



**DocEnt Project
DOCENT Testing Report
"Evaluation of the Learning Units
and the Career Service"
Deliverable 6**

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1.0 Introduction: Background to the Project

DOCENT - DOCTors in ENTERprise is a 24 month project financed by the European Commission Lifelong Learning Programme under the subprogramme: ERASMUS/ Multilateral projects/ Cooperation between Universities and Business.

The project is a response to Europe's acknowledgement that doctoral graduates have the potential to be key actors in the creation of innovation and promoting knowledge-based economic growth in any economy at National, European and Global level. They possess the skills and competences and the training required to contribute to the advancement and diffusion of knowledge and technologies. Doctorate graduates are that *innovation injection* which can help industry in any economy to be more competitive in a knowledge base society. PhD graduates should not consider academia as their main or only path of employment but should explore opportunities in industry, not only because the number of positions in Universities are saturated, but also because they can make a huge contribution to industry.

DOCENT, thus, aims to contribute to enhancing the employability of technical and scientific doctoral candidates in industry through the development and testing of:

- ***a model for the provision of careers services*** specific to doctoral candidates and graduates capable of innovation and effective knowledge transfer, whether as an employee or as an entrepreneur. It also includes guidelines for integration/coordination between University functions; and

- **training modules** to be offered within this careers services framework to support the professional development of doctoral candidates and graduates, in particular opening up opportunities beyond academia, and underpinning the development of transferable skills.

The Project Docent thus aims to enhance employability of technical and scientific PhD candidates through promoting the development of transferable skills among doctorate candidates, not only for the purpose of a career in industry, but to change the mindset of PhD graduates from the traditional academic one to a more entrepreneurial approach.

This document is the evaluation report of the piloting of the Learning Units as well as of the feedback obtained from the Careers Services Model as part of Work Package 3. In WP 1 and WP2, the needs of PhD candidates were researched and based on the results obtained, a set of learning units as well as a model for careers services aimed at PhD candidates were developed. WP3 involved the piloting and evaluation of these outputs.

2.0 Aims and Objectives of WP3

As has already been highlighted, the aim of WP3 is to test the learning modules and the career services model (deliverables 4 and 5) developed in WP2 of the project. This work package thus involved:

- Testing carried out by three of the project partners: the University of Malta (Malta), the University of Modena and Reggio Emilia (Italy) and the FUNDEUN (Spain); and
- Testing done to validate and improve the deliverables (deliverables 4 and 5).

The work by these three partners in this work package as indicated in the project description involved the following:

- The selection of common criteria used for the evaluation of the modules selected to test, for the conduct of the trials and for their monitoring and “ex post” evaluation;
- the selection of the participants involved in the evaluation: This included initiative to facilitate the participation of women; to foster the creation of PhDs groups from different scientific fields (chemistry, biology, agriculture, etc.), promoting an interdisciplinary approach and horizontal interaction and creativity in the groups of young PhD candidates.

Activities within this work package included:

- Preparation of teachers/tutors on how to use the learning units;
- The realization of the training with PhD candidates;
- The creation of a focus group in each university (for evaluation of the careers service), testing base (for a total of 3 focus group totally achieved), in which lecturers, referrals of doctoral courses, staff of the Guidance and Placement Service and staff of the Technology

Transfer Offices and referrals of companies association will participate. The focus group will focus on validating the model of academic integrated services to support the science careers of PhD candidates and to identify some practical implementation modalities for the model adoption;

- Developing performance indicators: These were included in evaluation forms from doctoral candidates and teachers involved in the experimentation collected at the end of the learning units; and involving representative institutional stakeholders in focus groups (detectable through an attendance sheet that would suggest the role); and
- the drafting of a technical report that documents the trial progress.

This document is the outcome of all the activities taking place within WP3 of the project.

2.1 The learning Units to be evaluated

A total of 18 learning units were developed as a result of the work in WP2. Each LU (learning unit) was designed to be between 1½ and 2 hours long. The sessions have been developed starting with a short definition of the skill around which it was been designed. They then expand to give a quick overview of the topic. The main aim is to change the mindset of the PhD candidates from that of academia to one that is closer to industry.

The training modules were grouped under five main modules. The first one, Manage your Career considers aspects of one's career development. The second module focuses on opportunities in the labour market outside academia. The third module, Working with others, equips participants for working with others within organisations. The fourth module focuses on project management while the last and fifth module goes beyond and considers aspects such as entrepreneurship and building one's own business. It is thought that these learning units touch on all the different aspects of working in the labour market, mainly industry.

The table below provides the list of these designed 18 Learning Units (LUs) organized within 5 training modules.

Table 1: Learning Units developed in WP2

TRAINING MODULE	LEARNING UNITS
1. MANAGE YOUR CAREER	1.1. Career management skills and employability 1.2 Recognise and promote your skills 1.3 Gaining employment
2. OPPORTUNITIES OUTSIDE ACADEMIA	2.1 Business culture 2.2 Commercial awareness 2.3 Knowledge of the labour market
3. WORKING WITH OTHERS:	3.1 Leadership 3.2 Networking 3.3 Science communication for a knowledge-based society 3.4 Conflict management
4. MANAGING PROJECTS:	4.1 Funding, finance and resources 4.2 Project management 4.3 Budgeting in a nutshell 4.4 Intellectual Property management
5. BEYOND EMPLOYMENT	5.1 Creativity 5.2 Entrepreneurship 5.3 Resilience and risk-taking 5.4 How to write a business plan

It was decided that not all the units would be tested as this would be too demanding and the number of PhD candidates in each of the partner organisation is limited. It was decided that each partner will test 6 Learning Units (except UNIMORE who tested 8), in order to be able to test a total of 11. Each unit, with the exception of two was to be tested by two partners in order to be able to test the general applicability of the materials developed in different European contexts. The modules which are to be piloted by each of the three partners involved in this part are listed in the table below:

Table 2: Learning Units Tested in WP3

UoM	FUNDEUN	UNIMORE
1. MANAGE YOUR CAREER		
	1.1. Career management skills and employability	1.1. Career management skills and employability
1.2 Recognise and promote your skills		1.2 Recognise and promote your skills
2. OPPORTUNITIES OUTSIDE ACADEMIA		
	2.2 Commercial awareness	2.2 Commercial awareness
3. WORKING WITH OTHERS		
	3.1 Leadership	
	3.3 Science communication for a knowledge-based society	3.3 Science communication for a knowledge-based society
4. MANAGING PROJECTS:		
4.2 Project management		4.2 Project management
4.3 Budgeting in a nutshell		4.3 Budgeting in a nutshell
4.4 Intellectual Property management		4.4 Intellectual Property management
5. BEYOND EMPLOYMENT		
5.2 Entrepreneurship	5.1 Creativity	
5.4 How to write a business plan	5.2 Entrepreneurship	5.4 How to write a business plan

2.2 The Careers Services Model to be evaluated

The Career Service model developed within Docent is '*a model for the provision of careers services tailored to the needs of doctoral candidates and graduates*'. It explores the different types of support services which may be provided to PhD candidates and the possibilities for which the model can be used. The Careers Services model thus provides:

- a framework for the development of new careers-related services specific to doctoral candidates and graduates;
- a framework against which to review current career development support available to doctoral candidates and graduates;
- help in identifying ways to improve existing services; and
- In reviewing the different institutional functions which contribute to careers support for doctoral candidates and graduates and how these work together.

The model also identified the key players which include:

- Policy makers including government or regional agencies;
- senior university staff;
- non-academic employers of researchers;
- research supervisors and managers;
- specialist staff such as trainers, advisors and placement services;
- Academic sector bodies at European or national level;
- Industrial and enterprise or professional associations; and
- Doctoral candidates and graduates themselves.

The model then considers specific aspects:

1. ***Career Management, skills and employability***: with the aim to promote the value of doctoral training, across a wide range of career paths, to all stakeholder groups and to support doctoral candidates and graduates. This is to be done in response to the need to form and work towards personal career-related goals, in the context of a broad employment market or as an entrepreneur; and to recognise and promote the transferability of their skills and to meet development needs appropriate to their career goals.
2. ***Opportunities beyond academia***: in order to raise awareness of non-academic career paths for doctoral graduates: whether for employment and self-employment; to identify opportunities for doctoral candidates and graduates to gain experience, in order to develop the knowledge and skills demanded by a non-academic career; to offer guidance on recruitment processes; and to promote recruitment by establishing connections between doctoral candidates and graduates and employers;

These two objectives are then considered in further detail and specific objectives, activities, products and useful resources are suggested.

This is the general model which will be evaluated in this work package. The importance of this model is that it is considered as relevant, practical, useful and comprehensive by Universities across Europe in the provision of career services to doctorate candidates in their preparation to work outside academia. The methodology adopted for its evaluation is described in the next section.

3.0 Evaluation Methodology

This section includes details of the method adopted for the evaluation of the two deliverables: the Learning Units and the Careers Services model. It provides details of the persons and different key players involved in the process, the evaluation tools used and the documentation of the process kept.

3.1 Evaluation of the Learning Units

The Learning Units were delivered between May and July 2011. In order to ensure the successful delivery of these Learning Units and that a similar approach was taken by each of the three organisations involved, the same steps for implementation were followed. These steps included:

- ***Identification of tutors to deliver the Learning Units:*** The first step involved the identification of the tutors to be subcontracted (if not identified from within own institution) to deliver the training modules. The trainers were preferably to have experience of industry as well as be versed with the technical/scientific areas in which the PhD candidates are studying. The best approach was to identify tutors through handpicking them for their experience and expertise in the area of training;
- ***Setting the dates and time for Learning Units to be delivered:*** Through contacting persons who know about or have access to PhD candidates the best times and dates for the implementation of the Learning Units were decided. An adequate time span between applications by participants and the delivery of the training courses was provided;
- ***The room allocation for delivery of the Learning Units:*** The logistics for the organisation of the training modules were then put in place. The rooms where the training was to take place as well as any equipment such as infocus or other equipment needed were made available.

3.1.1 Selection of Participants to the Learning Modules

A call for PhD candidates about training modules was issued. The best channels to reach PhD candidates were used. Since the training courses are to have groups between 5-15 participants, selection Criteria in the case of large numbers of applicants were put in place. Requirements for applicants included the following:

- Applicants have to be PhD candidates;
- Applicants doing their research in STEM (Science, Technology and mathematics);
- A preference given to female candidates. The selection group could look at the gender balance of the applicants to ensure that there is female representation admitted to the training;
- Preference was given to those students who were more advanced in their studies; and
- Motivation for application: The reason/motivation expressed by applicants interested in participating in the training.

Evaluation Process

The Learning units were evaluated through feedback from the tutors and from the participants. The tools for this process included a questionnaire for the tutors and one for the students. These two questionnaires were filled in at the end of the session.

The aspects of the learning units evaluated by the participants in the ***participant questionnaire*** included the following:

- Questions about the respondents' personal characteristics (gender, age, area of study etc.) and work expectations on completion of doctorate studies;
- Questions about the content and training material used during the session;
- Questions about the methodology/approach used during the session;

- Questions about the relevance of the topics/situations raised during the sessions;
- Questions about the need for these skills for work in industry; and
- Questions about whether the training matched their expectations.

At the end of the questionnaire, participants were asked for any suggestions and recommendations to improve the learning modules.

The aspects of the learning units evaluated by the tutors in the ***tutor questionnaire*** included the following aspects:

- Questions on the relevance of the training for PhD candidates working in industry;
- Questions on the quality of the training materials supplied and their utility;
- Questions on the supporting material produced for students and tutor in the learning modules;
- Question on how the learning units can be improved and made better for use in the future;
- Request for suggestions for further exploitation of the learning material produced.

In some cases this can also take the form of an informal interview where the partners can discuss the various issues with the tutor in order to obtain better in-depth understanding and feedback on how to improve the learning material.

The student and tutor questionnaires are included in the Annexes at the end of the document.

3.1.2 Implementation of the Learning Units by the partners

The Learning Units were piloted, as already stated by the University of Malta, the University of Modena and Reggio Emilia, and FUNDEUN.

Implementation of Learning Units in Spain

FONDEUN was responsible for piloting 6 learning units. These learning units included the following:

- 1.1: CAREER MANAGEMENT, SKILLS AND EMPLOYABILITY
- 2.2: COMMERCIAL AWARENESS
- 3.1: LEADERSHIP
- 3.3: SCIENCE COMMUNICATION FOR A KNOWLEDGE-BASED SOCIETY
- 5.1: CREATIVITY
- 5.2: ENTREPRENEURSHIP

Six different tutors were identified to deliver the different Learning units. Here below is the profile of each of the tutors:

Vicente Sabater: *Senior Lecturer of Business Organization* is a member of the Tourism Research Institute at the University of Alicante. He also held the position of assistant director of the Department of Business Administration. His research interest is human resource management and is module leader in different post graduate courses. He has taken part in various public projects highlighting the public competitive project for the creation of the Tourist Observatory of the Valencian Community and other private projects, study for the detection of training needs for local development agents, research management and teaching methodologies in business administration with various consulting groups, etc. He is the author of several books, book chapters and articles related to teaching methodology, human resource management and strategy Human Resource Planning, Human System Management, Employee Relations and Journal of Production Economics.

Faustino Olmos: *Managing Partner in Espiral Training and Coaching company* has a Master in Human Resources. During 1995 -2007 he was HR director of Winterthur Spain for the

North and Levante zone in Spain and member of the knowledge management Department at Axa insurance until April 2008. He is also a Business Coach certified by the European School of Coaching; Member of the international coaching federation (IFC) and the Spanish association of coaching and process consultation (AECOP). He is a frequent speaker at business conferences and author of several articles. He has developed training programmes with: FUNDEUN, Winterthur Seguros, Seguros Axa, University of Valencia and Alicante, Regional Government of Valencia, various municipalities, Florida training centre, Lluís Vives Business School, San Pau de Barcelona Hospital, San Boi Hospital, University Hospital of Lleida, Atlántida Seguros, Segur Caixa, Grupo Ferrer, Grupo Caliche, Inaer, ... Companies which participated in the process of coaching to managers: Winterthur Seguros, Seguros Axa, Grupo Hera, la Caixa, el Hospital de la Lleida, Consultores Bareus and Consultoría Ceice.

Juana Tormo: Degree in Business Administration, University of Alicante is associated Lecturer in Marketing at the Dept. of Financial Economics of the Faculty of Economics and Business Studies of the University of Alicante. She is tutor and Coordinator of Internship in Administration and Management in Faculty of Economics as well as Coordinator and teacher of the "Marketing and Sales" course. She also teaches in on-line Master in Business management and Marketing by University of Alicante, University of Barcelona, University Carlos III of Madrid and Group Santillana as well as in several occupational courses organised by the Valencian Service of Public Employment and Training, SERVEF. Her speciality is Commercial Management.

José Manuel Valero: Degree in Chemical Engineering is specialised in Industrial Chemistry, from the University of Murcia. He specialised in Strategic Management from Universidad Politécnica de Madrid, obtained a Diploma in Higher Business Management from ICADE-FUDESEM (Universidad Pontificia de Comillas), and a Masters in Business Administration and Management from Funcionario de Carrera of the University of Alicante (FUNDESEM). He currently is the Director of the Research Management and Technology Transfer Office. He has attended numerous courses and specialised seminars on Management of Technology Management and Innovation at the Escuela de Organización Industrial, Carlos III University, Spanish R&D Plan, IESE-University of Navarre, among other institutions. He has managed

several Spanish and European technology transfer projects. He teaches in several doctoral courses on technology and innovation, and has given courses and conferences in several Spanish and Latin American universities.

Eva Toledo Alarcón: Area Manager of the PADIMA Agency is an Economist, and official patent and trademark agent. She has a Master's Degree in industrial property and copyright and is an authorised representative for the OHIM. She is associated Lecturer in Marketing at the Dept. of Financial Economics of the Faculty of Economics and Business Studies of the University of Alicante and Lectures in Patents, Trademarks, Designs and Copyright at the University School of the University of Alicante. She is also a specialist in industrial property assessment and in the valuation of intangible assets.

Rafael Lafont: Assistant Director in Foundation Enterprise-University of Alicante (FUNDEUN) and associated Lecturer in Business Organisation at the University of Alicante. He is a Law graduate and has developed projects on training, employment and self-employment in different areas: European, Spanish, regional and local (EQUAL, INTERREG, AENEAS, Leonardo, SERVEF, IMPIVA, Fundación Tripartita, ...). He is Head of studies in training given by FUNDEUN: specialisation courses, post-graduate or business recycling, in-company training, workshops, seminars. Other positions he has include: Deputy in Master of Local Development Agencies Management; Job placement deputy for the FUNDEUN employment service; Member of working groups of several European Projects: Concepción Arenal (Equal Initiative), "MAVITRA" on virtual labour market (Interreg), "BrainNet-Working" on the promotion of legal immigration (Aeneas), among others. He is also participant in Advisory Board of Experts in Young Entrepreneurs Award, SERVEF; participant in the working group of "FUNDEUN New Business Ideas Awards" (17 calls), and "Financing Forum for Business" (12 forums) that promotes FUNDEUN. He is the author of several studies: "Training needs and support services of ADLs of the province of Alicante", "Best Practices in Employment Services", "Labour Market in the Mediterranean Basin", "Circular Migration". Relationships with private companies that develop training and employment projects include: IBERDROLA, Hormigones del Vinalopó, Blinker, Casino del Mediterráneo, INAER, FORTE, PIKOLINOS, INUSA, TM, GTT.

There were several PhD candidates who expressed an interest and applied to follow the Learning Units. The tutor, date and number of participants are provided in the table below.

Table 3: Details about the implementation of the Learning Units by FONDEUN

LEARNING UNITS	TUTOR	DATES AND TIMES	NO. OF PARTICIPANTS
1.1 CAREER MANAGEMENT, SKILLS AND EMPLOYABILITY	Vicente Sabater	Thursday, 19 May from 10.00 to 11.30	26
2.2 COMMERCIAL AWARENESS	Juana Tormo	Thursday, 19 May from 16.30 to 18.00	18
3.1 LEADERSHIP	Faus Olmos	Thursday, 19 May from 12.00 to 13.30	19
3.3 SCIENCE COMMUNICATION FOR A KNOWLEDGE-BASED SOCIETY	José Valero	Thursday, 19 May from 18.30 to 20.00	17
5.1 CREATIVITY	Eva Toledo	Friday, 20 May from 10.00 to 11.30	17
5.2 ENTREPRENEURSHIP	Rafael Lafont	Friday, 20 May from 12.00 to 13.30	18

At the end of each session, the participants as well as the tutors were asked to fill in the questionnaires. Students attending at least 80% of sessions received a Diploma issued by the Fundación Empresa-Universidad de Alicante, FUNDEUN.

Implementation of Learning Units in Malta

UoM was responsible for piloting 6 learning units. These learning units included the following:

- 1.2: RECOGNISE AND PROMOTE YOUR SKILLS
- 4.2 PROJECT MANAGEMENT
- 4.3 BUDGETING IN A NUTSHELL
- 4.4 INTELLECTUAL PROPERTY MANAGEMENT
- 5.2: ENTREPRENEURSHIP
- 5.3 HOW TO WRITE A BUSINESS PLAN

Five different tutors were identified to deliver the different Learning units. Here below is the profile of each of the tutors:

Dr. Suzanne Gatt is a senior lecturer at the Faculty of Education at the University of Malta. She has over the past ten years been heavily involved in the preparation, implementation as well as reporting of EU-Funded projects under various programmes ranging from ERASMUS, Leonardo, Comenius 2 and Comenius 3 within the Lifelong Learning Programme, FP6, FP7, Daphne, and PROGRESS among others. In addition, she has extensive experience in the evaluation of project proposals over a wide range of programmes both on a national and international level, having acted as evaluator for several programmes for the European Commission. She has taught EU project management and evaluation in a number of Masters programmes. Dr. Suzanne Gatt delivered the Learning Units: *Project Management* and *Budgeting in a Nutshell*.

Ms. Laura-Sue Armeni is a psychology graduate with specialisation in organisational psychology and skills promotion in the workplace. She has been involved in the training of employees and HR managers. She also specialises in conflict resolution processes within family enterprises, in occupational psychometric testing and employment issues. She is also involved in the research project INCLUD-ED, which is related to the field of education, at the University of Malta. Ms. Armeni delivered the Learning Unit '*Promote and Recognise your Skills*'.

Mr. Mario Duca has qualified in Management and in engineering. He runs his own two companies, one focusing on energy saving solutions and the other providing management, internationalisation, start-ups and family business consultancy services. He is particularly active in the area of family businesses and regularly provides training in related areas. He is the Chairman of the SME committee at the Malta Chamber of Commerce and of the Malta Association of Family Enterprises, MAFE. Mr. Duca delivered the learning unit on *Entrepreneurship*.

Mr. Kevin Gatt is a management consultant and visiting Senior Lecturer at the Faculty for the Built Environment at the University of Malta. He holds both an MBA as well as an M.Sc in water engineering. He has experience of the implementation of projects at national level and has been involved in major capital projects for the country. He has for the past several years, as part of his professional activities, been providing training to those aspiring to be entrepreneurs in how to write a business plan with very good reviews from those attending. Mr. Gatt delivered the Learning Unit *How to write a Business Plan*.

Dr. Iván Luis Sempere Massa is partner-director of the Legal Department PADIMA. He is a graduated lawyer specialised in industrial property. He is also official patent and trademark agent. Dr. Massa holds a Master's Degree in industrial property and copyright. He is an authorised representative for the OHIM. Dr. Massa is also a lecturer in Patents, Trademarks, Designs and Copyright at the University School of the University of Alicante and is a Professor of the commercial and procedural law department at Alicante University. He also acts as Expert Witness in intellectual property cases. Dr. Massa delivered the Learning Unit: Intellectual Property Management (IPR).

Table 4: Details about the implementation of the Learning Units by UoM

LEARNING UNITS	TUTOR	DATES AND TIMES	NO. OF PARTICIPANTS
1.2 RECOGNISE AND PROMOTE SKILLS;	Laura Armeni	Tuesday 14 June 2011 10:30 – 12:30	4
4.2 PROJECT MANAGEMENT	Suzanne Gatt	Tuesday 14 June 2011 10:30 – 12:30	5
4.3 BUDGETING IN A NUTSHELL	Suzanne Gatt	Thursday 16 June 2011 8:30-10:30	5
4.4 INTELLECTUAL PROPERTY MANAGEMENT	Iván Luis Sempere Massa	Thursday 7 July 2011 10:00 – 12:00	4
5.2 ENTREPRENEURSHIP	Mario Duca	Thursday 16 June 2011 10:30-12:30	5
5.4 HOW TO WRITE A BUSINESS PLAN	Kevin Gatt	Friday 17 June 2011 14.00 – 16.00	8

Implementation of Learning Units in Italy

UNIMORE was responsible for piloting 8 learning units. These learning units included the following:

- 1.1 CAREER MANAGEMENT, SKILLS AND EMPLOYABILITY
- 1.2 RECOGNISE AND PROMOTE YOUR SKILLS
- 2.2 COMMERCIAL AWARENESS
- 3.3 SCIENCE COMMUNICATION IN A KNOWLEDGE BASED SOCIETY
- 4.2 PROJECT MANAGEMENT
- 4.3 BUDGETING IN A NUTSHELL
- 4.4 INTELLECTUAL PROPERTY MANAGEMENT
- 5.2: ENTREPRENEURSHIP
- 5.3 HOW TO WRITE A BUSINESS PLAN

Five different tutors were selected to deliver the learning Units. Their profile is included here below:

Roberto Cippitani has a Degree in Economics. He is a University lecturer on private law of public bodies, European private law, legal aspects of EU Programmes, contract law at the University of Perugia. He regularly contributes to training courses organised by Universities and other public and private bodies, with his knowledge and expertise of contracts and rules of participation in EU Programmes. He is consultant for the Italian Ministry of University and Research and for several universities and public bodies. Since 1996 he is a partner of "Studio legale e commerciale Cippitani, Di Gioacchino e Iozzolino" based in Rome, specialised in legal and financial management of EU Programmes. He has been actively involved in several EU projects funded by Jean Monnet Action, Tempus, European Social Fund and the EU Framework Research programme. He is this year a Jean Monnet Chair.

Marilena Ravetto is a Career Counsellor at University of Modena and Reggio Emilia.

Paolo di Marco is a management consultant for different sector companies and for Public Administration (Poste Italiane, Inail, CCIAA, Local Public offices). He is expert in Project Management and Business Plan implementation, and delivers formation courses at Alma Graduate School Faculty in Bologna, in Accounting and Business Strategy. He is responsible for the didactic materials and strategy tools for the Executive on line courses. He is also part of the Luiss Guido Carli Business School Faculty in Rome, in charge of the didactic direction of the Entrepreneurship course. He is a contracted university professor for the Business Strategy and Economics and Business Management classes of the Economics and Business Management degree course and for the International Marketing class of the Management master degree course at Bologna University. He is the founding partner of PD For Consulenza Direzionale which is involved in business projects and development in the Management field with extensive experience in R&D and Product Management. I gained an MBA diploma, accredited by Asfor, in 1997.

Giulia Catellani

Luca Simone Rizzo has a PhD in Business Studies, since 2003 Dr. Rizzo has carried out research on geo-economic/territorialisation processes collaborating as a contracted researcher with the University of Trieste (GeoNetLab - Centre of Excellence for Research in TeleGeomatics) and the University of Verona. As from 2005 he has taught as a contracted lecturer different courses in Italian universities. He has worked as a Policy Officer (SNE) at DG RTD -SSH Theme - on issues related to territorial development, regional policies, and entrepreneurship. At present he collaborates with the European Commission (DG RTD) as an external expert/reviewer, in particular working on issues related to social/territorial cohesion and socio-economic inequalities. Currently he works as a research fellow at Padua University (Dept. of Geo-Sciences) and as a consultant (for various public and private organisations - at local and regional level). He also collaborates as an intra-muros expert with UNIMORE Research Office providing RTD advisory and project management/training services, in particular in the frame of



an ACP S&T project and EU funded projects. His expertise includes the following: EU grant Project Design/Management/Training/Dissemination, Spatial and Territorial Analysis (GIS building).

Table 5: Details about the implementation of the Learning Units by UNIMORE

LEARNING UNITS	TUTOR	DATES AND TIMES	NO. OF PARTICIPANTS
1.1 CAREER MANAGEMENT , SKILLS AND EMPLOYABILITY	Marilena Ravetto	Tuesday 3 May 2011 15.00 - 17.00	35
1.2 RECOGNISE AND PROMOTE YOUR SKILLS;	Marilena Ravetto	Tuesday 3 May 2011 11.30 – 13.30	39
2.2 COMMERCIAL AWARENESS	Paolo di Marco	Wednesday 4 May 2011 16.30 – 18.00	17
3.3 SCIENCE COMMUNICATION IN A KNOWLEDGE BASED SOCIETY	Luca Simone Rizzo	Thursday 5 May 2011 11.15 – 13.15	34
4.2 PROJECT MANAGEMENT	Roberto Cippitani	Wednesday 4 May 2011 11.30 – 13.00	32
4.3 BUDGETING IN A NUTSHELL	Roberto Cippitani	Wednesday 4 May 2011 9.00 – 11.00	34
4.4 INTELLECTUAL PROPERTY MANAGEMENT	Giulia Catellani	Thursday 5 May 2011 9.00 – 11.00	32
5.4 HOW TO WRITE A BUSINESS PLAN	Paolo di Marco	Wednesday 4 May 2011 14.00 – 16.00	18
<i>BUDGETING AND PROJECT MANAGEMENT COURSE IN ENGLISH FOR FOREIGN STUDENTS</i>	Roberto Cippitani	Thursday 31 March 10.00 -- 13.00	5

3.2 Evaluation of the Careers Services Model

The main method for evaluation of the Careers Model was through a focus group which was organised in each of the three partners involved in the testing exercise. A focus group approach was used as it was believed that it was the best tool to allow insights into the value and relevance of the model developed from different perspectives and different key players.

3.2.1 Structure of the focus group and research tools used

The evaluation process took into consideration the following:

- **Composition of the Focus Group:** The focus group was to preferably between 4 -7 participants. The number depended on the availability of the persons accepting to take part in the exercise. It was also important to ensure that the focus group included a variety of the types of players in order to obtain as many different perspectives as possible. Thus potential players for the focus group could include:
 - Persons who already provide career services, even if not to PhD candidates;
 - Personnel involved in transfer of knowledge from academia to industry;
 - Professors who have PhD candidates and often find themselves providing advice and support to students;
 - Representatives from Industry, potentially associations or employers among those who recruit PhD graduates;
 - PhD candidates themselves as representatives of end users of the service.

- **Aspects to be raised and discussed during the focus group interviews:** The focus group discussions started with the researcher providing background knowledge on the Docent project, its aims and why it has worked on the development of the careers services model for doctorate candidates. The remaining discussion was then to focus on the following aspects:
 - ***Relevance of a careers model for doctorate candidates:*** This part of the focus group included a discussion on how much the participants felt about the need for institutions to provide careers services for doctorate candidates. The researcher read through the potential uses of the model and asked the group to discuss whether they considered the applicability indicated to be comprehensive, practical and relevant;
 - ***Whether the key players identified are comprehensive:*** The researcher read through the list of key players and asked the group if they felt that the list was comprehensive and whether one should also have included other players, or to reduce the different players identified;
 - ***The comprehensiveness of the competences of the personnel involved in the provision of careers services;*** The researcher then referred to the competences identified, explaining that these did not refer to an individual's competences but for the whole service provision. The discussion was then based on whether these competences were comprehensive, possible to achieve and to indicate what was not necessary and/or what could be added on or increased;
 - ***The applicability of the objective, activities and resources identified for the implementation of the model:*** The researcher then moved on to the rest of the careers model and considered the objectives for the two different goals. The feedback obtained by the participants on the relevance, practicability and comprehensiveness of the individual details were considered each in turn.

3.2.2 Implementation of the focus group by each of the separate partners

Focus Group in Spain (FUNDEUN)

Fundación Empresa-Universidad de Alicante (FUNDEUN) organised the focus group with the different stakeholders involved in encouraging the culture of innovation, management and improvement of innovation processes companies in the Alicante Province.

A meeting of the members of the Advisory Council of the Innovation Forum was called by e-mail and ordinary mail attaching the agenda and a European project programme. All the documentation related to the Career Service Model was subsequently sent by email and ordinary mail. This was done 15 days ahead of the scheduled date to allow participants enough time to familiarise themselves with the content developed by the project partners (They were provided with this documentation translated into Spanish). Two days before the meeting, each member called to the meeting was contacted by telephone to confirm attendance.

The meeting of the Advisory Council took place on 17 May 2011 at 10.30 am at the University of Alicante, Club social II, with the objective of involving them and requesting their advice and validation of the points on the agenda set out below: Presentation of provisional results of the European Doctors in Enterprise Project, analyses, validation and suggestions for improvement for their implementation.

The meeting began with an explanation of the work methodology. Attendees were told that they had each been given a set of questions to return at the end of the meeting. General comments were then to be compiled to draw suggestions to improve the project. The meeting started with a PowerPoint presentation to the Advisory Council by FUNDEUN managing director Isabel Obrador, highlighting the main objectives of the Career Service Model, specifically for doctoral candidates and graduates. The attendees worked on the questions for two hours and the session was moderated to focus the debate on points of interest for the project. The information served to implement their advice and opinions and suggestions for improving the project products.

FUNDEUN Manager Isabel Obrador brought the meeting to a close, thanking everyone for attending and for the contributions made by the institutions. She said that FUNDEUN was interested in transferring all the recommendations for improvement for an effective Careers Services Model.

The group members who took part in this session engaged in an efficient debate. Two people from FUNDEUN, Isabel Obrador and Rafael Lafont took notes.

Participants to the Focus Group included:

1. Manuel Palomar, Vice President for Research, Development & Innovation of the University of Alicante.
2. Alfredo Bataller, President of the Sha Wellness Clinic (Hotel Clínica Spa Médico de lujo).
3. Javier López Mora, General Secretary of COEPA (Confederación empresarial de la provincia de Alicante).
4. Juan Ferrer Marsal, Director of Alicante Port.
5. Francisco Ferrando Casanova Manager International Programmes Department of IMPIVA (Instituto de la Pequeña y Mediana Industria de la Generalitat Valenciana).
6. Manuel Cazorla, Managing Director of SISTEL (Sistemas Informáticos de Software y Telecomunicaciones).
7. Cesar Quintanilla, Managing Director of QPHARMA (Pharmaceutical Company).
8. Raquel Rosique, Manager of Elche Industrial Park.
9. Alfonso Ramón Borja, President of the Centro de Gestión del Conocimiento
10. Isabel Obrador, General Manager of FUNDEUN (Fundación empresa Universidad Alicante).

Focus Group in Malta (UoM)

The focus group in Malta was organised in July 2011. As a first step, an email was sent out to the key players identified. A total of 7 people were contacted and who came from: representatives of employers; expert in career guidance; PhD candidates; two University Professors with PhD candidates; as well as the knowledge transfer office at University. Out of these seven different key players a total of 5 persons turned up for the focus group.

The focus group participants were the following:

1. Dr. Manwel Debono, Institute of Labour Studies, University of Malta
2. Dr. Anton Bartolo, Knowledge Transfer Office, University of Malta
3. Mr. Brian Schembri, PhD Candidate;
4. Mr. Mark Schembri, PhD Candidate;
5. Dr. Alexia Borg, Malta Enterprise.

The participants received the careers guidance model document one week before the meeting and were invited to read through the document. They were given the questions to be tackled during the focus group interview.

The focus group was moderated by Dr. Suzanne Gatt while Ms. Laura-Sue Armeni took notes of the points made by the participants. The interview started with an introduction of the DOCENT project and its aims and objectives. The discussion then moved on to the careers service with a quick review. The questions about the careers model were then each tackled in turn.

The focus group took about two hours in total to be completed.

Focus Group Italy (UNIMORE)

Organisations active in the Province of Modena and representing groups more concerned by the activities carried out under DOCENT were identified. These included organisations representing the private and the public sectors (i.e. business enterprises as well as policy makers, at local and district level). Subsequently a comprehensive list was drawn up and contacted via email and phone to identify the most suitable candidates. Of those invited only one could not be present due to institutional commitments: Prof. Sergio Ferrari (Delegato alla Ricerca, UNIMORE). Participants, after agreeing to take part in the meeting, received an email with clear explanations about the exercise to be carried out, its goals and what they would be asked to do. The following documents were sent to the participants:

- the DOCENT Brochure, in PDF format;
- D1.3 Final Report (Italian version/WP1), titled “Transferable skills and employability for doctoral graduates: survey of the current landscape”; and
- D5 (Career Service Model) (to be discussed during the focus group).

The Focus Group was held on 17/05/2010 at UNIMORE premises, Università degli Studi di Modena e Reggio Emilia, Rettorato, 1st floor, via Università 4, “Sala del Consiglio di Amministrazione” at 10 a.m. 10 participants took part in the exercise.

Below, a list of active participants:

1. Ms. Marilena RAVETTO, Placement Office, Manager.
2. Dr. Giulia CATELLANI, Industrial Liaison Office.
3. Dr. Barbara REBECCHI, Manager of the Research Office of the “Università degli Studi di Modena e Reggio Emilia”.
4. Mr. Luca ROSSI, Deputy Director, Confindustria Emilia Romagna.
5. Ms. Valeria FERRARI, Camera di Commercio di Modena - Area Sviluppo Imprese - Ufficio Promozione.

6. Ms. Alessandro ROSSI, Associazione Confindustria Modena.
7. Ms. Greta BERGIANTI, Democenter Sipe.
8. Prof. Maria Giovanna VEZZALINI, Co-ordinator of the PhD Schools, Università di Modena e Reggio Emilia.
9. Ms. Cecilia FABIANO, PhD candidate, UNIMORE in “Scienze, tecnologie e biotecnologie per il settore agro-alimentare”.
10. Ms. Barbara VILLANI, International Relation Office of the “Università degli Studi di Modena e Reggio Emilia”.

The focus group facilitator was Ms. Maria Grazia, ASTER Scienza Tecnologia Impresa - S.Cons.p.a., DOCENT Project Co-ordinator. Mr. Nicola Dorigo Salamon and Dr. Luca Simone Rizzo, Research Office of the “Università degli Studi di Modena e Reggio Emilia” were the rapporteurs.

4.0 Evaluation Results

This section includes the synthesis of the feedback obtained as part of the piloting process of the learning units and the careers service model. The overall results obtained from the three countries where the tools were piloted are provided to give some insights of the overall picture of the impact and the adaptability of the materials across Europe is presented.

4.1 Evaluation of the Learning Units

A total of 9 learning Units were piloted by two partners while an additional two were piloted by Unimore. This means that feedback on a total of 11 learning units was obtained. In order not to make the document too lengthy, each learning unit will be considered in turn, and the main findings will be considered in a combined and concise form. This will enable the evaluation to highlight the strengths and weakness of the learning units as well as identify the areas for improvement both at the specific level of learning units as well as to the learning units overall.

4.1.1 Career management skills and employability

This learning unit was piloted in Spain and in Italy. In total, the number of PhD candidates following this learning unit amounted to 26 and 39 in Spain and Italy respectively. In Italy the main participants came from Health and Geography. In Spain, most of the doctoral candidates were doing research in the Chemistry area (46% of the total), followed by Biology and Building with 13%, Communication with 12% and Material Science and Ecology with 8%. There was more or less a balance across gender, even if in Italy a slightly higher percentage of females followed this learning unit.

In providing feedback about the session, the PhD candidates attending were asked to rate various aspects between 1 and 5, with 1 being the lowest rating and 5 the highest. The table overleaf provides a summary of the feedback obtained in Spain and Italy.

Table 6: Average rating of different aspects of the Learning Unit (LU) – Career Management skills and employability

Aspect being Evaluated	Spain	Italy
Content covered in the course	4.00	4.23
Notes provided during the course	3.80	4.27
Tutor's presentation	3.53	4.27
Relevance of the content	3.61	3.75
Method of delivery of the course	3.42	3.79
Usefulness to find a job	3.53	3.61
Usefulness to career	3.76	4.00

It can be seen that the learning unit was rated positively across all aspects both in Spain and in Italy. The rating was more positive in Italy. It can be said that the participants stated that the material provided in the courses, the presentation of the tutor, relevance of the topic and method of delivery were all good. The participants also felt that the session was useful for

finding a job as well as for their career. This is understandable as the learning unit specifically focused on career management and employability aspects which are directly related to the labour market in terms of finding a job.

Table 7: Degree to which Learning Unit (LU) was considered necessary in preparation for work- Career Management skills and employability

LU necessary for work	Spain	Italy
No	0.00	0.00
A little	4.00	3.85
Yes	56.00	61.54
Definitely	40.00	34.61
TOTAL	100	100

There was a positive response to the need for such session with the great majority of participants stating that the session is necessary as preparation for work. This means that the learning unit was considered relevant to the PhD candidates and a contribution to their preparation for the labour market.

Table 8: Feedback on the length of the learning Unit (LU) – Career Management Skills and Employability

Length of LU	Spain	Italy
Too short	72.00	61.54
Too long	0.00	0.00
Enough	28.00	38.46
TOTAL	100	100

Many of the participants felt that the session was too short. This amounted to about two thirds of the students. One third considered the session to be just right. This response reflects the

amount of support which the students feel that they need and that two hours just touches the issues related to the topic.

Table 9: Overall Rating of the Session – Career Management Skills and Employability

How good LU was rated	Spain	Italy
Not at all	0.00	0.00
A little	8.00	3.85
Enough	0.00	19.23
Quite	60.00	50.00
Very Much	32.00	26.92
TOTAL	100	100

The session was rated very positively both in Spain and Italy, with the great majority rating it in the highest two ratings. It was only a few who did not rate the session that well. The reasons for this, however, were not provided. The conclusion is that the learning unit was considered overall to be quite good and worthwhile.

Table 10: Degree to which the Learning Unit (LU) met the students' expectations – Career Management Skills and Employability

How much LU matched expectations	Spain	Italy
Not at all	0.00	0.00
A little	4.00	7.69
Enough	8.00	26.92
Quite	48.00	26.92
Very Much	40.00	38.46
TOTAL	100	100

The majority of participants in both Spain and Italy stated that more or less the session met their expectations. Only a few felt that it did not meet their expectations that much. Overall the rating was a bit more positive in Spain than in Italy.

Table 11: Degree to which participants would recommend Learning Unit to others – Career Management Skills and Employability

Degree to which students would recommend LU	Spain	Italy
Not at all	0.00	0.00
A little	0.00	0.00
Enough	0.00	19.23
Quite	60.00	26.92
Very Much	40.00	53.85
TOTAL	100	100

All the participants in Italy and Spain stated that they would recommend the session to other PhD candidates. This is considered as a positive response as it means that the learning was considered good and tailored to the PhD candidates' needs.

Feedback from the course tutors was that the course was too short and PhD candidates would benefit from more sessions. There was agreement that it is absolutely necessary for doctoral candidates to be ready for the world of work. None the less, the course was considered as good and sufficient and would recommend it to doctoral candidates although it only caters for some of their expectations.

4.1.2 Recognise and promote your skills

This learning unit was delivered in Malta and in Italy. In Malta the learning unit was attended by 4 students from ICT and Engineering with more males than females attending. In Italy, a total of 39 PhD candidates attended, with more females than males participating.

Table 12: Average rating of different aspects of the Learning Unit (LU) – Recognise and Promote Your Skills

Aspect being Evaluated	Malta	Italy
Content covered in the course	5.00	4.23
Notes provided during the course	5.00	4.27
Tutor's presentation	5.00	4.27
Relevance of the content	3.50	3.75
Method of delivery of the course	5.00	3.79
Usefulness to find a job	5.00	3.61
Usefulness to career	4.00	4.00
TOTAL	100	100

Both the PhD candidates in Malta and in Italy have rated the different aspects of the learning unit quite well. There was a very positive response to the content and notes provided as well as the presentation made by the tutor. Both in Malta and Italy, the PhD candidates found the content quite relevant, even if not as positive as the other dimensions. They also thought that the learning unit had a good degree of relevance to finding a job and building one's career.

Table 13: Degree to which Learning Unit (LU) was considered necessary in preparation for work- Recognise and Promote Your Skills

LU necessary for work	Malta	Italy
No	0.00	0.00
A little	0.00	3.85
Yes	50.00	61.54
Definitely	50.00	34.61
TOTAL	100	100

The PhD candidates in both Malta and Italy expressed positive views about the need of such training in preparation for work. This confirms the relevance of the learning unit for the purpose of helping PhDs to work in industry as is the aim of the DOCENT project.

Table 14: Feedback on the length of the learning Unit (LU) – Recognise and Promote Your Skills

Length of LU	Malta	Italy
Too short	0.00	61.54
Too long	0.00	0.00
Enough	100.00	38.46
TOTAL	100	100

While in Malta the PhD candidates stated that the learning unit session was long enough, two thirds of the students in Spain stated that the session was too short. This learning unit was designed to have activities with the active participation of students. Since the number of participants in Italy was much larger, then probably a longer time was needed for all those at the session to have the time and space to participate. This was not a problem in Malta as the number of participants was much smaller.

Table 15: Overall Rating of the Session – Recognise and Promote Your Skills

How good LU was rated	Malta	Italy
Not at all	0.00	0.00
A little	0.00	3.85
Enough	0.00	19.23
Quite	0.00	50.00
Very Much	100.00	26.92
TOTAL	100	100

While the PhD candidates in Malta rated the session very positively, there was a wider mix of responses in Italy. None the less, the range of responses in Italy were also mainly towards the positive end, with over three quarters stated that the sessions were rated between quite and very well.

Table 16: Degree to which the Learning Unit (LU) met the students' expectations – Recognise and Promote Your Skills

How much LU matched expectations	Malta	Italy
Not at all	0.00	0.00
A little	0.00	7.69
Enough	0.00	26.92
Quite	100.00	26.92
Very Much	0.00	38.46
TOTAL	100	100

Overall, the PhD candidates' expectations were met, even if to varying degrees. It was only a few of the participants in Italy who stated that the learning unit only met a little of their expectations. It can thus be concluded that overall, most of the students' expectations were met and that they were happy with the session as delivered.

**Table 17: Degree to which participants would recommend Learning Unit to others –
Recognise and Promote Your Skills**

Degree to which students would recommend LU	Malta	Italy
Not at all	0.00	0.00
A little	0.00	0.00
Enough	0.00	19.23
Quite	0.00	26.92
Very Much	100.00	53.85
TOTAL	100	100

Practically all the PhD candidates would recommend the session to other students like them. This is a confirmation of the relevance and value of such session with PhD candidates and how much of this type of support they need and would appreciate at this point of their studies.

Among the recommendations put forward, students expressed the need for more time and sessions where they could expand on the issue and potentially also have one-to-one sessions where they would have the opportunity to plan and develop their capabilities. They also suggested that the learning unit be disseminated further among other PhD candidates as they believed that it would be useful to others as it was to them. Even the tutor from Malta felt that there was need for more time to talk and discuss issues at a more personal level.

4.1.3 Commercial Awareness

This learning unit was piloted in Spain and in Italy. In Spain a total of 18 PhD candidates attended while in Italy the number of PhD candidates attending was 17. There was more or less a gender balance in both Spain and Italy. In Spain participants chose to attend the session, career progression, to learn something new, as skills needed in private companies as well as to secure a better job. A similar range of reasons was also given by participants in Italy.

Table 18: Average rating of different aspects of the Learning Unit (LU) – Commercial Awareness

Aspect being Evaluated	Spain	Italy
Content covered in the course	3.83	4.38
Notes provided during the course	3.94	4.25
Tutor's presentation	4.11	4.81
Relevance of the content	3.55	4.06
Method of delivery of the course	3.77	4.19
Usefulness to find a job	3.77	3.81
Usefulness to career	3.88	4.06

The various aspects of the learning unit were evaluated positively by students in both Italy and Spain. The ratings were more positive in Italy than in Spain. The PhD candidates stated that the content, notes and tutor's presentation were good. The students in Italy rated the tutor's presentation exceptionally well. The learning unit was considered as useful both to find a job as well as for one's career.

Table 19: Degree to which Learning Unit (LU) was considered necessary in preparation for work - Commercial Awareness

LU necessary for work	Spain	Italy
No	0.00	0.00
A little	6.00	0.00
Yes	72.00	68.75
Definitely	22.00	31.25
TOTAL	100	100

The PhD candidates felt that the topic of Commercial Awareness was quite important as preparation for work. There was unanimous agreement in both Italy and Spain that the learning unit is needed in preparing to work in industry. This reflects the good degree to which the topics to be included within the learning units are close to the students' needs.

Table 20: Feedback on the length of the learning Unit (LU) – Commercial Awareness

Length of LU	Spain	Italy
Too short	47.06	12.50
Too long	0.00	12.50
Enough	52.94	75.00
TOTAL	100	100

There were slightly different trends in responses in Italy and Spain about the length of the learning unit. While in Spain the responses were balanced between the session being too short or enough, three fourths of the students in Italy felt that the duration of the session was enough. It is understandable that different tutors tackle the same learning unit in different ways, particularly when being delivered to different national contexts. In Spain, it could have also reflected a wish for greater in-depth discussion of the topic.

Table 21: Overall Rating of the Session – Commercial Awareness

How good LU was rated	Spain	Italy
Not at all	0.00	0.00
A little	11.00	6.25
Enough	0.00	0.00
Quite	61.00	31.25
Very Much	28.00	62.50
TOTAL	100	100

This learning unit had overall good reviews by students in both Italy and Spain. It was only in the case of few students who stated that the session was not that good overall. In addition, in Italy, over 60% of the participants rated the quality of the session as very good, whereas in Spain over 60% of students rated the session as quite good.

Table 22: Degree to which the Learning Unit (LU) met the students' expectations – Commercial Awareness

How much LU matched expectations	Spain	Italy
Not at all	0.00	0.00
A little	11.00	6.25
Enough	0.00	0.00
Quite	56.00	43.75
Very Much	33.00	50.00
TOTAL	100	100

Again, we find that with a few exceptions, PhD candidates from both Italy and Spain were quite or very much satisfied with the learning unit which matched their expectations well. This shows that not only was the topic of relevance to the PhDs, but that the learning unit was designed and delivered well to meet the needs of such a specific group of students.

Table 23: Degree to which participants would recommend Learning Unit to others – Commercial Awareness

Degree to which students would recommend LU	Spain	Italy
Not at all	5.56	0.00
A little	0.00	0.00
Enough	0.00	0.00
Quite	50.00	25.00
Very Much	44.44	75.00
TOTAL	100	100

Nearly the whole majority of the PhD candidates attending the Learning Units in both Italy and Spain stated that they would recommend the learning unit to other PhD candidates. This response is significant as it shows that the PhD candidates value the training with which they were provided in this particular learning unit.

Some students made a number of recommendations. They would have liked the notes and learning unit materials to be available electronically. They also believed that they should be given more publicity with other similar level of students. There was also a comment that the session was too much directed towards sales and maybe a wider view considered. Otherwise the participants stated that they would have liked to have more sessions on the topic to be able to expand further their knowledge and skills. The tutors believed that it is absolutely necessary for doctoral candidates and graduates to prepare for the world of work. The course catered for this very well.

4.1.4 Leadership

This learning unit was trialled only in Spain only. There was a good gender balance among the participants, even if there were a little more males than females attending the session. Most of the doctoral candidates were doing research in the chemical area, 17% were from Communication, 11% from the Biology, Ecology and Building areas and 6% from Material Sciences.

This time the majority of participants (84%) were part-time doctorates and only 16% full time. Overall the students were either towards the end of mid-way through their doctorate studies. 43% wanted to work in private companies, 29% at University, while 10% wanted to start their own companies.

Table 24: Average rating of different aspects of the Learning Unit (LU) – Leadership

Aspect of LU being Evaluated	Spain
Content covered in the course	4.16
Notes provided during the course	3.72
Tutor's presentation	4.29
Relevance of the content	4.11
Method of delivery of the course	4.66
Usefulness to find a job	4.05
Usefulness to career	4.22

Significantly positive ratings were given to the session showing that the participants felt that the content and presentation were of very good quality. They also enjoyed the method of delivery used and also thought that the topic was highly relevant. They also felt that the learning unit was very useful both to find a job as well as in their career. These ratings show that this learning unit touched on one particular important issue for PhD doctorates, and that the content prepared and method of delivery were appropriate for the participants.

Table 25: Degree to which Learning Unit (LU) was considered necessary in preparation for work- Leadership

Necessity of LU as preparation to work	Spain
No	42.00
A little	0.00
Yes	0.00
Definitely	58.00
TOTAL	100

There were mixed opinions with respect of the importance of leadership in preparation for work. While a little more than half see leadership as highly relevant and needed preparation for the world of work, the remaining half did not see a strong link. This may be the result of the way in which PhD candidates view preparation for work as well as their role on entering a company. If one just considers ability to look and find a job mainly as an employee, leadership is not that relevant. However, if one considers preparation to be a successful leader at work then leadership training would become very relevant. However, since no explanation was requested from students one cannot be sure about the reasons for such differing opinions.

Table 26: Feedback on the length of the Learning Unit (LU) – Leadership

Length of LU delivered	Spain
Too short	66.67
Too long	0.00
Enough	33.33
TOTAL	100

Two thirds of the PhD candidates felt that the session was not long enough and that they would benefit from more time while the remaining third felt that the time allocated was enough. This, in a way reflects a portion of the students' motivation to learn more about leadership and the need to invest in more training on the topic area.

Table 27: Overall Rating of the Learning Unit (LU) – Leadership

Level of overall rating of LU	Spain
Not at all	5.00
A little	5.00
Enough	0.00
Quite	42.00
Very Much	48.00
TOTAL	100

The PhD candidates, with the exception of one, were very positive about the learning unit by rating it well or very good. This shows that the participants considered it well delivered and highly relevant to what they want to achieve with respect to their career.

Table 28: Degree to which Learning Unit (LU) met students' expectations – Leadership

Match of LU to students' expectations	Spain
Not at all	0.00
A little	5.00
Enough	0.00
Quite	42.00
Very Much	53.00
TOTAL	100

The session was very well rated in terms of the students' level of expectations, with all except one stating that the learning matched their expectations quite or very much. This is indeed very good feedback.

Table 29: Degree to which participants would recommend Learning Units (LU) to others - Leadership

Level of Recommendation of LU	Spain
Not at all	0.00
A little	0.00
Enough	0.00
Quite	26.32
Very Much	73.68
TOTAL	100

The evaluation was very positive throughout with all participants recommending the training to a good degree, with all recommending the learning unit to good and high level. This reflects the great relevance and efficacy with which the learning unit was delivered.

There were few recommendations made by students, these including more time allocation, placing the materials on website as well as considering more open dynamics in the delivery of the session. The course tutor felt that it was too short, but believes it is absolutely necessary for doctoral candidates to be ready to access the world of work. Otherwise, he would highly recommend it to doctoral candidates and doctoral graduates.

4.1.5 Science communication for a knowledge-based society

This learning Unit was piloted in Italy and Spain. In Spain a total of 17 students attended while in Italy the number of participants amounted to 34. There was overall gender balance in Spain while more females attended in Italy. In Spain, doctorate candidates were doing research in the Chemistry (31%), Ecology and Biology (23%), Natural Sciences and Building (8%) and Information Technology and Communication (7%) areas. In Italy there was also a wide range of research areas, these mainly including Health and Geography.

Reasons for attending the course in Spain varied mainly between: for their careers; personal development; to learn new, different things; to help them to manage their careers; and to a lesser degree for skills to work in private companies and to help them secure a better job. In Italy, similar trends were obtained with fewer believing that the learning unit would help them find a better job.

Table 30: Average rating of different aspects of the Learning Unit (LU) – Science Communication for a Knowledge-based Society

Aspect being Evaluated	Spain	Italy
Content covered in the course	3.58	3.52
Notes provided during the course	3.58	3.36
Tutor's presentation	3.82	3.64
Relevance of the content	3.64	3.48
Method of delivery of the course	3.70	3.67
Usefulness to find a job	3.58	2.88
Usefulness to career	3.88	3.36

The ratings for the content, notes, relevance, as well as the methodology and the tutor's presentation were generally rated positively, even if to a lesser extent than the other learning units reviewed so far. The PhD candidates did not think that the learning unit is that relevant to finding a job but considered it more important in the case of building one's career. The topic of the learning unit in question is one where PhDs may not realise immediately its value. One needs to work in industry first to realise that at work, many of the colleagues would not be PhD graduates, and that some would probably not even have studied science. Communicating science to different audiences and in different ways thus becomes an essential skill, particularly when non-scientists can decide whether to invest or not in a scientific project.

Table 31: Degree to which Learning Unit (LU) was considered necessary in preparation for work - Science Communication for a Knowledge-based Society

LU necessary for work	Spain	Italy
No	0.00	3.03
A little	0.00	27.27
Yes	69.00	60.61
Definitely	31.00	9.09
TOTAL	100	100

It appears that the PhD candidates give more value to the need to be able to communicate science when one is at work, than for finding work. Being able to talk about what one has studies and is expert on is not considered as that important for finding a job. We can see, however, that there was a strong sense of realisation of the importance of being able to communicate science as a preparation for work, both in Italy and in Spain.

Table 32: Feedback on the length of the learning Unit (LU) – Science Communication for a Knowledge-based Society

Length of LU	Spain	Italy
Too short	43.75	6.06
Too long	6.25	42.42
Enough	50.00	51.52
TOTAL	100	100

A little less than half of the PhD candidates attending the learning units in Spain felt that the session was too short. On the other hand, the students in Italy considered the session as either long enough or a little long. The responses given do not provide enough insight into the reason for the different reactions, but it could be the tutor's approach, the way in which the content was presented or some other factor.

Table 33: Overall Rating of the Session – Science Communication for a Knowledge-based Society

How good LU was rated	Spain	Italy
Not at all	0.00	0.00
A little	6.00	21.21
Enough	12.00	27.27
Quite	65.00	42.42
Very Much	17.00	9.09
TOTAL	100	100

None the less, the ratings in both Italy and Spain of the session overall was rated positively in both countries. The PhDs stated that the session was good enough, quite or very good. This means that it has been received positively overall by many students. It was only in the case of

one fifth of the students in Italy who rated it less positive. This is possibly why they also found it too long.

Table 34: Degree to which the Learning Unit (LU) met the students' expectations – Science Communication for a Knowledge-based Society

How much LU matched expectations	Spain	Italy
Not at all	0.00	0.00
A little	0.00	21.21
Enough	0.00	30.30
Quite	69.00	9.09
Very Much	31.00	39.39
TOTAL	100	100

There was overall a positive response with respect to how much the learning unit met the PhD candidates' expectations, with about one third of students in both Italy and Spain that the learning unit met their expectations very well. The remaining students in Spain stated that their expectations were quite met whereas in Italy the remaining percentage was distributed between enough and little. Thus the overall response, although positive, was better in Spain than in Italy.

Both in Spain and Italy, the majority of the PhD candidates would recommend the learning unit to other doctorate students to varying degrees. The responses were more positive in Spain than in Italy. This reflects a similar trend in reactions to the other questionnaire items. Having said this, none of the PhD candidates stated that they would not recommend the learning unit.

**Table 35: Degree to which participants would recommend Learning Unit to others –
Science Communication for a Knowledge-based Society**

Degree to which students would recommend LU	Spain	Italy
Not at all	0.00	0.00
A little	0.00	21.21
Enough	0.00	30.30
Quite	56.25	21.21
Very Much	43.75	27.27
TOTAL	100	100

The tutor in Spain felt that the duration of the course was sufficient, as did the students. He believed it is absolutely necessary for doctoral candidates and graduates to prepare for the world of work.

4.1.6 Project management

This learning unit was piloted in Malta and in Italy. The number of participants in Malta was 5 while in Italy as many as 32 attended. While in Malta there was more or less gender balance in those participating, in Italy more females attended the learning unit. Reasons for choosing to attend the learning unit were both in Malta and Italy, mainly for personal and professional development and for finding a job.

Table 36: Average rating of different aspects of the Learning Unit (LU) – Project Management

Aspect being Evaluated	Malta	Italy
Content covered in the course	5.00	3.96
Notes provided during the course	5.00	4.11
Tutor's presentation	5.00	4.04
Relevance of the content	4.00	3.75
Method of delivery of the course	5.00	3.79
Usefulness to find a job	3.50	3.57
Usefulness to career	4.55	4.00

The participants in both Malta and Italy rated the learning unit highly. This was greater in Malta. This may be understandable as in Malta there are very few opportunities of training related to project management of EU projects, and thus participants in Malta were highly motivated to learn about the topic. Student rating in Italy was also high. It can be said that in both countries, PhD candidates stated that the content covered, the notes provided and the tutor's presentation and methodology were of high level and quality. They also felt that the learning unit was useful to find a job as well as for one's career.

Table 37: Degree to which Learning Unit (LU) was considered necessary in preparation for work - Project Management

LU necessary for work	Malta	Italy
No	0.00	3.70
A little	0.00	0.00
Yes	40.00	85.19
Definitely	60.00	14.81
TOTAL	100	100

Project Management was proved to be one area of training which PhD candidates consider as really necessary for preparation for work. There were only a small minority of students in Italy who did not think that this was the case. This confirms that the topic areas chosen within the DOCENT project were selected well.

Table 38: Feedback on the length of the learning Unit (LU) – Project Management

Length of LU	Malta	Italy
Too short	0.00	0.00
Too long	0.00	7.41
Enough	100.00	92.59
TOTAL	100	100

There was wide agreement in both Italy and Malta that the learning unit is long enough. This is reflected by the great majority expressing that the learning unit was long enough and only a few of the students in Italy considering it as too long. Nobody rated the learning unit to be too short. This shows that the amount of content to be covered was well adapted to the time constraints of the learning unit.

Table 39: Overall Rating of the Session – Project Management

How good LU was rated	Malta	Italy
Not at all	0.00	0.00
A little	0.00	3.57
Enough	0.00	42.86
Quite	40.00	39.29
Very Much	60.00	14.29
TOTAL	100	100

There were overall positive ratings given to both sessions in Italy and in Malta with most of the PhD candidates rating the learning unit as quite and very good, the highest two ratings. This also shows that the design and delivery of the learning unit on project management was overall successful.

Table 40: Degree to which the Learning Unit (LU) met the students' expectations – Project Management

How much LU matched expectations	Malta	Italy
Not at all	0.00	0.00
A little	0.00	0.00
Enough	0.00	40.74
Quite	20.00	37.04
Very Much	80.00	22.22
TOTAL	100	100

The good quality of the learning unit is further supported by the PhD candidates' opinion on how much the learning unit has met their expectations. This is demonstrated by the high proportion of students stating that their expectations were met. Although the ratings were

higher in Malta, one must keep in mind that the number of participants in Malta was much less and maybe having fewer students could have made the session more personalised than the large number of students participating in Italy.

Table 41: Degree to which participants would recommend Learning Unit to others – Project Management

Degree to which students would recommend LU	Malta	Italy
Not at all	0.00	0.00
A little	0.00	0.00
Enough	0.00	32.14
Quite	40.00	39.29
Very Much	60.00	28.57
TOTAL	100	100

It is as expected that practically all the PhD candidates who attended the training seminar, will also recommend it to other fellow students. This is a further confirmation that the training developed is relevant to the PhD candidates' needs.

The responses given by the post-learning unit questionnaire show that the learning unit on project management was considered relevant and of value to the PhD candidates. One of the tutors felt that such a learning unit can equip PhD with the basics for participating in EU projects and would avoid a lot of problems of coping with totally new ways of working. The amount of content was considered enough for the time allocated.

4.1.7 Budgeting in a nutshell

This learning unit was piloted in Italy and in Malta. In Italy there were 34 participants while in Malta they were 5. In Italy more females than males attended while in Malta there was a balance in gender.

This learning unit is quite technical in nature and the evaluation of this unit should be considered in terms of its content whereby not everybody likes accounting. None the less, it has to be acknowledged that all those involved in certain levels in industry need to have a basic understanding of budgeting issues.

Table 42: Average rating of different aspects of the Learning Unit (LU) – Budgeting in a Nutshell

Aspect being Evaluated	Malta	Italy
Content covered in the course	4.40	3.89
Notes provided during the course	4.40	4.04
Tutor's presentation	4.80	4.14
Relevance of the content	3.80	3.82
Method of delivery of the course	4.80	3.68
Usefulness to find a job	4.20	3.21
Usefulness to career	4.00	4.30

The PhD candidates rated the different aspects of the learning units quite well, considering the content, notes provided, and the tutor's presentation and methodology overall positively. While they consider budgeting less important to find a job, it is considered more important to one's career.

Table 43: Degree to which Learning Unit (LU) was considered necessary in preparation for work - Budgeting in a Nutshell

LU necessary for work	Malta	Italy
No	00.00	0.00
A little	20.00	21.43
Yes	40.00	64.29
Definitely	40.00	14.29
TOTAL	100	100

The majority of the PhD candidates in Malta and Italy stated that the learning unit on budgeting is important as preparation for work. Only about one fifth of the participants felt that budgeting is not that important. This may mainly be due to the students not appreciating the need to know such things for work purposes as they do not consider it as necessarily related to their future work.

Table 44: Feedback on the length of the learning Unit (LU) – Budgeting in a Nutshell

Length of LU	Malta	Italy
Too short	0.00	0.00
Too long	0.00	17.86
Enough	100.00	82.14
TOTAL	100	100

The PhD candidates felt that the two learning units were long enough. This was the opinion of all the participants in Malta, and the great majority of those following the learning unit in Italy. It can be concluded that the length of the learning unit is overall adequate.

Table 45: Overall Rating of the Session – Budgeting in a Nutshell

How good LU was rated	Malta	Italy
Not at all	0.00	0.00
A little	0.00	0.00
Enough	0.00	57.14
Quite	40.00	28.57
Very Much	6.00	14.29
TOTAL	100	100

The learning unit was rated overall positively by PhD candidates both in Malta and in Italy. This shows that the learning unit was successful and can be considered to be a good learning unit.

Table 46: Degree to which the Learning Unit (LU) met the students' expectations – Budgeting in a Nutshell

How much LU matched expectations	Malta	Italy
Not at all	0.00	0.00
A little	0.00	10.71
Enough	0.00	39.29
Quite	20.00	32.14
Very Much	80.00	17.86
TOTAL	100	100

The PhD candidates in Malta felt that the session met their expectations much more than the students in Italy. None the less, in both countries, the overall rating was positive and the majority of the students were quite satisfied with the training provided.

Table 47: Degree to which participants would recommend Learning Unit to others – Budgeting in a Nutshell

Degree to which students would recommend LU	Malta	Italy
Not at all	0.00	0.00
A little	0.00	10.71
Enough	0.00	28.57
Quite	20.00	25.00
Very Much	80.00	35.71
TOTAL	100	100

Most of the students stated that they would recommend the learning unit to other students like them. This is to be considered favourably since it shows that the planned training was relevant and of value to the target group for which it was designed.

One tutor felt that there was not enough to go through the whole content prepared if one stops to discuss issues raised by the students. This should be taken into consideration.

4.1.8 Intellectual Property management

This Learning unit was piloted in Malta and in Italy. Participants in Malta were 4 while those in Italy were 32. In Malta participants came from Engineering and ICT while in Italy these ranged from various areas of science studies ranging from healthcare, pharmacy to the Geography.

Table 48: Average rating of different aspects of the Learning Unit (LU) – Intellectual Property Management

Aspect being Evaluated	Malta	Italy
Content covered in the course	3.50	3.93
Notes provided during the course	4.00	3.97
Tutor's presentation	4.00	3.73
Relevance of the content	4.00	3.43
Method of delivery of the course	4.00	3.43
Usefulness to find a job	3.50	2.77
Usefulness to career	4.00	3.27

The learning unit was rated positively in the two countries where it was piloted and across both countries the PhD candidates rated well the content, notes as well as the tutor's presentation and methodology. The usefulness for a job or career was rated higher in Malta. This was mainly because those attending from Malta were interested in setting up their own company.

Table 49: Degree to which Learning Unit (LU) was considered necessary in preparation for work - Intellectual Property Management

LU necessary for work	Malta	Italy
No	0.00	3.13
A little	25.00	28.13
Yes	25.00	62.50
Definitely	50.00	9.38
TOTAL	100	100

There was acknowledgement that learning about intellectual property rights is important training for working in industry, even if in both Malta and Italy, about one fourth of those attended did not think that it was that important.

Table 50: Feedback on the length of the learning Unit (LU) – Intellectual Property Management

Length of LU	Malta	Italy
Too short	0.00	6.45
Too long	0.00	45.16
Enough	100.00	54.84
TOTAL	100	100

In Malta the students felt that the training session was long enough. In Italy, a little less than half felt that the session was a too long. The topic of intellectual property rights is a technical one with different implications for the different sectors since the application of IPR and copyright vary according to the work and type of outputs produced. It could be for this reason that some of the students in the group considered it too long.

Table 51: Overall Rating of the Session – Intellectual Property Management

How good LU was rated	Malta	Italy
Not at all	0.00	0.00
A little	0.00	21.21
Enough	25.00	27.27
Quite	25.00	42.42
Very Much	50.00	9.09
TOTAL	100	100

One fifth of the PhD students in Italy had reservations with respect to the overall rating of the learning unit. The rest of the PhD candidates in Italy, and those in Malta were more positive and reflected a greater appreciation of the session. As already highlighted, the nature of this learning unit has different levels of interest to those working in different areas of research.

Table 52: Degree to which the Learning Unit (LU) met the students' expectations – Intellectual Property Management

How much LU matched expectations	Malta	Italy
Not at all	0.00	0.00
A little	0.00	21.21
Enough	0.00	30.30
Quite	50.00	39.39
Very Much	50.00	9.09
TOTAL	100	100

The rating given by the PhD candidates in Malta was more positive than those in Italy. This reflects consistency in the responses of the Italian students. It could be that these PhD students needed a session which was more specifically tailored to their specific needs within their sector of study and in the case of the mixture of areas in Italy, this varied from health to engineering which have different IPR implications.

Table 53: Degree to which participants would recommend Learning Unit to others – Intellectual Property Management

Degree to which students would recommend LU	Malta	Italy
Not at all	0.00	0.00
A little	0.00	21.21
Enough	0.00	30.30
Quite	50.00	21.21
Very Much	50.00	27.27
TOTAL	100	100

The PhD candidates from Malta were more positive than those in Italy. One has to state that the type of training on IPR is not common in Malta and so the motivation to learn was high. In Italy, the reactions were again less positive, this reflecting that the session may have not been tailored for the needs of all the students and that some of the PhD candidates may have needed slightly different approaches than others.

4.1.9 Creativity

This learning unit was trialled only in Spain. There was overall a good gender distribution across gender. 46% were doing research in the Chemistry, 29% Biology and 7% Building, ICT, Materials Sciences and Ecology. The great majority (87%) were full-time students. A little less than half of the participants wanted to work in industry, 7% already had a job in industry and 4% wanted to start their own business. The rest preferred a job in academia.

There was a distribution of reasons given for which the participants decided to attend the session. These were distributed between personal and professional development and to learn new things. To a lesser extent, reasons given included those of securing a job in industry and to work in private companies. The reason for this could be that the participants did not relate the direct relationship between the topic of creativity and that of employment.

Table 54: Average rating of different aspects of the Learning Unit (LU) – Creativity

Aspect being Evaluated	Spain
Content covered in the course	3.58
Notes provided during the course	3.58
Tutor's presentation	3.76
Relevance of the content	3.70
Method of delivery of the course	3.58
Usefulness to find a job	3.64
Usefulness to career	4.00

The ratings given to the session was overall positive, and higher than the average of 2.5. It can be noted that overall the content covered, the notes provided as well as the tutor's presentation were considered quite good. The content was also considered quite relevant and the reactions to the approach adopted in the delivery were also positive. The highest rating was that given to the usefulness to the career. The session was considered to be very relevant to their career. This is particularly important and positive to the evaluation of the learning unit as it shows that the PhD candidates' needs have been identified and catered for well.

Table 55: Degree to which Learning Unit (LU) was considered necessary in preparation for work- Creativity

Necessity of LU as preparation to work	Spain
No	0.00
A little	0.00
Yes	76.00
Definitely	24.00
TOTAL	100

There was strong agreement that training in creativity is important in preparation for work. This reflects the acknowledgment of future researchers on how creativity impinges on their performance as researchers as well as for survival and success within industry.

Table 56: Feedback on the length of the Learning Unit (LU) – Creativity

Length of LU	Spain
Too short	82.35
Too long	0.00
Enough	17.65
TOTAL	100

The participants felt that the session was not long enough, this amounting to over 80% of the participants. This is to be understood as, on the one hand creativity is a wide area of study and tackling its many different aspects is demanding. In addition, in view of the importance which the participants give to creativity, it is understandable that they would be motivated to learn as much as possible. Two and a half hours bring limitations and as intended, only provide a flavour of an issue rather than in-depth knowledge and understanding as well as skills in how one can be creative.

Table 57: Overall Rating of the Learning Unit (LU) – Creativity

How good LU was rated	Spain
Not at all	0.00
A little	0.00
Enough	17.00
Quite	55.00
Very Much	11.00
TOTAL	100

There was overall a positive rating of this learning unit, with no negative rating given. The majority of the students attending the sessions were quite satisfied with the learning unit provided. In fact, none of the students gave a negative rating.

Table 58: Degree to which the Learning Unit (LU) met the students' expectations – Creativity

Match of LU with students' expectations	Spain
Not at all	5.00
A little	28.00
Enough	39.00
Quite	28.0
Very Much	0.00
TOTAL	100

It appears that the PhD candidates had quite high expectations of the session. While they have rated the session overall positively, they were less positive when stating the degree to which it met their expectations. In all probability, participants could have expected more direct training in techniques than that provided and this could have been reflected in the less positive response obtained with respect to expectations.

Table 59: Degree to which participants would recommend Learning Unit (LU) to others - Creativity

How much would students recommend LU	Spain
Not at all	5.56
A little	0.00
Enough	61.11
Quite	33.33
Very Much	0.00
TOTAL	100

Overall, with the exception of one, the PhD candidates would recommend the session to other PhD candidates. This means that despite not exactly meeting their expectations, they still felt that the learning unit would be worthwhile for other PhD candidates.

In terms of the recommendations provided, the students attending asked for the course content to be available on internet for download. They also thought that the training could be disseminated further for more impact. With respect to improving the content of the learning unit, students recommended extending the duration of the course and presenting more practical examples of innovation.

4.1.10 Entrepreneurship

This learning unit was piloted in both Malta and Spain. Participants in Malta were 5 while in Spain they were 18. In both countries there was overall a good balance across genders. In Malta, participants were mainly from ICT and Engineering. In Spain, most of the doctoral candidates were from Biology (46%), followed by Chemistry (31%), Communication and Ecology (8% each) and 7% from ICT. In Malta there was a balance between full- and part-time students while in Spain 81% were full-time and the remaining were part-time.

Table 60: Average rating of different aspects of the Learning Unit (LU) – Entrepreneurship

Aspect being Evaluated	Malta	Spain
Content covered in the course	5.00	3.94
Notes provided during the course	3.67	3.88
Tutor's presentation	4.00	4.16
Relevance of the content	4.67	3.61
Method of delivery of the course	4.00	3.77
Usefulness to find a job	4.00	3.88
Usefulness to career	4.25	3.72

The rating of the PhD candidates attending the learning unit on entrepreneurship were positive in both Malta and in Spain. The ratings were slightly higher in Malta but the differences were not much and the same trend can be noted. It can be concluded that both in Malta and in Spain, the PhD candidates agreed that the content covered, its relevance and notes given, as well as the presentation and methodology adopted by the tutor was of good to high quality with a rating around 4 out of 5 in most of the cases. They also recognise the usefulness of learning about entrepreneurship, both for finding a job as well as for one's career.

Table 61: Degree to which Learning Unit (LU) was considered necessary in preparation for work - Entrepreneurship

LU necessary for work	Malta	Spain
No	0.00	0.00
A little	0.00	0.00
Yes	0.00	67.00
Definitely	100.00	33.00
TOTAL	100	100

There is also a strong realisation and conviction among the PhD candidates attending the learning unit that training in entrepreneurship is very important as part of the preparation for the world of work. This is reflected in the responses by PhD candidates in both Malta and Spain.

Table 62: Feedback on the length of the learning Unit (LU) – Entrepreneurship

Length of LU	Malta	Spain
Too short	0.00	88.89
Too long	0.00	0.00
Enough	100.00	11.11
TOTAL	100	100

While the participants to the learning unit in Malta stated that the session was long enough, those in Spain indicated that it was too short. In the case of Malta, the session was 2 ½ hours long rather than 2 hours and this may be the reason why such a pattern of response was obtained. The response in Spain can show that the students would like to have further training in entrepreneurship.

Table 63: Overall Rating of the Session – Entrepreneurship

How good LU was rated	Malta	Spain
Not at all	0.00	6.00
A little	0.00	5.00
Enough	0.00	0.00
Quite	80.00	67.00
Very Much	20.00	22.00
TOTAL	100	100

With the exception of a very small number in Italy, the rest of the PhD candidates attending the learning unit on entrepreneurship have rated the session overall as quite and very positive. This is consistent with the other responses for the learning unit obtained.

Table 64: Degree to which the Learning Unit (LU) met the students' expectations – Entrepreneurship

How much LU matched expectations	Malta	Spain
Not at all	0.00	0.00
A little	0.00	5.00
Enough	0.00	11.00
Quite	80.00	56.00
Very Much	20.00	28.00
TOTAL	100	100

Again, one finds consistency in the PhDs' rating of how much the learning unit matched the candidates' expectations. As expected, the rating in Malta was higher than in Italy, but students in both countries was positive with the majority of students stating that the session met their expectations.

Table 65: Degree to which participants would recommend Learning Unit to others – Entrepreneurship

Degree to which students would recommend LU	Malta	Spain
Not at all	0.00	5.56
A little	0.00	5.56
Enough	0.00	38.89
Quite	20.00	50.00
Very Much	80.00	5.56
TOTAL	100	100

Overall there was a positive response with respect to recommending the learning unit to other PhD candidates, even if the students in Malta were more positive than in Spain. It was only a few students in Spain who were reluctant to recommend the learning unit where over half of them stated that they would recommend the learning unit.

The tutor in Spain admitted that even he found the learning unit too short and that more time could be dedicated to it.

4.1.11 How to write a Business Plan

This learning unit was piloted in Spain and in Italy. The number of PhD candidates attending the learning units in Malta was 8 while those following the learning unit in Italy was 18. There was more or less a gender balance in both Malta and Italy.

When asked to rate the content, notes and relevance of the content, a positive rating was given by the PhD candidates. The tutors' presentations and methodology was also rated quite positively. This shows that the PhD candidates attending the learning unit had appreciated the material prepared for them and considered them worthwhile. Many of the PhD candidates also said that they felt that the learning unit was useful for finding a job or to their career. The students attending could have the intention of developing their own business which would mean that they would necessarily need to know how to prepare a business plan.

Table 66: Average rating of different aspects of the Learning Unit (LU) – How to write a Business Plan

Aspect being Evaluated	Malta	Italy
Content covered in the course	4.38	4.38
Notes provided during the course	3.88	4.25
Tutor's presentation	4.25	4.88
Relevance of the content	3.50	4.00
Method of delivery of the course	4.50	4.56
Usefulness to find a job	4.13	3.88
Usefulness to career	3.63	4.13

Table 67: Degree to which Learning Unit (LU) was considered necessary in preparation for work - How to write a Business Plan

LU necessary for work	Malta	Italy
No	0.00	6.25
A little	0.00	0.00
Yes	37.50	56.25
Definitely	62.50	37.50
TOTAL	100	100

The value of the learning unit was considered very important as a preparation for the world of work by most of the PhD candidates. This is reflected in the great majority of those attending the session in their response in the questionnaire.

Table 68: Feedback on the length of the learning Unit (LU) – How to write a Business Plan

Length of LU	Malta	Italy
Too short	25.00	12.50
Too long	0.00	6.25
Enough	75.00	81.25
TOTAL	100	100

Over three quarters of the participants stated that the learning units were long enough, with the majority of the rest stating that they thought that it was too short. This shows that overall the material prepared to be covered during the learning unit was enough for the duration of the learning unit.

Table 69: Overall Rating of the Session – How to write a Business Plan

How good LU was rated	Malta	Italy
Not at all	0.00	0.00
A little	0.00	0.00
Enough	12.50	18.75
Quite	37.50	12.50
Very Much	50.00	68.75
TOTAL	100	100

All the participants to the learning unit have rated the session positively to some degree. In both Malta and Italy more than half of those attending said that they rated the learning unit as very good. None of the participants in either Malta or Italy rated the session as slightly or not good overall.

Table 70: Degree to which the Learning Unit (LU) met the students' expectations – How to write a Business Plan

How much LU matched expectations	Malta	Italy
Not at all	0.00	0.00
A little	0.00	0.00
Enough	25.00	12.50
Quite	37.50	37.50
Very Much	37.50	50.00
TOTAL	100	100

Like the responses obtained for the overall rating, in the same way the PhD candidates in Italy and Malta were also very positive in the degree to which the session had met their expectations.

**Table 71: Degree to which participants would recommend Learning Unit to others –
How to write a Business Plan**

Degree to which students would recommend LU	Malta	Italy
Not at all	0.00	0.00
A little	0.00	0.00
Enough	12.50	18.75
Quite	25.00	25.00
Very Much	62.50	56.25
TOTAL	100	100

Following the very positive feedback in the previous questions about the learning unit, one finds that the PhD candidates were also very positive with respect to whether they would recommend the learning unit to other PhD candidates. In fact, in both Italy and Malta, over half of the PhD candidates stated that they would strongly recommend the learning unit to other students. In addition, another one quarter of the PhD candidates stated that they would quite recommend the learning unit.

This section has provided the evaluation of the individual learning units. The overall conclusions will be discussed further on in this report.

4.2 Evaluation of the Careers Services Model

The following are the main feedback results obtained from the three focus groups organised in Malta, Spain, and Italy. For the sake of clarity, a number of subheadings are used in order to tackle the various aspects of the career guidance model.

4.2.1 Need for a careers services for doctoral candidates and graduates

All the participants with the exception of one in Spain agreed that there is a need for an institution or entity to provide doctorate candidates with a service to guide their career development outside university. The participants in Italy also agreed that there was a need for such a careers service. This was not the same response obtained in Malta. The participants in Malta highlighted that since in Malta employment for graduates and transition to the labour market is not a problem, then the need for support for doctorate candidates is currently not a priority. The PhD candidates present at the focus group in Malta, however, stated that even if they may not have problems finding a job, if they want to set up their own business, they would surely benefit from any help and support that they may receive during their studies. In view of this argument, the feeling in Malta was that although not currently a need, some form of support as that described in the careers service model would be needed in the future as the number of doctorate candidates in Malta increase.

Interest by doctorate candidates to look for career prospects outside academia

The University and the sector representatives in Spain and Malta agreed that there was an increased interest in PhDs to look for work outside academia. In Spain and Italy, participants from the business area mentioned that overall employers lacked information with respect to the possibility of hiring doctoral graduates and the added value of doing so. It also became evident that it was not clear to companies how profitable it is for them to hire a doctoral graduate rather than another type of candidate. A similar opinion was expressed in Malta. In the case of Malta, the opportunity for start up of a new business, that is entrepreneurship is

what a number of PhD candidates tend to consider more. In Italy, the gap between industry and academia was stressed highly and felt that one of the main issues that the careers service to consider is that of supporting businesses and academia to come closer, use similar language to collaborate more.

Most members in Spain said that it is convenient and necessary to develop a specific framework for managing the Career Service for doctoral candidates at the university. As already mentioned, in Malta, although the value of the careers model was acknowledged, they felt that there is no immediate need. In Malta, this service was viewed to be spread over the already existing structures which can extend their services to also include those related to PhD graduates. One example cited was that in the plans of setting up an observatory on employment and career guidance services in Malta, the observatory could also include a focus on the employment trends and development related to PhD graduates.

Lastly, the focus group in Spain said that there had not been any discussion in their institutions/companies about the need to provide a Careers Service for doctoral candidates or graduates. In Malta, the University is investing in knowledge transfer and is designing training to support PhD graduates. It has embark on a project supported by the European Social Fund in a Training programme for post-graduate students with the aim of promoting further knowledge transfer from academia to industry.

In Italy the discussion considered economies of scale. How many PhD candidates would make the provision of the service worthwhile, particularly during a time when budge cuts are being made. In Italy, it was believed that the careers services model could be set up at a regional level.

4.2.2 Relevance of the Careers Services Model

Relevance of the objectives for the two aspects of the careers services

The focus groups in Spain and Malta agreed that the objectives set for the careers services are relevant to the service which it is designed to provide. It was mentioned that many aspects have been included and the main issue appears, especially in Malta, to be that of deciding which services to implement first.

Aspects for service provision overlooked/left out

The focus group in Spain highlighted that it is important to stress the business sector's motivation to improve appreciation of the possibilities and profitability of doctoral graduates working in companies. A similar concern was expressed in Malta, where it was felt that employers still do not appreciate the contribution which doctorate graduates bring to their business. A similar argument was also raised in Italy.

One suggestion put forward in Spain was to provide more emphasis on HOW to carry out the activity in this advisory office, in other words, tools that make it possible. The business representatives in Spain also stated the importance of having an information platform where companies can state their needs to enable doctoral candidates to choose these themes to develop their doctoral theses in matters of interest to companies.

A suggestion put forward by participants in Malta was the need to clarify in the document that the careers services document does not necessarily have to reside in one entity but rather represents a framework of services which can be provided by different entities and in different ways. This should preferably be stated and clarified at the beginning of the document.

In Italy, the financial aspect of the implementation was considered a very important aspect.

Additional objectives/aspects to be included

Comments from the various focus groups, but particularly from Spain referred mainly to the need to strengthen the European DOCENT project and particularly the Career Service Model with the incorporation of more countries. Greater emphasis should be given to contacts between Universities and industry. Participants in Italy highlighted the need for industry and academia to work closer together and become organised in order for academia to cater better for industrial needs.

Degree to which activities and products are helpful to career services providers

The general opinion about how much the activities and products were helpful to career service providers, both in Spain and in Malta, was positive, and that the document provided quite a comprehensive proposal for activities and products which can be taken up by such a careers service. The participants in Spain emphasised how it was also important for the document to be properly publicised and brought to the attention of the interested parties such that implementation of aspects of it can start being taken up by institutions across Europe. Although the overall opinion in Spain and Malta was that there was still some time for institutions to appreciate the need for providing careers service for Doctorate candidates, there will be a greater need in the future where institutions need to move from considering careers services in a very generic way and to focus more on the needs of PhD graduates.

One suggestion was for the document to provide some concrete examples in order to help institutions understand what is being achieved.

4.2.3 Implementation of the careers model

Clarity

The focus groups in Spain and Malta stated unanimous that the third part of the document describing the steps for implementation were described with clarity. However, they agreed that this would be better understood following practical implementation. There was, particularly in

Spain, the feeling that it was rather theoretical and complex and that it could be simplified and more practical if some real life examples were provided..

Applicability

The majority of participants in the focus groups agreed that the proposed implementation was generic enough to be implemented across a number of different structures. None the less, some opinions from business in Spain indicated that the implementation of the model would not be possible without a degree of guidance. Some university representatives said that can only be implemented in universities, technology and/or business institutes. The overall reaction was that the relevant key stakeholders needed to get together and to discuss the implementation of the careers service model according to the specific needs and context of the region and/or country being considered. The service model should thus serve as a base or starting point. There was agreement that the service would be valuable for doctoral candidates, and when put in place, may also give a competitive advantage in the medium term to companies, which will add value to their institutions by having specialised employees. The recommendation from Spain was that of offering a standardised service among the different Universities. The main concern in Italy was that there was not enough detail about the number and type of personnel needed, how many University tutors to be included and other similar practical aspects.

4.2.4 General comments

The overall comments in the various focus groups reflected the current financial crisis being experienced which is not the best for expansion of services because companies are not doing anything new. None the less, investment in doctorate candidates by government could be one of boosting competitiveness within industry.

There was recognition that there is to date no specific careers service for doctoral graduates in many Universities, and nothing or very little is being done in this field, with only some technological institutes habitually working and training doctoral graduates for companies.

An emphasis was placed on the careers services to be close to industry and to be able to sensitise Universities as much as possible to the needs of and developments within industry sectors. The participants in Italy pointed out that the document does not consider the financial aspect of the implementation of the model. This, they felt was an important aspect and that it should be implemented in the document and given its due attention.

In order to implement the careers service effectively and with minimal additional investment, it was considered wise to consider other already existing types of career services, such as undergraduate careers guidance already provided by different institutions and to build on them. It was also considered very important to take advantage of already existing synergies with other university bodies providing related services to economise on effort and investments. In view of this, some participants suggested that level of coordination between the institutions involved should be included in the start service.

While there was strong agreement overall that the document would be very useful, mainly for universities, provided there is real interest in carrying it out and investing in it.

5.0 Overall Evaluation Outcomes

This section wraps up the overall findings and main messages which emerged from the evaluation exercise of the outputs produced as part of the DOCENT project. Due to the different nature of the learning units and the careers services, these will be tackled in separate sections below. In each section, the main strengths and issues which were identified are reported in a concise manner.

5.1 The Learning Units

The following provide a synthesis of the overall findings which emerged from the piloting exercise of the Learning Units. One can note immediately that the main feedback was positive and many of the suggestions made were intended mainly to find ways for improvement of what has been offered rather than radically changing the material developed. The main overall findings can be listed to include the following:

- **PhD graduates expressed a need for such training across all LUS:** When one runs through the overall ratings given to the different learning units by the PhD candidates across the three different countries, an overwhelming positive response is noted. It can be said that the piloting of the Learning Units can be considered to be overall successful. This is a confirmation that the DOCENT project is responding to a real- felt need;
- **Those LUs more closely related to the world of work were better received:** When one looks at the varying degrees of student satisfaction, it could be noted that some Learning Units reflected a greater positive feedback than others. This trend was noted mainly for those Learning Units that are more related to the world of work. So learning units such as Recognise and promote your skills, Entrepreneurship and How to write a Business plan reflected greater interest than Learning units such as Leadership, project management, IPR and Communicating Science. These latter ones were not considered to be as directly related to the students' immediate needs for employment and thus, although worthwhile, were not considered as crucial as for others;
- **In many cases LUs could have been longer:** There were frequent comments that some of the Learning units were too short. There appear to be various reasons for such comments. Often, this has been the result of students wishing to have more time to discuss their own specific situation or else to go deeper into the topic area being tackled. This may not necessarily mean that the Learning Units need to be a little longer in some cases, but

more so that there is potential for the further development of some Learning Units and to offer PhD candidates more sessions as the need is greater;

- **Some LUs could have been better tailored to the group needs:** Some common trends in responses and comments made reflect a desire by the PhD candidates to go deeper into particular aspects within the Learning Units. For example, one suggestion made about the Learning Unit on Business Plan, the PhD candidates wished that they could go on to write their own business plan and to have tutoring along the way;
- **Group size influences the effectiveness of the LU:** There was a tendency for slightly higher rating to be obtained when the groups were smaller. This shows that when the groups were over 30 they could have been too big and that the amount of discussion possible was limited;
- **There is potential for some LUs to be expanded more to reflect specific needs of the PhD candidates:** Some of the Learning Units could be more tailored to the type of PhD candidates present. This was evident in Learning Units such as IPR where the PhDs participating had different needs and interests. In such cases it could make more sense to group the PhDs with similar interests and intentions when organising the learning Units;

These main findings help to identify the ways in which the learning units can be improved further to be tailored for the needs of the PhD candidates. What can be concluded is that they have been positively received in three different countries which reflect their applicability across a European context.

5.2 Careers Services Model

The overall outcomes of the evaluation of the Careers Services Model show that the participants of the focus groups expressed a positive opinion about the quality of the careers service document and their contributions were mainly aimed at improving what they considered a good and quite comprehensive piece of work. The points which were raised by the three different focus groups can be gathered to include the following points:

- ***There is to a degree a need for such as service:*** There were different opinions about the need to have careers services provision for PhD graduates. While there was agreement that the type of support and guidance required by PhDs was different to that of University students at other different levels, there were mixed reactions about the need to invest in such service at this point in time. This concern was expressed mainly in Malta where the number of PhD graduates is still small even though growing gradually, and where many of the PhDs still find employment within academia with little problems to enter the labour market;
- ***Careers Service is relevant and needed for PhD Graduates:*** The careers service model as conceptualised and developed by the Docent group was considered as relevant to the needs of PhD candidates in science and technology, and that it addresses overall their needs in terms of preparation to enter the labour market in industry rather than in academia;
- ***There is a growing interest among PhD Graduates in careers outside academia:*** There was an overall acknowledgement that more PhD graduates are considering the option of working in industry, whether in starting up their own business or within existing industries. Although there was recognition that the current financial crisis limits SMEs' capacity to invest financially in employees with a PhD, while acknowledging that governments may recognise and invest in PhDs to boost industry's competitiveness;

- ***Model is overall comprehensive considering many aspects:*** The participants to the focus groups stated that the careers service model was overall comprehensive and that many different aspects of the types of support and services which can be offered have been taken into consideration. While the comprehensiveness of the document was acknowledged, there was also mention to indicate within the document that in implementation, there is no need to cater for everything and to offer all types of services at one go;
- ***Careers service is not necessarily a one-entity provision:*** One remark which emerged in some of the comments was that in reading through the careers services document, the impression that it was talking about one single entity was given. The focus group participants mentioning this agreed that it would make sense to have services offered at different points and by different entities if this made more sense and was more economically and logistically viable. A recommendation put forward was that this point be made early in the document so that readers are aware from the beginning of the different permutations in the implementation of the careers guidance service;
- ***Implementation process is described clearly and concisely:*** There was overall agreement in the focus groups that the section of the document describing the process of implementation of the careers services model was clear and concise. This was considered helpful as those entrusted with its implementation would understand clearly and easily how they can go about the process;
- ***Inclusion of more practical examples:*** It was considered helpful if some practical examples of existing models of the careers model were included in the document to provide concrete examples to those using the document for implementing their own structures to see how other institutions have gone about the process in their own context;
- ***There needs to be greater communication/channels with industry:*** Although mentioned within the careers guidance document, those coming from industry re-emphasised the need to have very good communication channels between industry and

academia and that this should maybe made very clear and given that additional attention in the document;

- ***Inclusion also the importance for service providers to network and communicate to each other:*** One aspect which the document could include more prominently was the need for the career services themselves to network with each other such that they can learn from each others' experience, provide a wider access of information, as well as be better able to map research needs and opportunities for employment within industry within a wider European context;
- ***Emphasis on utilising already existing services/structures for other level students:*** One consideration put forward was that it would make sense to use already existing careers services structures, even if these usually cater for students at lower levels of study, and to extend and adapt these services to PhD candidates where possible in order to maximise existing resources and structures and avoiding the need for major investment for the implementation of such model.
- ***Simplify model to make it more flexible thus encouraging its adaptation:*** One suggestion was to consider making the document simpler and possibly less detailed in view of increasing its possibility of increasing its take up by University institutions. In considering this option, a possible balance between aiming for comprehensiveness and practicality needs to be taken into consideration;
- ***Give a greater consideration to the financial implications:*** This comment was raised in view of the current economic crisis where funding is even more difficult to find. The focus groups highlighted how the implementation of the careers model had financial implications as it implies the need for more personnel and more services, and all this costs money. There was also with this, the suggestion to include some more practical details with respect to the amount of doctorate candidates who would make the careers service viable and at what level it should and could be implemented;

- ***Upgrade the European Project by adding more countries:*** Although possibly beyond the scope of the current project, it would make sense to have the inclusion of different perspectives through extending the number of countries involved in the process of development of the careers services model.

It can be noted from these points that there were overall many positive comments and reflections on the careers services model and that the main suggestions and recommendations made focused more on ways of making the document more practical such that it is eventually taken up and used by institutions rather than being left just as a document for reference. This is positive to the project partners as it is their aim to see aspects of the careers services model implemented in the different organisations across Europe for the benefit of both the PhD candidates as well as to the industry and Europe overall.

6.0 Areas for Improvement

An evaluation process is not carried out only for the sake of identifying the strengths and weaknesses of a product. One important outcome of an evaluation is the improvement of the products based on the weaknesses or areas for further improvement which have been identified. In the case of the learning units and the careers services model, the evaluation has served to provide insight into how these products can be improved both in their overall approach as well as at more precise technical level.

Following the evaluation exercise and an identification of the overall outcomes, it is now possible to identify the ways in which the two products can be improved. The areas of improvement for each of the outputs are considered in the two sections which follow below.

6.1 Improving the Learning Units

Based on the main feedback results on the Learning Units, a number of recommendations can put forward. Some of these recommendations refer to the content of the Learning Units. Other recommendations refer to the way in which the Learning Units are implemented and further training for PhD students developed.

- ***Consider the options for some Learning Units to be a little longer than 2 hours:***
There is at times the possibility for the Learning Units to involve a discussion between the tutor and the students. It would make more sense if the Learning Units be allowed a little more time to be implemented. If a time slot of 3 hours is allocated instead of 2, there will be more time for discussion. It will always be possible to finish the session before the time allocated, but if there is a lively discussion, the tutor would be able to take advantage of this extra time allocated;
- ***Limit the number of PhD candidates in any one group:*** While too small a group does not make an audience, when the group becomes too big, then the quality of the learning

experience is affected. It is recommended that where possible, that the number of students following the Learning Units should not be greater than 25, even if a number of 20 would be better. This would allow more interaction between the tutor and the students;

- ***Group students with similar needs (not necessarily similar background):*** There are Learning Units which may be given a different approach depending on the type of interest of the students. When organising Learning Units, it would be better to try and group students with similar needs e.g. need to learn how to submit a product for a patent, or for those who want to have their own business etc.;
- ***Plan potential extensions to the existing Learning Units:*** There was an expression for additional training in a number of cases, often with a personalised approach. This means that the Learning Units, although serving a good purpose, may not be enough to prepare PhD candidates for work in industry. Entities delivering the Learning Units may consider adding on other forms of training and support to those students who express a wish for more training;
- ***Place the learning units' notes online:*** There was an expression to place the Learning Units notes and possibly also a film of the training session online so that the students who for some reason do not attend the Learning Unit, can still benefit from the learning experience.

In a way it can be seen that the feedback not only confirms that the Learning Units were well tailored to the needs of PhD candidates. Most of the recommendations made, as already highlighted were directed to improving a good product.

6.2 Improving the Careers Service Model

A number of recommendations for improving the careers service model could be extracted from the focus group evaluation exercise. These recommendations for improving the document are listed to include the following:

- ***Emphasising that its implementation is not necessarily as one single entity:*** One way to improve the understanding of the document and the type of model being proposed is to state at some point, preferably towards the beginning of the document, that the model being proposed does not necessarily imply the setting up of a new separate entity but that the additional services can be accommodated within different existing structures in Universities or other structures as considered appropriate. Although this is implied through the document, it appears that it is not clear enough to readers;
- ***Providing as much as possible real examples of practices:*** One recommendation related to making the document more practical for implementation. A suggestion put forward is to include reference to some already existing initiatives which can be considered as case studies. These may be included in the document in information boxes or any other format, but they will help readers to understand better the applicability of the document, making it more practical;
- ***Emphasising further the need for better links with industry:*** Rather than a shortcoming within the document, but more of one main existing problem, there was a strong recommendation for the document to push even further the need for Universities to establish better contacts and channels with industry such that there is better communication and collaboration between the two. In view of this recommendation, there can be, possibly at the start of the document a direct reference for those considering the implementation of the careers service model to constantly keep in mind this essential need to have close links and channels with industry;

- ***Consider the possibility of simplification:*** This was an overall recommendation, in that the document could be simplified such that readers are not inundated with information and are discouraged from taking up a careers service for PhD graduate. The issues related to this recommendation are that while the document may be considered easier to follow and implement, in simplifying some information and details will need to be removed and this will detract from the richness of the document. There are different options which can be taken up: either of re-editing the document such that the same amount of information is kept but the wording and flow is made easier and shorter; or else to consider the possibility of developing a guidebook for practical implementation as a practical document which indicates the salient features and steps, but those wishing greater detail could refer to the existing document. The development of this practical guidebook is not a required output of this project but may be taken up in the future;
- ***Insert a section which discusses the financial aspect:*** Although it is probably not possible to work out any costings as the model is designed to be flexible and to be applied across different contexts and different sizes, there can be the insertion of some financial considerations which can be made in putting together the business plan for the implementation of the careers service.

These areas of the careers service which may improve the model developed reflect the input of the different key players which would be involved, from providers, to employers, to the end users (PhD candidates).

7.0 Conclusion

This document has described the methodology and the results of the evaluation of the two Docent outputs: the Learning Units and the Careers Services Model. It can be concluded with satisfaction that the Learning Units were overall quite well received by the PhD candidates. This confirms that DOCENT is really working in response to a real need and that the work within Docent has responded in the right way.

The Careers Services model was also considered to be a good product, even though the main concerns seemed to revolve also round the financial implications in view of financial cuts being made. None the less, the model was considered to be valid, and that its need would grow as more and more students continue with their doctorate studies and as employers start to appreciate the value of PhD for their businesses.

This exercise thus shows that, at least from the key stakeholders, that the project outputs are of a certain quality and serve the need for which they were developed.



Annexes : Evaluation Tools used

Participant Post-training Questionnaire (Participants)

Section A: Respondent Characteristics

1. Indicate your gender Male ☐ Female ☐
2. How old are you
20-24 ☐ 25-29 ☐ 30-34 ☐ >35 ☐
3. What is the area of research of your PhD?

4. Are you doing your PhD Full-time ☐ part-time ☐
5. At what stage of your studies are you?
Early stage ☐ half way ☐ final stage ☐
6. What are your plans for your future employment?
☐ I already have employment in industry
☐ I already have employment in academia
☐ I want to find work in industry
☐ I want to find work in academia

Section B: Details about Learning Unit Followed

7. Tick the learning unit you attended:

Career management skills and employability	<input type="checkbox"/>	Commercial awareness	<input type="checkbox"/>	Science communication for a knowledge-based society	<input type="checkbox"/>
Recognise and promote your skills	<input type="checkbox"/>	Leadership	<input type="checkbox"/>	Project management	<input type="checkbox"/>
budgeting in a nutshell	<input type="checkbox"/>	Creativity	<input type="checkbox"/>	Intellectual Property Management	<input type="checkbox"/>
How to write a Business Plan	<input type="checkbox"/>	Entrepreneurship	<input type="checkbox"/>		<input type="checkbox"/>

8. Why were you interested in following this learning unit? (You can tick more than one)

- ☐ worthwhile for my personal development
- ☐ worthwhile for my professional development
- ☐ would help me find a (better) job
- ☐ could learn things which would help me with my career
- ☐ like to learn new and different things
- ☐ will need these skills to work in industry

Other _____

Section C: Feedback about the session:

9. Please rate the following between 1-5 (1 – Worst/least and 5- best/most)

- | | | | | | | |
|----|---|---|---|---|---|---|
| a. | The content covered in the session | 1 | 2 | 3 | 4 | 5 |
| b. | The notes you were provided with during the session | 1 | 2 | 3 | 4 | 5 |
| c. | The presentation of the tutor | 1 | 2 | 3 | 4 | 5 |
| d. | The relevance of the content to your career prospects | 1 | 2 | 3 | 4 | 5 |
| e. | The method of delivery of the session | 1 | 2 | 3 | 4 | 5 |
| f. | Do you think that it would be useful to find a job? | 1 | 2 | 3 | 4 | 5 |
| g. | Do you think that it would be useful in your career? | 1 | 2 | 3 | 4 | 5 |

10. Do you think that the session was:

- ☐ Too short
- ☐ Too long
- ☐ Just enough

11. Do you think that such session is needed by PhD candidates in preparation for work?

☐ No ☐ A little ☐ Yes ☐ Definitely

12. How good would you rate the session overall?

☐ Not at all ☐ a little ☐ enough ☐ quite ☐ very much

13. How much did the session match your expectations?

☐ Not at all ☐ a little ☐ enough ☐ quite ☐ very much

14. How much would you recommend such session to other PhD candidates?

☐ Not at all ☐ a little ☐ enough ☐ quite ☐ very much

15. In the lines below please write any recommendations you would make about the Learning Units

Participant Post-training Questionnaire (Tutor)

Section A: Respondent Details

1. Indicate your gender Male ☐ Female ☐

2. Tick the learning unit you delivered:

Career management skills and employability		Commercial awareness		Science communication for a knowledge-based society	
Recognise and promote your skills		Leadership		Project management	
budgeting in a nutshell		Creativity		Intellectual Property Management	
How to write a Business Plan		Entrepreneurship			

3. Please rate the following aspects of the training materials between 1-5
(1 – Worst/least and 5- best/most)

a.	How comprehensive the background content was	1	2	3	4	5
b.	The notes prepared for the students during the session	1	2	3	4	5
c.	Relevance of content to PhD candidates	1	2	3	4	5
d.	Relevance of material in preparation for work in industry	1	2	3	4	5
e.	The slides prepared for the session	1	2	3	4	5
f.	The reception of the students to the session	1	2	3	4	5
g.	Level of engagement of students in the sessions	1	2	3	4	5

4. Do you think that the session was:

☐ Too short

☐ Too long

☐ Just enough

5. Do you think that such session is needed by PhD candidates in preparation for work?

☐ No

☐ A little

☐ Yes

☐ Definitely

6. How good would you rate the session went overall?

☐ Not at all

☐ a little

☐ enough

☐ quite

☐ very much

7. How much do you think that the session you delivered matched the students' expectations?

☐ Not at all

☐ a little

☐ enough

☐ quite

☐ very much

8. How much would you recommend such session to other PhD candidates?

☐ Not at all

☐ a little

☐ enough

☐ quite

☐ very much

9. In the lines below please write any recommendations you would make to improve the Learning Units

10. Do you have any suggestions about how the Learning units can be better used/exploited for the benefit of PhD candidates?

Focus Group Guidelines and Questions

Guidelines

In the organisation of the focus group, it would help if participants are provided with the careers services model beforehand so that they have enough time to read through it and to have a good idea of what it involves. This would decrease the time required to explain the careers services model during the focus group interview.

Do not forget to take the signatures of those present on the form at the end of this document. Also distribute the form for consent to have their names included in the report of the focus group interviews.

The first part of the focus group interview is to include a brief description of the project Docent and its aim of designing ways and methods as well as training to help PhD candidates be better prepared for a career in industry (rather than in academia as is traditionally the case). The project leaflet may be distributed to help better understanding of the aims of the project.

First part of the interview: Need of a careers model for doctorate candidates:

This part of the discussion will include a discussion on how much the participants feel about the need for institutions to provide careers services for doctorate candidates.

1. Do you feel that there is need to provide doctorate candidates with some form of support services for their employment/professional development beyond their studies?
2. Is there an increased interest by doctorate candidates to look at their career prospects outside academia?
3. Is there a need for the development of a framework for careers-related services specific to doctoral candidates for your particular institution/Universities?
4. Have you within your institution discussed at some point the provision of a careers service for doctorate candidates and graduates?

2nd Part of Focus Group interview – Relevance of model

The researcher will read through the potential uses of the model and ask the group to discuss whether they consider the applicability indicated to be comprehensive, practical and relevant;

5. Do you think that the objectives for the two aspects of the careers services model are relevant to doctorate candidate needs?
6. Are there aspects for service provision which have been overlooked/left out?
7. Are there any additional objectives/aspects that you would suggest be included?
8. Do you think that the activities and products are helpful to career services providers?
9. Do you find the inclusion of resources useful? Are they enough or would you like to have more?

3rd Part of the Focus Group interview – Practicality of implementation

You can now direct the discussion to the section related to the implementation of the careers services model.

10. Look at the third part of the model which includes questions and steps to take should an institution want to implement the careers services model. How clear and practical did you find this section?
11. Do you think that the advice given is implementable within a wide range of different types of institutions?
12. Has any particular aspect been overlooked and needs to be included?
13. How useful do you think that this section can be for institutions wanting to implement the careers services model?

Overall Comments

14. Is there anything else related to the careers services model which needs to be considered?
15. Is there anything else which needs to be included in the document?
16. How useful and usable do you think that the document is to Universities and research institutions wanting to provide careers services to doctorate graduates and candidates?
17. Do you have any advice on how best to disseminate this document among Universities and research institutes?

End of focus group interview

At the end of the focus group interview thank the participants for their contribution and input into the project.