup>. Innovative approaches to doctoral programmes included in the UK "*a four-year NewRoutePhD claims to develop just such {soft and employability} skills in graduates*"<sup>39</sup>, programmes linked to the European Institute of Innovation and Technology<sup>40</sup> (EIT), institution-wide formal guidelines for doctoral programmes in Galway<sup>41</sup> (Ireland), procedures for doctoral examinations such as in Germany<sup>42</sup>, and through Marie Curie Actions the development of European Industrial Doctorates<sup>43</sup> which are in addition to the existing initiatives such as new research Career Integration Grants<sup>44</sup>.

Following the launch of the EMJDs the UNICA network (Network of Universities for the Capitals of Europe) organised a seminar in January 2011 to share the early experience of EMJDs. At the high level participants identified key enabling criteria that helped them to enable an EMJD:

- *Supportive environments*
- *Dedicated people*
- *Sufficient funding*

<sup>35</sup> KTH. (2010). *Individual Study Programme – Postgraduate Students*. KTH Stockholm, July 28, [cited March 19 2012]. <http://www.kth.se/internt/blankettarkivet/blanketterna/kth/FO-INDS-eng.dot>

, KTH. (2011). *Individual study plan*. KTH Stockholm, May 31, [cited March 19 2012]. <http://www.kth.se/en/student/forms-for-ict/individual-study-plan-1.25513>

, KTH. (2012). *Studies for a doctorate degree: Internal regulation no. 79/94*. KTH Stockholm, March 7, [cited March 19 2012]. <http://intra.kth.se/en/regelverk/utbildning-forskning/forskarutbildning/examina/avlaggande-av-doktorsexamen-1.27248>

<sup>36</sup> NTNU. (2011). *Joint degrees and cotutelle agreements (joint supervision) in doctoral degree training*. NTNU-Trondheim, October, [cited March 19 2012]. <http://www.ntnu.edu/studies/phd/cotutelle>

<sup>37</sup> UNISTATS. (2011). *Durham University: Employability statement*. Higher Education Funding Council for England, [cited December 31 2011]. <http://unistats.direct.gov.uk/empStatementPage.do?institutionName=DURHAM+UNIVERSITY>

<sup>38</sup> ECONOMIST. (2010). *The disposable academic: Why doing a PhD is often a waste of time*. Economist, December 16, [cited December 16 2010]. [http://www.economist.com/node/17723223?story\\_id=17723223](http://www.economist.com/node/17723223?story_id=17723223)

<sup>39</sup> Ibid.

, NewRoutePhD. (2012). *New Route Phd*. NewRoutePhD.ac.uk, March, [cited March 9 2012]. <http://www.newroutephd.ac.uk/>

<sup>40</sup> Mundell, Ian. (2011). *Degrees labelled for innovation*. European Voice, January 6, [cited January 16 2011].

<http://www.europeanvoice.com/article/imported/degrees-labelled-for-innovation/69862.aspx>

<sup>41</sup> GALWAY. (2012). *University Guidelines for Research Degree Programmes* NUI Galway, January, [cited March 5 2012].

[http://www.nuigalway.ie/graduatestudies/Current\\_Students\\_2/guidelines.html](http://www.nuigalway.ie/graduatestudies/Current_Students_2/guidelines.html)

<sup>42</sup> FMER. (2012). *Doctoral Examination*. Federal Ministry of Education and Research, Germany, March, [cited March 5 2012].

<http://www.research-in-germany.de/info/phd-in-germany/51960/doctoral-examination.html>

<sup>43</sup> EUROPE. (2012a). *European Industrial Doctorates*. European Commission, March, [cited March 19 2012].

[http://ec.europa.eu/research/mariecurieactions/docs/eid\\_en.pdf](http://ec.europa.eu/research/mariecurieactions/docs/eid_en.pdf)

<sup>44</sup> EUROPE. (2011a). *€40 million start-up fund for junior researchers in Europe in 2011*. European Commission, January 19, [cited January 19 2011].

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/48&format=HTML&aged=0&language=EN&guiLanguage=en>





- *Identify the Scientific agenda and a set of trusted consortium members which share said agenda AND which have established links with existing joint programmes*
- *Content and structure should reflect each other*
- *Learn all relevant national legislation: national legislation remains the final arbiter in all key variables. The EMJD programme can be a powerful facilitator but most stringent national rules must be respected<sup>45</sup>*

And in March 2011 the EUA reported on the 'European Doctorate' following a decade of the EHEA focus on doctoral education, concluding with some conflicting challenges:

- *Autonomy: increasing political attention leading to new legislation – temptation to over-regulate*
- *Over-structuring: institutions focusing too much on taught courses and micro-management*
- *Under-structuring: 'window-dressing' – each professor gets a 'doctoral school'*
- *QA: Finding doctorate-specific QA procedures and indicators that take into account research environment and institutional structures<sup>46</sup>*

To a large extent the EMJD approach attempts to balance both autonomy and structure. The structural guidance is provided through the requirements for consortium structure, but thereafter there is autonomy over the interdisciplinary research focus of an EMJD. There is a requirement that the EMJD develops quality assurance (QA) processes that apply across the consortium, not just at individual partner sites, but there is not a prescription as to what the QA processes will be. The Commission provides motivations for HEIs to meet important standards, such as the "*Human Resources Strategy for Researchers*", where it formally acknowledges institutions that meet the standards<sup>47</sup>, but it is not mandatory for institutions to meet them (as is also the case through ECTS labels for example).

So in the QA component of the Doctoral landscape that follows the indicators that will be built will need to reflect a graduated, but heterogeneous, set of practices. There is a requirement that there is a consortium-wide doctoral training strategy (the existing diversity of approaches having been mapped for the Commission in 2011<sup>48</sup>), but there is then autonomy about what it will be. EMJDs are therefore formal structures within which significant HE innovation can occur, and this was clearly evident with the Master Programmes in phases 1-3 of this project.

In just over decade the EHEA has made significant progress in creating a more 'European' doctorate, which takes doctoral programmes beyond mono-disciplinary and single-institution silos, into a multi-disciplinary and collaborative activity that is focused not just on local and national goals, but those of

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<sup>45</sup> Deprez, Tim, and Johan Robberecht. (2011). *Best Practices in Co-ordination of EM Action 1 Joint Doctorates: Presentation of case studies of three Universities*. UNICA Network, January 11, [cited March 5 2012]. <http://www.unica-network.eu/sites/default/files/Workshop%20EM%20Action%201%20-%20Johan%20Robberecht.pdf>

<sup>46</sup> Jørgensen, Thomas Ekman. (2011a). *The 21st Century Doctorate – sharing European developments*. European University Association, March 18, [cited March 5 2012].

[http://www.tempus.am/Events/Doctoral%20Studies\\_Oct.%2021,%202011%20Brussels/Thomas\\_Jorgensen.pdf](http://www.tempus.am/Events/Doctoral%20Studies_Oct.%2021,%202011%20Brussels/Thomas_Jorgensen.pdf)

<sup>47</sup> EUROPE. (2012b). *HRS4R Acknowledged Institutions*. European Commission, March [cited March 19 2012].

<http://ec.europa.eu/euraxess/index.cfm/rights/strategy4ResearcherOrgs>

<sup>48</sup> EUROPE. (2011b). *Report of Mapping Exercise on Doctoral Training in Europe*. European Commission, June 27, [cited March 30 2012].

[http://ec.europa.eu/euraxess/pdf/research\\_policies/Report\\_of\\_Mapping\\_Exercise\\_on\\_Doctoral\\_Training\\_FINAL.pdf](http://ec.europa.eu/euraxess/pdf/research_policies/Report_of_Mapping_Exercise_on_Doctoral_Training_FINAL.pdf)





Europe positioning itself in the competitive global HE environment. The Salzburg I recommendations of 2005 had evolved into the 2010 Salzburg II<sup>49</sup> set, summarised as:

- *The doctorate is and must be research based*
  - *It has a specific nature that makes it different from the types of education in the first and second cycle – research must be the leading principle*
  - *Important to stress that training through research creates a certain mindset for many sectors and careers – but it is cultivated by having done original research*
  - *Critical mass of research in the institution – capacity building for and through doctoral education*
- *Space for individual development*
  - *Doctoral education obtains a large part of its value from the unique and individual paths that doctoral candidates take.*
  - *They meet unforeseen problems and obstacles and learn to tackle them*
  - *Doctoral holders have individual career profiles as a product of their research experience and/or exposure to different environments*
- *Autonomy for the institution to choose mission and strategy and to set up the appropriate structures*
  - *Universities have demonstrated their will and capacity for reform; they have the most extensive experience in how to develop doctoral education*
  - *Autonomy will secure the critical diversity needed to sustain a vibrant European environment for doctoral education*
  - *However, this requires a large degree of accountability for the institutions*<sup>50</sup>

The EMJDs are clearly important ‘actors’ in the wider EHEA development of excellent doctoral programmes, and it will be important that the relatively modest number of Programmes has, like the Master Programmes, an impact beyond its actual scale. The EMJDs are also collaborative participants in the wider EHEA doctoral developments, not stand-alone, and it is clear that they not only collaborate and share within the Erasmus Mundus programme (through the significant facilitation of the Commission in arranging workshops etc.) but they share and learn through wider networks such as the EUA Council for Doctoral Education<sup>51</sup>, and through the policy developments that will occur within the Horizon 2020 Strategy.

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<sup>49</sup> EUA. (2010). *Salzburg II Recommendations: European Universities' Achievements since 2005 in Implementing the Salzburg Principles*. European University Association, [cited March 9 2012].

[http://www.eua.be/Libraries/Publications\\_homepage\\_list/Salzburg\\_II\\_Recommendations.sflb.ashx](http://www.eua.be/Libraries/Publications_homepage_list/Salzburg_II_Recommendations.sflb.ashx)

<sup>50</sup> Jørgensen, Thomas Ekman. (2011b). *The Salzburg Principles and Salzburg II*. European University Association, October 21, [cited March 5 2012].

[http://www.tempus.am/Events/Doctoral%20Studies\\_Oct.%2021,%202011%20Brussels/Thomas\\_Jorgensen.pdf](http://www.tempus.am/Events/Doctoral%20Studies_Oct.%2021,%202011%20Brussels/Thomas_Jorgensen.pdf)

<sup>51</sup> EUA. (2012). *EUA Council for Doctoral Education*. European University Association, March, [cited March 9 2012].

<http://www.eua.be/cde/Home.aspx>



## 8 Annex B: Indicators

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The online resource [www.emqa.eu](http://www.emqa.eu) contains an online version of this Handbook along with a set of indicators that you can use to self-assess your Programme. The indicators were developed for EMQA by Jeroen Huisman & Paulo Charles Pimentel Bótas, International Centre for Higher Education Management, University of Bath, UK.

The indicators are not meant to be a comparative and normative metric to assess the relative performance of Programmes – there are so many differences between Doctoral Programmes and this makes direct comparability very difficult.

However, what is more important is how a Programme understands its ‘excellence’, how it can review it strategically, and how it can prioritise areas for improvement and innovation. In addition, learning from the excellence of other Programmes (the primary objective of this Handbook) may help Programmes to identify areas for improvement and innovation. And, importantly, the use of the indicators will allow a Programme to understand how quality is perceived across all the participants, from academics, administrators, support staff across the institutions, to the doctoral candidates. The online tool provides an opportunity to build a Programme-wide set of anonymised assessments by a Programme Coordinator.

The full set of indicators is designed to be used by the Coordinating and Partner institutions. In previous versions of the self-assessment exercise various sub-sets of self-assessment questions were provided for coordinators, partners and doctoral candidates. However, these were not always fully suited to all Programmes, so the 2012 set of indicators has the option to declare any of them as ‘not applicable’ – this provides easy customisation for each group.

Lastly, there is not always a single indicator for each sub-component of the quality landscape. Some sub-components are more complex than others and need to be covered by more than one set of questions.

### ***Priority A: Developing a comprehensive vision***

D-A.1: Identifying the need and ‘unique selling proposition’ to run this EM programme:

Indicator D-A.1.1: Developing the objectives of the programme

- 1) Programme objectives are developed without explicitly considering its unique selling point(s)
- 2) Programme objectives are developed, implicitly considering its unique selling point(s)
- 3) Programme objectives are developed that differ from other (relevant) programmes in a couple of areas
- 4) Programme objectives are developed that differ from other (relevant) programmes in many areas.

Indicator D-A.1.2: Developing the structure of the programme

- 1) A programme structure is developed without explicitly considering its unique selling point(s)
- 2) A programme structure is developed, implicitly considering its unique selling point(s)
- 3) A programme structure is developed that differs from other (relevant) programmes in a couple of areas
- 4) A programme structure is developed that differs from other (relevant) programmes in many areas.



Indicator D-A.1.3: Performing programme need(s) analysis

- 1) The consortium has hardly analysed the need(s)
- 2) The consortium has analysed the need(s) somewhat, but largely on the basis of taken-for-grantedness and unsupported assumptions
- 3) The consortium has thoroughly analysed the need(s) in some respects (one or two from e.g. problem analysis, scientific developments, candidates' needs, labour market expectations)
- 4) The consortium has thoroughly analysed the need(s) in many respects.

D-A.2: Detailing the prime purpose and the underlying research excellence that drives the research proposals and mobility paths

Indicator D-A.2: The prime purpose and excellence that drives research proposals and mobility paths

- 1) Partners individually propose research projects to prospective candidates
- 2) Partners individually propose research projects to prospective candidates and (do their best to) coordinate mobility paths at partner sites
- 3) Partners have developed a consistent research programme based on excellence of partners and consortium and candidates are enabled to develop a mobility path
- 4) Partners have developed a consistent research programme based on excellence of partners and consortium and develop – with the candidate – a seamless mobility path.

D-A.3: Building a viable sustainability strategy for the consortium and the programme

Indicator D-A.3: Building long- and medium term strategies

- 1) The programme mainly focuses on the here-and-now, with limited attention to future sustainability
- 2) The programme monitors some external developments (that potentially affect the sustainability in the medium term) to a limited extent
- 3) The programme monitors external developments (that potentially affect the sustainability in the medium and longer term) to some extent
- 4) The programme has explicit instruments in place to make the programme sustainable in many respects (funding and sponsors, continuous commitment current partners, search for new partners, monitoring student flows and demand, targeted marketing activities, robust governance structure).

D-A.4: Understanding the value of the shared academic and administrative cultures and quality of all partners and the participating candidates

Indicator D-A.4.1: Dealing with different academic and administrative cultures

- 1) Partners acknowledge different academic and administrative cultures, without finding solutions to emerging cultural problems Partners have noted some cultural differences, that are once in a while addressed.
- 2) Partners have noted the most important cultural differences, that are regularly addressed
- 3) Partners continuously monitor cultural differences and their impacts (e.g. through risk assessments) and these are also continuously addressed and acted upon.

Indicator D-A.4.2: Understanding the quality of partners and their institutions

- 1) The quality of partners is assumed
- 2) The quality of partners is checked once in a while on an ad hoc basis
- 3) Some processes are in place to make the partners accountable for the quality of their input
- 4) A full set of processes (regular reporting, key performance indicators, but also “light-touch” processes as continuous communication and social events) is in place for partners to regularly account for the quality of their input.



D-A.5: Building a coherent and comprehensive employability strategy for graduates

Indicator D-A.5: Making the Programme 'attractive' for the Labour Market

- 1) It is assumed that students will be responsible for making themselves 'employable'
- 2) In some of the phases (during the programme, in transition to the labour market or afterwards such as contacts with alumni), there are activities (placements, projects etc.) that focus on employability.
- 3) In many phases (programme design, during the programme, in transition to the labour market or afterwards such as contacts with alumni), there is considerable attention to focusing on generic employability goals.
- 4) Throughout the programme (from design to delivery) the consortium pays structured attention (explicit learning outcomes and competences re employability skills, gathering feedback from labour market including monitoring jobs acquired by graduates, placements/internships, involvement of industry partners in the programme, careers office) to employability skills, and key actors in the labour market are embedded in the Programme (placements, programme content and design etc.).

D-A.6: Agreeing a transparent and equitable policy for the doctoral examination process

Indicator D-A.6: Agreeing a policy for the doctoral examination process

- 1) Examination processes and procedures can be found in each partner's regulations
- 2) Examination processes and procedures are to some extent dovetailed
- 3) Examination processes and procedures are compared and, within the limits of national and institutional regulations, dovetailed
- 4) Equity and transparency considerations drive the comparison of examination processes and procedures. Processes and procedures are, within the limits of national and institutional regulations, dovetailed.

D-A.7: Agreeing a clear policy about the doctoral degree to be awarded, and maximising the recognition of the doctoral degree and its associated "products"

Indicator D-A.7: Supporting degree recognition

- 1) The degree is sum of the parts (no joint degrees, separate certificates only), there is limited attention to broader recognition
- 2) The degree is coherent, but there is limited attention to broader recognition
- 3) The degree is coherent and there is some attention to broader recognition (e.g. ECTS, diploma supplement, learning outcomes specified).
- 4) The degree is coherently organised and presented (joint degrees) with detailed attention to recognition in many facets (ECTS, diploma supplement [in various languages], learning outcomes specified, attention to specific domestic requirements in partner countries, joint degrees, mutually accredited programmes).

**Priority B: Provide an integrated training, research, and staff development strategy**

D-B.1: Developing an effective research programme with balanced supervision processes and workloads across the consortium (co-located research groups)

Indicator D-B.1: A research programme with balanced supervision processes and workloads across the consortium

- 1) Each partner clarifies its input in the supervision process
- 2) Partners clarify their input in the supervision process and do their best to coordinate supervision and workloads



- 3) Partners discuss their input in the supervision process based on fitness for purpose criteria
- 4) Partners discuss their input in the supervision processes on a regular basis based on fitness for purpose criteria and continuously monitor whether the balance is appropriate.

D-B.2: Providing collaborative research and communication platform across the consortium for staff and doctoral candidates

Indicator D-B.2: Research and communication platform

- 1) Each partner communicates individually with candidates
- 2) Partners have set up a research and communication platform, that is used for storing information on the programme and partners
- 3) Partners have set up a research and communication platform, that is used for storing information, and functions as a potential means for communication between staff and candidates
- 4) Partners have set up a sophisticated research and communication platform, that is used for storing information, and functions as a means for two-way communication between staff and candidates

D-B.3: Ensuring the assessment mechanisms for work leading to the doctorate are coherent and balanced across the consortium

Indicator D-B.3: Ensuring coordinated assessment of candidates

- 1) ECTS procedures guide assessment across the partners
- 2) Different grading systems are communicated across the partners
- 3) Consortium-wide tables (translating marks and gradings) ensure that candidates are coherently assessed
- 4) Consortium-wide tables and mechanisms (joint and double marking by different partners, involvement external examiners) ensure that candidates are coherently assessed

D-B.4: Providing doctoral candidates with access to the best doctoral training, research tools and facilities

Indicator D-B.4: Providing access to training, research tools and facilities

- 1) Each partner decides and communicates which training, research tools and facilities are available
- 2) Partners discuss training, research tools and facilities at the consortium level and decide consequently on local training, research tools and facilities
- 3) Partners discuss training, research tools and facilities at the consortium level in the light of the overall programme objectives and learning outcomes
- 4) Partners discuss training, research tools and facilities at the consortium level in the light of the overall programme objectives and learning outcomes, and act upon these by providing tailor-made local training, research tools and facilities (and possibly a functional e-learning platform at consortium level).

D-B.5: Implementing formal continuous research progress monitoring

Indicator D-B.5: Formal continuous research progress monitoring

- 1) Research progress is monitored by individual supervisors, with a stress on the first year
- 2) Research progress is monitored at the consortium level, with a stress on the first year
- 3) Research progress is monitored by partners throughout the registration period
- 4) Research progress is monitored through dedicated mechanisms (assessment grids, progress reports, supervisors and/or committee meetings and discussions) at the consortium level throughout the registration period.





D-B.6: Ensuring effective staff mobility and inter-cultural awareness across the programme and consortium

Indicator D-B.6: Ensuring staff mobility

- 1) Staff mobility is organised on the basis of volunteering
- 2) Staff mobility is organised on the basis of (programme) needs-based considerations
- 3) Staff mobility is coordinated across all partners on the basis of programme needs and research interests among staff
- 4) Staff mobility is coordinated across all partners on the basis of programme needs and research interest among staff, additionally there is considerable attention to preparation of staff (cultural awareness, career development)

**Priority C: Develop a realistic management, financial, and institutional strategy**

D-C.1: Identifying clearly and consistently which administrative units are responsible for doctoral candidates

Indicator D-C.1: Identifying administrative units responsible for doctoral candidates

- 1) Each partner has appointed an administrative contact person, that is continuously available for its doctoral candidates
- 2) Each partner, as well as the consortium, has appointed an administrative contact person, that is continuously available for its doctoral candidates
- 3) The consortium has specified the roles and responsibilities of administrative units/persons at partner and consortium level
- 4) The consortium has specified the roles and responsibilities of administrative units/persons at partner and appointed, with a clear division of labour and clear linkages to other administrative units (international office, finance office, etc.) within the partner institutions.

D-C.2: Planning the finances and allow for risks and contingencies

Indicator D-C.2: Financial management

- 1) Resources are annually allocated to partners by the consortium leader
- 2) Finances are discussed annually and – if necessary – budget allocations are reconsidered
- 3) Resources and finances are carefully planned (annual consideration of budgets) and executed in much detail (financial handbook at consortium level)
- 4) Resources and finances are carefully planned (annual consideration of budgets) and executed in much detail (financial handbook at consortium level, regular monitoring) and an annual risk and contingency analysis takes place at consortium level.

D-C.3: Implementing a formal consortium agreement, including IPR and ethical issues

Indicator D-C.3: Implementing a consortium agreement

- 1) The consortium agreement contains some general guidelines the partners agreed upon, but the agreement is largely a symbolic document
- 2) The consortium agreement contains some general guidelines the partners agreed upon, once in a while the agreement is (re)discussed
- 3) The consortium agreement details all duties and responsibilities of the partners involved
- 4) The consortium agreement details all duties and responsibilities of the partners involved, including IPR and ethical issues, and is regularly (re)discussed.

D-C.4: Ensuring that doctoral candidates have employment contracts (e.g. dealing with maternity leave, mobility visas, taxation, etc.)



#### Indicator D-C.4: Ensuring employment contracts

- 1) Candidates have employment contracts with a partner and include basic arrangements
- 2) Employment contracts are developed at the consortium level (but may be implemented at partner level), and include basic arrangements
- 3) Employment contracts are developed at the consortium level (but may be implemented at partner level), and include detailed arrangements
- 4) Employment contracts are developed at the consortium level (but may be implemented at partner level), and include detailed arrangements; contracts are supplemented with dedicated human resource policies (visa, maternity and other leave, medical support, housing, access to facilities, etc.).

#### D-C.5: Implementing a programme-wide quality assurance process

##### Indicator: Implementing programme-wide quality assurance

- 1) Each partner takes care of internal (partner level) quality assurance (mainly course evaluations)
- 2) Internal quality assurance is coordinated across all partners involved (mainly course evaluations and programme evaluation)
- 3) Internal and external quality assurance is coordinated across all partners involved, focused on course and programme evaluation
- 4) A broad(er) set of evaluation tools (evaluations by candidates, staff, external partners, quality monitoring boards) at the consortium level are used for both internal and external quality assurance.

#### D-C.6: Ensuring there is consistent organisational strategy regarding internationalisation

##### Indicator: Ensuring an internationalisation strategy

- 1) The internationalisation dimension is taken-for-granted given the programme is offered by an international consortium
- 2) There is explicit attention to take care that an internationally diverse group of candidates enrolls and that equally a diverse set of international faculty is involved in teaching
- 3) Internationalisation goes beyond international candidates and staff and is also visible in the curriculum (language courses, [inter]national cultures, internationalisation at home), also staff visit and teach regularly at partner institutions
- 4) Beyond an integrated perspective on internationalisation (see 3), the internationalisation activities are strongly linked to the overall internationalisation strategies and activities of the partners.

#### D-C.7: Implementing a dynamic marketing strategy

##### Indicator D-C.7: Implementing a marketing strategy

- 1) The programme is promoted by partners, though mainly in a passive way, through various communication mechanisms (web site, folders)
- 2) The programme is consistently and actively promoted by the consortium (web site, folders, fairs, mailings, international and global networks)
- 3) The programme is consistently and actively promoted by all involved (doctoral candidates, staff, university management; programme ambassadors)
- 4) Beyond active and consistent promotion, the partners invest seriously in branding the programme and consortium (e.g. alumni network).



**Priority area D: Recruit excellent students, deliver value to them, and engage alumni**

D-D.1: Recruiting and selecting the 'best equipped' doctoral candidates

Indicator D-D.1: Recruiting and selecting doctoral candidates

- 1) Candidates are selected by the consortium on the basis of academic credentials
- 2) Individual partners select on the basis of a portfolio approach (academic credentials, language skills, motivation, attitude)
- 3) Individual partners actively recruit and select on the basis of a portfolio approach (academic credentials, language skills, motivation, attitude)
- 4) Candidates are actively recruited and selected by consortium on the basis of a portfolio approach (academic credentials, language skills, motivation, attitude)

D-D.2: Ensuring doctoral candidates are well prepared logistically and academically before they arrive to start research

Indicator D-D.2: Ensuring doctoral students are prepared

- 1) The consortium sends the key information on the programme to all candidates
- 2) The consortium sends key information on the programme and the expectations to all candidates
- 3) The consortium sends key information on all academic (programme, expectations) and non-academic aspects (visas, accommodation, language) to all candidates
- 4) The consortium uses a variety of tools (web sites, information packages, personal contact by tutors) to inform candidates about all academic (programme, expectations) and non-academic aspects (visas, accommodation, language)

D-D.3: Supporting the doctoral candidates socially, culturally and academically after they arrive

Indicator D-D.3: Supporting doctoral candidates socially, culturally and academically

- 1) The partner responsible for the first semester has organised meetings to support candidates at the start of their programme
- 2) The partner responsible for the first semester has organised meetings and has set up a mentor/supervisor programme
- 3) Throughout the programme, the candidates are supported socially, culturally and academically through some planned activities
- 4) Throughout the programme, the candidates are supported socially, culturally and academically through a range of planned activities (social-cultural events, academic mentoring, student support systems, networking events, group identity activities)

D-D.4: Joining-up the resource availability across the institutions

Indicator D-D.4: Joining up resources

- 1) Each partner assures access to relevant resources
- 2) Consortium partners discuss resources needed and take care they are provided locally
- 3) The consortium partners discuss programme objectives and learning outcomes and match these with local resources (e.g. library, IT, study rooms, social facilities)
- 4) The consortium partners discuss programme objectives and learning outcomes at the course level and explain in detail how these match with local resources

D-D.5: Maximising learning and research training opportunities during the programme

Indicator D-D.5: Offering candidates learning and research training opportunities

- 1) Each partner has thought through and offers learning and research training opportunities



- 2) There is some planning at the consortium level to offer appropriate learning and research training opportunities to all candidates
- 3) At the consortium and partner levels, tutoring, mentoring and supervision arrangements are in place to fully support all candidates to find and make use of the available learning and training opportunities
- 4) Many different arrangements (tutoring, counselling, mentoring, supervision, information sources on web site, peer input, liaisons with business and industry) are in place to offer the candidates support to find and make use of the available learning and training opportunities.

#### D-D.6: Preparing doctoral candidates to maximise their career potential

##### Indicator D-D.6: Maximising career potential

- 1) Some partners pay attention to life after graduation
- 2) The consortium integrates career issues in the final phases of the programme
- 3) There is considerable attention to career potential through contacts (lectures, internships) with representatives of business and industry, the professions etc.
- 4) There is considerable attention to career potential through contacts (lectures, internships) with representatives of business and industry, the professions etc., in addition to offering candidates ample leeway to reflect on their own career development (mentoring, tutoring)

#### D-D.7: Building a long-term relationship with alumni

##### Indicator D-D.7: Building relationships with alumni

- 1) Partners are incidentally contacting doctoral graduates
- 2) Partners are systematically contacting doctoral graduates to monitor their labour market positions
- 3) Partners are systematically contacting doctoral graduates to monitor their labour market positions and to involve them in the current programme
- 4) Partners are systematically contacting doctoral graduates to make use of their input throughout the programme (open days, ambassadors; speakers, contributors; graduate feedback)



## 9 Annex C: List of EMJDs

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Taken from the 10 July 2012 list:

[http://eacea.ec.europa.eu/erasmus\\_mundus/results\\_compendia/selected\\_projects\\_action\\_1\\_joint\\_doctorates\\_en.php](http://eacea.ec.europa.eu/erasmus_mundus/results_compendia/selected_projects_action_1_joint_doctorates_en.php)

(Access the URL above for programme descriptions and links to their websites)

AgTrain - Agricultural Transformation by Innovation

ALGANT-DOC - Algebra, Geometry and Number Theory Joint Doctorate

DCGC - Doctoral Programme in Cultural and Global Criminology

DocMASE - Joint European Doctoral Programme in Advanced Materials Science and Engineering

EDEEM - European Doctorate in Economics Erasmus Mundus

EDIM - European Doctor in Industrial Management

EDLE - European Doctorate in Law and Economics

EGS-ABG – European Graduate School in Animal Breeding and Genetics

EMJD-DC - Joint Doctorate in Distributed Computing

EMJD-GEM - Erasmus Mundus Joint Doctorate on “Globalization, Europe & Multilateralism”

ENC Network - European Neuroscience campus network

ETeCoS3 - Environmental Technologies for Contaminated Solids, Soils and Sediments

EUDIME - Erasmus Mundus Doctorate in Membrane Engineering

EUROPHOTONICS - Doctorate Program in Photonics Engineering, Nanophotonics and Biophotonics

EUROSPIN - European Study Programme in Neuroinformatics

EXTATIC - Extreme-ultraviolet and X-ray Training in Advanced Technologies for Interdisciplinary Cooperation

FONASO - Forest and Nature for Society

FUSION DC- International Doctoral College in Fusion Science and Engineering

ICE - Interactive and Cognitive Environments

IDEALAB - International Doctorate in Experimental Approaches to Language And Brain





IDS-FunMat - International Doctoral School in Functional Materials for Energy, Information Technology, and Health

INTERZONES - Cultural Studies in Literary Interzones

IRAP PhD - International Relativistic Astrophysics Doctorate Program

LAST-JD - Joint International Doctoral Degree in Law, Science and Technology

MACOMA - Erasmus Mundus PhD in Marine and Coastal Management

MARES - Doctoral Programme in Marine Ecosystem Health and Conservation

MoveAge - Prevention of mobility loss with ageing

NanoFar - European Doctorate in nanomedicine and pharmaceutical innovation

NeuroTi - NeuroTime: Erasmus Mundus Joint Doctorate "Neural processing of time"

PHOENIX - Phoenix JDP Dynamics of Health and Welfare

SELECT+ - Environmental Pathways for Sustainable Energy Services

SETS - Erasmus Mundus Joint Doctorate in Sustainable Energy Technologies and Strategies

SMART – Science for Management of Rivers and their Tidal Systems

TEEME - Text and Event in Early Modern Europe