



# ERASMUS+ - Knowledge Alliances

## Evaluation Report

### Call for proposals EAC/A03/2016

Proposal number:	588319-EPP-1-2017-1-LT-EPPKA2-KA
Proposal title:	Knowledge Alliance for Sustainable Smart Cities
Acronym:	KNACK
Applicant organisation:	VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETAS VIESOJI ISTAIGA

Award Criteria	Score	Max
Relevance	19	25
<p>The project ambition is to play a key role in the popular domain of Smart Cities, by integrating partners from academia and industry. It will deliver an education program preparing for the challenges in this domain and exploiting the latest advances in big data and text analytics. Therefore, the proposal fits the objectives of the action.</p> <p>The project addressed is already very topical and also discussed in many arena, therefore, the positioning and the value of the project is critical. At this stage, the proposal lack a strong positioning regarding the state of the art and the added value of its approach.</p> <p>Based on above-identified specific needs, problems/challenges, the participating higher education institutions (HEIs) propose the multidisciplinary integration of data and text mining, affective tutoring, recommender, intelligent assessment and affective computing systems, human intelligence, collective intelligence, motivational, educational persistence and social learning theories to enhance the quality and relevance of education in the area of sustainable smart cities (SPACE). As observed, this is a very long list and it is not clearly stated which parts will be finally selected. The proposal has to be careful to nicely complement the existing solutions and define its articulation with the relevant existing organizations. They propose to realize the market needs and state of the art analysis during work package 2 of the proposal. This is acceptable. This task will be performed using two maturity and benchmark models.</p> <p>There are plenty of potential applications as illustrated by verticals associated with the area, e.g., transport, health, energy, and environment. However, there exist also a large number of initiatives and projects about which the consortium seems to be well aware, but those are not discussed in the relevant section of the proposal.</p> <p>The type of content for this curricula aimed to address smart cities is illustrated in the proposal. Education and Training is a way to address some of the target groups mentioned in the proposal.</p> <p>The partners are engaged in the proposal. They will all benefit from the outcomes. The HEIs will value their education offering and the Educational centre that they will develop. The interest for industry is mostly to contribute with their knowledge in designing the offering.</p> <p>The value for Europe is testified by the already existing numerous initiatives deployed in Europe such as the European action on Smart Cities Initiative to name one. Likewise, the Knowledge Alliance for Sustainable Smart Cities (KNACK) project will contribute to the modernisation of Europe's higher education systems as outlined in the 2011 EU Communication on the Modernisation Agenda for Higher Education. Even if the project will identify specific needs, depending on the culture of each country, the European benchmark regarding the use of new technologies in urban environments, to improve quality of life and sustainable development is useful in order to build a new course, as completely as possible. The deliverables of the project are open source MOOC courses that may be used all over Europe. European added value of the project is therefore relevant.</p>		
Quality of the project design and implementation	17	25
<p>The methodology is based on the experience of the partners in this domain as well as the main recommendations such as the Smart City Maturity &amp; Benchmark model (2016) and the Smart Cities Maturity Model and Self-Assessment Tool (2014). They will provide the guidelines to develop the framework report for the common curriculum and the report on common grounds for teaching and</p>		

learning. This is positive and helps to define the methodology and the guidelines of the approach taken by the project.

The project is organized in work packages from requirements to evaluation; each work package is well defined regarding its mission and main deliverables. Therefore, the overall structure of the project is consistent with its objectives. However, the description of the tasks is mainly devoted to listing technologies that will be used but does not explain how they will be used. For example big data, text mining, facial affect detection, biometrics are often mentioned to be key technologies of the project and it is relevant but there is no indication on the method set up to use these concepts in order to produce a software and a course.

The main outcome will be twofold. Firstly, several new MOOC modules will be developed and integrated with existing BSc, MSc and PhD programs. Secondly, a Cross-Institutional Affective Educational Centre will also be made available and sustained after the end of the project. It is a substantial production. Smart city courses may be an experimentation opportunity for a new course methodology in order to obtain a patent for an additive tutoring system, as indicated in the proposal. Even if it is partly a research project the different steps and responsibilities of the development and testing phases should have been explained to allow an assessment of the innovative methodology. The creation of the Intelligent Cross-Institutional affective educational centre is a good option. This virtual centre will allow potential users of the MOOC courses to receive help in order to integrate the new teaching method. The choice of using an already existing platform developed for a previous project to host the MOOC courses is good too. Ethical issue management is planned, due to the use of personal data.

For the first year, the new modules will target a population of several hundreds of students in class and fewer but substantial numbers of students, virtually. There will be PhD students participating in the pilot project. In addition, it will also support virtual training for teachers and practitioners. Overall, the audience is large for a new development and this is found positive and ambitious. The recognition of the programs is clearly explained. The students will value these learning outcomes with recognition of ECTS delivered by the HEIs (from 3 ECTS to 15 ECTS will be allocated depending on the HEIs study programs and semester planning). Participants of virtual training will be awarded with certificates.

Independent expert evaluators will monitor the results of the project. An External Advisory Committee will be established to bring a societal and industrial perspective and advise the management of the project. The quality control is properly described and covers all important points.

The budget is allocated as a function of the responsibilities and roles taken by the partners. The budget allocated matches the engagement as the major tasks related to the project management/coordination, the MOOC module development, the development of the Intelligent Cross-Institutional Affective Educational Centre and the most experienced partners carry out the result monitoring and reporting. Taking into account the innovative approach of the courses and the effort it will need, the cost efficiency of the project is considered to be good. A risk assessment and back up policy should be presented in case the main partners in charge of the development of the solutions fail, as this activity is highly concentrated.

Quality of the project team and the cooperation arrangements	21	30
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The partners have developed considerable experience in the management of National and European projects. There are in excess of ten partners in total: drawn from academia, a research centre, SMEs and a Non-for profit organization. The role of the partners are well-explained and engage the skills required to address the objective. However and surprisingly, there are no municipalities involved, which would have been beneficial to support the design of the offering and contribute to reach out to these groups. The consortium positively involves partners from all the corners of Europe, taking into account the diversity of situations. This is important as there are differences between the situation in cities around Europe and this approach is supporting a better cohesion policy. The project involves higher education institutions and enterprises, the partnership being compliant with Knowledge Alliances requirements and allowing a large geographical outreach. That said, the partners involved under the enterprises category are not necessarily enterprises. Partner 7's description mentions that it is an institute for training, Partner 8 is said to be a research centre. It appears that only Partner 10 is a

SME acting in smart city applications. Partner 11 is a specialist establishing new training methods and linked to Partner 1 in the team. This choice of enterprises may be adapted to the development to be performed but limits the interest of the knowledge alliance where mutual and balanced exchanges between partner types should take place. This weakness in terms of balanced exchanges is confirmed by the allocation of working days in majority to education and research partners.

The content for the MOOC module is already quite well defined. There exists also a methodology to consider the integration of the MOOC module in the curricula of all HEIs. There is a plan to apply for a Patent "Affective Tutoring System" to EPO (European Patent Office). Joint ownership of the patent is foreseen and the rights of each party will be clearly presented in the related agreement.

The cooperation arrangement is appropriate and should be operational to manage this consortium. All processes are described using usual practices from management, budget and quality assessment. The staff involved have the right level of expertise and experience to carry the task they have been allocated. The organisation of the consortium is correct. The cooperation decision body is the administrative and financial steering committee. All partners have worked together in different compositions and the communication among them will be facilitated by these previous experiences. The conflict resolution method uses an informal approach and majority vote if necessary, this is considered to be satisfactory. The copyright agreement will describe how partners and external parties can use the outcome produced in the project.

Concerning benefits from the project, HEIs will have the opportunity to develop new courses using innovative technologies in order to upgrade their curricula and to promote research in affective tutoring. Enterprises will have access to European market needs information and will be able to commercialize new services and products. Benefits look balanced between different partner's types. The project therefore aims at upgrading existing curricula of participating universities with the newly developed MOOC modules with the collaboration of non-academic partners by learning from cities that have demonstrated SPACE strong points. This fits perfectly into the main objective of the project and will contribute to enriching the offering of the involved HEIs.

Impact and dissemination	16	20
<p>The main target groups identified for the project are the project partners, universities not involved in the project, national and regional authorities, enterprises and organizations with agreements on employment of graduates. The exploitation starts during the project lifetime because the new MOOC courses are used by students and by a sample of executives in built environment organizations, administrations and ministries. These courses will be integrated into existing curricula by partner universities. Even if the curricula are not identified, it is considered to be correctly planned by the partner's universities. The use of the MOOC courses is not limited to universities because it can be accessed anywhere anytime and this is considered to allow a wider exploitation.</p> <p>The dissemination plan is typical, properly described and aimed to reach out to all stakeholders. However, reaching out besides the current partners, through the centre that will be established, needs to be developed.</p> <p>The application shows a good potential impact related to the societal and economic dimension, primarily because of the topic address but also as for the material produced and its value for the target groups.</p> <p>The output of the project is public. It includes the MOOC courses. A copyright and commercialization agreement will be issued.</p> <p>The sustainability of the project is globally convincing. Indeed, after completion of the project, the coordinator will take care of the maintenance of the Centre and the website, for at least 5 years. Partners' web sites will also keep materials as long as they remain up-to-date and useful. The Virtual interuniversity networked educational centre that was developed by the CENEAST project "Reformation of the Curricula on Built Environment in the Eastern Neighbouring Area" will be used to host the BSc, MSc and PhD Open Educational Resources. However, no agreement is foreseen, nor a contribution from the partners to sustain their community. The patent application could be a good idea but its potential outcome is not seen as a potential source of sustainability.</p>		
Total	73	100