SMACCS, PREPARATION OF A CURRICULUM AND DEVELOPMENT OF AN ERASMUS MUNDUS JOINT MASTER DEGREE IN SMART CITIES AND COMMUNITIES, A STEP TOWARDS EXCELLENCE FROM UMONS

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Abstract
European cities are forerunners in the transition towards a low carbon and resource efficient economy. A fast growing percentage (currently 72%) of the EU population lives in urban areas, using 70% of our energy. Quality of city life and the attractiveness of cities as environments for learning, innovation, doing business and job creation are now key parameters for success in the global competition for talent, growth and investments. Key challenges for Smart and Sustainable Cities are to provide solutions to significantly increase cities’ overall energy and resource efficiency through actions addressing the building stock, energy systems, mobility, climate change, water and air quality. Such actions should bring profound economic, social and environmental impacts, resulting in a better quality of life (including health and social cohesion), competitiveness, jobs and growth. In this respect and according the aims of an Erasmus Mundus Joint Master Degree (EMJMD) it is expected the creation of such actions to contribute to the objectives of the Europe 2020 Strategy and of the Education and Training strategic framework 2020 (ET2020), including the corresponding benchmarks established in those policies. As a consequence of the above the preparation and development of an Innovative Joint Master Degree in Smart Cities and Communities in co-operation with another 3 European Universities (Spain, Greece, U.K.) and Industries should underpin this strategy and is further presented in this work.

The decay of the city of Mons due to the gradual disappearance of the local steel and coal industry in the region of Walloon, (Belgium) along with the existing old medieval structure of the city itself resulted at the same time on a deterioration of the community and quality of life with higher unemployment rates in the city and its surroundings. In the last years and after a strong change and influence by the people represented by the current Major and ex-prime minister of Belgium made the city and the civilians to enhance the efforts of seeing again the city of Mons as one of the main cities to further progress to policies that include actions related with the concept of ‘Smart Communities and City’. A strong partner in this effort is proved to be the University of Mons that has been a long time now in the area, being the oldest engineering University in Belgium with a tradition of corresponding to the needs of the local/regional community. Thus, after an organised effort by the Municipality of Mons and the University of Mons this ‘common vision’ towards a new era for the community and the city of Mons is further expressed via the preparation and development of a proposal related with the creation of a unique Master degree that would be able to help the city to become an important player again in the area. It cannot be an option to allow a historic city getting into even more decline. One also should keep the initiatives for innovation and technological creativity in the EU order to withstand the concurrency from Asia. Based on this idea a future Master of Erasmus Mundus-programme with people from all over the world will be able to enrol in the programme exchanging ideas, thus tackling a bit of the emerging harsh concurrency away.

Keywords: Education, Innovation, Smart Cities and Communities, Curriculum development.

1 INTRODUCTION

The use of academic frameworks for the European Union countries that make possible the exchange of students between Universities of different countries for a defined period of time (1-semester or 1-year) has been existing quite a long time (1987) via its first appearance in the name of Erasmus Programme (European Region Action Scheme for the Mobility of University Students) [1]. Very quickly the programme became so popular that was later incorporated into the then existing Socrates programme that was established by EC in 1994. The same programme (Erasmus) was later part of the Socrates II that finished in January 2000 and which by its turn was replaced by the new name of
Lifelong Learning Programme (LLP) from 2007 – 2013. The number of students and the increasing participation of countries became from a mere 3,244 students in 1988 and 11 countries to 272,000 students from 34 countries at the end of 2013 that included 28 EU member states plus 6 other countries from Europe. The programme itself has been progressed and expanded in such a way that new forms such as traineeships have been applied since 2007 showing at the end of 2013 that one in every three students being abroad was offered a job by their host and one in ten went on to create their own company, a point that shows the importance of the application of such programmes for the students as well as the faculty later and that of the companies in the EU market.

This increasing interest of the Bachelor and even more that of the Master and PhD degree students, especially after the continuous ‘unification-homogenization’ of the 1st and 2nd cycle degrees according to the ‘Bologna’ process and criteria [2] from 2012 and afterwards on such programmes, resulted to make the EU education makers to consider new programmes and forms that could further increase the effective outcomes and employability along with the competitiveness of these students and the corresponding universities and further that of countries and EU in the education sector globally by continuing and further renaming in the second year of the LLP a new form of a 2nd Cycle degree the one currently called as Erasmus Mundus Joint Master Degree (EMJMD). As part of the LLP programme the new and first time created Erasmus Mundus Degree appears in 2009 with its first year of selection for the Master and Doctorate level in 2009 though the scheme itself exists from its first generation (2004-2006) and followed by its second part (2006-2008) that has already created till end of 2008 66 new EMMCs programmes [3]. The 2009 selection now under the LLP of Joint programmes included 50 Erasmus Mundus Master Courses (EMMCs) and 13 Erasmus Mundus Joint Doctorates (the new addition in the existing scheme). The call (EAC/04.09) was first launched in February 2009 and in its first version there is an extensive application number (7) from Belgium Universities such as KUL, UGent, UCL, ULiege, expressed in various different fields such as the ones of nanosciences, food science, clinical linguistics, etc. [4].

The attractiveness and visibility of European higher education worldwide via the EMJMD programme shows an increase of applications but a decrease of selected programmes in two different calls in 2010 of 29 more EMMCs, thus a total of 123 Master programme offered with 11 new EMJDs. From Belgium there are only 3 new applications, yet it is the first time that there is an interest related with the environment-energy sector and expressed by UGent’s application and conceived new EMMCs degree [4]. It is also the period that the author of this paper who has already participated in the structure of a new global visibility programme in the field of sustainable energy in Portugal [5] changes country (USA) and returns to Europe to continue his research and academic work in Spain. The increasing interest of this paper’s author to give a strategic advance and to create along with his colleagues new cutting-edge Master or PhD programmes similar to the ones that he has encountered and taught while his time in his own Master degree but 23 years ago in USA (I.I.T. interdisciplinary energy-environment-economics programme) [6] and due to the lack at that time for such degrees in EU and later at MIT as a researcher (2010) finds him starting a new effort to create a cutting-edge EMMC that would be related with the interests of the University, region and that of his and other colleagues in the increasing new field of sustainable mobility. As a result of this interest and efforts, an common application by the University of Antwerp has been worked and submitted in January 2014 with work taken place in various forms (i.e., personal meetings, teleconference meetings, etc) in the year before the final submission (2012). A detail description and steps used of this application and submission effort is shown in [7] while the final result of this group effort was to conceive this EMCCs degree selected as an EMJMD in year 2013.

2 METHODOLOGY

Before entering to the methodology that was followed to prepare and finally submit the application form along with the other consortium partners from UMONS, it is necessary to give a description of the environment that this topic has been created and that clarifies the reasons that made this effort so important and resulted to the submission finally of the EMJMD application.

This description contains two parts, i) the part related with the University itself and its role to take the decision to submit this proposal in the proposed topic and ii) with the selection of the EMJMD and the suggested topic that followed in the application process. This is described in detail to the next subsections.
2.1 Historic background of the city and the University of Mons, Belgium

Mons, which is its French pronunciation (Bergen in Dutch language), is a Belgian city and municipality that is situated southwest of the capital city of Brussels just 65 km distance and 23 km Northwest from the boards with France. It is the capital of the province of Hainaut that includes various small cities and reaches a total population of 95,000 people with a rather urban-rural environment. It is a medieval city with a characteristic central square in the city centre (Grande Large) that has its origins from the Julius Caesar era in the 1st century BC. The name is believed to be taken by the Latin Montes (mountain in English) and is related with the place where the castle was build, a typical fortified city that grew further till the 12th century along with its population. It is referred that the city had already 4,700 inhabitants by the end of the 13th century and grew up to 8,900 by the end of the 15th century. From 1500 to 1800 the city shows an increasing role in the area that finally was annexed to France and resulted in 1792 to become the capital of the Jemappes district. It is later in 1830 that Belgium earns its independency and cities like Mons were dismantled and it is the beginning of the city to grow outside its fortifications and allowing the creation of large boulevards and other urban projects. Yet it is the industrial revolution and the existence of coal mining that will make Mons after the 1860s a centre of heavy industry, which strongly influenced the culture and image of the Borinage region as a whole and to become an integral part of the industrial backbone of the newly created region of Wallonia.

It is because of the reasons above that in 1837 is created the ‘Faculté Polytechnique de Mons, FPM’ in its initials and that in its first version is called according the French then academic university system ‘École des Mines’, meaning ‘Mining School’. In this way the increasing importance of the city along with its parallel development is justified by the University creation and the University starts playing a significant role in the city actions as well as that of the rest of the area. Due also to the fact that this development is expressed via the creation of richness from the local coal mines, the University is in the Engineering field one and is the first of its kind that is created in Belgium at that point. Later on a number of different cities will follow the same example though it will be only much later that the name will change. In 1845 there is an increase of the length of studies and the creation of a commercial section by adopting at that point the name ‘Business, Industry and Mining School of Hainaut’. It is officially recognised under this name by the state and is given governmental subsidies. The increasing scientific and industrial progress and the speed of the economic advancement requires further development of the engineer’s education and greater specialization and after a few years (1853) there is the addition of new degrees such as those of Chemistry and Mechanical Engineering. Then it is the railroad engineer and finally the electrical engineering takes place in 1887. Due to the increasing importance of the city the school is finally renamed as ‘Faculté Polytechnique du Hainaut’ with its fame growing and having students from all over Europe. It is finally in 1935 that the University is named ‘Faculté Polytechnique de Mons’, that after the WWII goes through a reorganization process and fills its ranks and consequently resumes its boom by offering new degrees such as the ones of Architecture and Computer and Management Sciences. A structure that will be retained till today where the Faculty awards academic degrees in the areas of: Architecture, Architecture, Chemistry and Materials Engineering, Electricity, Computer and Management Sciences and Mechanics and Mining with the highest rank of degree for all the above named as Doctor of Applied Sciences.

The importance of the city of Mons becomes less influential after the two World Wars and especially after that of the WWII despite the creation very close of the new NATO’s Supreme Headquarters Allied Powers Europe (SHAPE) just 5 km away from the city in 1967. The change of the energy use either in transport (i.e., oil) or energy (gas, electricity) along with the drain of the area from coal with the oil crisis in 1974 and the lack of an efficient strategic plan to encounter the deindustrialization and to pass from the heavy industry era (i.e., coal, metallurgical, etc) to new forms of occupation and industries brings the city in a recession and in an disadvantage situation compared with other cities either in the region of Walloon or further of Belgium and especially those of the North part. This situation is expressed by an increase rate of unemployment that reaches a 20%, accompanied by a lack of investments on public works and the city itself with an ageing population that is partially offset by the University students. It is only in the last years that the city starts again developing through the conversion fits economy to a rather service city where now the tourism starts playing a more significant role along with new high-tech companies in the area of IT helping this development. Still the unemployment rate although it is considerably decreased (around 16%, yet closely doubles that of the Flanders region and the average of Belgium 8.3% in 2015) [8]. According to [8], Belgium has relatively few fast-growing firms in innovative sectors and the business climate is further hampered by administrative and regulatory burdens (especially in the region of Walloon) which inhibit company expansion while restrictions on hold back market dynamics for business services. The Belgian labour
market is characterised by a low overall employment rate and large employment differentials between regions and especially between those of Walloon and Flanders.

On the other hand the parallel problems that are encountered in the city of Mons are further ‘reflected’ also in the University of Mons (then FPM) with the decrease of the role of the University and its importance in the city’s facts that is expressed with a reduced number of students submissions. At the same time in the area, the other various local ‘Ecoles’ encounter similar if not larger problems and along with those of FPM (though not in the same extension as the other colleges) and those based on the increasing competitiveness in the Belgium educational market and changes in Europe, it finally results towards the merging initially of two different Universities in 2007, the University of Mons-Hainaut and that of the Polytechnic Faculty of Mons. Still it is also the constant striving from the side of the University for quality and innovation that brings this initiative and creation finally of the University of Mons (UMONS) in 2009 while being the fourth (and smallest) university of the French community of Belgium with about 6,000 as in 2010 enrolment data. The final faculties that the UMONS contain form 2009 and afterwards are the following: a) Faculty of Engineering (ex-FPM), ii) Faculty of Economics and Management (Warocqué), iii) Faculty of Psychology and Educational Sciences, iv) Faculty of Medicine and Pharmacy, v) Faculty of Sciences, vi) Faculty of Translation and Interpretation (FTI-EII) and vii) Faculty of Architecture and Town Planning.

2.2 Investigation of the field (state of the art) and innovative character of the suggested research topic

As was mentioned in the previous section the University of Mons (UMONS) was created with its present name after a merging of different schools in 2009 with the rector since then being Prof. Calogero Conti who is a member of the previous called FPM school. The Faculty of Engineering, that still keeps being the most well known faculty, is one of the seven (7) different faculties that have adopted the new grade regulations based to the ‘Bologna’ Process along with the other 3 schools (Écoles) make the picture of the UMONS. Inside now the UMONS and due to the continuous competition in the field of higher education also - that includes of course that considerably of research – they have been created cross-discipline actions that are expressed via the participation of different departments from the different faculties and schools. Thus for conceiving better results in the research fields there has been taken a strategic decision by the rector and the other members of each faculty, to create new interdisciplinary and cross-sectional actions in the form of Research Institutions and in areas that would correspond to the needs of the local and global economy. Thus presently exist ten (10) research institutions that are: a) Biosciences, b) Complex Systems, c) Energy, d) Human and Organization Development, e) Information Technologies and Programming Languages, f) Language, g) Materials Engineering and Science, h) Numerical Technologies, i) Risk Science and Management and j) Health Science and Management. The total number of administration, researchers and faculty that these institutions cover with their research work is around 1,000.

The Energy research field actions is expressed via the name Research Institute for Energy (RIE) where the current president and responsible of the research strategy based on a board with other faculty and research members, is Professor Marc Frere from the Faculty of Engineering, Department of Thermodynamics and Physical Mathematics. The RIE has defined its expertise and thematic areas that are expressed in detail via the existing web site [9] of the Institution and are nine (9) in total number and are the following ones: a) Bio combustion and Combustion, b) Capture and Storage of CO2, c) Photovoltaic Technologies, d) Future Cities, e) Energy Storage, f) Materials and Processes for Energy Applications, g) Wind Energy, h) Intelligent Electricity and Grids, i) Geothermal Energy. All the research areas mentioned before are corresponding not only on local needs of the city itself (Mons) that the University is mainly based (since there is a large branch also of UMONS at the larger city of Charleroi), but also tries to express future development in the area of Walloon and even more that of Belgium.

Based on that concept that there is indeed a necessity of the city of Mons - as expressed in earlier sections - to recover and become active and starts playing an important role again in the local market, a group effort from the University and the Faculty of Engineering and the RIE has been pointed and this was the submission of a European proposal under the frame of FP7 that would be related with the new call of the ERA-CHAIR and a topic proposed not from EU now and is the normal procedure but from the Institution itself that points the research field where they believe they could probably work in their current weaknesses and progressing to the area that would have the most immediate impact in the local society. Therefore in 2013 in its first version of the ERA-CHAIR call from EU under the FP7 frame and theme of ERACHAIRS-2013-1, it has been presented a proposal by UMONS that was
pointing to the area of Energy, including that of Sustainable Mobility also. The proposal under the name RE-SIZED (initials of Research Excellence for Solutions and Implementation of Net Zero Energy City Districts) was submitted and finally approved with a starting date in 2014. This new scheme that is explained in detail in [10] included the recruitment of an ERA-CHAIR Holder that would be able to lead a new recruited research team that would be of excellent quality and would be able under his supervision to connect, if not all, the most of the previously mentioned research fields where RIE is currently doing research and be served inside the University Community of Mons as an example/platform to be followed later as a guide of how to improve and become global competitive in research that would by its turn bring immediate effects to the local and regional economy.

Therefore under this logic and frame the ERA-CHAIR Holder and author of this work has initiated along with the President of RIE efforts to create a new Research Unit that would become later independent under the name of NZED (Net-Zero Energy City Districts) [11]. These efforts had as a major point the creation of a new culture that would consider the existing one but would also add the newly formed one and would be able to offer to offer not only global class research in the broad area of Smart Districts/Cities but even more to prepare a base of people that would later lead this effort by creating a new degree programme that could express the new cutting-edge research field. In favour of this decision was considered the fact as mentioned in the Introduction that the author and ERA-CHAIR Holder of this work has already been in the position to go through the process of creating such a degree in collaboration with other partners therefore a decision was taken to work in the preparation and final submission of a proposal that would be related with the research topic of the ‘Smart Cities and Communities, SMACCs’ as is the title of this work.

Yet since this decision was not only based in the criteria above it would be wise at that point to mention some of the other criteria that help the author along with the President of RIE to take the decision to proceed to the final submission of the SMACCs proposal. Thus as already mentioned the Faculty of Engineering currently works under the new applied ‘Bologna’ Process, which in this case means that there are three (3) different degree levels and are the: a) Bachelor Degree with 180 ECTS, b) the Master Degree with 120 ECTS and finally c) the Doctorate level with 180 ECTS. That means that the first part (BSc) can be finalized in 3-years, the 2nd part in 2-years and the third part in 4-years (the 180 ECTS can be dispersed in a longer period of time instead of the usual 30 ECTS/semester).

Currently in the Faculty of Engineering there are six (6) Master degree offered with 120 ECTS and these are: a) MSc in Architectural Engineering, b) MSc in Materials Engineering and Chemistry, c) MSc in Electrical Engineering, d) MSc in Computer and Management, e) MSc in Mechanical Engineering and f) MSc in Mining and Geology Engineering. As can be easily understandable the offer of the MSc courses offered by the Faculty of Engineering compared with other Universities and programmes is very limited and even less in the area of Energy as is one of the research fields that RIE has been created for. Therefore it is quite obvious that the research work that is offered does not correspond to the amount of degrees offered and thus this amount had to be increased especially in the areas that are considered strategic and were presented previously from the University.

2.3 Partners Selection, Proposal Preparation and Submission Process

The first effort of the author along with other colleagues in the faculty of Engineering to present a proposal related with the research field of ‘Smart Cities and Communities’ was initiated in 2015 and presented in the call of February 2016 with the results coming out in July 2016 as is the normal period of time (4-months) that the final results are known by email to the applicants. Despite the previous experience of the author the limited available time to prepare a proposal of this size was enough to reduce it in quality and not permit to be successful in the final selection which based on the EU previous years and tables has a success rate each proposal of 33% with the submissions and final selections. Yet, the evaluation form that was sent later to the author was enough to make him more motivated and start preparing the second proposal from the new academic year (September 2017).

Since the scope of this work is to present the methodology that was followed so that any new applicants would like to consider to submit a proposal in the call of Erasmus Mundus Joint Master Degrees (EMJMD) then from that point and afterwards there is the presentation and guidelines of the necessary steps to be taken and followed so that finally the application will have a success result. So the author based on the previous evaluation form along with the new guidelines that were given for some minor changes from the previous year application, started with his Unit to work in the most necessary and important steps that are required for the final writing and submission of the proposal.
Thus the first thing that the author did once the academic year of 2017 started was to contact again the responsible persons that were previously worked with together to the previous submission proposal so to guarantee that they are once again agree and want to proceed in the work of such a proposal. This answer was given quite early from all the initial implicated partners, therefore the author as the Project Coordinator and future Director of the programme proceed to the next steps that were pointed mainly from the evaluation form received. In this evaluation form the main points and actions that were written are referred below and were the ones that the author along with his colleagues in UMONS as well as the other 3 partners Universities worked more so to be able to have a successful result. At this point the author’s opinion is - after being already in the position to work and submit 3 EMJMD programmes – that exists a certain methodology and steps that along with the really needs of the University and the surrounding area-society that have to be followed (not necessarily in order) if any other faculty members would like to proceed in such a submission.

In the following sections (2.3.1-2.3.4) it is described the guidelines/prerequisites and recommendations to follow by every applicant given by the ERASMUS+ people and the Key Action 1 that is related with the EMJMD. Below each bullet of guideline is presented the actions taken by the author in bold letters and the other colleagues of the proposal while with italic letters is expressed by the EU the points that the applicant has to consider more. It has to be motioned here that the application is separated in three (3) different parts that are referred as Award Criterions, 1, 2 and 3 with the 40%, 40% and 20% of the application grade.

2.3.1  Prerequisites for an Erasmus Mundus Proposal

* Your consortium has a "broad knowledge" of Erasmus+ and a "sound knowledge" of the Erasmus Mundus action
  - What/who is it for? How does it work? What activities does it support and how? Who could help you understand it better?
    Distribute as Project Coordinator ASAP the required material so that partners are familiar with all the details of the call, in case of not being able to understand it ask help from the International Office.

* Your consortium has a concrete idea for an international partnership to jointly implement a EMJMD
  - Does it fit the EMJMD objectives, priorities, requirements, etc.?
    Read well the call and try to respond to these kinds of questions
  - Does it address the needs of all the consortium partners?
    It is important to show that every partner has a need and is not just another MSc degree

* Your idea is embedded in your institutions
  - Have it discussed with the relevant instances (Rector, Dean, international affairs office, etc.)
    Try to contact first the faculty you are thinking of working together, then proceed to the Head to ask him about his opinion, then to the Dean and then to the Vice-rector or Rector if necessary.
  - Ensure support for the proposal preparation and, if successful, the project implementation
    Support has to be by persons who know to write this kind of proposals.

2.3.2  Building up the EMJMD consortium

* Start locally in your institution: (other colleagues, services, departments with experience in running international mobility projects (in particular Erasmus Mundus)

If not other colleagues familiar with this kind of call then try to include the International Office

* Consult your Erasmus+ National Agency: for advice and networking opportunities

Networking can be personal or/and from the International Office as in our case

* Continue searching for other stakeholders from Programme Countries to expand the consortium: other HEIs, research institutes, enterprises, local/regional/national authorities, etc.
Begin this action ASAP since it requires a significant period of time to explain and proceed final with the required Letter of Interests (LoI)

* Enlarge the consortium with international partners from Partner Countries: organizations you have worked with in the past with specific expertise, colleagues that share the same enthusiasm for international cooperation and mobility projects, etc.

Partner Countries have been in this case from the author’s previous collaborations and countries of study

√ Keep the size of the partnership manageable

From the existing statistics it seems that the best number is to have four (4) partners though more is possible but makes the proposal rather more complex. In our case it was considered to have a very strong partner from another country but finally the cons were more that the consortium remain to four.

* Participating organizations*

- bring specific expertise, concrete added value to the EMJMD

It has to be shown that between the different partners there is complimentarity and not overlapping in the required courses and area of research.

- gain a world wide visibility, work together with excellent students

Try to implicate the International Office of the Partners so to create the International visibility along with possible personal contacts of the implicated faculty members.

f) Cooperation is based on trust, on confidence and on formalized agreements, ensuring institutional commitment and defining the role and tasks of each partner

Advisable to have everything clarified from the beginning so not to have alter any problems between partners.

g) Academic and administrative management are jointly designed and structured

Try to collect all the information from the Partners and their administrations so that when you will finally agree all the legal and other problems have been overcome. This task requires quite a time so try to do it from the beginning.

2.3.3 Award criteria recommendations and executions

DO’s

- Respond to the sub-points of the Award Criteria paying attention to the specific context: (DONE)
- Make sure you get all your points across in a structured and coherent manner, but keep it short and simple: (DONE)
- Present all important and distinguishing features of your project –the experts’ assessment will be based only on information provided in the application: (DONE)
- Provide supporting evidence for your statements: (DONE)

DON’Ts

- Avoid being vague in demonstrating the project's reasoning and strengths
- Do not assume that because of your expertise and previous experience, you do not need to explain how your project is built-up and will develop in the future
- Make sure you are not presenting your proposal as the sum of each partner’s contribution, but rather demonstrate the joint undertaking of the consortium stakeholders

Award criterion 1: Relevance of the project (40 points)

DO’s

- Convincing evidence for “jointness” and course integration: (DONE)
- Thoroughly assessed results of needs analysis at different levels: (DONE)
• **Innovation and excellence** for HEIs and attractiveness of EHEA:  (DONE)
• **Concrete benefits** for each targeted group (students, academic staff, etc.):  (DONE)

**DON'Ts**
• Dominance of coordinating institution instead of a common and integrated approach
• Imprecise targets for the degree award and lack of joint strategy
• Inaccurate needs analysis methodology resulting in irrelevant conclusions
• Weak integration of internationalization strategies at the cost of stakeholders

**Award criterion 2: Quality of project design and implementation**  (20 points)

**DO's**
• **Effective strategy** and tools for monitoring and ensuring excellence:  (DONE)
• **Academically relevant** design and rationale of mobility paths with concrete learning outcomes:  (DONE)
• **Proactive consortium support** responding to students and staff needs:  (DONE)
• **Interaction** with world of work integrated in the course:  (DONE)

**DON'Ts**
• Absence of an established mechanism to appropriately react to evaluation findings
• Unfeasible, unbalanced and ineffective mobility schemes
• Underestimation of the administrative workload to the detriment of the course
• Negligence of student integration in socio-cultural and professional context

**Award criterion 3: Quality of project team and cooperation arrangements** (20 points)

**DO's**
• **Synergies** resulting from the complementarity of the partners  (DONE)
• **Inclusive** and **transparent** cooperation mechanisms, based as well on mutual trust:  (DONE)
• **Academic jointness** as central theme during course implementation  (DONE)
• **Realistic** and **transparent** financial plan  (DONE)

**DON'Ts**
• Unclear motivation of partners to join the project

Letter of Interest from Partners very important to show that!
• **Failure** to ensure institutional backing of the partners
• **Lack of attention** to the variety of national legal frameworks
• Avoid too **rigid cooperation arrangements** not allowing for necessary adaptations
• **Imprecise** financial management provisions of the consortium

**Award criterion 4 - Impact and dissemination**  (20 points)

**DO's**
• **Concrete indicators** and tools for measuring the impact on all stakeholders  (DONE)
• **Tailored** promotion /dissemination approach to different audiences  (DONE)
• **Integration** of labor-market elements to promote employability and support sustainability  (DONE)
• **Provisions for wide access** to course materials  (DONE)
DON'Ts

• Lack of definition and promotion of the programme’s distinctive selling points demonstrating its competitiveness
• No networking activities to ensure wide programme visibility and recognition by academia, students and future employers
• Sustainability strategy not adequately considered and not integrated in all project stages

Additional award criterion: Additional scholarships for targeted regions

DO’s

• Mutual benefits through the cooperation with the specific regions/countries: (DONE)
• Concrete contribution to meet the challenges in the HE systems of these countries: (DONE)
• Support for a strong and educated human capital: (DONE)
• Effects of the cooperation on economic and social development: (DONE)

DON'Ts

• Imprecise plan and objectives for building up cooperation with the regions/countries
• Limitation of collaboration to the level of student exchange
• Unclear methodology and inappropriate approach to reach excellent students

2.3.4 Application Procedure

The steps that were followed for the final submission of the application were the following:

* Description of the project:
  – Refers to the "Award criteria"
  – Includes information on partners/key staff and EU grants received or applied for

* Grant request table automatically calculates the maximum EU grant requested based on the following input:
  • ECTS credits / duration of an intake – 120 ECTS/2-Years duration
  • Whether a preparatory year will be implemented – Yes, 1-Year preparatory was asked
  • Participation costs of the EMJMD – Total participation/budget costs €3,923,000
  • Estimated number of students per intake, split into Programme/Partner Country – 28/year for 3-years, equally split it per partner though depending individual’s application rate
  • If applicable, number of additional scholarships for students from targeted regions of the world – applicable and extra 24 scholarships (8/year) were added in the 3-different intakes

* Declaration on Honor & Mandates - (DONE)
  • Declaration on Honor: signed by the legal representative of the applicant HEI - (DONE)
  • Mandates: signed by the legal representative of each partner - (DONE)
    o not required for Associated Partners (if applicable)
    o must be scanned and attached in one single .pdf document, with Mandates keeping the order as in the List of Participating organization of the eForm(P2-Pn) - (DONE)

* Proof of valid accreditation(s) - (DONE)
  • Mandatory eligibility criterion! - (DONE)
  • Applicable for the Programme Country HEIs involved in the EMJMD as Partners - (DONE)
  • Any official document or reference proving that at least the national components of the EMJMD are duly accredited in the respective countries - (DONE)

* Other relevant annexes (optional)
Cannot replace essential information expected in the mandatory parts of the Application Package

Should support, illustrate or evidence the information already provided in the Award Criteria attachments - (DONE)

Exhaustive list of documents provided in the "Instructions for completing the Application Package" (needs analysis, business plan, consortium/student agreement, etc.) - (DONE)

3 RESULTS
The results of the methodology written previously and followed according also the EU comments after an October 2016 workshop in Brussels has to result finally to a proposal that would include the following parts in the submission time:

a) **eForm**: Parts A, B, C, D - Consortium composition and basic project data + compulsory attachments:

b) Description of the project (Word or .pdf format)
   - Award criteria 1-4
   - + if applicable: "Relevance of the project in the targeted region(s)"

c) Grant request table (Excel format)


d) Declaration on honor and Partners’ Mandates (.pdf format)


e) Proof of valid accreditation(s) (Word or .pdf format)
* Optional: Other relevant annexes (Word or .pdf format)

4 CONCLUSIONS
From all the above it is clearly seen that the preparation, development and final submission of a proposal that includes a lot of academic and administration parts as the one related with the call of an Erasmus Mundus Joint Master Degree requires a number of careful steps, methodology and clear timeline schedule that has to be coordinated well by the leader of the proposal in excellent collaboration with the rest of people implicated in this process. If all the above steps will be followed then according to the author's opinion it is more than possible to have a successful proposal, something that is also believed for the author's proposal itself also.

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REFERENCES


