



Erasmus+

Application Form

Selection: 2017

KA2 – Cooperation for innovation and the exchange of good practices – Capacity Building in the field of Higher Education

Call for Proposals 2017 - EAC/A03/2016

Enhancing Competences of Sustainable Waste Management in Russian and Kazakh HEIs / EduEnvi

DETAILED DESCRIPTION OF THE PROJECT

(To be attached to the eForm)

Version 1 (2017) – 20.10.2016

PART D - Quality of the project team and the cooperation arrangements

D.1. Organisations and activities

This part must be completed separately by each organisation participating in the project (applicant and partners).

Partner number		P1
Organisation name & acronym	Tampere University of Applied Sciences - TAMK	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
<p>Tampere University of Applied Sciences is a multidisciplinary and international higher education institution located in the Tampere Region in Finland. TAMK has around 10,000 undergraduate students. TAMK's expertise ranges from engineering to business and entrepreneurship, from vocational teacher training to health care with special emphasis on practically oriented education and R&D activities. TAMK's profile both as a modern and dynamic education institution as well as an active project actor allows for genuine, long-lasting and confidential partnerships with companies and SMEs, as well as with public and third sector organisations.</p> <p>Regarding the management and coordination of projects, TAMK has strong experience in running and participating in projects funded by several funding instruments (Erasmus, EuropeAid, TEKES, ESF, ERDF, Lifelong Learning, Erasmus+, etc.). TAMK's project staff has professional experience, skills and competences in managing projects, while its administration is specialised in financial management, accounting and reporting.</p> <p>TAMK has five strategic focus areas where educational excellence is combined with practically oriented, user-driven research, development and innovation actions. Utilizing video technologies in higher education is one of TAMK's strategic focus areas of digital skills in learning and teaching. Multidisciplinary solutions are developed to meet the changing needs of operational environments. TAMK's research and development portfolio includes a wide range of successful local, regional, national and international projects.</p>		
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>		
<p>TAMK is the applicant and the project coordinating HEI. TAMK coordinates the whole project work as well as all management and financial issues. TAMK is the chair of the steering group and the coordinator of the European partners. The role of TAMK is not only to coordinate but also to share the strong expertise and experiences of online and mobile learning. For teacher training TAMK's premises offer live video broadcasting to Youtube, web conferencing and live streaming and a new video studio and editing space for creating learning videos and lecture recordings. In addition, being a multidisciplinary university TAMK shares the knowledge and ideas gained also on other focus areas of this project, entrepreneurship and environmental sciences, with the partner universities.</p> <p>TAMK is the leader organization in project opening (WP1), management (WP2) and eLearning pedagogies and tools (WP6).</p>		
D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project		
<i>Please add lines as necessary.</i>		
Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>	
Maija Kärnä	<p>Principal lecturer, International Business Education: MSc (Business Adm.), PhD (educ.)</p> <p>Skills: -online and mobile learning -international projects, academic coordination</p>	

	<p>Relevant publications:</p> <p>Kärnä, M. & Lehtonen, P. 2016 Improving the Quality and Relevance of Vocational Teacher Education in Finland. In G. Ubachs & L. Konings (eds). Conference Proceedings. Online, Open and Flexible Higher Education Conference, EADTU. Enhancing European Higher Education. "Opportunities and impact of new modes of teaching". Rome, October 19th-21st, 2016. Available online: https://conference.eadtu.eu/images/Proceedings/Conference_proceedings_2016_defcompressed2.pdf</p> <p>Kärnä, M., Jaakkola, P. & Lehtonen, P. 2014. Social Media challenges Vocational Teacher Education in Finland. World Conference on Educational Multimedia, Hypermedia and Telecommunications, Jun 23, 2014 in Tampere, Finland. Chesapeake, VA: Association for the Advancement of Computing in Education (AACE). Available at: http://conference.pixel-online.net/FOE/files/foe/ed0004/FP/0576-ITL387-FP-FOE4.pdf</p> <p>Kärnä, M. Tereshchenko, S. & Tereshkina, T. 2014. Connecting Learning and Working Life in Higher Education. In T.Smirnova & L.Titova: Экономические и управленческие технологии XX века: теория и практика, подготовка специалистов. Материалы Международной и научно-практической конференции. Санкт-Петербург, 20 ноября 2014 (Economical and management technologies of 21st century: theory and practice, preparing specialists. Materials of International methodological and scientific-practical conference. St.Petersburg, 20.11.2014).</p> <p>Kärnä, M. & Kärnä, V. 2012. Bachelor's and Master's Level Students' perceptions of using Web 2.0 Tools for Knowledge Construction in PBL-context. EDULEARN12 Proceedings, 4th International Conference on Education and New Learning Technologies, Barcelona, Spain. 2-4 July, 2012.</p> <p>Kärnä, M. 2011. The use of virtual spaces to scaffold knowledge building in the context of problem based learning (Virtuaalinen tiedonrakennuksen tila ongelmaperustaisen oppimisen tukena). Doctoral Thesis. Acta Universitatis Lapponiensis no 211. Lapin yliopistokustannus: Rovaniemi. Available at: http://lauda.ulapland.fi/bitstream/handle/10024/61663/K%E4rn%E4.Doria.Acta%20E.%2080.pdf?sequence=4</p>
Eeva-Liisa Viskari	<p>Principal Lecturer, Energy and Environmental Engineering PhD (Environmental Sciences) MSc (Environmental Sciences)</p> <p>Skills and research interests: project management, environmental analysis and monitoring, sustainable sanitation and biowaste management, resource efficiency and urban agriculture</p> <p>Bohdziewicz, J., Cebula, J., Marcisz, M., Piotrowski, K., Przywara, L., Viskari, E.-L., 2015. Application of human urine from dry toilets as natural fertilizer in onion (<i>Allium cepa</i> L.) cultivation – a chlorophyll indicator study. 5th International Dry Toilet Conference, August 19-21 2015, Tampere, Finland.</p> <p>Bohdziewicz, J., Cebula, J., Marcisz, M., Mrowiec, B., Piotrowski, K., Sakiewicz, P., Viskari, E.-L. 2015. Application of halloysite sorbent for</p>

	<p>ammonia and odors removal from dry toilet facilities. 5th International Dry Toilet Conference, August 19-21 2015, Tampere, Finland.</p> <p>Tsang, P.K., Szabo, H.M. and Viskari, E.-L. 2015. Gas release and ventilation in a dry toilet – comparison between different models (II). Methods. TAMKJournal, ISSN 2342-9887 (online).</p> <p>Tsang, P.K., Szabo, H.M. and Viskari, E.-L. 2015. Gas release and ventilation in a dry toilet – comparison between different models (I). Results. TAMKJournal, ISSN 2342-9887 (online).</p> <p>Kolari, S., Savander-Ranne, C. and Viskari, E.-L. 2008. Learning needs time and effort - a time use study of engineering students. European Journal of Engineering Education. 33:483-498.</p>
Sisko Mällinen	<p>Principal Lecturer, Vocational Teacher Education, MA (Lang), MA (Educ), PhD (Educ)</p> <p>Skills:- Online and blended learning Technology enhanced learning Teacher education Curriculum development International collaboration Foreign Language teaching and learning Assessment and testing Project management Currently working as a responsible pedagogue in VET Teachers for Future, Finland - Brazil Collaboration 2014-, Project manager in a national project, Accreditation of Prior and Experiential Learning in Higher Education, funded by ESR 2010-2013, participant in an international Leonardo da Vinci project, Development of Educational Techniques in Vocational Education and Training.</p> <p>Mällinen, S. 2007. Conceptual change process of polytechnic teachers in transition from classrooms to web-based courses. Academic dissertation. University of Tampere.</p> <p>Mällinen, S & Mahlamäki-Kultanen, S. 2007. Online instruction and teachers' conceptual change process in vocational higher education. Paper presented in the 5th International Conference on Researching Work and Learning in Cape Town, south- Africa .2. Dec – 5 Dec 2007.</p> <p>Mällinen, S. 2006. Towards online pedagogy - Information and communication technologies as a stimulus for transformative learning of teachers in Lahti University of Applied Science Paper presented at a Seminar on Adult Education in Hämeenlinna, Finland, 10 Feb 2006.</p> <p>Mällinen, S. 2001. Teacher effectiveness and online learning. In J. Stephenson (Eds.) 2001. Teaching and Learning Online. Pedagogies for New Technologies. 139–149. London. Kogan Page.</p>

Perttu Heino	<p>Research Director, PhD (Eng.)</p> <p>Skills: management and evaluation of international projects university-enterprise cooperation intelligent features in interactive software</p> <p>Relevant publications:</p> <p>Heino, P. 1999. Fluid property reasoning in knowledge-based hazard identification. Espoo, VTT, 1999. VTT Publications; 393. 170 p. + app. 44 p.</p> <p>Heino, P. and Suzuki K.. 2007. Safety gaming in the management of complex chemical processes. APSS 2007, Busan, Korea.</p> <p>Heino, P. and Pippola, T. 2008. Wellbeing and Physical Exercise Internet Portal for Vocational Schools Students in Finland. In: Symposium on Future Trends in Wellbeing Technology and Services, Sendai, Japan, 24.5.2008.</p> <p>Koivula, U.-M., Ala-Uotila, E., Engblom, S., Heino, P., Jungerstam-Mulders, S., Koivumäki, A., Puurtinen, H.-G., Salo, K. and Sankelo, M. 2009. R&D strategies and activities. Comparing Universities of Applied Sciences In Finland, the Netherlands, Belgium and Germany. Pirkanmaan ammattikorkeakoulun julkaisusarja A. Tutkimukset ja selvitykset. Nro 16. 47 p.</p> <p>Heino, P., Pippola, T., Peltonen, J. and Piispanen, P. 2009. Innovative development of an environment for innovations. Espoo, Laurea University of Applied Sciences. Many faces of innovation : from literature synthesis to empirical studies Laurea Publications A 70. 7 p.</p> <p>Heino, P. and Oikarainen, M. 2011. Developing Business from Technological Ideas of Higher Education Teachers and Students. In: EBRF 2011, Research Forum to Understand Business in Knowledge Society. December 14-15, 2011, Espoo, Finland. 3 pp.</p>
Annukka Tapani	<p>Principal lecturer, Vocational Teacher Education</p> <p>Education: Doctor of Social Sciences (D.Soc.Sc.) Master of Arts</p> <p>Skills: -teacher education, specifically entrepreneurship education and entrepreneurial pedagogy -curriculum development -new teachership</p> <p>Relevant publications:</p> <p>Tapani, A., Kukkonen, H. Stenlund, A. Lehtonen, H. 2015. Matkalla kohti uusia mahdollisuuksia – yrittäjyyskasvatuksen iltakoulun seminaarijulkaisu (On the way towards new possibilities - seminar publication on entrepreneurship education) Tampereen ammattikorkeakoulun julkaisu. Sarja B. Raportteja 85. Tampere 2015.</p> <p>Tapani, A. 2014. Yrittäjyyskasvatusta suomalaiseen opettajankoulutukseen ja opetukseen! YVI-hankkeen hedelmiä vuosilta 2010-2014. (More entrepreneurship education in Finnish teacher education and teaching! -</p>

	<p>Fruits of YVI-project from years 2010-2014). In Seikkula-Leino, J. Tiikkala, A. & Yöntilä, L. (eds.) Opettajankouluttajana riskipedagogiikkaa toteuttamassa – sanoista tekoihin (Implementing risk pedagogy as teacher educator - from words to action). Publications of Turun normaalikoulu 1/2014. Available at http://www.doria.fi/handle/10024/103005.</p> <p>Tapani, A., Kukkonen, H. & Stenlund, A. (eds.) 2014. Pysäköinti kielletty – huoltoajo sallittu! – Yrittäjyyspedagogiikka moottorina kohti uudenlaista ammatillisuutta. (No parking - service traffic permitted! - Entrepreneurship pedagogy as a motor towards new type of professionalism). Publications of Tampere University of Applied Sciences. Series B. Reports 72. December 2014.</p> <p>Tapani, A. 2008. Extreme-mahdollisuuksia vai konkurssin pelkoa? – yrittäjyys nuorten näkökulmasta (Extreme possibilities or fear of bankruptcy? - entrepreneurship as young people see it). Hallinnon Tutkimus 1/2008, pp. 49-61.</p>
Jarmo Vihmalaakso	<p>Designer at Floworks (6 years) Floworks is a Department of TAMK specialized at improving the University's capabilities in digitalized learning and teaching.</p> <p>Education: Bachelor of Business Administration (BBA) Vocational Teacher Education (current)</p> <p>Skills: Extensive experience in screen capture, audio equipment, video cameras, video conferencing and video streaming. developing and administering learning technologies in general staff training and technical support (7 years of experience)</p> <p>Relevant publications:</p> <p>Vihmalaakso, J. 2012. Development of Self-Study Materials and Staff Training. Tampere University of Applied Sciences. 2012. Available at http://urn.fi/URN:NBN:fi:amk-2012121018837.</p> <p>Vihmalaakso, J. 2016. Kemianlabrasta osallistavan oppimisen teknologiatilaksi. In Sintonen, S. (.eds). 2016. @Floworks - näkökulmia verkko-opetuksen laatuun ja kehittämiseen. (@Floworks – Quality and Development of Online Learning). Publications of Tampere University of Applied Sciences. Series B. Reports 88. Tampere 2016</p>

Please copy and paste tables as necessary

Partner number		P2
Organisation name & acronym	Erhvervsakademiet Lillebælt	
D.1.1 - Aims and activities of the organisation		
Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).		

Lillebaelt Academy University of Applied Sciences (EAL) is Southern Denmark's largest academy with approximately 3500 students and 300 staff members. The institution offers full-time and part-time higher education through seven faculties;

- Technology, energy and logistics
- Construction
- Events, experiences and tourism
- Finance and economics
- Sales, marketing and business development
- Multimedia and IT
- Laboratory, agriculture and process

Innovation is a central focus area at EAL, which can be seen in their mission "We educate to create innovation and growth". Innovation is an integrated element in EAL's strategy. EAL offer a bachelor top-up in innovation and entrepreneurship, which focuses on educating students to become entre- and intrapreneurs. Therefore, EAL have qualified teachers within the field of innovation and entrepreneurship. EAL have extensive experience from working with innovation events and processes, through activities e.g. 48 hours and InnoEvent. Education-industry cooperation is also a central focus area at EAL to ensure that the study programmes match the industry's needs. Students will meet industry through e.g. project work, case studies, internship, guest lecturers and innovation activities. EAL's Multimedia and IT faculty focuses on educating students to have competences and skills related to the latest trends within programming, electronics, data networks, websites, mobile apps and animation. Therefore, EAL have qualified teachers within ICT and the usage of new technology. EAL have experience in transferring their pedagogical approach and train teachers in their methodology through setting-up a business college in Kosovo.

Please describe also the role of your organisation in the project (limit 1000 characters).

EAL will contribute with expert knowledge on the topics innovation and entrepreneurship to ensure that the modules developed in the project incorporates elements e.g. innovative and entrepreneurial thinking, knowledge and competences. EAL will also contribute with knowledge about how ICT can be integrated in teaching activities. Furthermore, EAL will provide knowledge on how to establish qualitative education-industry cooperation that benefits the institutions, the enterprises and the students. EAL is responsible for WP 5, which focuses on transferring knowledge in how higher education institutions can establish relationships with industry through innovative and entrepreneurial approaches. EAL will develop and implement workshops for teachers to ensure they have the necessary skills and competences to implement innovation events and processes.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Malin Burström Gandrup	Malin Burström Gandrup has a bachelor degree in Media and Communication Science from Jönköping University, Sweden and a master degree in International Business Communication from University of Southern Denmark. She has close to 10 years of experience from working in the communication field as a Communication Officer and as project manager for several international projects. She started her employment at EAL in August 2012 and works as a Project Manager in the international department. Malin has extensive experience from intercultural communication by working in Sweden, Australia, New Zealand and Denmark, and by being involved in several EU-, Nordplus- and interreg-funded projects. Malin has been involved in the two externally financed projects 'Innovative Entrepreneurship in Nordic-Russian Context' and 'Development and Facilitation of Innovative Pedagogy in the Nordic-Russian Context', which focuses on developing innovative pedagogy and enhancing students and teachers knowledge, skills

	and competences in innovation and entrepreneurship. In the later project, Malin was e.g. responsible for planning and implementing a training seminar for teachers from Denmark, Finland and Russia. Furthermore, she has been project leader for an innovation camp organized at EAL in the spring 2014. Malin has previously been a lecturer, mainly in courses focusing on communication, at bachelor level.
Nana Lindholm	Nana Lindholm holds a bachelor's and master's degree in International Business Communication from the University of Southern Denmark. She has been associated with EAL since the fall of 2015 as both an intern and student helper in the international department, and is since August 2016 employed fulltime as International Project Coordinator. Nana has been involved in several EU- and Nordplus financed projects working with and being responsible for dissemination activities. Currently, she is responsible for the dissemination of the Nordplus financed project E-Nobanet, as well as working with the EAL dissemination activities in several other projects. Nana has successfully published various articles in local and national newspapers and magazines in connection with externally funded international projects.
Peter Storm-Henningsen	Peter Storm-Henningsen holds a master degree (mag.art.) in philosophy from the University of Southern Denmark and is currently commencing doctoral studies in cognitive science at the University of Osnabrück in Germany. With a background in Research and Innovation from the Pharmaceutical Industry, he has a more than 10 years of experience with teaching at bachelor and master level, both in companies as well as at the University of Southern Denmark and at Lillebaelt Academy. Peter has been working with knowledge, values, innovation and entrepreneurship, especially in relation to the philosophical foundations of concepts and the social psychology of their significance and use. Peter has delivered master-classes on innovation in Denmark and Portugal, and has recently been involved in two intercultural projects <i>Innovative Entrepreneurship in Nordic-Russian Context</i> , and <i>Development and Facilitation of Innovative Pedagogy in the Nordic-Russian Context</i> , which focuses on developing innovative pedagogy and enhancing students and teachers' knowledge, skills and competences in innovation and entrepreneurship.
Bjørk Boye Busch	Bjørk Boye Busch holds a bachelor degree in Computer Science from Aalborg University, Denmark. He has worked 7 years as a professional system developer/programmer and for the last 30 years he has worked as a fulltime lecturer within the IT area, primarily in technology, design and programming. Bjørk has since the early internet days used internet as a platform for distributing his own materials as well as using electronic materials from text to videos. He has used screen casting (distributed on YouTube) as an active part of his teaching materials and has been one of the drivers behind implementing videoconference as a virtual classroom on EAL's bachelor in Software Development. Furthermore, he is experienced with integrating Twitter and Blog's in his teaching activities.
Simon Stochholm	Simon Stochholm holds a bachelor's degree in Linguistics and Business Communication from University of Aarhus and University of Southern Denmark. He also holds a master's degree in Computational Linguistics from Copenhagen Business School / University of Copenhagen. He has spent most of his professional life working as a software developer and lecturer in

	<p>software development at business academy level and at a Youth Education Program for young people with autism spectrum disorder.</p> <p>Simon has been employed at EAL since August 2015 and has since then attended several e-learning conferences, worked intensively with flipped classroom, the integrating of videos in teaching activities and has been the driving force on a pilot scheme about digital teaching objects.</p>
Camilla Graversgaard Hansen	<p>Camilla Graversgaard Hansen has worked in the field of education for 10 years. She is an accountant by training. Before starting her employment at EAL, she worked at Campus Vejle, where she controlled the organization's liquid assets and had the responsibility for the school's debtors and creditors. She started her employment at the student administration at EAL in September 2013, and was transferred to the International Department in August 2015. She works as an Erasmus coordinator, and her main task is the administration of the incoming exchange students EAL. Besides coordinating the student mobility, she is also involved in externally financed projects (EU-, Nordplus- and interreg-funded) in which EAL participates. She has the overview of the project budgets and the responsibility of balancing the different accounts. Furthermore, she is in charge of travel bookings and time management (e.g. collecting timesheets) of employees involved in the projects.</p>

Partner number		P3
Organisation name & acronym	University of Valladolid, UVa	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
<p>Since its origin in the thirteenth century, the University of Valladolid (UVa) has grown and adapted to the times to become one of the most important universities in Spain. It counts over 80 degrees, 68 postgraduate and 29 doctoral programs. On average, nearly 24,000 students enroll each year, counts on more than 2,600 teachers and nearly 1,000 people in administration tasks and other services. Over 60% of students do internships in companies and other institutions. It offers a comprehensive range of double international degrees.</p>		
<p>The UVa manages around 852 research projects financed through competitive public R+D+i calls (European, national or regional), and approximately 500 contracts and agreements aimed at the transfer of knowledge and technology, amounting to an average value of over fifteen million Euros per annum. Moreover, its researchers take part in almost 250 further projects and contracts managed by other institutions.</p>		
<p>The Chemical Engineering and Environmental Technology Department is one of the most active and international departments of the University of Valladolid, leader in both, innovative teaching methodology and research. The Department has developed and implemented many degrees and postgraduate curricula in the areas of Environment and Chemical Engineering, Accredited at national or international level. All the courses are also implemented for e-learning. The Department conducts, also, a doctoral program on Chemical and Environmental Engineering with 29 students at present.</p>		
<p>The staff of this project is member of the consolidated research group of Environmental Technology, who has been working hard since 1980 in the management, minimization and valorization of wastes, developing cost-effective technologies for the treatment and reuse of industrial and domestic</p>		

wastewaters, gas and solid wastes. In the past 5 years, the research group has been granted with 17 R&D publicly funded projects accounting for a total budget of 3,903,317 €, and 39 privately funded R&D projects, accounting for a total budget of 2,179,739 € and participates in 3 COST ACTIONS. The scientific productivity of the group in the last 5 years (2012-2017) accounts for 16 PhD Theses defended, 140 JCR papers (73% within the first quartile, Q1), 17 book chapters, 134 contributions in International Conferences and 2 Patents.

Please describe also the role of your organisation in the project (limit 1000 characters).

UVa will contribute with expert knowledge on teaching, research and collaboration with industry in the Environmental Science and Engineering fields, specifically on waste management, minimization, treatment, reuse and valorization processes. UVa will provide the necessary knowledge on the state of the art, scientific fundamentals, industrial processes, and technology foresight and trends.

UVa will provide its broad expertise in programming, implementing and teaching Environmental degree, postgraduate and doctoral curricula, with international recognition in order to select and prepare the contents and activities of the projected curricula. UVa will advise and revise the generated pedagogical material, bringing its assistance to solve the possible questions. Additionally, UVa will work in the training of teachers, preparing the planned workshops and material for individual study as documentation, reference books and specific articles or reports.

UVa is the Leader Organization for WP4, and will have a main contribution to WP3, WP7 and WP8. UVa will apply its management, scientific diffusion and transfer of knowledge experience participating in WP1, WP2 and WP9.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.
Silvia Bolado Rodríguez	<p>Principal lecturer, Chemical Engineering and Environmental Technology, PhD Chemical Engineering</p> <p>Member of the Committee for the design of MSc curricula in Industrial Engineering (UVa)</p> <p>Member of the Committees for the design, organization and evaluation of:</p> <ul style="list-style-type: none"> · Environmental Engineering MSc program (UVa) · Chemical Engineering Degree program (UVa) · Chemical Engineering MSc program (UVa) <p>Skills and research interest: Waste valorization, Biofuels production from wastes, Removal of contaminants from wastewater and soil, Circular</p>

	<p>Economy, Chemical Process Technology: Separation and Reaction, Bioprocesses: Enzymatic reactions and fermentation, Teaching innovation</p> <p>Research in teaching innovation:</p> <ul style="list-style-type: none"> ● Participation in 8 publicly financed research projects (national and european), 2 of them as coordinator ● 4 invited conferences, 35 communications in Congresses, 1 international journal publication, member of 2 scientific committees. <p>Scientific research:</p> <ul style="list-style-type: none"> ● Participation in 24 publicly financed research projects (6 as coordinator) and 13 research projects with private financiation (9 as coordinator) ● 47 articles in scientific international journals indexed ● 2 scientific books and 7 chapters in books with international publishers ● 47 scientific communications in Congresses <p>5 selected research projects in the last 10 years, directly related with this proposal:</p> <ul style="list-style-type: none"> ● Valorization of Agrofood Effluents using Microalgae Processes to produce Bioenergy and Bio-products. Principal investigator: Silvia Bolado. Regional Funding Agency JCyL. Project period: 2014 - 2017 ● Nutrient recovery from agroindustrial effluents via microalgal biomass growth and valorization. Principal investigator: Silvia Bolado. National Funding Agency: MINECO. Project period: 2014 - 2017 ● Sustainable management of arsenic contaminated water and soil in rural areas of Latin America. Specific Support Action. Inco-Dev (UE) Partner 2. Principal Investigator: Silvia Bolado. International Funding Agency: European Union. Project period: 1/2006-12/2007. ● Valorization of by-products from biofuel production as animal feed. Principal Investigator: Silvia Bolado. Funding Company: UVESA. Project period: 2010-2012. ● Recovery of ammonium thiocyanate from industrial wastewater. Principal Investigator: Silvia Bolado. Funding Company: Arcelor- Mittal. Project period: 2009-2011. <p>3 selected recent scientific articles directly related with this proposal</p> <ul style="list-style-type: none"> ● Martín-Juárez, J., Lorenzo-Hernando, A., Muñoz-Torre, R., Blanco-Lanza, S., Bolado-Rodríguez, S. (2016). Saccharification of microalgae biomass obtained from wastewater treatment by enzymatic hydrolysis. Effect of alkaline-peroxide pretreatment. <i>Bioresource Technology</i>, 218, 265-271 ● Travaini, R., Martín-Juárez, J., Lorenzo-Hernando, A., Bolado-Rodríguez, S. (2016). Ozonolysis: An advantageous pretreatment for lignocellulosic biomass revisited. <i>Bioresource Technology</i>, 199, 2-12. ● Bolado-Rodríguez, S., Toquero, C. Martín-Juarez, J., Travaini, R., García-Encina, P.A. (2016). Effect of thermal, acid, alkaline and alkaline-peroxide pretreatments on the biochemical methane potential and kinetics of the
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	anaerobic digestion of wheat straw and sugarcane bagasse. Bioresource Technology, 201, 182-190.
Pedro A. García Encina	<p>Full Professor, Environmental Engineering PhD Chemical Engineering MSc Chemical Science Chartered Chemical Engineer (IChemE)</p> <p>Head of the Environmental Engineering MSc program Head of the Environmental Technology Research Group Head of the Chemical Engineering and Environmental Technology Department (2004-2012) Member of the Committee for the design of Degree curricula in Industrial Engineering (UVa) Member of the Committee for the design of MSc curricula in Industrial Engineering (UVa) Evaluator of IChemE International Accreditation Teams</p> <p>Skills and research interest areas: Environmental Technology. Sustainable Waste Management. Bioprocesses. Waste valorization. Anaerobic Wastewater treatment. Nutrients removal. Design and operation of anaerobic reactors</p> <p>Research in teaching innovation:</p> <ul style="list-style-type: none"> ● Participation in 8 publicly financed research projects (national and european), 1 of them as coordinator ● 35 presentations in Congress <p>Scientific research:</p> <ul style="list-style-type: none"> ● Participation in 35 publicly financed research projects (national and european), 13 of them as coordinator. ● Participation in 63 research projects with private financing (collaboration with the industry), 36 of them as coordinator ● 84 articles in scientific international journals indexed in JCR (Scopus, Orcid...) ● more than 150 scientific communications in Congresses ● 3 patents ● 20 PhD Thesis supervision <p>5 selected research projects financed in the last 10 years, directly related with this proposal:</p> <ul style="list-style-type: none"> ● Estudio de eliminación de microcontaminantes en sistemas de tratamiento de aguas residuales y su efecto sobre las poblaciones microbianas en sistemas biológicos. PI Pedro A. García Encina. Regional Funding Agency: JCyL. 03/2016-06/2018 ● A study of organic matter biodegradation and nutrients recovery from Agro-industrial Wastewaters using symbiotic microalgal-bacterial systems:

	<p>Optimization at lab scale. PI Pedro García Encina. National Funding Agency: MINECO. 04/2011 - 05/2013</p> <ul style="list-style-type: none"> ● A study at microscopic and process-scale of the interactions between nitrification-denitrification processes and biological phosphorous removal during the treatment of wastewater. PI: Pedro Garcia Encina. National Funding Agency CICYT: 2007 - 2010 ● Collaboration in the Wastewater Treatment Plant of the Heineken Factory: Study of the Process and collaboration in operation and modifications.PI: Pedro A García Encina & Fernando Fdz-Polanco..Funding Company: Heineken España S.A. Project period: 07/2015-12/2016. ● Evaluation of the basic engineering PROJECT and analysis of the upgradring alternatives of Avila WWTP. PI: Pedro García Encina. Funding Company: SOMACyL. Project Period: 05/2010 - 06/2010 <p>3 selected recent scientific articles directly related with this proposal:</p> <ul style="list-style-type: none"> ● Figueroa-González, I., Quijano, G., Laguna, I., Muñoz, R. García-Encina, P.A. (2016) A fundamental study on biological removal of N₂O in the presence of oxygen. Chemosphere, 158 9-16 ● Alcántara C, Dominguez J, García D, Blanco S, Perez R, Garcia-Encina P, Muñoz R (2015) Evaluation of wastewater treatment in a novel anoxic-aerobic algal-bacterial photobioreactor with biomass recycling through carbon and nitrogen mass balances. Bioresource Technology 191: 173-186. ● Rodríguez, E., García-Encina, P.A., Stams, A.J.M., Maphosa, F., Sousa, D.Z. (2015) Meta-omics approaches to understand and improve wastewater treatment systems Reviews in Environmental Science and Biotechnology, 14 (3) 385-406.
Rubén Irusta Mata	<p>Principal lecturer, Environmental Technology PhD Chemical Engineering</p> <p>Skills and research interests: Environmental Technology. Sustainable Waste Management. Waste valorization. Wastewater treatment. Emerging micropollutants. Life Cycle Assessment. Ecodesign.</p> <p>Research in teaching innovation:</p> <ul style="list-style-type: none"> ● Participation in 2 educational Congresses <p>Scientific research:</p> <ul style="list-style-type: none"> ● Participation in 115 research projects with public (National and European) and private (collaboration with industry) funding, 100 of them as coordinator. ● 31 articles in scientific international journals indexed in JCR (Scopus, Orcid...) ● More than 140 communications in Congresses, workshops and conferences <p>5 selected research projects financed in the last 10 years, directly related with this proposal:</p>

	<ul style="list-style-type: none"> ●Optimization of oxidation technologies for reducing trihalomethanes in drinking water treatment plants. PI: Rubén Irusta Mata. National Funding agency: MICINN. Project period: 01/2010 - 12/2012 ●Recycling of used tires and polyolefins: design, development and environmental assessment of a new road crash barrier coverage. PI: Rubén Irusta Mata. National funding agency: Spanish Ministry of Environment. Project period: 4/2007 - 31/3/2008 ●Implementing membrane technology and MBR systems for the wastewater treatment in the Technology Park of Boecillo (Spain). PI: Rubén Irusta Mata. National Funding Agency: MICINN. Project period: 11/2008 - 07/2010 ●Ecotoxicological Evaluation of Pharmaceutical and Personal Care Products (PPCP's) as a measure for the prevention of aquatic environment pollution. PI: Rubén Irusta Mata. Funding Company: Fundación Mapfre. Project period: 01/2012 - 12/2012 ●Introduction of environmental criteria for the purchase of lighting equipment, conditioning air and partial isolation in airport terminals. PI: Rubén Irusta Mata. Funding Company: TECNOMA. Project period: 01/2010 - 12/2010 <p>3 selected recent scientific articles directly related with this proposal:</p> <ul style="list-style-type: none"> ●Ortiz de García S, Pinto Pinto G, García-Encina P, Irusta-Mata R (2014) Ecotoxicity and Environmental Risk Assessment of Pharmaceuticals and Personal Care Products in aquatic environments and wastewater treatment plants. <i>Ecotoxicology</i>. 23:1517–1533. ●Ortiz de García S, Pinto G, García-Encina P.A, Irusta R (2013) Ranking of concern, based on environmental indexes, for pharmaceutical and personal care products: An application to the Spanish case. <i>J. Environ. Management</i>. 129: 384-397. ●Nieto P, Hidalgo D, Irusta R, Kraut D (2012) Biochemical methane potential (BMP) of agro-food wastes from the Cider Region (Spain). <i>Water Science & Technology</i> 66(9): 1842–1848.
M ^a del Mar Peña Miranda	<p>Principal lecturer Chemical Engineering and Environmental Technology, PhD Chemical Engineering</p> <p>Skills and research interest: Environmental Technology. Waste valorization. Removal of contaminants from wastewater. Anaerobic wastewater treatment, psychrophilic temperature. Membrane bioreactor. Intensification pretreatment.</p> <p>Scientific research:</p> <ul style="list-style-type: none"> ●Participation in 25 publicly financed research projects (3 as coordinator) and 18 research projects with private financing (5 as coordinator) ●28 articles in scientific international journals indexed ●2 chapters in books with international publishers ●45 scientific communications in Congresses <p>5 selected research projects in the last 10 years, directly related with this proposal:</p> <ul style="list-style-type: none"> ●Study of the anaerobic treatment (AnMBR) of municipal wastewater from Comunidad de Murcia and potential application for agricultural irrigation. Funding company: CADAGUA. PI: M.Peña. Period:2016-17.

	<ul style="list-style-type: none"> ●Membrane technology and UASB reactor for bioethanol wastewater treatment. Funding company: ABENGOA WATER. PI: M. Peña Miranda and F. Fdz Polanco. Project period: 2013 - 2014. ●Advanced technologies for the energy optimization and process optimization of the conventional municipal wastewater treatment plant. Ministerio de Medio Ambiente y Medio Rural y Marino. Reference IPT-2011-1078-310000. Company: CADAGUA. Project period: 2011-2014 ●Project CENIT –TECOAGUA. Development of sustainable technologies for the integral water cycle. BEFESA AGUA S.A. Membrane technology and anaerobic reactor. PI: M. Peña and F. Fdz-Polanco. Project period: 2010-2012. ●CADAGUA, S.A. Sludge minimization, nutrients recovery and optimization of energy consumption of municipal wastewater. Reference: 281/PC08/3-04.3. CENIT. Period: 2009 – 2010. PI: F. Fdz Polanco. <p>3 selected recent scientific articles directly related with this proposal</p> <ul style="list-style-type: none"> ●J. Gouveia, F. Plaza, G. Garralon, F. Fdz-Polanco, M. Peña, 2015. Long-term operation of a pilot scale anaerobic membrane bioreactor (AnMBR) for the treatment of municipal wastewater under psychrophilic conditions. <i>Bioresource Technology</i> 185, 225–233 doi:10.1016/j.biortech.2015.03.002 ●J. Gouveia, F. Plaza, G. Garralon, F. Fdz-Polanco, M. Peña, 2015. A novel configuration for an anaerobic submerged membrane bioreactor (AnSMBR). Long-term treatment of municipal wastewater under psychrophilic conditions. <i>Bioresource Technology</i>; 198; 510–519. DOI information: 10.1016/j.biortech.2015.09.039 ●I.Ramos, M. Peña, M. Fdz-Polanco, 2014. Where does the removal of H₂S from biogas occur in microaerobic reactors? <i>Bioresource Technology</i> 166, 151-157. DOI information:10.1016/j.biortech.2014.05.058
Raúl Muñoz Torre	<p>Associate Professor, Dept. of Chemical Engineering and Environmental Technology, University of Valladolid, (Valladolid, Spain). PhD in Biotechnology, Dept. of Biotechnology, Lund University, (Lund, Sweden, June 2005). Master in Chemical Engineering, University of Valladolid, (Valladolid, Spain, September, 2001). H index: 33 (20/09/2016) Scopus ID Nº: 16319160700</p> <p>SUPERVISION <i>November 2005–to date:</i> 9 postdocs/11 PhD students + (8 on-going)/18 Master Students/17 Final Year Projects/22 Undergraduate Research Projects.</p> <p>SCIENTIFIC PRODUCTIVITY</p> <ul style="list-style-type: none"> ●Nº JCR Publications (2002-Dec 2014): 126 + 6 under review (71 % Q1) ●Nº non JCR International Publications: 4 ●Nº National Publications: 3 ●Nº International Book Chapters (by invitation): 10 + 2 in preparation ●Nº National Book Chapters (by invitation): 10 ●Nº International Books Edited: 1 + 1 in preparation for Elsevier ●Contributions to International Conferences: 65 oral platforms + 37 posters + 10 Invited Keynotes/plenaries ●Contributions to National Conferences: 3 (oral platforms) + 1 Poster ●Nº Granted Patents: 1

	<ul style="list-style-type: none"> ●Participations in Public Research Projects and Relevant Contracts with Companies: 33 (23 as P.I.) ●Total Amount of Research Funding obtained as P.I (2005-to date): 4.273.352 € ●Regular reviewer for 38 JCR International Journals (2005-to date) ●Member of 19 Scientific Committees in Prestigious International Congresses (2009-to date) ●Project Evaluator: Argentina, Czech Republic, The Netherlands, Poland, South Africa, Spain, Sweden, Rumania, Mexico, Chile ●Nº invited participations in short-courses and seminars (2003-to date): 43 (13 National/30 International). <p>5 Selected JCR publications</p> <ul style="list-style-type: none"> ●Toledo A.L, Serejo M, Blanco S, Perez R, Lebrero R, Muñoz R (2016) Photosynthetic biogas upgrading to bio-methane: boosting nutrient recovery via biomass productivity control. <i>Algal Res.</i> 17: 46-52. ●Serejo M, Posadas E, Boncz M, Blanco S, Garcia-Encina P, Muñoz R (2015) Influence of biogas flow rate on biomass composition during the optimization of biogas upgrading in microalgal-bacterial processes. <i>Environmental Science & Technology.</i> 49(5): 3228-3236. ●Posadas E, Morales M.M, Gomez C, Acien-Fernandez G, Muñoz R (2015) Influence of pH and CO₂ source on the performance of microalgae-based secondary domestic wastewater treatment in outdoors pilot raceways. <i>Chemical Engineering Journal.</i> 265: 239-248. ●De Godos I, Vargas V, Guzmán H, Soto R, Garcia B, Garcia-Encina P, Muñoz R. (2014) Assessing carbon and nitrogen removal in a novel anoxic-aerobic algal-bacterial photobioreactor configuration with enhanced biomass sedimentation. <i>Water Research,</i> 61:77-85. ●Posadas E, García-Encina P, Dominguez A, Diaz I, Becares E, Blanco S, Muñoz R (2014) Enclosed tubular and open algal-bacterial biofilm photobioreactors for carbon and nutrient removal from domestic wastewater. <i>Ecol. Eng.</i>67: 156-164.
Raquel Lebrero Fernández	<p>February 2015-to date: PhD Assistant Professor, Dept. of Chemical Engineering and Environmental Technology, University of Valladolid, (Valladolid, Spain).</p> <p>February 2013: PhD in Environmental Technology, Dept. of Chemical Engineering and Environmental Technology, University of Valladolid (Valladolid, Spain).</p> <p>September 2008: Master in Process and Systems Engineering, University of Valladolid (Valladolid, Spain).</p> <p>H index: 12 (20/12/2016)</p> <p>Scopus ID Nº: 36134644700</p> <p>SUPERVISION</p> <p>February 2013–to date: 1 PhD thesis + (5 on-going)/3 Master Students/2 Final Year Projects/7 Undergraduate Research Projects.</p> <p>SCIENTIFIC PRODUCTIVITY</p> <ul style="list-style-type: none"> ●Nº JCR Publications (2011-to date): 29 + 4 under review (86 % Q1) ●Nº non JCR International Publications: 3 ●Nº International Book Chapters (by invitation): 9 + 1 in preparation

	<ul style="list-style-type: none"> ●Nº National Book Chapters (by invitation): 8 ●Nº International Books Edited: 1 ●Contributions to International Conferences: 21 oral platforms + 9 posters ●Contributions to National Conferences: 3 (oral platforms) + 1 Poster ●Participations in Public Research Projects: 8 (4 as P.I.) ●Participation in Contracts with Companies: 3 ●Regular reviewer for 15 JCR International Journals (2011-to date) ●Member of 3 Scientific Committees in Prestigious International Congresses (2011-to date) ●Project Evaluator: Argentina, Hong-Kong <p>5 Selected JCR publications</p> <ul style="list-style-type: none"> ●Lebrero R, Angeles R, Perez R, Muñoz R (2016) Toluene biodegradation in an algal-bacterial airlift photobioreactor: influence of the biomass concentration and the presence of an organic phase. Journal of Environmental Management. 183(3): 585-593. ●Lebrero R, Toledo-Cervantes A.L, Muñoz R, del Nery V, Foresti E (2016) Biogas upgrading from vinasse digesters: a comparison between an anoxic biotrickling filter and an algal-bacterial photobioreactor. Journal of Chemical Technology & Biotechnology. 91(9): 2488-2495. ●Lebrero R, Lopez J.C, Lehtinen L, Perez R, Quijano G, Muñoz R (2016) Exploring the Potential of Fungi for Methane Abatement: Performance Evaluation of a Fungal-Bacterial Biofilter. Chemosphere 144: 97-106 ●Lebrero R, Hernandez M, Quijano G, Muñoz R (2014) Hexane biodegradation in two-liquid phase biofilters operated with hydrophobic biomass: effect of the organic phase-packing media ratio and the irrigation rate. Chemical Engineering Journal 237:162-168 ●Lebrero R, Gondim A.C, Perez R, García-Encina P, Muñoz R (2014) Comparative assessment of a biofilter, a biotrickling filter and a hollow fiber membrane bioreactor for odour treatment in wastewater treatment plants. Water Research. 49:339-350
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Partner number		P4
Organisation name & acronym	ITMO University (former St. Petersburg National Research University of Information Technologies, Mechanics and Optics)	
D.1.1 - Aims and activities of the organisation		
Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).		

ITMO University is one Russia's leading higher education and research institutions, specializing in Information Technology, Optical Design and Engineering. Founded in 1900, today it is home to over 14,300 students and has earned its name "National Research University," blending the culture of innovation and discovery with world-class education. Our 14 departments offer an extensive curriculum in fundamental and applied disciplines, with an emphasis on graduate education and multidisciplinary approach. Our focus is on preparing elite scientists, engineers and programmers, notably in the areas of Photonics and Optics, Intelligent Technology and Robotics, IT in Economics, Social Sciences and Art, Life Sciences and Health, Natural sciences, Smart- and Nano- materials and Technology. Our 43 international research laboratories generate advanced knowledge and tackle some of the world's top challenges. The interdisciplinary approach and the culture of innovation are supported by the University's R&D system of startup labs and tech clusters that in partnership with industry and government, brings new innovative solutions to the market. With its global reputation for excellence, ITMO University participates in several international programs and offers over two dozen double degrees Master's and PhD programs with partner universities around the world. Several courses are taught in English. ITMO University is the home to one of the best centers for the selection and training of young gifted programmers in Russia. Our student team is the only 6-time winner of the ACM-ICPC international collegiate programming contest.

Please describe also the role of your organisation in the project (limit 1000 characters).

ITMO is the leader organization of WP 3 Curriculum design and adoption. ITMO is one of 8 Russian universities, which set up and run the Open Education platform www.openedu.ru. This education platform is allowing the students of Russian universities to get the education modules in other universities, which are the part of Open Education. In addition, ITMO University has a status of National Research University, which give the privilege of own accreditation of Master's Degree educational programmes. The modules, which will be created in this project will be used as an essential part of the Master's Degree Educational programme. ITMO will also provide online platform courses.ifmo.ru for piloting and dissemination purposes.

ITMO University with participate in organizing seminars/webinars to disseminate the best practices of curriculum work developed and to improve the understanding between HEIs, students and the labor market, with the ultimate goal of improving the employability of students after graduation. The new modules on sustainable waste management will be integrated into the university curricula.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Irina SERGEEVA	<p>Doctor's degree in Economics, Professor, Head of the Chair of Financial Management and Audit.</p> <p>Skills and research interests: Entrepreneurship, Innovation, Securities Market, Real Estate Economics, Corporate Management, Financial Markets</p> <p>Supervisor of Bachelor Programme: Financial Management</p> <p>Supervisor of Master Programmes: Corporate Management, Resource Management in Innovation, Audit and Quality Certification, Resource Supply of Technological Innovation</p> <p>2013-2014 member of the International laboratory "Sustainable development and resource efficiency in the food chain", financed by the grant from Ministry of Education and Science RF</p>

	<p>Relevant publications:</p> <p>Sergeeva I., Pokorna J., Pilar L., Balcarova T. Value proposition Canvas: Identification of Pains, Gains and Customer Jobs at Farmers' Markets. AGRIS on-line Papers in Economics and Informatics - 2015, Vol. 7, No. 4, pp. 123-130</p> <p>Sergeeva I., Maitah M., Smutka L., Nikiforova V., Vasilyonok V. The Development of Mutuals Funds in Russia. International Business Management - 2015, Vol. 9, No. 6, pp. 1257-1262</p> <p>Sergeeva I., Duhanina D. Using logarithmic functions for models of industrial enterprises sustainable development. Scientific journal of ITMO University. Series <i>"Economics and Environmental Management"</i>, 2015. № 3(22), pp. 132-143</p> <p>Sergeeva I. Funding Tools for Small and Medium Enterprises. Scientific journal of ITMO University. Series <i>"Economics and Environmental Management"</i>, 2013, №2. http://www.economics.ihbt.ifmo.ru</p> <p>Sergeeva I., Nikiforova V. The Development of the Portfolio Management for the Unit Investment Funds.- Journal of Advanced Studies in Finance. - Summer 2012, Volume III. Issue 1(5) – http://www.asers.eu/journals/jasf/</p>
Olga SERGIENKO	<p>PhD (Technical Sciences), Associate Professor Head of Industrial Ecology Department ITMO University, St. Petersburg, Russia Supervisor of the Master's program "Environmental Management and Cleaner Production" at the ITMO University; Supervisor of the Bachelor program "Energy-saving Processes in Chemical Engineering, Petrochemical and Biotechnology", profile "Environmental protection and rational use of natural resources" at the ITMO University; Since 2002 – the Russian coordinator and researcher of several international projects in the field of resource efficiency and cleaner production in industry with emphasis at the food and energy sector; 2013-2014 - member and the executive in charge of the International laboratory "Sustainable development and resource efficiency in the food chain", financed by the grant from the Ministry of Education and Science of the RF; Member of the Russian Society of Environmental Economics – since 2005; Expert of the St. Petersburg Ecological Union – since 2002; Chairman of the State graduation commission in the specialty "Ecology" at the Novgorod State University named after Yaroslav the Wise; Chairman of the State graduation commission in the specialty "Environmental Protection" at St. Petersburg State University of Plant Polymers;</p> <p>Skills and research interests: resource efficiency in the production chain, corporate environmental management, cleaner production methodology, eco-labeling, life cycle assessment, identification of the best available techniques in industry;</p> <p>Author of more than 120 scientific publications, including 3 monographs and 4 textbooks;</p>

	<p>Relevant publications:</p> <p>Sergienko O.I. Environmental Safety Management in the Food Chain: monograph [in Russian]// Sergienko O.I. SPb.:SpBGUNiPT, 2011.</p> <p>Sergienko O.I. The Best Available Techniques: collective monograph [in Russian]//E.B. Koroleva, O.N. Zhigelei, A.M. Kryazhev, O.I. Sergienko. T.V. Sokornova. SPb., Ay-Pi, 2011.</p> <p>Olga Sergienko, Holger Rohn. Application of Resource Efficiency in Russia: Experiences and Potentials/ Paper presented at the World Resources Forum 2011, Davos, Switzerland, September 19–21, 2011/http://www.wrforum.org/wp-content/uploads/2015/04/WRF_Meeting-Report-2011.pdf</p> <p>Klaus Wiesen, Jens Teubler, Holger Rohn, Olga Sergienko. How a closed carbon cycle can fail the target of decoupling – a case study of a biogas plant in Germany/ Paper presented at the World Resources Forum 2014, Arequipa, October 19-22, 2014 /http://www.wrforum.org/wp-content/uploads/2015/05/WRF_MeetingReport2014_FINALFINAL.pdf</p> <p>O. Sergienko, N. Ulianov, Y. Kashchenko. A Comparative Analysis of Technologies for Biowaste Utilization Based on Ecological and Economic Criteria/15th Anniversary International Multidisciplinary Scientific GeoConferences & EXPO - SGEM 2015// URL: www.sgem.org</p> <p>O. Sergienko, S. Kopyltsova. Implementation of Life Cycle Assessment for Improving Resource Efficiency: a Case Study of Bakery Production in Russia/15th Anniversary International Multidisciplinary Scientific GeoConferences & EXPO - SGEM 2015// URL: www.sgem.org</p>
Polina AGAKHANIANTS	<p>PhD (Technical Sciences), Associate Professor</p> <p>Since 2005 – Industrial Ecology Department, ITMO University, St. Petersburg, Russia, associate professor</p> <p>Since 2013 – Institute of Design, Ecology and Hygiene, Ltd., scientific advisor</p> <p>Since 2000 – NGO “St.Petersburg Society of Natural Sciences”, ECOM Assessment Center, project coordinator</p> <p>Skills and research interests: municipal solid waste management, environmental impact assessment, public participation.</p> <p>Relevant publications:</p> <ol style="list-style-type: none"> 1.P. Agakhaniants. Industrial control of waste management [in Russian] // Environmental safety: Handbook for managers in environment and industry. – St.Petersburg, 2009. 2.P. Agakhaniants. Environmental policy for an enterprise [in Russian] // Environmental safety: Handbook for managers in environment and industry. – St.Petersburg, 2009. 3.P. Agakhaniants et al. Assessment of environmental impacts and Russian public in 1979-2002 [in Russian]. M., KMK, 2006. – 427 c. 4. Agakhaniants P. Environmental decision-making system in Russia// Public participation in environmental impact assessment in Russia and United States/ J. Reisman, P. Agakhaniants, M. Tysiachnuik, M. Edelstein и др. – St.Petersburg, 2002.
Nikolay	PhD (Technical Sciences), Associate professor, Senior Researcher

<p>ULYANOV</p>	<p>Supervisor of the Master's program "Industrial Ecology" at the ITMO University Since 2005 – Industrial Ecology Department, ITMO University, St. Petersburg, Russia, Associate professor Since 1998-2005 Department of Occupational Life Safety and Thermal Engineering, Saint Petersburg State University of Refrigeration and Food Technologies. St. Petersburg, Russia, Associate professor Skills and research interests: best available techniques of environmental protection, waste waters treatment techniques, sewage sludge treatment and utilization, thermal methods of waste destruction Author of 4 textbooks and more than 45 scientific publications, including articles and abstracts at conferences, 4 copyright certificates and 2 patents of the Russian Federation; Relevant publications: 1.N.B Ulyanov, S.B. Tomilov, M.E Kleimenova, G.A Semina, S.V Smirnova. The Results of Environmental Investigation of Waste Water Facilities for Production of Aluminum Beverages for Containers [in Russian]// Scientific journal NRU ITMO, Series "Economics and Environmental Management", №1, 2015/ http://economics.ihbt.ifmo.ru/file/article/11646.pdf 2.O. Sergienko, N. Ulianov, Y. Kashchenko. A Comparative Analysis of Technologies for Biowaste Utilization Based on Ecological and Economic Criteria/15th Anniversary International Multidisciplinary Scientific GeoConferences& EXPO - SGEM 2015// URL: www.sgem.org 3. N.B Ulyanov. On the question of the creation of the domestic marine equipment for the treatment of a new generation of wastewater [in Russian] // V International scientific-technical conference "Low Temperature and Food Technologies in the XXI century", November 22-24, 2011, a collection of reports, P. 418-420 4. N.B Ulyanov. On the question about reconstruction of water supply and treatment facilities with a hydraulic mixing of reagents with water [in Russian] // News of Saint Petersburg State University of Refrigeration and Food Technologies, 2009. - №2. P. 60-67. 5. N.B Ulyanov. Deep cleaning of wastewater from nitrogen compounds physicochemical methods [in Russian]// News of Saint Petersburg State University of Refrigeration and Food Technologies, 2009. - №1. P. 62-70 6. N.B Ulyanov. On the question of the development of environmentally sound technology for the sewage sludge incineration. Problems of engineering and technology of food production.// News SPbGUNIPT, 2009. - №415-B-SPb.</p>
<p>RaliyaYULMETOVA</p>	<p>PhD (Chemistry), Associate Professor Since 2007 – Industrial Ecology Department, ITMO University, St. Petersburg, Russia, Associate professor Skills and research interests: Treatment of municipal solid waste, environmentally friendly ways to waste recycling Thermodynamic analysis of chemical reactions in the laser marking bitmap on gyroscopic devices nodes Author of more than 40 scientific publications, including monographs, articles and textbooks. Relevant publications:</p>

	<ol style="list-style-type: none"> 1. R.F.Yulmetova, P.N.Shaforostov Environmental safety in the operation of cable transmission lines of JSC "Lenenergo". [in Russian] //Belgorod State Technical University, Belgorod, 2014. - Vol. 2. - P. 222-227. 2. R.F. Yulmetova The problems of collection and disposal of used batteries batteries[in Russian] //SPb: IPTS, 2011. - P. 430–433 3. R.F. Yulmetova, O.S. Yulmetova, A. G. Shcherbak. The analysis of chemical interactions in laser marking bitmap on gyroscopic devices nodes [in Russian]// Scientific and Technical Journal ITMO. - 2011. - № 5 (75). – P. 91-95. 4.R.F. Yulmetova, Y.A.Komicheva. Environmental aspects of processing of plastic waste on the basis of polystyrene//SPb: IPTS, 2010. – P. 390-394 5.R.F. Yulmetova, Y.A.Kobeleva. Problems of disposal of mercury waste in metropolis [in Russian] //SPb: IPTS, 2010. – P. 386-39. 6. R.F. Yulmetova. Problems of recycling construction waste of enterprises[in Russian] //SPb: 2009. – P. 444-448.
Natalia DINKELAKER	<p>MSc. (Biology), Head of the Ecological monitoring Laboratory of Industrial Ecology Department ITMO University, St. Petersburg, Russia Senior Teacher in the Master's program "Environmental Management" at the ITMO University; Senior Teacher in the Bachelor program, profile "Environmental protection and rational use of natural resources" at the ITMO University; Lecturer in programs of professional development GmbH "Integral", St. Petersburg: "Development of the chapters of Environment Impact Assessment (EIA)", "Development of the sections "The list of activities for environmental protection" (PMOOS)", "Development of the sections "Environmental engineering research at the design stage of the constructed and reconstructed objects - since 2012 Expert of the State Ecological Assessment on the Federal level (in register) of Federal Supervisory Natural Resources Management Service of the Ministry of Natural Resources and Environment of the Russian Federation - since 2009 Expert of the State Ecological Assessment on regional level (in register) in Dept. of Natural resources of Leningradskaya oblast Administration - since 2014 Expert in Helcom (BASE project) 2012-2014 Consultant in projects of Baltic Fund for Nature - 2011-2014 Consultant in the Institute of applied ecology and hygiene - since 2014 Member of the Russ. Soc. of Naturalists, member of White Sea, Valaam expeditions – since 1991; Member of the State graduation commission in the specialty "Applied Ecology" at SPb State University; Skills and research interests: assessment of impact on environment and bioresources, ecological monitoring, bioindication and biotesting, impact of industrial objects on ecosystems, nature protecting techniques in industry, ecological parts in terrestrial planning; biosensors Author of more than 40 scientific publications, parts of state reports and materials for TV and press of Federal Supervisory Natural Resources Management Service, HELCOM reports, programs, conferences, Relevant publications:</p> <ol style="list-style-type: none"> 1. <i>Dinkelaker N.V., Goshar O.I.</i> The analysis of application of biotesting as a instrument of environmental monitoring of locations of waste near megapolises [in Russian] //Belgorod State Technical University, Belgorod, 2015. 2. <i>Dinkelaker N.V.</i> "The objectives of the development of the joint approaches to the establishment of a Joint Management Plan for the Curonian Lagoon.

	<p>The Joint Plan as one of the tools for the Baltic Sea Action Plan implementation" // Draft Minutes of Seminar in frame of the "Implementation of the Baltic Sea Action Plan in the Russian federation» (BASE) project "Practical measures for biodiversity conservation and approaches to integrated management of economic activities in the waters of the Baltic Sea, adjacent to the Kaliningrad region" 19-20 June 2013, Kaliningrad // http://www.helcom.fi/PublishingImages/helcom-at-work/projects/base/events/Minutes%20from%20the%20seminar%2019-20%20June%202013%20Kaliningrad_EN.pdf</p> <p>3. <i>Dinkelaker N.V.</i> Utilization of fallen leaves in city [in Russian]// Ecom-news, February, 2007 ecom.su/news/index.php?id=757</p> <p>4. <i>Zagidullina A.T., Dinkelaker N.V.</i> The changes of legislative and normative base necessary for developing mechanisms of biodiversity conservation and conservation of ecological functions of forests [in Russian]// // The Strategy of developing forestry and nature protection normative for Middle Taiga forestry region for introduction of sustainable forestry model/ Materials of WWF seminar 18 March 2013, Saint-Peterburg, p52-55</p> <p>5. <i>Ktitorov P.S., Iovchenko N.P., Dinkelaker N. V., Chuyko V.P.</i> Succession influence on dynamic of breeding ducks populations at the Rakovye Lakes. In: "Management and conservation of waterfowl populations in Northern Eurasia (with special focus on the White sea - Baltic Flyway)". Abstracts. Petrozavodsk. 2003 P. 88-90</p> <p>6. <i>Dinkelaker N. V.</i> Overgrowing processes in landscapes of Rakovie Lake nature reserve [in Russian]// Ecosystems of Rakovie Lake reserve: history and modern condition, SPb, Saint-Petersburg State University Press, 2011</p>
Igor KUPRIENKO	<p>Manager of Center for Project Development and Fundraising, ITMO University.</p> <p>Mr Kuprienko has about 24 years working experience on Innovative SMEs development in cross-cultural and complex environment, including experience in NIS countries, providing consulting, training and advisory services for business development for SMEs, universities' and EU-Russia local governments' cooperation.</p> <p>Since 1994 he is responsible for interregional neighborhood development, consultative and advisory assignments to public and private clients on various SME development aspects and Information Technology and communications issues (including system analysis, design and development, network), setting the University cooperation, setting the investors friendly environment. Due to active involvement in Tacis CBC projects as project designer, director and expert, he has developed a great experience in liaising with public administrations and authorities at all levels and created a number of professional partnerships and local and international networks.</p> <p>Mr Kuprienko implemented a number of projects for local and regional authorities aimed to address innovative SMEs development on EU-NIS countries recommendations and objectives. In most of these projects, he was involved in the development recommendations on incentives and specific measures to stimulate Triple Helix approach involving business-university-government players.</p> <p>During 1997-2011 Mr Kuprienko was involved in number EU-co-financed Projects operating on EU-Russia cross-border environment. The responsibilities were covering the actual design and drafting of the projects as well as participation in implementing as team leader and expert roles.</p> <p>Mr Kuprienko has gained working knowledge of the EU implementation processes and tools like Project Cycle Management, Logical Framework Approach, Work Plan drafting, Financial Management, Visibility Guidelines,</p>

	Reporting for EU program. Has developed strong analytical and communication skills as well as proven ability to conduct high-level dialog with representatives of Public Sector Organizations as well as Private Companies.
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Partner number		P5						
Organisation name & acronym	Ural Federal University named after the First President of Russia B. N. Yeltsin, UrFU							
D.1.1 - Aims and activities of the organisation								
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>								
<p>Ural Federal University is the oldest higher educational institution in the Ural region. It was founded in Ekaterinburg in 1920 by the decree of Vladimir Lenin, the head of the Soviet Government. After some time the University split into two: Ural State University (USU), specializing in fundamental, natural and mathematical sciences, humanities and social studies, and Ural Polytechnic Institute (UPI, later - Ural State Technical University, USTU-UPI) which was essentially focused on training engineers for metallurgical, heavy engineering, construction, radio technology and power engineering industries. In 2008 the modernization reform of the Russian higher education system was launched. A number of universities were merged, received a federal status and additional financing.</p> <p>The merger process of USTU-UPI and USU to create Ural Federal University (UrFU) began in 2009 and was fully completed by the spring of 2011. There are currently 25 000 students and 2000 teachers in UrFU.</p> <p>Achieving this goal is inseparably linked with the mission of the Ural Federal University, which was created on the base of two leading universities in the Ural region to pool their educational, scientific and innovative potential for the development of the Urals as one of the centers of the global economy. UrFU fulfills functions of the regional center of education with doctoral programs in most disciplines and professional faculties including chemistry, environmental economics, ecology, business, and education. The strategic aim for the University at the first stage of the Development plan is to become the leader among Russian federal universities and higher educational institutions of the Ural Federal District in the spheres of education, research and innovation</p>								
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>								
<p>UrFU will develop a new graduate program in Waste Management, also minor in Waste Management will be developed for all prospective graduate students with different majors. Non-degree short educational program for practitioners will be introduced as well.</p> <p>UrFU is the lead organization in in quality assurance and monitoring WP8. It is obliged to hold meetings/workshops on quality assurance and monitoring. Additionally UrFU will organize several workshops in it's premises during the project. UrFU will actively participate in all project's tasks. As a Federal University it is one of the strategic tasks of Ural Federal University to allocate internationally acknowledged best practices and knowledge, integrate them into the everyday work of the university and disseminate these practices and knowledge further to the other regional and national universities in Russia. Ural Federal University organizes and participates actively in international, national and regional conferences and has thus excellent opportunities to disseminate the results of the project in various connections. UrFU has experience in quality assurance and monitoring and practice in monitoring in several national and international projects.</p>								
D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project								
<i>Please add lines as necessary.</i>								
Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>							
Sergei N. Polbitsyn	<p>Education</p> <table border="0"> <tr> <td>Doctor in Economy</td> <td>2016</td> <td>Ministry of Education</td> </tr> <tr> <td>MBA</td> <td>1997</td> <td>College of Business and Management Illinois University</td> </tr> </table>		Doctor in Economy	2016	Ministry of Education	MBA	1997	College of Business and Management Illinois University
Doctor in Economy	2016	Ministry of Education						
MBA	1997	College of Business and Management Illinois University						

	Cand. of Science	1987	Leningrad Institute of Pulp and Paper Industry
	Specialist	1981	Ural State (Federal) University
	<p>Education at other institutions</p> <p>2015 Cambridge English Level 1 Certificate</p> <p>2014 European Entrepreneurship Colloquium</p> <p>Teaching and Research Employment</p> <p>2012- Ural Federal University, professor</p> <p>2008 - Institute of Economy, Urals Branch of the Russian Academy of Sciences. Research on agrifood policies, innovation systems, social and economic development of territories.</p> <p>2004 – 2007 Ural Agrarian Academy. Dean of the Department of Economy.</p> <p>1997-2003 Ural Academy of Public Administration. Research on innovative development of municipalities.</p> <p>Courses taught in the Ural Federal University:</p> <p>Business planning (undergrad and grad)</p> <p>Team creation (undergrad)</p> <p>Decision making (undergrad)</p> <p>Innovation management (grad)</p> <p>Investment management (grad)</p> <p>Quantitative methods of economic analysis (grad)</p> <p>Regional innovation policies (grad)</p> <p>Publications. The total amount of published works exceed 80 publications. The most important scientific publications for the last three years:</p> <p>Peer-reviewed Book</p> <ol style="list-style-type: none"> 1. Polbitsyn S.N. et al Multifunctional Model of Socio-economic Development of Rural Territories. – Yekaterinburg, 2012. – 160 p. <p>Articles in peer-reviewed journals</p> <ol style="list-style-type: none"> 2. Polbitsyn S.N. et al Variants of models of food supply system for developing arctic territories// Agrarny vestnik Urala. – 2014. –No 12. – pp.93-96 3. Polbitsyn S.N. et al Validation of the Priorities for the Regional Agriinnovation Systems Development //Economic Systems Management. 2014. No 10 4. Polbitsyn S.N. et al Major Directions in Food Supply Organization for Northern, Arctic and Polar Territories //Economic Systems Management. 2014. No 10 <p>Competitive Research Grants:</p> <p>2011 Russian Humanitarian Foundation “Multifunctional Model of Socio-economic Development of Rural Territories of Sverdlovsk oblast” Three years research grant.</p> <p>2014 Russian Humanitarian Foundation “Mechanism for Realization of Multifunctional Model of Socio-economic Development of Rural Territories of Sverdlovsk oblast” Three years research grant.</p>		
Olga Trunova	Education		

	<p>2016 - present time - PhD Student, Ural Federal University (Research Advisor: Polbitsyn S.N.)</p> <p>2016 Master of Public Administration, National Research University Higher School of Economics</p> <p>2014 Specialist in National Economy, Perm State University</p> <p>Teaching and Research Employment</p> <p>2014-2016 - Centre for Applied Economics of the Higher School of Economics, research assistant</p> <p>Participation in 6 research projects with public (regional and local) and private (collaboration with industry) financing</p>
Sergei Kulpin	<p>Education</p> <p>2012 Master of Management, Ural Federal University</p> <p>2010 Specialist in Information Technologies and Systems, Ural Federal university</p> <p>Teaching and Research Employment</p> <p>2012-present time Institute of Public Administration and Entrepreneurship, assistant.</p> <p>2012-present time Institute of Economy, Urals Branch of the Russian Academy of Sciences. Research on internet-marketing</p> <p>Courses taught in the Ural Federal University:</p> <ol style="list-style-type: none"> 1. Internet in Business (undergrad) 2. Intellectual Capital Management (undergrad) <p>Publications. The total amount of published works exceed 30 publications. The most important scientific publications in overseas edition for the last three years:</p> <ol style="list-style-type: none"> 1. Kulpin S.V. The effectiveness evaluating of online shop based on informativity of the product portfolio [Electronic resource] / E.V. Popov, S.V. Kulpin // Proceedings of The 9th International Days of Statistics and Economics, September 10–12, 2015; Prague. – Czech Republic: University of Economics, 2015. – Mode of access: http://msed.vse.cz/msed_2015/sbornik/toc.html 2. Kulpin S.V. Economic Institutions of the Internet [Text] / E.V. Popov, S.V. Kulpin // Proceedings of the 6th International Conference in Economics and Management of Networks, November 21-23, Agadir, Morocco. – Austria: University of Vienna. – 2013. 3. Kulpin S.V. Economic institutions for internet transactions [Electronic resource] / E.V. Popov, S.V. Kulpin // Proceedings of Inaugural Winir Conference, 11-14 September 2014, Old Royal Naval College, Greenwich, London, UK. – 2014. – Mode of access: http://winir.org/content/uploads/Conference_Papers_2014_2/WINIR2014_Sergey-Kulpin_583790_1405762488.pdf 4. Kulpin S.V. Factor Analysis of Information Products Competition [Text] / E.V. Popov, S.V. Kulpin // Montenegrin Journal of Economics. 2014. Vol. 10. N 2. 5. Kulpin S.V. Typology of transaction costs in the Internet [Text] / E.V. Popov, S.V. Kulpin // Proceedings of the 11th Eurasia Business and Economics Society Conference, September 12-14. – Ekaterinburg: EBES, 2013. – pp. 454-465

	Competitive Research Grants: 2016 Russian Fund for Fundamental Research “Research of marketing institutions in the virtual marketplace”. Two years’ research grant.
Aleksandr Yashin	<p>1992 Graduated from Urals Polytechnic Institute (UPI) as Chemical Engineer 1996 Candidate of Science (Environmental Economics) Degree from Ural State Technical University 2011 Approved as Associate Professor (Docent) in Economics and Management from Highest Attesting Committee of Russian Federation Deputy Director, Institute of Public Administration and Entrepreneurship, Ural Federal University. Associate Professor of Chair of Regional and Municipal Economics, Finance and Security</p> <p>Skills and research interests: Entrepreneurship, Logistics and Supply Chain Management, Environmental Economics and Management</p> <p>Coordinator of Russian-American Local Communities Sustainable Development Program in Ural region of Russia. Such program named ROLL (Replication Of Lessons Learned) was implemented from 1997 to 2009 under support of USAID and Sustainable Development Foundation.</p> <p>During 1994 - 2007 participant and project manager of the number of environmental projects (in the spheres of Environmental Policy, Economics for Environmental Decision-Making, Environmental Impact Assessment and Solid Waste Management) funded by US EPA, US AID, MATRA Foundation, British Council, UK Department For International Development (DFID), German Ministry of Science etc.</p> <p>In 2000 - 2005 participant of Ekaterinburg City Solid Waste Management Strategic Plan team as representative of NGO sector of Ural region. This project was designed by Ekaterinburg City Administration and funded by City Administration and UK Department For International Development (DFID).</p> <p>Relevant publications:</p> <ol style="list-style-type: none"> 1. Yashin A.A., Ruzhanskaya L.S., Soldatova Yu.V. Theory of Organization. UrFU, Yekaterinburg. 2015. 2. Yashin A.A., Strukova L.V., Derek J. Blair. Steps Towards Sustainable Communities. CETI, CEED, Sunderland City Council, Sunderland. – Sunderland, UK, 2003. 3. Yashin A.A., Ryashko M.L. Principles of Logistic Systems Development and Evaluation. UrFU, Yekaterinburg. 2014.

Partner number		P6
Organisation name & acronym	Tyumen State University, TSU	
D.1.1 - Aims and activities of the organisation		
Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).		

Established in 1930, Tyumen State University or University of Tyumen (UT) is the oldest academia in the Western Siberia, with a total student enrolment of over 20,000 and a total number of employed staff of 1,963. It fulfills functions of the basic center of personnel training with doctoral programs in most disciplines and professional faculties including engineering, geography, biology, law, business, and education with the only exception of medicine. The university implements large-scale research projects, introduces innovative educational projects, provides multi-level and ongoing training. Although there are five other universities in the Tyumen region, UT is the most dynamic and up-to-date.

In 2015, UT joined the club of top 21 Russian universities in the 5-100 project. A strategic objective of UT is to create a new-generation university through the reorganization of its human resources policy, its core assets (educational, research, innovative) and institutional environment, and by means of comprehensive upgrading of infrastructure. UT is in Top-50 Russian universities possessing the highest level of competitiveness in technical, natural and hard sciences, as follows from the rating made by RAEX (Expert Rating Agency).

In 2015, Tyumen State University ranked 47th in the National Russian University ranking index concerning federal and national research universities. In 2016, UT was placed 32 out of 200 universities in the National Rating "Innovations and Entrepreneurship". UT researchers work in more than 30 academic fields, cooperating with research universities throughout the world.

Please describe also the role of your organisation in the project (limit 1000 characters).

TSU has in its structure the Research Institute of Ecology and Natural Resource Management. The main activities of the staff, pioneered the practice of environmental government agencies and oil and gas companies are: environmental monitoring; assessment of environmental impact from industry, mainly oil and gas companies. TSU can contribute with expertise on legislation in the field of Sustainable Waste Management. TSU will be a Russian counterpart for UVA on WP 4 DEV - Sustainable Waste Management Curriculum Content Planning and Teacher Training. TSU will be responsible for organization of a workshop for curriculum and learning module content planning including appropriate visits to West-Siberian Innovation Centre and research centers, some local companies in the field of waste management. The university will also take responsibility of some project document translations from English to Russian. TSU is going to initially use the modules to complete the existing curricula.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Dmitry Rudenko	<p>Deputy Director for Research, Finance and Economics Institute Principal lecturer, International Economics PhD (CSc in Economics) MSc (Economics)</p> <p>Skills and research interests: environmental economics, sustainable development, poverty and inequality.</p> <p>The project leader: 2014-2015: Multidimensional poverty monitoring in the regions of Russia. Grant for young scientists. Founded by the Russian President (14.Z56.14.3051-MK)</p> <p>Supervision: 5 Master Students / 2 Bachelor Students</p> <p>Relevant publications: Rudenko, D. and Skripnuk, D. (2016). Environmental Kuznets curve: The case of arctic Russian regions, In Ecology, Economics, Education and Legislation, Vol. Iii, (pp. 209-216).</p>

	<p>Didenko, N., Rudenko, D., Skripnuk, D. (2015). Environmental Security issues in the Russian Arctic. In Ecology, Economics, Education and Legislation, Vol Iii (pp. 267-274).</p> <p>Nalimov, P., & Rudenko, D. (2015). Socio-economic Problems of the Yamal-Nenets Autonomous Okrug Development. In N. Tsounis & A. Vlahvei (Eds.), International Conference on Applied Economics (Vol. 24, pp. 543-549).</p> <p>Rudenko, D., & Morosova, E. (2015). Prospects for the Development of Further Vocational Education in the Tyumen Region of Russia. In N. Popov & O. Chigisheva (Eds.), Worldwide Trends in the Development of Education and Academic Research (Vol. 214, pp. 693-699).</p> <p>Rudenko, D. Y. (2014a). A comprehensive approach to the study of poverty in the region. Regional Research of Russia, 4(3), 143-151. doi:10.1134/S2079970514030083</p>
Elena Danilova	<p>Principal lecturer, Environmental Economics PhD (CSc in sociology) MSc (Environmental and resource economics)</p> <p>Skills and research interests: environmental management, environmental economics and environmental protection.</p> <p>Supervision: January 2017 - 5 students – bachelor`s thesis in "Management", 2 students - bachelor`s thesis in "Human Resources"</p> <p>Relevant publications: Danilova, E.P. et al. (2013). Environmental management. Tyumen, Tyumen State University Publishing House, 84 p.</p>
Svetlana Kazantseva	<p>Principal lecturer, Lean Production PhD (Dr in Economics) PhD (CSc in Sociology) MSc (Economics)</p> <p>Skills and research interests: lean production, management. 2009 School of consultants. Academy of National Economy under the Government of the Russian Federation, Moscow, specialty: management consultant. 2011 Certified Management Consultant in accordance with the Amsterdam Standard (ICMCI).</p> <p>Supervision: September 2005 – to date: 2 PhD thesis + (3 ongoing) / 1 Master Students</p> <p>Relevant publications: Kazantseva, S. (2004). Industrial organizational systems: development trends, design and evaluation, Tyumen: Vector Book, 260 p. Kazantseva, S.M., Kolmakov, V.V. (2013). A small entrepreneurship in the Tyumen region: possibilities for public-private partnership and loudspeaker of the relations of property. - Tyumen: Ist Consulting, 160 p. Kazantseva, S. (2014). Problems of implementation of lean production at Russian enterprises. Creative Economy 12 (96), pp. 90-98 Kazantseva, S. Improving business processes describe the methods used in the practice of management consulting. Questions of the new economy, 2 (24), pp.57-60.</p>
Gladun Elena	Principal lecturer, Environmental Law

	<p>PhD (CSc in Law) MA (Law)</p> <p>Research interests Legal regulations of sustainable development (in Russia); comparative research in the area of environmental law, natural resource law; regulations of the Arctic regions, northern indigenous peoples' issues</p> <p>Relevant courses in MA Programs: Global Environmental Management (oil and gas sector): Course in English, LL.M, 2012 - present; LL.M program (University of Wolverhampton, Great Britain, 2011); Student exchange program (University of Tyumen, 2016) Laws and Regulations of Petroleum Exploration and Production: Course in English, LL.M, 2014 – present; Student exchange program (University of Tyumen, 2015) Environmental Law: Course in Russian, LL.B, LL.M, B.Sc, M.Sc, 2002 – present; Land Law, Land Use Management; Courses in Russian, LL.B, LL.M, 2003 – present.</p> <p>Coordinator of the Project: “Sustainable Land Management and Land Use Scenarios” (jointly with the University of Osnabrück, Germany)</p> <p>Relevant research projects: “Sustainable Land Management and Adaptation Strategies to Climate Change” (German Federal Ministry of Education and Research, 2011-2016) Water Quality and Sustainable Ecosystems in the Conditions of Environmental and Climatic Change in Western Siberia (Laboratory of Water Quality, Stability of Water Ecosystems and Ecotoxicology, Tyumen State University and Russian Academy of Science, 2012)</p> <p>Relevant publications: von Dressler H., Clemens G., Griewald Y., Gladun E. Developing Land-Use Scenarios for Stakeholder Participation in the Southern Tyumen Region. Management of Environment and Natural Resources. VI International Conference Materials. 2016: 20-22. Gladun E., Chebotarev. G. Legal Measures for Efficient Environmental Regulations of Oil and Gas Industry in Western Siberia. The Yearbook of Polar Law. Volume VII. 2015: 352-374. http://elenagladun.com/articles/14-Year-Book-of-Polar-Law-2015.pdf Gladun E., Chebotarev G., Soromotin A. Mission of Tyumen State University in the Period of Intensive Economic Development of the Arctic Territories in the Yamal Region. Arctic Dialogue in the Global World: Conference Materials Book, Ulan-Ude. 2015: 188-191 http://elenagladun.com/articles/12-Arctic-Dialogue-in-the-Global-World-2015.pdf Gladun E. Environmental Protection in the Arctic in the Period of Industrial Development: legislation of the Arctic countries. The Newsletter of Tyumen State University. Social-Economic and Legal Studies. 2015: 132-142. Environmental Protection of the Arctic Region: Effective Mechanisms of Legal Regulation. Russian Law Journal. Volume III. 2015: 92-110. http://elenagladun.com/articles/16-Russian-Law-Journal-2015.pdf Public Participation in Resources Management. The Newsletter of Tyumen State University, 2008: 45-48.</p>
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Liudmila Simonova	<p>Head of the Department of International Business and Economics Principal lecturer, International Business PhD (Dr in Economics) MSc (Economics)</p> <p>Skills and research interests: international business, management, institutions, corruption, small and medium size enterprises.</p> <p>Project leader: 2013: The regional innovation ecosystem formation and development. Founded by the Ministry of Education and Science of Russia (14.V37.21.0972)</p> <p>Supervision: 3 PhD students / 5 Master Students / 5 Bachelor Students</p> <p>Relevant publications: Simonova, L. M., Pogodaeva, T. V., & Zhaparova, D. V. (2015). Up The Down Staircase Or How To Improve A Rating. <i>International Conference on Applied Economics (Icoae) 2015</i>, 24, 652-658. doi:10.1016/s2212-5671(15)00665-6 Simonova, L.M., Kholodionova, A.S., (2016). Energoberegayushchiye meropriyatiya na primere odnogo iz gazodobyvayushchikh predpriyatiy Rossii. <i>Vestnik Tyumenskogo gosudarstvennogo universiteta. Sotsial'no-ekonomicheskkiye i pravovyye issledovaniya</i>. 2(3), pp. 253-263. Simonova, L.M., Pogodayeva, T.V., Zhaparova, D.V. (2015). Vliyaniye institutsional'nykh faktorov na investitsionnyuyu privlekatel'nost' regionov intensivnogo prirodopol'zovaniya. <i>Institutsional'naya transformatsiya ekonomiki: rossiyskiy vektor novoy industrializatsii materialy IV Mezhdunarodnoy nauchnoy konferentsii v 2 chastyakh</i>. Pp. 386-393. Simonova, L.M., Pogodayeva, T.V., (2015). Chto uluchshat': reytingi ili instituty? <i>Eko</i>. 10 (496). pp. 78-97. Simonova, L.M., Artyukhov, D.A., (2015). Metodika otsenki sotsial'no-ekonomicheskikh effektiv razvitiya regional'nogo neftegazovogo sektora. <i>Vestnik Tyumenskogo gosudarstvennogo universiteta. Sotsial'no-ekonomicheskkiye i pravovyye issledovaniya</i>. 1(1), pp. 185-192.</p>
Vitaly Khoroshavin	<p>Head of the Institute of Earth Science Principal lecturer, Water quality and aquaecology, soil protection PhD (CSc in Geography) MSc (Geoecology)</p> <p>Skills and research interests: assessment of water runoff quality change; petroleum hydrocarbons transportation on small rivers & lakes in waters of ground- and soil; Soil contamination protection on Agricultural Regions; Basin approach in hydrology; Connection of factors of Soil & Water Quality formation; The Impact of Water Quality on Human Health</p> <p>Project leader: 2004-present: Environmental monitoring of the territory of natural park "Kondinskie ozera". The Part "Soil monitoring" 2006-2008: Recreation monitoring in natural park "Kondinskie ozera". 2010-2012: Water Quality in Western Siberia: anthropogenic impact & climate change 2013-present: Water Quality in Arctic: natural & anthropogenic factors of Aquaecology & fish habitat</p>

	<p>Supervision: 1 PhD students / 5 Master Students / 5 Bachelor Students</p> <p>Relevant publications: Khoroshavin, V.Yu. et al. (2011). Prediction of possible climate warming impacts on land water chemistry. Doklady Earth Sciences. Vol. 441. № 2. pp. 1688-1691. Khoroshavin, V.Yu. et al. (2012). Paleoeological studies of mountain lakes. Water Resources. Vol. 39. № 5. pp. 576-589. Khoroshavin, V.Yu. et al. (2013). Variation of Cytogenetic Parameters in Coregonid Fish Species from the Ob-Irtysh Basin. Russian Journal of Ecology, 2013, Vol. 44, No. 4, pp. 342–344. Khoroshavin, V.Yu. et al. (2013). Water chemistry in small lakes along a transect from boreal to arid ecoregions in European Russia: Effects of Air Pollution and Climate Change. Applied Geochemistry. Vol. 28. C. 69-79. Khoroshavin, V.Yu. et al. (2013). Aquatic Geochemistry of Small Lakes: Effects of Environment Changes. Geochemistry International, Vol. 51, No. 13, pp. 1031–1148. Khoroshavin, V. Yu. and Moiseenko, T. I. Petroleum hydrocarbon runoff in rivers flowing from oil-and-gas-producing regions in Northwestern Siberia. Water resources, 2014, Vol. 41, Is. 5, pp 532-542.</p>
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Partner number		P7
Organisation name & acronym	Al-Farabi Kazakh National University - KazNU	
D.1.1 - Aims and activities of the organisation		
Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).		
<p>Al-Farabi Kazakh National University is the leading institution of higher education and one of the main research centers of Kazakhstan.. The University is distinguished by the rich diversity of its subject spectrum offered at 15 functioning faculties. There are 9 natural sciences and technical research institutes and laboratories, 17 research institutes and centers of social and humanitarian profile at faculties and a techno-park. The University has academic staff of around 2500 professors, doctors, candidates of sciences and PhDs engaged in training more than 25000 students. All educational programs of the university have successfully passed international accreditation of ASIIN and AQUIN. According to QS World University Rankings 2016 KazNU held the position among top 250 universities being ranked 236th.</p> <p>Employability of students is one of the core issues at KazNU. There is a good practice of organizing employer's annual forum and job fair.</p> <p>KazNU is a member of well-known international organizations as well as the Global Hub of the United Nations Academic Impact Program on Sustainability.</p> <p>Since 2010, KazNU has been developing distance and e-learning and uses Moodle as Learning Management System (LMS). Moreover, in 2014 KazNU in cooperation with the teaching staff began to work on the creation of Massive open online course (MOOC), and is currently on the Internet at http://open.kaznu.kz . MOOC operates its own platform based on the Open EDX system. Currently at various stages of development are 35 MOOCs.</p> <p>In 2017 it is planned to work on the development of high-quality MOOC, publication on the platform and the active participation of the audience. The next stage is to establish close cooperation between the representatives of the consortium, which will create a national platform of open education in close cooperation with MES of the RK.</p> <p>KazNU has the necessary experience in improvement of national educational standards in particular fields, on the basis of qualification framework ideas, Bologna principles and the EU universities'</p>		

experience by participating in the EU projects such as: Teaching competency and infrastructure for e-Learning and retraining (CANDI), Qualification Frameworks in Central Asia: Bologna-Based Principles and Regional Coordination (QUADRIGA), Quality of Engineering Education in Central Asia (QUEECA) and EQF – based professional ICT training for Russia and Kazakhstan (PICTET).

Please describe also the role of your organisation in the project (limit 1000 characters).

KazNU will take fair responsibility for the implementation of the project and actively participate in fulfillment of aims and objectives of the Project. The University will ensure dissemination and implementation of project results in his own country.

KazNU will be the Leading organisation of WP7, Piloting new curricula and learning modules.

Al-Farabi Kazakh national university staff have the own Education platform on the base Open edX <http://open.kaznu.kz>. This educational platform enables the students from outlying regions of Kazakhstan to obtain knowledge on the individual modules using distance technologies.

Al-Farabi Kazakh national university is ready to participate in organizing of the workshops for a joint understanding between the partners and working life representatives.

The new modules on sustainable waste management which will be created in the framework of this project will be integrated into the university curricula.

Further it is planned development of the Master's Degree Educational programme based on the developed modules.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.
<p>Aliya Askarova</p>	<p>Doctor of Physical and Mathematical Sciences The best University Teacher of the Republic of Kazakhstan in 2005, 2010, more than 450 publications, including 8 monographs, 35 textbooks Holder of the Order "Kurmet", Diploma "Honorary Scientist of Europe" and the Leibniz Medal (Germany), 2014</p> <p>Projects</p> <ol style="list-style-type: none"> 1. Development of energy saving technologies for efficient and cleaner burning low-grade coal in the Kazakh energy TPP boilers 2. Create a new "clean" technologies of burning high-ash coal in the thermal power plants in Kazakhstan, using the mechanism of selective non-catalytic reduction of nitrogen oxide emissions in the environment 3. New technologies optimize the combustion processes high-ash coal power boilers TPP Kazakhstan with the aim of minimizing harmful emissions into the atmosphere

	<p>4. New technologies optimize the combustion processes in China and Kazakhstan solid fuels in power plants in order to minimize harmful emissions</p> <p>5. The use of overfire air technology at burning energy of fuel into the combustion chamber thermal power plants, in order to reduce the anthropogenic impact on the marketing environment of the Republic of Kazakhstan</p> <p>Relevant publications:</p> <p>1. Askarova A., Bolegenova S., Bolegenova Symbat, Berezovskaya I., Ospanova Sh., Shortanbayeva Zh., Maksutkhanova A., Mukasheva G., Ergalieva A. Numerical Simulation of the Oxidant's Temperature and Influence on the Liquid Fuel Combustion Processes at High Pressures // Journal of Engineering and Applied Sciences. – Vol. 10, №4, 2015. – P.90-95, IF=0.12.</p> <p>2. Askarova A., Bekmukhamet A., Bolegenova S., Ospanova S., Symbat B., Maximov V., Beketayeva M. and Ergalieva A. 3-D Modeling of Heat and Mass Transfer during Combustion of Solid Fuel in Bkz-420-140-7C Combustion Chamber of Kazakhstan // Journal of Applied Fluid Mechanics. - 2016. - Vol.9, №2. - P.699-709, IF Thomson Reuters and Scopus.</p> <p>3. A. Askarova, S. Bolegenova, Symbat Bolegenova, V. Maximov, A. Yergaliyeva, Z. Gabitova, A. Maxutkhanova, Zh. Shortanbayeva, A. Boranbayeva and K. Berdikhan Application of Numerical Methods for Calculating the Burning Problems of Coal-Dust Flame in Real Scale // International Journal of Applied Engineering Research ISSN 0973-4562. – Vol.11, Issue 8. – 2016. – P. 5511-5515, IF Scopus.</p> <p>4. Askarova A., Bolegenova S., Bolegenova Symbat, Maximov V., Beketayeva M. Influence of boundary conditions to heat and mass transfer processes // International Journal of Mechanics. - 2016. - Vol.10. - P. 320-325, IF Scopus.</p> <p>5. Askarova A., Bolegenova S., Bolegenova Symbat, Maximov V., Beketayeva M., Shortanbayeva Zh. On the effect of the temperature boundary conditions on the walls for the processes of heat and mass transfer // International Journal of Mechanics. - 2016. - Vol.10. - P. 349-355, IF Scopus.</p>
Saltanat Bolegenova	<p>Head of the Chair of Thermal Physics and Technical Physics, Doctor of Physical and Mathematical Sciences The best University Teacher of the Republic of Kazakhstan in 2007, 2013, Developer of state educational standards of the RK more than 150 publications, including 6 monographs, 30 textbooks Projects</p> <p>1. Development of energy saving technologies for efficient and cleaner burning low-grade coal in the Kazakh energy TPP boilers</p> <p>2. Create a new "clean" technologies of burning high-ash coal in the thermal power plants in Kazakhstan, using the mechanism of selective non-catalytic reduction of nitrogen oxide emissions in the environment</p> <p>3. New technologies optimize the combustion processes high-ash coal power boilers TPP Kazakhstan with the aim of minimizing harmful emissions into the atmosphere</p>

	<p>4. New technologies optimize the combustion processes in China and Kazakhstan solid fuels in power plants in order to minimize harmful emissions</p> <p>5. The use of overfire air technology at burning energy of fuel into the combustion chamber thermal power plants, in order to reduce the anthropogenic impact on the marketing environment of the Republic of Kazakhstan</p> <p>Relevant publications:</p> <p>1. Askarova A., Bolegenova S., Bolegenova Symbat, Berezovskaya I., Ospanova Sh., Shortanbayeva Zh., Maksutkhanova A., Mukasheva G., Ergalieva A. Numerical Simulation of the Oxidant's Temperature and Influence on the Liquid Fuel Combustion Processes at High Pressures // Journal of Engineering and Applied Sciences. – Vol. 10, №4, 2015. – P.90-95, IF=0.12.</p> <p>2. Askarova A., Bekmukhamet A., Bolegenova S., Ospanova S., Symbat B., Maximov V., Beketayeva M. and Ergalieva A. 3-D Modeling of Heat and Mass Transfer during Combustion of Solid Fuel in Bkz-420-140-7C Combustion Chamber of Kazakhstan // Journal of Applied Fluid Mechanics. - 2016. - Vol.9, №2. - P.699-709, IF Thomson Reuters and Scopus.</p> <p>3. A. Askarova, S. Bolegenova, Symbat Bolegenova, V. Maximov, A. Yergaliyeva, Z. Gabitova, A. Maxutkhanova, Zh. Shortanbayeva, A. Boranbayeva and K. Berdikhon Application of Numerical Methods for Calculating the Burning Problems of Coal-Dust Flame in Real Scale // International Journal of Applied Engineering Research ISSN 0973-4562. – Vol.11, Issue 8. – 2016. – P. 5511-5515, IF Scopus.</p> <p>4. Askarova A., Bolegenova S., Bolegenova Symbat, Maximov V., Beketayeva M. Influence of boundary conditions to heat and mass transfer processes // International Journal of Mechanics. - 2016. - Vol.10. - P. 320-325, IF Scopus.</p> <p>5. Askarova A., Bolegenova S., Bolegenova Symbat, Maximov V., Beketayeva M., Shortanbayeva Zh. On the effect of the temperature boundary conditions on the walls for the processes of heat and mass transfer // International Journal of Mechanics. - 2016. - Vol.10. - P. 349-355, IF Scopus.</p>
Zhanar Shortanbayeva	<p>Deputy Head of the Chair coordinator of educational programs of the Department, coordinator of academic mobility Projects</p> <p>1. Development of energy saving technologies for efficient and cleaner burning low-grade coal in the Kazakh energy TPP boilers</p> <p>2. Create a new "clean" technologies of burning high-ash coal in the thermal power plants in Kazakhstan, using the mechanism of selective non-catalytic reduction of nitrogen oxide emissions in the environment</p> <p>Relevant publications:</p> <p>1. Askarova A., Bolegenova S., Bolegenova Symbat, Berezovskaya I., Ospanova Sh., Shortanbayeva Zh., Maksutkhanova A., Mukasheva G., Ergalieva A. Numerical Simulation of the Oxidant's Temperature and Influence on the Liquid Fuel Combustion Processes at High Pressures</p>

	<p>//Journal of Engineering and Applied Sciences. – Vol. 10, №4, 2015. – P.90-95, IF=0.12.</p> <p>2. A. Askarova, S. Bolegenova, Symbat Bolegenova, V. Maximov, A. Yergaliyeva, Z. Gabitova, A. Maxutkhanova, Zh. Shortanbayeva, A. Boranbayeva and K. Berdikhan Application of Numerical Methods for Calculating the Burning Problems of Coal-Dust Flame in Real Scale // International Journal of Applied Engineering Research ISSN 0973-4562. – Vol.11, Issue 8. – 2016. – P. 5511-5515, IF Scopus.</p> <p>3. Askarova A., Bolegenova S., Bolegenova Symbat, Maximov V., Beketayeva M., Shortanbayeva Zh. On the effect of the temperature boundary conditions on the walls for the processes of heat and mass transfer // International Journal of Mechanics. - 2016. - Vol.10. - P. 349-355, IF Scopus.</p>
Yermek Alimzhanov	Director of Institute of New Educational Technologies, MSc in Mathematics, PhD student.
Azat Absadyk	Head of Online Courses Center, MSc

Partner number		P8
Organisation name & acronym	Sh.Ualikhanov Kokshetau State University, KokSU	
D.1.1 - Aims and activities of the organisation		
<p><i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i></p> <p>Sh.Ualikhanov Kokshetau State University is one of the leading regional universities in the Northern Kazakhstan. KokSU is a modern, actively developing higher education institution with a worthy tradition, great potential and serious plans for the future.</p> <p>Currently, there are 6 faculties at the university. Academic staff consists of over 500 professors. The students are trained in 54 specialties. The total number of students is about 9000 people. The university offers educational programs on Bachelor (4 years), Master (2 years), Ph.D (3 years). The university educational process is adopted to the principles of the Bologna Process based on ECTS and "University-Enterprise" relations.</p> <p>In order to promote research activities and expanding the range of applied objectives new scientific laboratories and institutes function at the university: Eurasian Centre for Sustainable Development named after Vernadsky, NMR spectroscopy laboratory, the laboratory of wind turbines made of composite materials, the Scientific Research Institute of the region, a research laboratory of agro innovation and laboratory of linguistics.</p> <p>One of the priority tasks of the KokSU is to ensure the competitiveness and demand for the graduates, international recognition of diplomas, and high economic and social status of the teaching staff. Today the university gradually build a strategy integration with the world educational and scientific information system.</p> <p>Lecturers and students participate in international educational programs such as: DAAD, IREX, LOGO, TEMPUS, Erasmus Mundus, State Scholarship "Bundestag", "Bolashak. The university actively pursue a program of academic mobility for teachers and students.</p> <p>In 17 March, 2008 our University was given the Award "EUROPEAN QUALITY" in Oxford (England) for Quality Management in Education. Since 2010 KokSU is a member of Magna Charta Universitatum (Bologna, Italy).</p> <p>KokSU wishes to start a new Master's level programme on waste management as for now in Kazakhstan the state standard with such educational programme doesn't exist.</p> <p>Today in Kazakhstan there are no state standards of educational programmes as it is supposed 80% of academic freedom under the development of any educational programme. KokSU can influence the contents of a new standard for the field of waste management.</p>		

Please describe also the role of your organisation in the project (limit 1000 characters).

Sh. Ualikhanov Kokshetau State University (KokSU) role in the project is development of educational programs, dissemination of project results, professional development of teachers, integration of training programs in the European dimension, institutional partnerships, opening of new specialty, bilateral agreements for international cooperation, developed educational programmes, trainings and materials, and financial statements on project.

KokSUs role in the project is development of the study programme and courses, skills development of teachers and implementation of the new courses. Project activities include the analysis of the job demand in the direction of the project and to specify the needed job qualification together with practice partners. Furthermore KokSU participates in the development of a network / knowledge base on the topics and takes part in the international activities, disseminates the project results within the university and its network, includes quality criteria and feedback for the development of the new study offers and administers its project activities incl. the local working groups. KokSU will have a special supporting role in planning and implementing WP8.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.
Anuarbek Kakabayev	<p>PhD, associate professor at geography, ecology and tourism department of KokSU. The Head of the European Programmes department of the university, the Local coordinator of Tempus and Erasmus Mundus projects. A participant of the the seminar “Horizon 2020 Project development” in May 2014 (Spain), completed the programme on European Projects Development from February – April 2014 (Belgium), participation in the course “Project evaluation and quality assurance of the EU projects” in March 2014 European Academy (Belgium), postdoctoral training at the University of Basque country in 2013-2014 (Spain). Fields of specialization: educational technologies, environmental education, environmental management, agro-ecology, ecological genetics and biohazards. Author of more than 50 scientific papers and 5 didactic publications. Role in the project is responsibility for general coordination of work and distribution between partners in Central Asia and European.</p> <p>Relevant publications:</p> <ol style="list-style-type: none"> 1. G. Iskakova, A. Kakabayev, L. Tatarkina, B. Utebayeva, M. Ramazanov, 2015. Ecotoxicological assessment of contaminated soil and water using modern genetic technology. Summer school in Contaminated soil. Universite Paris-Est Marne – la – Vallee Champs-sur-Marne, France. June 29 - July 3, 2015. 2. A. Kakabayev L. Tatarkina, B. Utebayeva, L. Bermaganbetova, 2015. The ecological condition of soil in Northern Kazakhstan as a result of contamination with radionuclides and heavy metals. Summer school in Contaminated soil. Universite Paris-Est Marne – la – Vallee Champs-sur-Marne, France. June 29 - July 3, 2015. 3. A. Kakabayev, L. Tatarkina, B. Sharipova, 2015. На съвременниомис-технологии за оценка на токсичността на околната среда близо до урановите мини в Казахстан. Научна конференция с международно участие Хоризонти в развитието на човешките ресурси и знанието. Том 2. Бургас. 4. A. Kakabayev, 2012. Environmental impact assessment of the gold mining enterprises of Northern Kazakhstan. Samarkand Agricultural Institute, “The

	problems of inculcation of innovational technologies in agriculture”, November.
Abilzhan Khussainov	<p>PhD in Biology, Director of the NGO "Environmental Center" Eco-Kokshe ", professor at geography, ecology and tourism department of KokSU. Teaching activities: Agricultural chemistry, soil science, agriculture, ecology, bioecology, air protection, conservation and rational use of land resources, environmental economics, environmental monitoring, environmental assessment and auditing, based on research and design, plant ecology, ecotoxicology, bioindication pollution and etc. Total number of scientific papers is 215, 8 papers are producing recommendations, 9 papers of guidelines, instructions, 1 manual and 1 monograph.</p> <p>Relevant publications:</p> <ol style="list-style-type: none"> 1. A.Khussainov, A. Mukhanbet, S. Yelyubayev, 2016. Prospects of application of phosphorus fertilizer of industry waste for spring wheat in the black soils of Northern Kazakhstan. The collection of materials of the International scientific-practical conference dedicated to the 60th anniversary of the SPC Grain Farming named after A. Barayev. Agriculture and breeding of agricultural plants at the present stage, Astana-Shortandy, Volume I , 9-10 August 2016. p.371-377. 2. A.Khussainov, A. Nurakhmet, T. Seilkhanov, 2012. Prospects of industrial waste as meliorants and fertilizers on the soils of Northern Kazakhstan. Proceedings of the international scientific - practical conference "Actual problems of scientific support of agriculture of the Republic of Kazakhstan" dedicated to the 60 - anniversary of the Doctor of Agricultural Sciences Professor Sagalbekova U.M. Kokshetau – 2012. – p. 33-35. 3. A.Khussainov, L. Safronova, 2014. Effect of waste uranium processing plant on the contamination of surface water and groundwater. Proceedings of the VII International scientific-practical conference "Modern problems of quality control of natural and technological environments", Tambov city. - 2014. - p.1470 -1473. 4. A.Khussainov, A. Mukhanbet, A. Balgabayev, 2014. Impact of industrial wastes in the water stability of soil aggregates in a common chernozem of Northern Kazakhstan. Materials of the Republican scientific-practical conference "Integration of education and science in the field of plant growing on green technology principles" - Almaty, 3-4 December, p.189-192.
Idiya Fakhrudanova	<p>PhD in Biology, the Head of geography, ecology and tourism department in KokSU. The expert of the European projects. A participant of different seminars, conferences in Europe and Central Asia. Fields of specialization: ecological plasticity of wheat, ecological problems of the Northern Kazakhstan, ecotourism development in Kazakhstan. Author of more than 60 scientific publications.</p> <p>Relevant publications:</p> <ol style="list-style-type: none"> 1. Idiya Fakhrudanova, A. Khaimuldinova, M. Kizatov, 2016. Environmentally sound and economically viable methods of cleaning contaminated soil waste. Environmentally sound and economically viable methods of cleaning contaminated soil waste. Materials of the International Scientific-Practical Conference XII «Strategiczne pytania swiatowej nauki - 2016», 7-15 lutego, 2016. – Volume 2/ - Ecnjmiczne nauki. – (Przemysl Nauka i studia). - C.3-7 (Poland) 2. Idiya Fakhrudanova, G. Abisheva, 2016. Theoretical aspects of the impact of surface mining on the environment in Akmola region. Theoretical aspects of the impact of surface mining on the environment in Akmola region.

	<p>Materials of the International Scientific-Practical Conference VIII «The new word in science: development prospects» (Cheboksary city, 11 April 2016). - №2 (8). – 2016. – p. 208-210.</p> <p>3. IdiyaFakhrudenova,Zh. Baigozhina, 2016. Evaluation of ash recycling industrial waste heat power plant. Evaluation of ash recycling industrial waste of heat power plant. Materials of the International Scientific-Practical Conference "Ualikhanov readings – 20". - 2016. - T.6 . - p. – 285-287</p>
Nurgul Nurmukhanbetova	<p>PhD, associate professor at chemistry and biotechnology department of KokSU. A participant of the international seminars and conferences in Spain, England, Hungary and Central Asian universities. Fields of specialization: pydrochemical study of physico-chemical water quality parameters, sorption of water purification technology systems from a variety of pollutants (heavy metals, phenols). She is the expert in the modular design of educational programs based on competent approach in accordance with the Dublin descriptors.</p> <p>Relevant publications:</p> <p>1.Nurmukhanbetova N.N., Gabbasova R.R., Zhirnova Y.A, Tauzhanova A.A, Mansurov Z.A. 2015. Biosorbents study based on carbonized sorbents for the purification of waste water from metal ions of toxicants. Materials of the International Scientific-Practical Conference “Ualikhanov readings - 19”, volume 5, Kokshetau, Kazakhstan.</p> <p>2. Nurmukhanbetova N.N., Gabbasova R.R., Zhirnova Y.A, Tauzhanova A.A, Mansurov Z.A. 2015. Sewage treatment from ions of heavy metals with carbonized pine sawdust. Materials of the International Scientific-Practical Conference “Ualikhanov readings - 19”, volume 5, Kokshetau, Kazakhstan</p> <p>3. Nurmukhanbetova N.N., Mansurov Z.A Zhirnova Y.A, Kairnasova G.Z. 2014. Sorption extraction of phenol from wastewater by using solid waste sorbents. Materials of the International Scientific-Practical Conference “Ualikhanov readings - 18”, volume 5, Kokshetau, Kazakhstan.</p>
Gulim Iskakova	<p>MSc in Environmental Sciences,the lecturer at the geography, ecology and tourism department of KokSU. The manager of the European Programmes department of the university, the coordinator assistant of the Erasmus Mundus and TEMPUS projects. A participant of the seminars and conferences in 2013-2014 (Spain), training at the University of Las Palmas de Gran Canaria in 2013-2014 (Spain). Fields of specialization: education, teaching, environmental education, environmental management, ecotourism, geography and ecology. Author of 10 scientific publications.</p> <p>Relevant publications:</p> <p>1. G.Iskakova, A. Zandybay, 2011. Situation of waste contamination in Kokshetau city. Materials of the International Scientific-Practical Conference "Ualikhanov readings – 15". Volume 6. p. 202</p> <p>2. G. Iskakova, A. Zandybay, 2012. To identify the features of morphological composition and volume of emissions of solid domestic waste connected with communal equipment of houses. Materials of the International Scientific-Practical Conference "Ualikhanov readings – 16". Volume 8. p. 125</p> <p>3. G. Iskakova, A. Zandybay, B. Esenzholov, 2012. To study morphological features of emissions of solid domestic waste on various factors in Kokshetau city. “Messenger of Kazakh National University”, ecological number 3, Almaty, p.235.</p>

	4. G. Iskakova, A. Kakabayev, L. Tatarkina, B. Utebayeva, M. Ramazanova, 2015. Ecotoxicological assessment of contaminated soil and water using modern genetic technology. Summer school in Contaminated soil. Universite Paris-Est Marne – la – Vallee Champs-sur-Marne, France. June 29 - July 3, 2015.
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Partner number		P9
Organisation name & acronym	M. Auezov South-Kazakhstan State university, SKSU	
D.1.1 - Aims and activities of the organisation		
<p><i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i></p> <p>M. Auezov South Kazakhstan State University (SKSU) is one of the largest universities in Kazakhstan, training specialists of higher and post-graduate education in specialties of engineering, life science, IT, education, law, business, art, culture, sport, tourism. The University trains specialists for enterprises and organizations of all Kazakhstan. The mission of SKSU is formation of modern research-educational environment in which the training of highly qualified HR on the principles of close integration of science, education and innovations is being realized. There are 14 faculties in the University structure, more than 16000 students, 1000 Master's and PhD students in the University. Actively realizing the policy of the state in the sphere of education the University has proceeded to the three-level system of education for the degrees of Bachelor (89 program) – Master (61 program) – Doctor PhD (14 program). Programmes are taught in Kazakh, Russian and English languages. Leading prominent scientists from near and far abroad countries, including USA, Germany, Spain, Belgium, Russia, Turkey, Austria, Korea, Malaysia are invited to lecture in the University.</p> <p>Studies are conducted in 17 modern training buildings, three sport complexes. In whole the University has 511 training rooms, 124 laboratories, 55 computer class rooms. A corresponding infrastructure was created for realizing research and innovative activities at the University: 11 scientific-research institutes; 9 scientific centers and 6 international scientific-educational centers, 38 scientific laboratories including the accredited certificated center, which are provided by the analytical equipment of the last generation, function.</p> <p>SKSU ranked the 3rd in National ranking of universities. SKSU ranked 601+ in QS World Ranking, and included in the number TOP 100 (71st position) of the international ranking QS «Developing Europe and Asia». SKSU accredited both on national and international level. 125 programmes were accredited by Independent Kazakh Agency for Quality Assurance in Education. 22 programmes were accredited in German Accreditation Agency ASIIN with awarded Eurobachalore, EUR-ACE, EURO-INF labels. SKSU has about 130 cooperation agreements including partner-universities from EU.</p>		
<p><i>Please describe also the role of your organisation in the project (limit 1000 characters).</i></p> <p>To reach aims and objectives of the project SKSU has necessary material basis and suitable location: south region has about 150 large and medium-sized companies producing more than 80% of industrial production. As a major regional institution, SKSU is able to engage the companies in the project and provide the basis for design and implement practical skills modules in curricula. SKSU is a member of the national group of Kazakhstan on integration into the European Higher Education Area and is able to promote the project results in the country educational system. SKSU can establish a special center for the dissemination in order to ensure future sustainability of these results in Kazakh HEIs. Advanced information, material and technical base of the university can be the basis for carry out trainings, workshops and conferences. SKSU will take responsibility as the lead organization for dissemination of the project results (WP9), actively participate in fulfillment of aims and objectives of the</p>		

project. SKSU is willing to enter the new learning modules into existing Master's programs and also, want to participate into development of new Master's program.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.
Botagoz Mutaliyeva	<p>PhD (Chemical Sciences) Position: Dr., Associate professor at the “Biotechnology” department of the Higher School “Chemical engineering and biotechnology”; Responsible for International cooperation in the High School Chemical engineering and Biotechnology</p> <p>Experience in scientific and international programs</p> <ul style="list-style-type: none"> - INTAS program grant to participate in the Summer School for young chemists and 5th European Conference ("The 2005 Younger European Chemists' Conference") in Brno, Czech Republic, 2005. - Responsible Executive Program Fundamental Researches for 2006-2008. The title of theme: "Development of scientific foundations and technologies for the creation of new advanced materials for various functional purposes" on "Scientific foundations of the development of new polymer compositions for dehydration and desalting of oil dewaxing" (UDC 311.313 SRNTI state registration № 0106 PK 00057). - Responsible for the international grant from EU Tempus. Tempus joint project: 158918- Tempus-1-2009-1-AT-Tempus-JPCR “Teaching competency and infrastructure for e-learning and retraining” (CANDI), January 2010 - January 2014. - Leading scientific researcher of the project, co-director of the project №278-4 from February 4, 2014 by priority: "Energy" on subpriority: "Renewable energy sources (wind and hydropower, biofuels and photovoltaics)," on "Development of new technology biomass-based agricultural waste into biogas, protein-vitamin concentrate and biofertilizers». - Holder of grant under the German Academic Exchange program DAAD for scientists in Max-Planck institute of Colloids and Interfaces during period from 1st of July till 30th of September 2015 year. - Holder of the International Grant under program Erasmus Mundus Action 2 Silkroute, University degli studi di Padova, Department of Agriculture, Food, Nature, Animals and Environment, Padova, Italy, 2016 r. <p>Participation in various workshops and seminar-trainings connected with E-learning, joint study programs, TeleTeachingTool: Interdisciplinary guided research; the iLab experience – a blended learning concept for hands-on exercises; TUM Graduate School, 2.0 – the new framework for Ph.D. at TUM; Interdisciplinary international research projects and courses.</p>

Awards

- Holder the title of "Best University Teacher of 2012" Grant from the Ministry of Education and Science of the Republic of Kazakhstan

Publications

More than 100 publications, including in the Database of Scopus, Thomson Reuters, also materials of the conferences in Germany, Turkey, Czech republic, Italy, Russia, Kazakhstan, Uzbekistan, 6 patents.

Relevant publications

1. Zhumabek Bakhov, Karlygash Korazbekova, Botagos Mutaliyeva. Influence of Co-substrates for the Methane Production Rate Kinetics in Anaerobic Fermentation of Pig Slurry. Modern Applied Sciences. Vol.9, №6; 2015. – P. 217-225. Scopus database.
2. M.I. Satayev, R.S. Alibekov, L.M. Satayeva, O.P. Baiysbai, B.Zh. Mutaliyeva. Charactersitics of activated carbons prepared from Apricot kernel shells by mechanical, chemical and thermal activations. Modern Applied Sciences. Vol.9, №6; 2015. – P. 104-119. Scopus database.
3. B.Zh. Mytaliyeva, G.M. Madybekova, S.B. Aidarova, G.K. Alimbekova. Cleaning of water-oil emulsions with use of composition surfactants. Abstracts of International conference “Colloids and nanotechnologies in industry”. – Almaty: K.I. Satpayev KazNTU, 2012. – P.84.
4. Mutaliyeva B.Zh., Madybekova G.M., P. Lieberzeit, A. Pryanichnikova. Opportunity of Tempus №58918 – AT-CANDI project for development of educational process in High Educational Establishments. 4th EuChemS Chemistry Congress. August 26-30, 2012, Prague, Czech republic. – P. 138.
5. Mutaliyeva B.Zh., Turmakhanova N.N., Omirbayeva G.K., Shemuratova E. Research of possibility of intensification the methane fermentation processes for biogas production from agriculture waste. Materials of International scientific-practical conference “Innovation idea of young scientists as a contribution in development of science”. – Shymkent: M. Auezov SKSU, 2013. – T 8. – P. 141-145.
6. B. Mutaliyeva, G. Madybekova, P. Lieberzeit, A. Pryanichnikova. Teaching competency for E-learning and retraining in educational process of high school . Works of the International scientific-practical conference “Development of science, education and culture of independent Kazakhstan in conditions of global challenges of modernity”. – Shymkent: M. Auezov SKSU, 25-26 of October, 2013. – T. 8. – P.124-126.
7. Bakhov Zh.K., Mutaliyeva B.Zh., Korazbekova K. Rational solution of biotechnological processing of agriculture waste. II-nd International virtual Internet-conference “Biotechnology. A look into the future”. – Kazan: 26-27 march, 2013 y.- P. 14-17.
8. B. Mutaliyeva, Zh. Bakhov, K. Korazbekova, G. Madybekova, S. Aidarova. Investigation of Co-substrates Influence on Methane Production Rate Kinetics. Colloids and nanotechnologies in industry. 23-24 of October, 2014.-P.44.

	<p>9. Bakhov Zh.K., Korazbekova K.U., Mutaliyeva B.Zh., Saparbekova A.A. Bioreactor for biogas and biofertilizers production. Innovation patent RK №28281 от 15.04.2014, bul. №4.</p> <p>10. B. Mutaliyeva, D. Grigoriev, G. Madybekova, A. Sharipova, S. Aidarova, A. Saparbekova and R. Miller. Microencapsulation of Insulin and its release using W/O/W double emulsion method. Colloids and Surfaces A: Physicochemical and Engineering Aspects Online publication complete: 20-OCT-2016. DOI information: 10.1016/j.colsurfa.2016.10.041;</p>
Almira Saparbekova	<p>Academic degree, academic rank: Candidate of biological science or speciality 03.00.07 - Microbiology, associate professor on speciality «Technology of food products»;</p> <p>Position: Head of the department «Biotechnology».</p> <p>Saparbekova A.A. is specialist in sphere</p> <ol style="list-style-type: none"> 1. Bioremediation is a waste management technique that involves the use of microorganisms to remove or neutralize oil pollutants from a contaminated site. Microorganisms are destructors of oil and oil products. 2. Applications of microorganisms for bioabsorption of metals. Bacterial leaching 3. Utilization of industrial waste including food industry. Creation new food stuff on bases waste (milk whey, winery wastes). Efficient recycling of brewer's spent grain. 4. Application of agriculture waste <p>Ecological biotechnology is being used to provide alternative cleaner technologies which help to further reduce the hazardous environmental implications of the traditional technologies.</p> <p>Scientific interests: Effective resource saving technologies in food industry.</p> <p>The head of state financed theme - «Effective resource saving technologies and application secondary raw materials in food-processing industry»;</p> <p>The scientific adviser of 3-investment projects on the following themes:</p> <ul style="list-style-type: none"> «Working out of innovative technologies of processing of fruit-and-vegetable products for conservation and drying processes»; «Working out of industrial technology of koumiss dry powder with entering of highly active ferment»; «Working out of the scientifically-proved technology of national dairy products such as iodized «Kurt» for a dietary food for the persons living in areas with problem ecological conditions». The given works are carried out within a framework of the investment project of Ministry of Agriculture of RK «Increase of competitiveness of agricultural production». <p>Scientifically-methodical work: Saparbekova A.A. published more than 180 scientifically-methodical works. The study guide «Effective resource saving technologies and machinery of food products»,</p>

electronic textbook «Complex use of wastes of food-processing industry», the course of lectures on discipline «Food chemistry», the study guide “Ecological biotechnology” were published.

Study: Saparbekova teaches all kinds of academic studies: lectures, practical and laboratory researches. From 2007/2008 academic year Saparbekova A.A. teaches the lessons in English. For improvement of English language she has passed courses in «Educational Centre Inter Press» (Shymkent), in September of 2008 she has successfully passed a complete course in International school of English in St. Julian's (Malta), in 2011 she has passed scientific training in Germany in the university Hohenheim on a speciality according to the List of priority specialities for awarding of the international grant "Bolashak" «Biotechnology of food products». In 2013 she was the owner of international grant of DAAD program. By the order of the Minister of Education and Science of RK she was the owner of the state grant «The best teacher of high school» in 2010.

Statements at conferences and seminars: More than 40 statements at the international scientifically practical conferences. She has taken part in the international conference «High effective food technologies, methods and means of their realisation», Moscow, Russia. The diploma and certificate were received.

Competence in languages: Kazakh, Russian, English.

Relevant publications:

1. Korazbekova K, Bahkov Zh, Saparbekova A.A. The anaerobic conversion waste to biogas and fertilizers as alternative decision of the ecological problems. The Collection article International scientifically-practical conference "Development and introduction resource saving technology and device", P 30-33, Russia, Penza, 2013.
2. Zh. Ibraimova¹, A.Rustenov, R. Saparbekova A.A. Preserving Herbs with *Lactobacillus plantarum*-52 Lactic-acid Bacterium and Their use in Forage For Cows, Bioscience, Biotechnology, - Research Asia - April 2015, - Vol. 12(1), pp
3. Myrhalykov ZH.U., Saparbekova A.A. Konarbaeva Z.K., Selection of starter cultures for producing milk products in media containing grain additives, Biomedical and Pharmacology Journal. Vol.6 No.2, P 169-176, 2013
4. Korazbekova K, Bahkov Zh, Saparbekova A.A. Dry fermentation of agricultural waste in the modified leach-bed reactor with immobilization of microorganisms Biotechnology 12 (6), Asian Network for scientific information, P 236-244.
5. M. Turaliyeva, Saparbekova A.A. A.Yeshibaev, G. Identification of *Ulmus Pumila* L. Pathogens with the Help of PCR, Bioscience,

	<p>Biotechnology, - Research Asia - April 2015, - Vol. 12(1), pp 213-217</p> <p>Saparbekova A.A., Otarbekova A.A. Importance of biological leaching metal from industry waste. Theoretical and practical problems of development modern science. The Material X International scientifically-practical conference. Russia, .Mahachkala, 31.03.2016r. P.35-36</p>
Galiya Madybekova	<p>Principal lecturer, professor Analytical chemistry, Colloidal chemistry Degree: Candidate of chemical sciences on specialty: 02.00.11 – Colloidal chemistry and physical-chemical mechanics Scientific projects:</p> <ul style="list-style-type: none"> - Responsible performer of Fundamental research Program for 2006-2008 yy. Regional State Institution “Centre of Science about Earth, Metallurgy and Enrichment” Science Comitet Ministry of Education and Science of the Republic of Kazakhstan «Development of scientific bases and technologies of creation of new perspective materials of various purposes» on theme «Creation of scientific bases of development of new polymeric compositions for dehydration, desalting and dewaxing of oil» (№ gov. registration 0106 RK 00057). - International grant EU on the Tempus Program Tempus joint project: 158918-Tempus-1-2009-1-AT-Tempus-JPCR «Teaching competency and infrastructure for e-learning and retraining» (CANDI), 2010-2014 year. Coordinator from the regional university. <p>Awards:</p> <ul style="list-style-type: none"> - Diploma of MES the RK, 2006 .; - The best teacher of high school in 2006; - Medal A.Baitursynov, 2012 .; - SKSPI Diplomas for achievements in science, 2012, 2013, 2014, 2015, 2016 years. <p>Patents:</p> <ul style="list-style-type: none"> 1 patent of the RK, 1 Preliminary patent of the RK. - «Method of desalting and dehydration of oil» – Patent of the RK № 13328 from 28.05.2003 on the claim № 2002/0138.1 from 11.02.2002 - «Method of desalting and dehydration of oil» – Preliminary patent of the RK № 19286 from 25.01.2008 on the claim 2005/1439.1. cl. C 10 G 33/04. <p>Author more than 200 scientific articles and abstracts published in the various International-recognized journals and materials of the International conferences.</p> <p>Relevant publications:</p> <ol style="list-style-type: none"> 1. Russian Federation, Moscow city, Colloidal properties of polymeric composite materials and application-specific aspects of their usage. IV International Conference on Colloid Chemistry and Physicochemical Mechanics, IC-CCPCM 2013. Moscow, 2013

	<p>2. Research of chicken manure as a substrate for biogas and biofertilizers yield. IV International scientific conference "Colloids and Surfaces-2015". Al-Farabi Kazakh National University, Almaty, s.124.</p> <p>3. Study of Hydrolyzed Poly action it file compositions with surfactants for use in emulsifying process. 6th International Workshop on Bubble and Drop Interfaces. Germany, Potsdam, 2015.</p> <p>4. Colloid-chemical approach to use of Polyacrilonitrile derivatives compositions with surfactants. International Journal of Engineering Sciences.Vol.: 13,Issue:5. P.62 – 68. If=0.93.</p> <p>5. Investigation efficiency of Alhagi Pseudalhagi flavonoids dimerization process. Life Science Journal. (<i>Life Sci J</i>). ISSN:1097-8135. Volume 10 - Number 4 (Cumulated No. 35), December 25, 2013. life1004. If=0,165.</p> <p>6. Polymer-surfactant complexes for microencapsulation of vitamin E and its release. Colloids and Surfaces B: Biointerfaces. (2015),http://dx.doi.org/10.1016/j.colsurfb.2016.03.063. If =4,287</p> <p>7. Teaching competency for E-learning and retraining in educational process of high school . Works of the International scientific-practical conference "Development of science, education and culture of independent Kazakhstan in conditions of global challenges of modernity". – Shymkent: M. Auezov SKSU, 25-26 of October, 2013. – T. 8. – P.124-126.</p> <p>8. Use of microorganisms immobilization for increase of efficiency of biomass processing based on the arriculture waste. ISPC "Auezov reading – 12:Role of regional university in the development of innovation directions of science, education and culture". T. 3 -PC. 240-243.</p> <p>9. Investigation of Co-substrates Influence on Methane Production Rate Kinetics. Colloids and nanotechnologies in industry. 23-24 of October, 2014.-P.44.</p> <p>10. Research of chicken manure as a substrate for biogas and biofertilizers yield. Abstracts of the IV International scientific conference "Colloids and surfaces -2015". Almaty, 3-5 June, 2015. – P.124.</p>
Bahytzhan Kedelbaev	<p>Doctor of technical science, professor</p> <p>Area of scientific interests: Complex processing of plant and hydrocarbon raw materials.</p> <p>Publications: 400 scientific and methodical publications</p> <p>Staff training: Scientific adviser of 5 PhD and 15 masters</p> <p>Awards:</p> <ul style="list-style-type: none"> - Medals of Nobels and Leibniz - Holder the title of "Best University Teacher of 2007" Grant from the Ministry of Education and Science of the Republic of Kazakhstan. <p>Kedelbaev Bahytzhan Shilmirzayevich is a specialist in the field of complex processing of vegetable and carbohadrate raw material, chemical and biochemical processing of waste, heterogenic and enzymatic catalysis. Author of more than 400 scientific-methodical publications, including 6 monographies and 22 patents.</p> <ul style="list-style-type: none"> - management of International grant of EU in the Tempus project: 158918-Tempus-1-2009-1-AT-Tempus-JPCR "Teaching

competency and infrastructure for e-learning and retraining” (CANDI), january 2010 y. – january 2014 y.

-Leading scientific researcher of the project №253 «Development of new technologies and organization of production of indicator flat elements for express determination of harmful and toxic substances in atmosphere and soils» january 2010-december 2011

- senior research assistant of the project №279 «Development of technology and scientific basis of synthesis of polycomponent mineral fertilizers with specific features for sierozemic soils», january 2011-december 2014

-coordinator of the scientific research project №339-38 «Development of innovative technology of deep processing of carbohydrate containing plant materials and wastes for production of xylitol and sorbitol by chemical and fermentative hydrogenization, based on application of joint process», january 2015- december 2017

- coordinator of the project Co-funded by the Erasmus+ Programme of the European Union, International University Cooperation on Land Protection in European-Asiatic Countries – IUCLAND, 2015-2018

- senior research assistant of the scientific research project on theme «Research of low temperature processes of clinker formation from secondary raw materials and industrial wastes for creation of resource-saving technology of special cements», january 2015-december 2017.

He undertook the internship in Germany, Austria, China and Slovakia.
Relevant publications:

1. Kedelbaev B.Sh., Kudasova D.E., Dauylbai A.D., Abildayeva R.A., Lesbekova S.Zh. Research of Sorbit production process from Guza-pai. Proceedings of National Academy of Sciences, Biology and medicine, №2 (314),2016 y., p. 159-162.

2. Kedelbaev B.Sh., Rakhmanberdiyev G.R., Tashkarayev R.A. Perspectives of multi-atomic alcohol production from carbohydrate-containing agriculture waste of Central Asia. Abstracts of conferences in organic chemistry “OrgChem-2016”, St. Petersburg, 2016 y., p. 580.

3. Kedelbaev B.Sh. Prospects of usage of polysaccharides depolymerization processes of the industrial and agricultural wastes in republic of Kazakhstan. International Conference of Industrial Technologies and Engineering (ICITE 2015), M.Auezov South Kazakhstan State University Shymkent, Kazakhstan., октябрь 30-31, 2015г. С. 473-476.

4. B.Sh. Kedelbaev, S. K. Turtabaev, G. S. Shalabaeva, K. T. Sarbaeva. Synthesis and Research of the Nickel Catalysts of Liquid-Phase Hydrogenation of Benzene Promoted by Ferroalloys. Contemporary Engineering Sciences, Vol. 8, 2015, no. 3, 127 – 135.

5. Kedelbaev B.Sh., Kudasova D.E., Dauylbai A.D., Abildayeva R.A. Research of process of Xylite synthesis from beer pellet. Proceedings

	of National Academy of Sciences, Biology and medicine, №2 (314), 2016 y., p. 150-154.
Aigul Mamitova	<p>Principal lecturer, Chemical Engineering, Environmental Technology, Biotechnology</p> <p>Education: Basic professional education- industrial engineer on speciality «Environmental protection and rational using of natural resources». Candidate of technical science on speciality 05.17.01 – Technology of inorganic substances</p> <p>Skills and research interest: Resource-saving industrial technologies, Complex using of secondary raw materials, Removal of contaminants from wastewater and gas emissions, Chemical Process Technology.</p> <p>Scientific research, directly related with this proposal:</p> <ul style="list-style-type: none"> • Participation in financed research national project №413 «Development of technology of fertilizers production on the basis of deep processing of wastes of phosphorus industry» 2013-2014 • Participation in financed research national project №68-39 «Development of electrochemical method of production of finely dispersed copper powder in dimethylsulphoxide», 2014-2017 • Participation in the project Co-funded by the Erasmus+ Programme of the European Union, International University Cooperation on Land Protection in European-Asiatic Countries – IUCLAND, 2015-2018 <p>Relevant publications:</p> <ul style="list-style-type: none"> - Participation in International conference «Science: Integrating theory and practice» in Bozeman (USA). On the results of conference publication of article «About the complex innovative approach to providing of hydroecological stability in water economic area». 23-24 of February 2014. - Publication of article «Application of electrochemical methods of processing of sulphur containing wastes» in the collection of scientific papers of International research and practice conference «Theoretical and practice questions of science and education», Tambov. 2015 - Publication of article «Studying of Kinetics and mechanism of cathodic processes at electrolysis of $\text{Cu}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$ solutions in dimethyl sulfoxide» in Asian Journal of Chemistry (№3 2016); - Publication of article «Electric conductivity of $\text{Cu}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$ solutions in dimethylsulfoxide» in European Journal of analytical and applied chemistry (Vienna, 2016) - Participation in XI International research and practice conference «International scientific review of the problems and prospects of modern science and education», New York, USA, 7-8 of march 2016. On the results of conference publication of article «Physicochemical properties of the DMSO - $\text{Cu}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$ system».

	<ul style="list-style-type: none"> - Publication of article «Production of copper powders from water dimethylsulphoxide electrolytes» in Rasayan Journal of Chemistry (India); - Publication of article «Electric conductivity of solutions of Copper(II) nitrate crystalhydrate in dimethyl sulfoxide» in Russian Journal of Physical Chemistry A (Russia);
Darkhan Sabyrkhanov	<p>Doctor of technical sciences, professor, vice-rector of M.Auezov South-Kazakhstan State university</p> <p>Owens the principles of educational programmes development at all levels taking into account forming of competences and learning outcomes. Has considerable experience in accreditation of educational programmes. Has a strong skill in internationalization strategy implementation. He has experience in development and coordination of international projects, promoting relations with the international partners; development of documents for organization and implementation of educational processes, coordination of curricula development and enhancement, organization of seminars etc. Has experience in development of degree programmes taking into account succession of the education levels. Management of the educational and science processes in the university.</p> <p>Expert of the Independent Kazakh Agency for Quality Assurance in Education (IQAA), owns skills in forming of systems of internal and external quality assurance.</p>

Partner number		P10
Organisation name & acronym	Spetsavtobaza	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
<p>Special Mobile Unit (specavtobaza) was established in 1892 and nowadays is the largest waste management company in Urals region. The company is state-owned. It provides services of refuse disposal for more than 3000 clients in Ekaterinburg area. There are more than 400 employees working for the company. The company owns special landfills and different types of facilities for waste treatment including waste incineration facilities, waste sorting facilities and waste treatment plants.</p>		
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>		

The organization will contribute with expert knowledge on the Ecology practical field, specifically on waste management, minimization, treatment, reuse and valorization processes. Specavtobaza will provide the necessary knowledge on the industrial processes, and technology foresight and trends.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
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Partner number		P11
Organisation name & acronym	Ministry of Education and Science, Kazakhstan	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
The Department of Postgraduate and Higher Education of the Ministry of Education and Science of the Republic is responsible of the development of Postgraduate and Higher Education in Kazakhstan.		
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>		
The role of the Department of Postgraduate and Higher Education of the Ministry of Education and Science of the Republic in the project is to ensure the high quality and relevance of the contents of the new learning modules and curricula in sustainable waste management by giving feedback and expert advice during the development work of the project. A representative of the Ministry of Education will participate in the major dissemination and exploitation events of the project and thus support the process of accreditation of the studies of sustainable waste management into the study programmes of universities outside the project as well as dissemination.		
D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project		
<i>Please add lines as necessary.</i>		
Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>	
Akhmed-Zaki, Darkhan	<p>Doctor of Technical Science Head of the Department of Postgraduate and Higher Education of the Ministry of Education and Science of the Republic</p> <p>His scientific research focuses on the theory of thermal filtration of incompressible liquids in the porous environment and verification of programs. He has over 40 publications in national and international scientific journals. He is a chargeable executor of projects under program TEMPUS, international collaboration, fundamental and applied programs from MES PK, and also does contractual works with Production branch "Embamunajgaz" of joint-stock company "KazMunaigaz".</p>	

List of Associated Partners

(Where applicable)

*These organisations may provide the consortium with facilities or assistance that enhances the quality of work, but they cannot be responsible for core activities of the project (e.g. management, coordination, monitoring, leader of a work group etc.). **No financial contribution from the project grant will be allocated to these organisations.***

Ref.nr	Name of organisation	Type of institution	City	Country	Role in the project
914690504	Ekaterinburg Administration (Committee for Ecology)	City administration	Ekaterinburg	Russia	participation in the needs analysis concerning competences of future professionals, give specialist comments, dissemination
915689604	Safe Technologies	Private company	St.Petersburg	Russia	Forming required competences for the training modules; preparation of teaching materials; provision of video materials for the lectures; dissemination of the project results; participation in creation of the International Center for Sustainable Waste Management
933085390	Kazakh National Agrarian University	HEI	Almaty	Kazakhstan	Participation in meetings, seminars, conferences organized by the project; dissemination, participation in every stage of project, if it is possible. Expertise and support in recycling and use of waste to produce composite materials and study their properties.
914841339	U.U. Usmanov Kazakh Research Institute of Soil Science and Agrochemistry	Research Institute	Almaty	Kazakhstan	Give specialist comments/lecture etc. if necessary, to participate in meetings/seminars/co

					nferences organized by the project, dissemination, etc
914774991	Research Centre of Ecology and Environment of Central Asia	Research Centre	Almaty	Kazakhstan	Give specialist comments/lecture etc. if necessary, to participate in meetings/seminars/conferences organized by the project, dissemination
914658300	South-Kazakhstan State pedagogical institute	State institution for education	Shymkent	Kazakhstan	SKSPI will participate in the dissemination of the project results, needs analysis concerning competences of future professionals, give specialist comments/lecture etc., will participate in meetings/seminars/conferences organized by the project
914440535	UC NRC group Ltd.	Private company	Almaty	Kazakhstan	Participation in the needs analysis concerning competences of future professionals, give specialist comments/lecture.
937165889	S. Seifullin Kazakh Agro Technical University	HEI	Astana	Kazakhstan	KATU will participate in the dissemination of the project results, needs analysis concerning competences of future professionals, give specialist comments/lecture etc., will participate in meetings/seminars/conferences organized by the project
914417158	PetroKazakhstan Oil Products LLP	National company	Shymkent	Kazakhstan	Participation in the needs analysis concerning competences of future professionals, offer expertise, participation in meetings/seminars/conferences organized by the project

916959431	Eurasian Technological University (ETU)	Private University	Almaty	Kazakhstan	ETU will participate in the dissemination of the project results, needs analysis concerning competences of future professionals, give specialist comments/lecture etc., will participate in meetings/seminars/conferences organized by the project
914063108	State Autonomous Organization "West-Siberian Innovation Center"	State Autonomous Organization	Tuymen	Russia	Participation in the needs analysis concerning competences of future professionals, give specialist comments
923149680	Kazakh National Research Technical University after K.I.Satpayev	Public university	Almaty	Kazakhstan	dissemination of the project results, participation in meetings/seminars/conferences organized by the project, participation in the needs analysis of competences
914012086	KOSMOS LLC	Private company	St.-Petersburg	Russia	participation in the needs analysis concerning competences of future professionals in the field of waste management, give specialist comments and lectures etc. if necessary, participate in meetings/ seminars/ conferences organized by the project and dissemination of the project results.
913992783	Institute of Design, Ecology and Hygiene	Private company	St.Petersburg	Russia	OOO IPEiG will participate in the needs analysis phase and in the dissemination of the

					project results. They will provide the project with expert knowledge on the field and feedback on the learning module work.

Please insert rows as necessary

D.2. Cooperation arrangements, management and communication

This part must only be completed once by the applicant.

D.2.1 - Project management

Please define the organisation of the implementation of the project and the division of tasks between the partners. Please explain the allocation of resources for each activity. Explain also how the tasks are distributed amongst the partners and how project "ownership" is ensured (limit 3000 characters).

TAMK is the project coordinator. The project work will be monitored by a managerial group consisting of 9 members: local manager from each partner HEI and project manager (TAMK, chair). This group will meet three times face-to-face and seven times online during the project. The managerial group is responsible for ensuring that the overall work in the project is in line with the aims and schedule set in the project plan. The agenda and the minutes of meetings will be prepared by the project coordinator and published in the intranet of the project.

The country/region coordinators from TAMK (EU), ITMO (Russia) and SKSU (Kazakhstan) will form a coordinator group to keep in contact, monitor and support partners between the managerial group meetings. The project manager will report on the proceedings of coordinator group in managerial meetings. The coordinator online meetings are timetabled in the kick-off meeting.

A local project manager in each partner university coordinates the partner activities. They are key persons responsible for involving the appropriate local staff in the different activities. Each participating HEI is equally responsible for ensuring successful completion of the project. For P3 – UVa the management is entrusted to FGUVA controlled by UVa.

Division of tasks:

The project work is divided into 9 work packages. Each WP has a lead and supportive organization. The lead organization responsibilities are divided between the partners according to their interest, existing capacities and experience.

The WPs, the lead organization and participants:

- WP1 Project opening - TAMK - all HEIs
- WP2 Management - TAMK - all partners
- WP3 Curriculum Design and accreditation - ITMO - all partners
- WP4 Curriculum Content Planning and Teacher Training - UVA- all partnering HEIs and partner company
- WP5 Learning Innovation and Entrepreneurship through University - Industry cooperation (EAL) - all partnering HEIs
- WP6 eLearning pedagogies and tools - TAMK - all partner country HEIs
- WP7 Piloting - KazNU - all partnering HEIs
- WP8 Quality Assurance and monitoring - UrFU - all partners
- WP9 Dissemination - SKSU - all partners

Allocation of resources:

- Each WP requires face-to-face meeting(s) or workshop(s) related to the specific activities within the WPs: WP1, WP6, WP7 and WP9 each one meeting/workshop, WP3 two workshops, WP2,WP4, WP5 and WP8 each 3 meetings/workshops
- The allocation of administrative workdays for WP is related to the complexness of the activity and the number of partners involved.
- The implementation of the activities during the WPs require the several workdays from experts and developers in the different institutions (staff costs). The amount of workdays required will depend on the estimated complexity of each activity.
- The purchases of electronic and laboratory equipment are needed for the implementation of learning modules in WP3 and for teacher training in WPs 5 and 6.

Project ownership:

- In general, partner country universities will bear the responsibility of the implementation of the tasks, while European partners will provide advice and methodological and technical expertise.
- the project is based on a burning need of sustainable waste management specialists in both partner countries and the partners represent the forefront universities willing to develop their capacities in the field
- The division of work creates an interdependence between the participants which motivates to work towards a successful completion of the project

D.2.2 - Cooperation and communication arrangements of the consortium

Please explain the overall project and partnership management making specific reference to the management plan and how decisions will be taken. Please describe how permanent and effective communication and reporting will be ensured as well as the measures put in place for conflict resolution (limit 2000 characters).

The highest management organ in the project is the managerial group which consists of 9 members and which is presided by the coordinator (TAMK). The managerial group is in charge of the management of the project. Decisions are made based on discussion and if necessary using the simple majority of votes to reach a decision with the project manager's casting vote in case of tie vote.

The first tasks of this Committee will be to agree in a set of

- a Management Guidelines (providing a series of rules to enable the smooth progress of the project like report deadlines and formats, financial approval and reporting, meeting frequency, etc.). The guidelines will include a definition of the tasks and responsibilities of the regional/country coordinator group consisting of TAMK(EU), ITMO (Russia) and SKSU (Kazakhstan) and whose role is to assist the managerial group in the day-to-day monitoring of the project and supporting the partners.
- a Conflict Resolution Protocol (specifying the steps to be taken in case that there is a disagreement between the partners. The first tool for used is discussion between the involved partners and the project manager. The managerial groups is the last instance of conflict resolution and its decisions will be final.),
- a Dissemination and exploitation plan (setting the policies for internal and external communication: internally, it will define the formal channels and tools to communicate among partners and externally, it will set the rules to communicate information about the project, according to EU regulations) and
- a Quality Plan (containing the specification of the activities, their deadline and the requirements to accept their outcome and who is in charge of the quality assurance for each activity). The documents will be drafted by the project manager.

Permanent and effective communication will be achieved by publishing the project's website with areas for internal (inside project) and external (public) communication areas. All the project documents will be stored on the intranet. Additionally, the managerial group will meet f-to-f annually and 7 times online. The progress of WP work is monitored by online meetings and intermediate reports. The WP lead organization will summarize these into a final WP report which will be discussed in the managerial meeting. The communication language is English. The outcomes are in English, Kazakh or Russian.

PART E - Project characteristics and relevance

E.1. Why does the consortium wish to undertake this project?

Please outline the motivation behind your project, clearly identifying the specific needs or problem/s which it intends to solve. Explain how the project proposal fits within the development strategies of the Partner Countries involved and how it addresses the priorities defined at national / regional level. Also explain why this/these problem/s were selected instead of others. In particular, explain how the area of intervention has been explored to guarantee that the project is offering something new compared to the existing situation. Where applicable, explain any synergy with other EU initiatives should be highlighted (limit 5000 characters).

Improvement of the state of environment through efficient waste management and by promoting remanufacturing, reusing and recycling of material streams from industry and municipalities are priority issues in Kazakhstan (CONCEPT for the transition of the Republic of Kazakhstan to Green Economy 2013) and in Russia (2017 - Year of Ecology by Presidential ordinance) today. There are burning issues concerning the insufficient waste management in these countries. In Kazakhstan e.g. 97% of municipal solid waste is taken to uncontrolled dumps and substandard authorized landfills without processing or recycling, while growth of 50 % in household waste is expected by 2025. Recently steps have been taken towards solving the problem f. ex. through international development bank loans. In September 2016 started the first EBRD/CTF financed loan for modernizing infrastructure for solid waste management in Kyzylorda, Southern Kazakhstan. In Russia the amount of municipal solid waste alone is growing steadily by approximately 16-17% per year while the reutilization levels remain poor (8%) while in EU-countries on average 40 % of the municipal solid waste, in Finland even 90 %, is reused. After the adoption of amendments in the Federal Law "On Production and Consumption Waste" at the end of 2014 Russia began to create an efficient regional and local waste management system in the country including organization of regional programs and territorial schemes of waste management, establishment of municipal infrastructure for sorting and recycling MSW as well as establishing waste utilization norms for specific product groups.

While the measures taken in both countries can be considered necessary, they are not sufficient. An important step to improve the situation would be the creation of a training system for personnel in the field of waste management. The need has been recognized both in Kazakhstan and in Russia at national level. In Russia the matter has been attended by issuing during 2014-2016 a number of new professional standards containing the necessary competence requirements in the field of waste standards. In Kazakhstan universities as well as employers have recognized the incongruence between the university education outcomes and the real needs of labor markets. It was, also, shown in the preliminary needs analysis carried out by the Kazakh and Russian partner universities during project preparation that there is an acute need for undergraduate and graduate level programs in the field of sustainable waste management, which meet to the modern requirements. In this regard, this project aims to develop online courses and training modules in the field of sustainable waste management in Russian and Kazakh universities by studying the best practices of the European experience. Preparation of high quality personnel in the field of sustainable waste management will give the impetus to developing research in cooperation with the local businesses and creating innovative technologies to reuse the valuable components from waste and thus closing the resources loops and reduce forming of waste at their sources. Industry-university cooperation as part of education has been up till now a largely under-utilized area in both partner countries.

While eLearning is widely used in many European universities to build students flexible learning paths and increase accessibility and inclusion of studies, they are still underutilized in many Russian and Kazakh universities making students' learning paths inflexible and inadequately inclusive. The relatively low usage of online learning tools and methodology in these countries is mostly due to lack of suitable ICT-equipment, access to internet and insufficient skills of professors to use these tools. Although some partners like KazNU and ITMO have already developed their capacity of online learning through various international projects and university's own resources, all the partner universities have recognized the

need to develop further and update their online teaching skills, methods and especially pedagogy due to the rapid development in this area.

The project proposes the modernization of the way partner HEIs provide flexible learning paths to their students. This is done by introducing modularly structured curricula of sustainable waste management offered in online learning environments. The project focuses on strengthening the relatively weak connection and cooperation between universities and other stakeholders by introducing new ways and methods of building cooperation and mutually beneficial bonds.

Development of learning and teaching tools, methodologies and pedagogical approaches in the area of sustainable waste management were selected as focus areas as development of these areas in the higher education will help solving several pressing issues in the partner countries. Firstly, building Master's level curricula on sustainable waste management will provide the countries with skilled professionals with the relevant knowledge in the theme. This will increase the ability of the partner countries to solve acute issues concerning the state of the environment. Secondly, modularly-built curricula online with built-in themes of innovation and entrepreneurship will enable the students to gain skills and knowledge that will improve their employability in the rapidly changing labor markets. Thirdly, the availability of the modules online will offer a channel for continuous professional learning for industry.

Please describe briefly how your project proposal was prepared (e.g., capitalising on previous experiences, based on achieved outcomes in former projects, following previous cooperation amongst the consortium members, etc.) (limit 1000 characters).

The initial idea of the project was generated in discussions between TAMK, ITMO and UVA. The consortium is based on prior Erasmus cooperation and active student mobility between TAMK and UVA, learning environment development by EAL and TAMK, and cooperation aims between TAMK and ITMO. It supports the cooperation strategy introduced at the First Spanish-Kazakh Forum of higher education institutions in June 2016. The other consortium partners were chosen from the existing networks of above.

A needs analysis was made by the consortium based on 1) national reports and plans of waste management in the area, 2) an online survey implemented among the academic staff (N=27) and students (N=79) in the partner universities and 3) interviews conducted among the local industry and authorities (N=10) by partner university staff.

Based on the needs analysis the project idea was developed further through bilateral and multilateral online meetings as well as a face-to-face project workshop in St.Petersburg in December 2016 between TAMK and ITMO. E-mail and an online document (Google doc) accessible by all partners was used for writing the application.

If your proposal is based on the results of one or more previous projects / networks, please provide precise references to this / these project(s) / network(s) in the table below.

Reference number	N.A.		
Project dates (year started and completed)	N.A.	Programme or initiative	N.A.
Title of the project	N.A.		
Coordinating organisation	N.A.		
Website	http://		
Password / login if necessary for website	N.A.		

Please summarise the project outcomes and describe (a) how the new proposal seeks to build on them and, (b) how ownership / copyright issues are to be dealt with (limit 1000 characters).

N.A.

Please copy and paste tables as necessary.

E.2. Rationale for the setting-up of the consortium

Please explain why the selected partners are best suited to participate in this European project. Describe innovative and or complementary skills, expertise and competences within the consortium directly relating to the planned project activities. If associated partners are involved, please explain their role in the project and the added value to the consortium (limit 3000 characters).

The role of the European partners in this project will be to mentor on top of their expertise and experience each on their special area. The areas, and thus the universities, were chosen to complete each other in the development of a relevant educational entity in sustainable waste management. The Danish Erhvervsakademiet Lillebaelt offers their expertise in university-business cooperation including integration of entrepreneurship and innovation into education. The University of Valladolid has extensive experience and research activities in the area of environmental sciences, including transfer of knowledge through university-industry collaboration contracts, specifically in the field of waste management, treatment and valorization. UVA has a broad experience in masters and doctorate courses with international accreditation and recognition of quality in the fields of environmental sciences and engineering. The internationally acknowledged experience of TAMK in teacher training including expertise in curriculum development and the use of eLearning technology in multicultural environments will interweave the expertise of other EU-universities into an effective package of 1) building the capacities of the academic staff in partner country universities and 2) building online learning modules in sustainable waste management. Additionally TAMK will support among others the curriculum content design through expert participation. TAMK has wide experience in coordinating national and international projects which will ensure the fluent work of the network.

The partner country universities represent high quality national universities with wide independence in planning their own Masters' level curricula. All the partner country universities have the necessary human and material resources to guarantee the project success. They were chosen based on their complementary know-how and wide variety of areas of expertise that they represent. The lead organization responsibilities of WPs are divided based on the special know-how and interest of each university:

-WP3: ITMO university masters the partner country curriculum development and accreditation processes in comparison with European requirements

-WP7: KazNU has the necessary resources to provide technical support to the other partners in the piloting of the learning modules

-WP8: UrFU has experience in international projects and quality assurance demanded in international context

- WP9: SKSU has wide experience of international projects, especially in dissemination and is willing to create a center for dissemination in the university to ensure sustainability of the project results.

The project has several universities, one local authority and companies as associated partners. The universities offer the project additional value by offering a multiplier effect in dissemination through their networks, ideas for module content development and peer assessment for the completed modules. They also lay ground for the later exploitation and accreditation work for the developed learning modules/curriculum. Companies participate in needs analysis, offer specialist advice and lectures, and participate in assessment activities of the module contents. The city committee of ecology in Yekaterinburg will provide valuable input and views on waste management from the point of view of local municipal management.

E.3. European added value

Please describe the benefits of and need for European cooperation. Please describe also why the results cannot be achieved through national, regional or local funding (limit 1000 characters).

In the Europe 2020 -strategy sustainable growth aiming at a more resource efficient and low-carbon economy and higher quality education have been set as priority areas. European HEIs have developed their education and research in the above areas in collaboration with the industry for years to be able to provide the European labor markets specialists with relevant knowledge about efficient and sustainable waste management and skills of innovation, entrepreneurship and the use of the ICT-based tools for the development of local industry. Through this funding the European experience and knowledge will be shared with Russian and Kazakh universities which have insufficient experience in the subject area and which face the demand of experts with relevant skills on sustainable waste management from the local industry and society. The experts are required to solve the pressing environmental problems in these countries with fresh and innovative ideas and skills of using eLearning technology to develop the society towards innovation and entrepreneurship intensive economy.

E.4. Innovative character

Indicate what the project is offering that is new and what are the main innovating elements (limit 2000 characters).

The first innovative aspect this project offers is a well-prepared programme for capacity building of the academic staff of the partner country universities in the area of waste management, where education is fractured and insufficient. Previous initiatives in environmental protection like SWAN-water or Ust-Kamenogorsk Water(EBRD) tended to focus on water recourse management or wastewater treatment. This project shifts the focus on sustainable solid waste management, which is one of the most acute problems in both partner countries.

The second innovational aspect that this projects offers is the introduction of eLearning pedagogy into the focus of the capacity building process for the academic staff. Some of the partner country universities like ITMO and KazNU have already developed their eLearning environments and practices either of their own accord or through international projects like CANDI, which aimed at developing both the infrastructure for eLearning, and the skills necessary to transfer existing courses and curricula to an eLearning environment. In addition to ensuring technical skills of using online tools and ICT-technology (including skills of filming, editing and publishing learning videos), the project aims at shifting the focus from teaching to learning and providing pedagogically sustainable eLearning tools for introducing entrepreneurship, innovation and industry-education cooperation practices into the learning programmes in the partner country universities. These areas will provide students with meta-competences relevant and necessary for future specialists in the field of sustainable waste management. The industry-education cooperation with local companies lays ground for a more concrete and extensive collaboration and co-funding of university-industry coalitions in the partner countries in the future.

The third innovative aspect of the project is the production of online learning modules including hands-on laboratory courses in sustainable waste management available in Russian and English language and tailored to meet the country-specific needs in Kazakhstan and Russia. This development work is timely to the concurrent renewal process in the eLearning technology in both countries including building national eLearning platforms.

PART F - Quality of the project design and implementation

F.1. Aims and objectives

Please define the concrete aims and objectives of the project and describe the ways in which the situation set out under the previous section (Part E) will be changed (limit 3000 characters).

The main aim of the project is to modernize, improve the accessibility and to internationalize the higher education in Physical sciences and Environmental protection in Kazakhstan and Russia. This aim will be achieved by building the capacity of the local academic staff (main target group of the project) in participating partner country universities 1) in sustainable waste management and 2) in the latest European pedagogical approaches. Additionally, eight online learning modules will be built on sustainable waste management to benefit the secondary target group, students and company/local/regional authority staff.

The objectives of the project:

- Through the training sessions organized in WP4 the target group will adopt the latest research, best practices, and latest technology in Europe in Sustainable Waste Management
- after the training sessions and peer assessment work in WP3 the academic staff will be able to combine industry-cooperation into defining the competence definitions of new curricula as well as about the latest curriculum building approaches
- after the completion of WP5 the target group will be able to integrate entrepreneurship and innovation methods into the learning modules
- after the completion of WP6 the target group will be able to choose the pedagogically best suited eLearning tools for each learning purpose f.ex. for collaborative knowledge building, brainstorming, feedback collection, knowledge testing.
- based on the above knowledge to build eight online learning modules on sustainable waste management (each university will build one-two modules of 6-9 ECTS)

The competence building of the academic staff in the area of Sustainable Waste Management will enable the modernization of existing curricula and the building of new educational programmes in Sustainable Waste Management, for which only recently new professional standards were introduced in Russia and for which no educational standards exist in Kazakhstan.

The new online learning modules will offer students flexible and inclusive learning paths which have been insufficiently available in both partner countries. The introduction of innovation methods and industry-university cooperation issues will provide students with relevant skills and knowledge needed in working life.

Training provided for curriculum building, eLearning technology and pedagogy will support the updating of the education in Sustainable Waste Management to meet the European and global standards. The modernized and new curricula and online modules will enable the education of new Master's level professionals as well as continuous and lifelong training for persons employed by industry in Sustainable Waste Management to solve burning environmental problems in both countries. Partner countries HEIs' closer cooperation with industry and the integration of industry-university cooperation into the learning modules will launch the development of mutually beneficial innovations and new ways of cooperation and funding in the future.

F.2. Project activities and Methodology

Please define the activities proposed and the working methodology (project activities/developments including educational and training content and pedagogical approach) to be used for achieving the objectives, including major milestones, measurable indicators, etc. (limit 6000 characters).

A swift setup will take place during a project preparatory phase (WP1) where the project partners organize and setup tools to enable smooth work during the whole project. A project website with intranet and social media channels will be built.

The first tasks (WP3) are divided in two: 3.2 Curriculum/Module Designing and 3.3 Accreditation of the curriculum/modules in partnering HEIs. In 3.2 each partnering HEI organises a local Competence Workshop (altogether six) with working life representatives (approx. 60 participants) to define the competence needs of future professionals in the field of Sustainable Waste Management. The results will be analysed together with the complemented needs analysis from students and staff of partnering HEIs and reported. A one-week Workshop is organised to build capacity of academic staff in curriculum and module design in StP. In 3.3 the planned curricula is introduced to company experts, rectors and Ministry of Education to launch the accreditation process. During the process, written proposals are written and finally inspected (described in 3.3.2) and also negotiations started with national online platform stakeholders (see 3.3.3).

To provide the necessary eLearning and laboratory infrastructure for the professors, teachers and students specific equipment is installed and introduced in partnering HEIs. This equipment will complement the existing ICT-equipment and software and enable the other activities in all WPs. Part of the infrastructure of the laboratories is brought to the modern level and is substantial together with the subject specific software to pilot the laboratory courses in WP7. In addition, teachers' competence in Professional English in Sustainable Waste Management is developed through an online course.

Milestones and indicators:

- Summarising report of the Needs Analysis to be used in the finalising the learning modules/curricula by 12/2017
- Detailed description of the new curricula and each learning module, 01/2018
- Written proposals of the curricula to the accreditors 06/2020
- Meetings with the stakeholders of national online platforms 05/2020
- Learning modules and parts of new Master's programmes are accredited in the partnering HEIs 08/2020
- Infrastructure setup 12/2017, equipment in place 12/2017
- Online module of Professional English on Sustainable Waste Management completed 6/2020

After the curriculum design, the building of competence of an expert group from the partner universities (12 teachers) in the subject area of Sustainable Waste Management will be started in parallel with the productions of the curriculum content descriptions that set the basis for the learning modules (WP4, see 4.1.7 for the list of module titles). The main activities are three workshops for teacher training and curriculum content planning including appropriate field visits (at least two visits).

Milestones and indicators:

- Professional literature in electronic form is in use of teachers by 12/2017
- Descriptions of curriculum/learning modules contents 2/2019

The next tasks will introduce new pedagogies to the partnering HEIs (WP5). The pedagogical approaches mainly focus on problem-based learning including university-industry cooperation in the implemented activities. The main activity of this WP is a training workshop on these new pedagogies followed by one workshop in each partnering to enhance pedagogical competence of teachers on the use of online tools in innovation intensive learning environments.

Milestones and indicators:

- Plan for how innovation and entrepreneurship will be present in the implementation and contents of the learning modules by 4/2019

Partly parallel to the previous activities eLearning pedagogies and tools are introduced to the partner HEIs (WP6) to build capacity of academic staff in eLearning. The main activity is a two-week workshop on pedagogical affordances and technical skills of using eLearning tools. After this WP the expert group of the partnering HEIs will combine all plans for the curriculum/learning modules from WPs 3 (structure), 4 (content) and 5 (innovation and entrepreneurship) and 6 (eLearning) to a full description of the contents (see 6.1.4).

Milestones and indicators:

- A resource blog by 5/2018
- Web-conference 9/2018
- Completed plan for online learning modules and/or curricula by 08/2019. Eight plans.

To exploit and disseminate the results of the project a pilot (WP7) will be conducted in each partnering HEI. The quality, accessibility and usability of all eight learning modules are tested and the student and teacher experiences are measured to evaluate and further develop the modules. The data gathered will be analysed, discussed in one-week Closing and Evaluation meeting and reported. Events for stakeholders are organised in each partnering HEI.

Milestones and indicators:

- Eight online learning modules are set up at the online platforms of ITMO and KazNU by 12/2019
- Eight modules are piloted by at least 12 teacher and 120 students by 01/2020
- Feed-back from students and stakeholders is gathered by the end of 2/2019
- Analysis of the results from eight surveys for teachers and students ready by 02/2020
- Discussions and decisions about modification needs with partners in a Meeting 2/2020
- Finalizing the learning modules by 4/2020
- 18 events for the stakeholders to disseminate the results by 06/2020

The dissemination of the results (WP9) start at the beginning of the project and is an ongoing activity during the project. Several activities are planned, see WP9, for example project presentations in conferences in Kazakhstan, Russia and Europe. Once project results are published, national training workshops will take place to disseminate the background, process, results and tools to other universities, national and local authorities and companies in the participating and neighbouring countries. Finally, the project will organize a large International Conference in Kazakhstan to invite scientific community to familiarize with new learning modules in Sustainable Waste Management.

Milestones and indicators:

- Dissemination and exploitation plan published by 11/2017
- Project website and social media channels ready by 11/2017, regular updates thereafter
- Press releases (three times during the project)
- Outreach articles in national and international journals, at least 12 articles
- Project national information days, 18 workshops and 18 webinars
- 30 Conference presentations by 08/2020
- Dissemination of project final results in an International Conference 06/2020

Two concurrent groups of activities will take place during the whole project: Project Management (WP2) and Quality Assurance and Monitoring (WP8). These two WPs will assure the smooth running of the project and will examine that the objectives are reached with the desired level of quality through periodical internal, beneficiaries and external expert reviews.

F.3. Budget and cost effectiveness

Please describe the strategy adopted to ensure that the proposed results and objectives will be achieved in the most economical way and on time. Explain the principals of budget allocation amongst partners. Indicate the arrangements adopted for financial management and what co-financing modalities are planned (limit 3000 characters).

The total project budget is 999 895,70€. The principle of minimum possible expenditure was used to allocate time and resources to each task. 39 % of total budget consists of staff costs for the implementation of the tasks of the WPs. The number of work days needed for each activity is calculated carefully and all partners include also co-financing staff costs to ensure that all activities can be done according to the plan and with high quality. Due to the 11 partners in the consortium, the establishment

of a well-functioning management system is important. The managerial costs are minimal but sufficient to ensure appropriate overall management and coordination.

All project partners have participated in the budget planning. Between the partners the resources are allocated according to the specific role of the partner and nature and volume of the activities. The budget is in balance among the partnering HEIs from Russia and Kazakhstan as well as among the EU partners. The roles of all partners are carefully selected based on their specific area of expertise and experience. All partnering HEIs will be responsible for approximately similar amount of work during the project. Partners P10 (Spetsavtobaza-company) and P11 (Ministry of Education, Kazakhstan) will participate only in limited part of the activities for example in the Needs analysis and dissemination. However, the work is divided in the WPs based on their specific roles and/or the leadership of a WP. European partners will dedicate less hours to the task when their role is mainly advisory. This will promote the cost-effectiveness of the budget.

EU-partner activities consists 26 % of the total project budget and 74 % is divided among the Kazakhstan partners (38 % of total budget) and Russian partners (36 % of total budget). Equipment costs are based on rapid market analysis to find favorable prices for eLearning and laboratory infrastructure for the development, exploitation and dissemination work in all WPs. Share of equipment differ among partnering HEIs according to their needs in the development of the infrastructure. Although the equipment costs are the second largest item of expenditure, 26 % of total project costs, equipment purchases ensure that the project results are sustainable and will be achieved. All costs will be produced only when necessary.

Subcontracting costs are minimized by utilising the resources already available at EU partner premises and free online services. Travel costs and costs of stay are 26 % of the total costs. Travel costs are minimized by using online communication when possible. However, to reach the project objectives all partners will have face-to-face meetings and workshops. Several travels during the project are combined in order to achieve high-level results with less travel costs. All partnering HEIs will receive similar traveling budgets given that they will be present at face-to-face meetings.

The financial control will be based on proven-expenditure. TAMK will receive the expenditure proofs from all partners and will reimburse them for eligible costs. The main source of co-finance in this project will be additional work days (for project management, financial administration, self-evaluation and dissemination activities), printing and publishing costs and travel costs and costs of stay for national and international conferences for dissemination purposes. Also, any expense over the limits of the project (tickets, staff-cost, etc.) will be covered by the partners.

F.4. Quality control and Monitoring

Please explain what mechanisms have been put in place for ensuring the quality of the project and how the evaluation will be carried out. Please define the specific quality measures established, as well as the benchmarks and indicators foreseen to verify the outcome of the action. Make sure that the information in this section is consistent with the project Logical Framework Matrix (limit 3000 characters).

A systematic evaluation mechanism (Quality Plan) will be built and maintained by the lead organization, P5 - UrFU, of the WP8 (Quality Assurance and Monitoring) to ensure a continuous feedback system for assessing and improving the planning, implementation and impact of the project. The plan is refined in cooperation in Tampere in a one-day meeting next to the Kick-off meeting. Quality assurance work is done throughout the lifespan of the project.

The quality mechanism is divided into three major tasks: 1) Internal and external quality assurance and monitoring plan 2) Annual evaluation of the progress of the project by external experts to identify design flaws or missed opportunities. 3) Final evaluation of the developed curricula and online learning module syllabi by three external experts.

The important measures of the quality work are:

- 1st Quality assurance meeting 05/2018 for four days in St. Petersburg (ITMO)
- 2nd Quality assurance meeting 05/2019 for 7 days Yekaterinburg (UrFU)

- 3rd Quality assurance meeting 05/2020 for 2 days St. Petersburg (ITMO).

The meetings are timed to coincide with the important project milestones: end of development phase in year 2018, piloting in 2019 and final reporting in 2020.

In addition to WP8 activities, each WP will be evaluated during the implementation as well as at the end of the WP work. During the WP work a short quality review concerning the WP quality measures drafted by the lead organization will be discussed in connection of every online managerial meeting. After the completion of a WP the lead organization will draft a report of the WP, which will be discussed in Quality meetings.

The quantitative and qualitative internal evaluation will consist of surveys and reports executed on quarterly basis and self-evaluation (altogether 10 surveys and reports) and peer mentoring. In addition to the face-to-face meetings, the seven online meetings will allow peer mentoring (10 events). Self-evaluation will be done through quantitative surveys giving feedback information about the success and progress of the project work through numbers of

- completed learning modules,
- students on pilot courses,
- academic staff being trained,
- completed ECTS,
- university-industry activities, eLearning technology included into learning modules
- participants in conferences, seminars, webinars and other events

Similarly, qualitative studies evaluate the pedagogical development and new skills and competences among the students and academic staff.

Evaluative and corrective feedback on the quality of the module plans is gained through peer mentoring. The results of the internal evaluation will be reflected in the Quality meetings.

The external quality evaluation of curriculum/finalized learning modules will be done by three external experts representing Kazakhstan, Russia and EU. Based on the feedback, the project's results are improved. During the project lifetime outside expert comments and feedback will be obtained from companies and local authorities.

Further, an external evaluator will be recruited to evaluate the project yearly. The evaluation services will be subcontracted from a well-known and reputable company. The decision of the company will be made within the consortium in the beginning of the project.

Financial audit will be done with regular national audit practices. Annual audit is done to control all expenses, time spending, proper procedures for equipment purchase etc.

PART G - Impact, dissemination and exploitation, sustainability

G.1. Expected impact of the project

Please explain who will use these project outputs / products / results and how the consortium will reach them. Describe how the target groups (including participating institutions, stakeholders) will be reached and involved during the life of the project and how the project will benefit the target group at local, regional, national and or European level. Please structure your description according to the different levels of impact and stakeholders (limit 3000 characters).

The online learning modules as well as the new and modernized curricula on Sustainable Waste Management built in the project will be exploited by students of the Russian and Kazakh universities, company employees and representatives of local, regional and national regulatory authorities to improve their skills and knowledge in the field. The online learning modules will be available at first for the students of partnering HEIs on the online platforms of ITMO (Russia) – courses.ifmo.ru and of KazNU (Kazakhstan) – open.kaznu.kz. After the piloting and accreditation of the courses in the partner country universities the aim is to transfer the modules to the national online platforms in Russia (openedu.ru) and in Kazakhstan (moocs.kz). All these platforms are accessible also across borders and thus widen the target group described. The target groups for the learning modules will be reached through the project universities and associated partners - universities, regulatory authorities, ministry, private companies, research institutes. A multiplier effect is achieved through efficient use of the networks of the above. The target groups will be involved in the project work by participating in the needs analysis, giving feedback and evaluation on the developed learning modules and to participating in the dissemination of the project results.

The new experiences of international project work and the improved capacities of the academic staff of partner country universities in content areas, adopted new pedagogics, language and cultural skills will be used by the partnering HEIs in modernizing their education also in education outside waste management, cultivating industry-university cooperation as well as in developing their international networks. The associated partners of the project, especially the heads of departments and faculties, vice-rectors and rectors of the universities and company representatives will be involved in the project work through events organized for discussions on the learning modules, their contents and availability and possibilities of accreditation of the modules as well as for other project results like new ways of industry-university cooperation.

The general public will get information about new development of waste management through the publications about the project in social media and local newspapers.

Target group benefits of the project:

At local level the local universities will include the online modules on sustainable waste management to develop their environmental education. Private companies and local offices of regulatory authorities in waste management can offer continuous training for their employees.

At Regional level, a networking effect between the academic staff of universities, private companies and regulatory authorities will be used to share best practices and experiences in the use of online learning modules in environmental education in universities as well as in working life.

At national level a better trained workforce in waste management will provide the countries with the human resource to solve the acute and burning problems in waste management. The articles of the project in local newspapers will also help the countries to disseminate knowledge about waste management issues among the general public.

At the European level the results of the project will enable the European HEIs to share the best practices in waste management and modern pedagogics with the participating universities in the project.

Please describe how the target groups (including participating institutions, stakeholders) will be reached after the project is finished (limit 3000 characters).

One of the most important channels for disseminating information about the project is the project website. The website will serve the project members as well as outside stakeholders. The website will be available for three years' time for students, academic staff and other stakeholders. The printed materials like handbooks and instructions concerning the methods used in building the learning modules will disseminate information about the project results even after the project ends by making copies of them available in libraries of major universities in both countries. Further, SKSU will act as a special center for the dissemination of the results developed under the project to all universities of Kazakhstan to ensure to achieve future sustainability of these results.

The main strategy to reach students from universities outside the project and staff members from private companies, local authorities, NGOs and associations after the timeframe of the project will be the publication of the developed learning modules of Sustainable Waste Management on the national open-access platforms OpenEdu in Russia and moocs.kz in Kazakhstan. ITMO in Russia and KazNU in Kazakhstan are members of the consortium maintaining the platforms. Further, KazNU has the responsibility of giving technical support to the moocs.kz –platform nationwide. These connections are expected to support and speed the integration process of the new online modules on the national platforms.

After the integration of the learning modules into the national platforms their availability to students will be disseminated by the 11 other universities included into the coordination consortium in Russia and by the existing 6 universities in Kazakhstan. Negotiations to increase the number of participating universities are ongoing in both countries.

In addition, a multiplier effect is expected to continue even after the project ends through the networks of the partner universities, companies and authorities as well as those of associated partners.

Overview of short and long term impact indicators

Please add rows as necessary according to indicators

Short term impact	Target groups/potential beneficiaries	Quantitative indicators	Qualitative indicators
There is improved local capacity to structure and produce new learning modules in Sustainable Waste Management in the Kazakh and Russian HEIs participating in the project.	Professors, teachers in partner country universities	10 Professors and 24 Teachers from partner country universities have participated in the training of content, eLearning pedagogy and technology, industry-university cooperation or English language course . 12 educational videos have been made.	Attitudes of the trained professors and teachers are positive towards online learning and the use of new pedagogies, English language skills have improved according to observations and interviews.
Academic and technical staff utilize new eLearning pedagogy and technology	Professors, teachers, laboratory and technical staff in partner country universities	46 members of the target groups have exploited the new eLearning pedagogy and technology according to survey for staff and students	Attitudes of the target groups are positive towards online learning and the use of new pedagogies and tools according to observations and interviews.

Teachers, professors, administrative staff from other universities and representatives of private companies/local authorities are aware of the new learning modules and their contents	Professors, teachers, administrative staff from other partner country universities, representatives of private companies and local authorities, NGOs, associations	180 members of the target groups have participated on workshops arranged by the project, 270 members of the target groups have participated in webinars arranged by the project. 60 company, local authority, NGO reps. have participated in competence workshops or in the accreditation processes in partner country universities.	The awareness among the target groups concerning the new learning modules and their contents has increased according to observations and interviews
Knowledge about the availability of the learning modules increase	Students from partner universities and from universities outside the project	At least 120 students have participated on information and demonstration sessions (face-to-face or on the web) organized by the partner country universities.	
New study modules have been piloted	Students	About 120 students have participated on the piloting of the new modules (60 ECTS)	Student interviews show positive feedback on the study experience on the online modules
Competence-based learning modules with new pedagogic approaches have been accredited and are in use in Kazakh and Russian HEIs	Students, representatives of companies and local authorities	Eight learning modules are accredited and available online.	Accreditors interviews show positive feedback on the learning modules.
The partner country HEIs have a larger international network	Universities	Each partner country university has at least 4 new international connections (universities or private companies) in their networks.	Internationalization has increased interest in cooperation between newly established partners
New university-industry cooperation	Private companies	8 new university-industry cooperation activities have been included into the learning modules	The relevance of university studies for gaining working life competences in the field has increased
Interest and knowledge about the importance of waste management increases	Public	At least 10000 members of the public in partner countries have read a newspaper or journal article (12 articles published), heard a conference presentation (30 conf. presentations) seen a video (one video	Awareness of waste management issues has increased which shows in positive comments concerning the project and waste management on various media. There is more interest in

		streamed on various platforms) or seen information about the project on social media or seen a TV interview about the project and its results	recycling and reuse of waste.
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Long term impact	Target groups/potential beneficiaries	Quantitative indicators	Qualitative indicators
Competence-based learning modules with new pedagogic approaches are in use in Kazakh and Russian HEIs after the end of the project	Students, representatives of companies and local authorities	There are graduates and trained persons who have studied sustainable waste management by participating in these eight learning modules that are available online.	
Students with financial challenges, health issues or who are located in remote areas have learning modules in use to cope with the lack of previous knowledge	Students	Participants on the learning modules include at least 20 students with financial, health issues or are from outside the partner universities.	Student experience surveys show that students find the modules interesting and easy to access
The learning modules are used by other universities, staff from private companies	Universities, private companies	At least 6 other universities are using the modules/accept them into the study programmes of students. Study modules are used by staff from private companies (6 companies) for continuous training.	There is a positive attitude towards the online learning modules in universities outside the project
The results of the project are exploited to build learning modules on other topics	Teachers, professors	At least 10 learning modules on other topics using the new pedagogical knowledge have been built in 3 years time after the project. 150 copies of handbooks and methodological instructions have been distributed to provide support for those interested in the methodology used.	Interest in integration of new pedagogics into learning materials has increased
More workforce with high competence in waste management	Private companies and local authorities	In five years' time 1000 Master's level students have graduated in the partner countries with at	The new graduating students have more competences in waste management.

available for private companies and local authorities		least 3 ECTS of sustainable waste management studies included into their studies and 30 staff members from local industry have taken a continuous training course in waste management	
The attitudes among the general public will change towards more positive	General public	5000 members of the public are expected to have a more positive attitude towards waste recycling and reuse	Interest in recycling and separation of waste has increased in partner countries

G.2. Dissemination and exploitation strategy

Please explain how the dissemination will be organised and how exploitation activities will ensure optimal use of the results within the project's lifetime and after. Explain the roles, responsibilities and target groups (limit 3000 characters).

Dissemination of the background, process and results of the project continue throughout the project starting from the WP1. The target groups of the project are academic staff and students of universities, staff of private companies and local/regional authorities, NGOs, associations and general public in partner countries. While the main responsibility of the dissemination activities is carried by SKSU, each partner of the consortium will participate in the dissemination in a way described below in connection with the tools used to reach the target groups.

- The project website has an internal and external information surface. The intranet is a restricted access area for information sharing and management purposes for the partners. On the open access site the public can review information about the project background and results, conferences, national seminars, webinars, workshops and information sessions organized as well as reach the links to the platforms containing the learning modules. It will exist at least three years after the end of the project.
- Social media will empower the communication potential of the website through a dedicated Facebook-page, Youtube channel and Twitter account to reach the target groups.
- Erasmus+ Project Results Platform will be used to give an overview of the project.
- Presentations at international and national conferences and specialist fairs by partnering HEIs and
- Outreach articles in professional and/or scientific publications written by each partnering HEI annually will be used for presenting the most relevant results of the project to the public and the scientific audience.
- Six Competence Workshops (WP3) will be organized in partner countries targeted on local private enterprises and authorities,
- Webinars, workshops, roundtable sessions will (WP3) introduce the project and the curriculum development work to the representatives of private companies, rectors of consortium partner universities with the main aim to promote the accreditation process.
- Information meetings by KazNu and ITMO at local Ministry of Education will be organized to speed the accreditation process of the learning modules
- National workshops (18) and webinars (18) (WP9) will be organized by each partner country university to disseminate the structure, availability, contents and delivery of the online modules and other project results to academic staff, heads of departments and deans from other partner country universities
- A final conference of the project is organized in Shymkent in April 2020. This conference will target scientists, industrial end-user actors and other beneficiaries in the field of sustainable waste management.

- Local scientific seminars and conferences will be organized and conference presentations given by each partner universities annually to reach the scientific audience
- Printed material like handbooks and methodological instructions will be printed and disseminated at project events and to libraries of major universities in both countries
- Multiplier effects are expected on the use of the above tools through networks of the target groups. The exploitation strategy is based on the integration of the online learning modules into the national online platforms in both partner countries. The exploitation of the materials will be free of charge for anybody interested. Only if the participant wishes to get a certificate or participate on deeper study practices will there be a fee.

G.3. Sustainability

Explain how the impact of this project will be sustained beyond its lifetime. Please list the outcomes that you consider sustainable and describe the strategy to ensure their long lasting use beyond the project's life - financially, institutionally and policy level. Also explain how the results will be mainstreamed and multiplied in the sector of activity and in the participating institutions. Describe the strategy foreseen to attract co-funding and other forms of support for the project (limit 2000 characters).

The sustainable outcomes of the projects:

- The built online learning modules and curricula
- The increased capacity of academic staff in partner country universities
- new international contacts

According to the needs' analysis based on the public sources of information and the project preparation phase surveys there is an acute need for education of experts in sustainable waste management in both countries. The graduates with modern know-how in waste management will disseminate information about the education in their workplaces and in society. The acute need for new specialists will encourage students to choose the new learning modules as a channel for gaining relevant career competences after the project ends.

The increased capacity of the academic staff in partner country universities on modern pedagogics, industry-university cooperation and eLearning can provide impetus to building new type of learning environments in other topics as well after the project.

Dissemination of the project results through online platforms, events and printed handbooks and instructions are expected to inspire the academic staff outside the partner universities to adopt the contents and the methodology used.

The new international and interdisciplinary contacts created during the project are expected to continue and develop through research collaboration and increased personal level contacts between the partner country and EU universities.

The aim is to transfer the new online learning modules on national online platforms in Russia and in Kazakhstan. After accreditation ensuring the maintenance and facilitation of the modules they will be available as per explained below:

The modules will be available after the project on three intensity levels:

- 1.free material available for all (no fee)
- 2.special material and exams for those wishing to get a certificate for the studies (fee)
- 3.additionally 1) a company-based study project or 2) hands-on experience on laboratory work included in modules 3,7 and 8 will be offered for a more practical hands-on experience on top of the theoretical material covered at levels 1 and 2 (fee)

This arrangement will ensure availability of the learning materials for a large audience. It will also secure the continuation of the supply and development of the learning modules in a financially sustainable way.

LOGICAL FRAMEWORK MATRIX – LFM

Wider Objective: <i>What is the overall broader objective, to which the project will contribute?</i> <ul style="list-style-type: none"> • Modernisation, accessibility and internationalisation of higher education in Physical sciences and Environmental protection in Kazakhstan and Russia 	Indicators of progress: <i>What are the key indicators related to the wider objective?</i> <ul style="list-style-type: none"> • After the end of the project, 8 online learning modules in Kazakhstan and Russia have been created and accredited in the field of Sustainable Waste Management 	How indicators will be measured: <i>What are the sources of information on these indicators?</i> <ul style="list-style-type: none"> • Number of accredited learning modules in Sustainable Waste Management integrated to curricula 	
Specific Project Objective/s: <i>What are the specific objectives, which the project shall achieve?</i> <ul style="list-style-type: none"> • develop capacity in Russian and Kazakh HEIs to improve Sustainable Waste Management education through 1) training of the academic staff in the content area and modern pedagogy 2) building new learning modules/curricula using eLearning technologies and pedagogic approaches to implement the curricula by August 2020. 	Indicators of progress: <i>What are the quantitative and qualitative indicators showing whether and to what extent the project's specific objectives are achieved?</i> <ul style="list-style-type: none"> • At least 10 profs and 24 teachers are trained in the content area, eLearning pedagogy or professional English • 8 learning modules exists • eLearning technology is in use • At least 120 students in pilots • eLearning is effective and accessible • At least 8 university-industry cooperation activities in modules • At least 6 additional partner country HEIs use the learning modules 	How indicators will be measured: <i>What are the sources of information that exist and can be collected? What are the methods required to get this information?</i> <ul style="list-style-type: none"> • Number of academic staff trained • Number of new learning modules • Number of students in pilots • Survey of used eLearning technologies, completed ECTS and accessibility across universities • Survey of new skills and competence among academic staff and students • Survey of pedagogical development • Number of univ-industry activities • Survey of used modules in other HEIs 	Assumptions & risks: <i>What are the factors and conditions not under the direct control of the project, which are necessary to achieve these objectives? What risks have to be considered?</i> <ul style="list-style-type: none"> • Academic staffs language skills are at sufficient level • Teachers are interested online education • Students are interested in online courses • Individual professors accept ECTS gained with international online courses • Companies are willing to participate
Outputs (tangible) and Outcomes (intangible): <ul style="list-style-type: none"> • Please provide the list of concrete DELIVERABLES - outputs/outcomes (grouped in Workpackages), leading to the specific objective/s.: <p>WP1: 1.1 Project is open and visible</p> <p>WP2: 2.1 Management reports/minutes, project monitoring</p> <p>WP3: 3.2 Designed curriculum, 3.3 Completed accreditation</p> <p>WP4: 4.1 Contents of curriculum and completed teacher continuous training</p> <p>WP5: 5.1 New pedagogies are</p>	Indicators of progress: <i>What are the indicators to measure whether and to what extent the project achieves the envisaged results and effects?</i> <ul style="list-style-type: none"> • Website and social media setup • The project is monitored regularly • Needs analysis, Detailed descriptions of modules, proposals for accreditors • Completed English training • Minutes of meetings • Curriculum Content plan • New pedagogic implementation plan 	How indicators will be measured: <i>What are the sources of information on these indicators?</i> <ul style="list-style-type: none"> • Website and social media updates • Number of visits to the web pages • Number of Partner agreements and staff conventions signed • Number of Report documents, analyses, plans, blogs, films, surveys, information sessions, outreach articles, handbooks, leaflets, conference proceedings, minutes and 	Assumptions & risks: <i>What external factors and conditions must be realised to obtain the expected outcomes and results on schedule?</i> <ul style="list-style-type: none"> • Enough students register to online courses in the pilot • The schedule of the pilot learning modules is compatible with the timeline of the students studies • Accreditation processes stay unchanged in the partner country HEIs

<p>introduced and trained WP6: 6.1 eLearning pedagogics and tools are introduced and tested WP7: 7.1 Piloting of new curricula and learning modules completed 7.2 Pilot analysis and further developed learning modules ready WP8: Periodic internal and external evaluations of the project WP9: National and international dissemination, dissemination of final results in project's International Conference</p>	<ul style="list-style-type: none"> • Completed plans for modules • At least 8 learning modules piloted • At least 12 learning videos • At least 60 ECTS of studies piloted - (Lab) equipment installed and in use • At least 6 information and 6 training sessions, 6 demonstrations • At least 10 internal and 4 external project/curriculum evaluations • Dissemination and exploitation plan • At least 30 conference presentations • At least 12 outreach articles • At least 18 National Dissemination Workshops/info days/webinars 	<p>photos of the events</p> <ul style="list-style-type: none"> • List of participants in the workshops • Photos and location of equipment • Number of educational videos • Internal project evaluations • External project evaluations • Curriculum evaluation report • Youtube account address, number of videos and shares in social media • Photos and recordings of the dissemination workshops and sessions • List of participants in the dissemination events 	<ul style="list-style-type: none"> • Accreditation of the new learning modules/Master's program might not be granted by the national authorities • Management of national online learning platforms stays unchanged • Academic staffs' English skills are sufficient in the subject area • Procurement of the equipment for the universities' facilities is not delayed by external factors
<p>Activities: <i>What are the key activities to be carried out (grouped in Workpackages) and in what sequence in order to produce the expected results?</i></p> <ul style="list-style-type: none"> • WP1.1 Setup of the project • WP2.1 Management meetings, reports, model of monitoring report • WP3.2 Workshops, equipment setup • WP3.3 Accreditors' events, proposals • WP4.1 Teacher training and Content Planning Workshops, Content plan • WP5.1 Training in new pedagogies • WP6.1 Web-conference, workshop • WP7.1 Pilot execution • WP7.2 Pilot analysis and further development of modules • WP8.1 Quality plan meetings • WP8.2 External Evaluations • WP9.1 Plan, articles, national and international dissemination events , project's international conference 	<p>Inputs: <i>What inputs are required to implement these activities, e.g. staff time, equipment, mobilities, publications etc.?</i></p> <ul style="list-style-type: none"> • WP1: 126 work days. 1 meeting. • WP2: 829 work days. 3 meetings. • WP3: 298 work days. Equipment setup. 2 training, 6 Competence workshops, 6 accreditor info sessions. • WP4: 773 work days. 3 workshops and 3 online meetings. A report. • WP5: 235 work days. 3 training workshops and online discussion. • WP6: 206 work days. Resource blog, Web conference, 4 workshops • WP7: 892 work days. Lab equipment. A meeting. Report of surveyed pilots. • WP8: 444 work days. 4 meetings. • WP9: 451 work days, 1 conference, 2 external workshops. Conference proceedings 		<p>Assumptions, risks and pre-conditions: <i>What pre-conditions are required before the project starts? What conditions outside the project's direct control have to be present for the implementation of the planned activities?</i></p> <ul style="list-style-type: none"> • the teachers and technical staff in the partner universities are still mostly available at the start of the project • There is no major change in the yearly schedule of academic activities in the participant HEIs

WORKPLAN

Please use the model provided. Applicants are expected to complete a one-page work plan for each project year.

For each year of your project proposal, please complete a work plan indicating the deadlines for each outcome and the period and location in which your activities will take place. Please create additional work plan tables if further space is needed.

The same reference and sub-reference numbers as used in the logical framework matrix must be assigned to each outcome and related activities.

Activity carried out in the Programme Country: = (E.g. activity in France for two weeks in the first month of the project 2= under M1)

Activity carried out in the Partner Country (ies): X (E.g., activity in Tunisia for three weeks in the second month of the project: 3X under M2)

WORKPLAN for project year 1

Activities		Total duration (number of weeks)	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Ref.nr/ Sub-ref nr	Title													
1.1	Setup of the project	3	2=	1X										
2.1	Management meetings, reports, model of monitoring report	12	1=	1=	1=	1=	1=	1=	1=	1=	1=	1=	1=	1=
3.1	Start of curriculum design and accreditation process	1	1=											
3.2	Competence workshops, Workshop for curriculum design, equipment setup, needs analysis	7	1X	2X	3X	1X								
3.3	Accreditors' (company experts, rectors, ministries) events, proposals of curricula for accreditors	1					1X							
4.1	Teacher training and Content Planning Workshops	16	1X			1X	1X	2X	2X	2X	2X	2X	1X	2X
5.1	New Pedagogies, introduction and training	3					1=	1X	1=					
6.1	eLearning pedagogy and tools resource blog	1									1X			
8.1	Quality assurance meetings and Quality plan maintenance, Quality plan	6	1X	1X			1X			1X	1X			1=
8.2	External evaluations	2											1X	1=
9.1	Dissemination and Exploitation Plan, articles, website and social media updates, national and international dissemination events, conferences	6	1=	1X			1X	1X			1X			1=

WORKPLAN for project year 2

Activities		Total duration (number of weeks)	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Ref.nr/ Sub-ref nr	Title													
2.1	Management meetings, reports	12	1=	1=	1=	1=	1X	1=	1=	1=	1=	1=	1=	1=
3.3	Proposals of curricula to accreditation process accreditors	2					1X							1X
4.1	Teacher training and Content Planning Workshops, Content plan	8	1=	1X	1X	1X	1X	1X	1X			1X		
5.1	New Pedagogies, training and plan	5			2X					1X				
6.1	eLearning pedagogy and tools web-conference and workshop and completed plans for modules	7	1=	2=	1X		1X						1X	1X
7.1	Pilot execution	12						1X	2X	2X	3X	2X	1X	1X
8.1	Quality plan meetings and maintenance	6			1X			1X		1X	1X	1X		1=
8.2	External evaluations	2											1X	1=
9.1	Dissemination: articles, website and social media updates, national and international dissemination events, project's international conference, conferences	5		1X			1X	1X			1X			1=

WORKPLAN for project year 3

Activities		Total duration (number of weeks)	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Ref.nr/ Sub-ref nr	Title													
2.1	Management meetings, reports	12	1=	1=	1=	1=	1X	1=	1=	1=	1=	1=	1=	1=
3.3	Proposals of curricula to accreditation process accreditors, Minutes of meetings with national online platform stakeholders	2									1X	1X		
7.1	Execution of the pilot in all partner HEIs	17	3X	3X	3X	3X	3X	2X						
7.2	Pilot analysis and further development of modules, Information sessions, training for stakeholders	8						2X	2X	1X	1X			
8.1	Quality plan meetings and maintenance	6		1X			1X		1X		1X		1X	1=
8.2	External evaluations	4									1X		1=	2X
9.1	Dissemination and Exploitation Plan, articles, website and social media updates, national and international dissemination events, project's international conference, conferences	11	1X	1X	1X		1X	1X	1X	1X	1X	1=	1X	1=

PART H - Work packages

Please enter the different project activities you intend to carry out in your project. Make sure that the information in this section is consistent with the project Logical Framework Matrix.

H.1. Description of work packages, outcomes and activities

Work package type and ref.nr	PREPARATION		1
Title	Project opening		
Related assumptions and risks	<p>Managers of each university and curricula building planners and professors of sustainable waste management in the partner universities will be available at the start of the project.</p> <p>Language – teachers might not have the necessary English skills and experience in management issues and working on this is not swift.</p> <p>Cultural differences – can have an impact on e.g. communication and cooperation</p>		
Description	<p>Aim: The aim of the WP is to ensure a smooth start-up of the project implementation.</p> <p>Objectives: The objectives of this WP are:</p> <ul style="list-style-type: none"> - to organize the work of the project consortium including <ul style="list-style-type: none"> - informing the partners and other stakeholders of the grant decision, - making partnership and grant agreements and subcontracts, - forming the steering group - introducing the partners of the management and financial procedures (request of payments, reports, validation of work vs. outcomes etc.) in the project and agreeing about their use - team-building: letting key persons to get to know each other - agreeing about the communication tools - agreeing about dissemination channels - organizing kick-off meeting to launch the project - to setup the necessary tools of communication to enable the efficient communication between the project partners as well as outside the project - setting up the communication tools and dissemination channels, - starting the dissemination <p>This is a “pre” work package, but a mandatory in order to ensure smooth flow of the progress of the whole project.</p>		
Tasks	<p>1.1 Project opening</p> <p>1.1.1 Partnership agreements and staff conventions are signed</p> <p>1.1.2 Setup of the project website and start the dissemination</p> <p>1.1.3 Organize kick-off meeting to launch the project</p>		
Estimated Start Date (dd-mm-yyyy)	15-10-2017	Estimated End Date (dd-mm-yyyy)	31-12-2017
Lead Organisation	P1 - TAMK- Finland		
Participating Organisation	All Partners		

Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	1.1.1	
	Title	Partnership agreements and staff conventions are signed	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Necessary agreements with partners in which all the details concerning the workload and financial issues are agreed. Partnership and grant agreements and staff conventions are signed	
	Due date	31-12-2017	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input checked="" type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	1.1.2	
	Title	Establishment of project's website and first dissemination outputs	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	<p>The main outcome of this Work Package will be a website on Wordpress-platform set up by IT Services of TAMK. The website will have two parts: 1) open-access site to general public and 2) intranet open only for the consortium members. The website presents information about the project. The website will be updated regularly and it will be open at least three years after the project's end. The project open-access website will be linked with each partner universities websites and every partner is responsible for updating project information also on their own websites. This website will be described in more detail in the Work Package 9. The intranet is used for management purposes of the project such as timetables, FAQs and links, and saving the relevant project documents. The first dissemination outputs are described in WP9.</p>	
	Due date	31-11-2017	
	Languages	English	

Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input checked="" type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups.</i> (Max. 250 characters) General Higher Education Community General Public		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input checked="" type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	1.1.3	
	Title	Kick-off meeting and report of the meeting	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Kick-off meeting of the project will be organized in Tampere in October 2017. The meeting lasts two working days. All the members of the HEIs of the consortium will take part to this meeting (together 20 persons). The agenda will include introduction, discussions of the consortium roles and responsibilities, Agreement and setup of the collaboration tools (Google-documents, mailing lists etc.), financial and administrative issues, start of the dissemination and team building. The timetable for online meetings of the country/region coordinators is set. The coordinator will take minutes of the meeting and they will be delivered to the whole consortium using project's intranet. Next to the kick-off meeting there will be meetings to launch also activities of WP2, WP3, WP8 and WP9 to ensure efficient start for the project.	
	Due date	31-12-2017	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups.</i> (Max. 250 characters)		
Dissemination level	<input checked="" type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Please copy and paste tables as necessary.

Work package type and ref.nr	MANAGEMENT	2
Title	Project Management	
Related assumptions and risks	<ul style="list-style-type: none"> - project manager is unable to continue - partners do not fulfil the agreed tasks on time - serious conflicts will arouse - issues concerning the distribution of the finances arouse 	
Description	<p>Aims: The overall aim of this work package is to ensure that the project will be completed successfully. TAMK as a project coordinator is responsible for the overall management of the project. All the partners will contribute to this WP by providing financial documents concerning the costs incurred as well as participating in project meetings and ensuring good management in their own institutions. This WP runs parallel with the Quality Plan WP's.</p> <p>Objectives: The objectives of this package are:</p> <ul style="list-style-type: none"> - to organize the work of the managerial group - to organize the monitoring of the project work - to organize financial management procedures in the project - to solve potential conflict situations that could raise during the execution of the project. <p>The project management is divided into three categories: management of content, management of financial issues and management of project. The managerial group will consist of 10 members: local managers from partner HEIs, project coordinator and administrator. This group will meet three times face-to-face and seven times online during the project. The financial and official contacts with partner countries Erasmus-offices will be done by the staff at the international office of TAMK who have a vast experience in the administration of international projects.</p> <div style="text-align: center;"> <pre> graph TD MG[Managerial group] --> PC[Project coordinator] MG --> RCC[Region/country coordinators] PC --> PR[Partners in Russia] PC --> PK[Partners in Kazakhstan] RCC --> PE[Partners in EU] </pre> </div> <p>The content issues will be the responsibility of lead organization of each work package. At the beginning of the implementation of WP 3- WP9 the lead organization agrees together with the participating partners upon a schedule for online meetings to support the implementation of the WP.</p> <p>The day-to-day management and coordination of the project as well as ensuring effective collaboration between the partners will be the responsibility of the project manager from TAMK.</p> <p>Implementation tasks:</p>	

	-financial management o grant allocation o budget management o documentation of the costs o auditing -coordination of the content o reports from the leading partners of each WP o monitor the results and their dissemination -coordination of the reporting o mid-term progress report after 18 months o final report after 36 months -coordination of the consortium work o organize managerial group meetings: face-to-face 10/2017, 01/2019, 05/2020, online: 01/2018, 11/2018, 02/2019, 11/2019, 04/2020, 08/2020 o cooperation with the Commission officials and taking part in meetings when necessary o coordination of the project documentation using also the project intranet o financial documents o agreements o minutes from the managerial group meetings Project closure: -closing meeting of the project -final check of the deliverables -final report		
Tasks	2.1 Management, communication and coordination 2.1.1 Project managerial group meetings/Minutes of the meetings 2.1.2 Country/region coordinators online meetings 2.1.3 Project reports 2.1.4 Model of monitoring report 2.1.5 Project management meetings/ Minutes of the meetings 2.1.6 Final management meeting of the project		
Estimated Start Date (dd-mm-yyyy)	15-10-2017	Estimated End Date (dd-mm-yyyy)	14-10-2020
Lead Organisation	P1- TAMK- Finland		
Participating Organisation	All Partners		

Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	2.1.1	
	Title	Project managerial group meetings/ Minutes of the meetings	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Project managerial group meetings will be held face-to-face once a year during the project. Face-to-face meetings will be held in Tampere 09/2017, in Kokshetau 01/2019 and in St. Petersburg 05/2020. Online meetings form an important part of the project management and there will be 7 online meetings altogether: Meetings will be held:	

		<p>01/2018, 06/2018, 11/2018, 06/2019, 11/2019, 04/2020, 08/2020. The achievements and possible difficulties in the project work will be discussed. Each leading organisation of a WP will report the status of the work in WP's.</p> <p>Closing event of the project will be held at St.Petersburg. All consortium members as well as the members of the steering group will participate in this 2-day meeting. In the meeting the lead organizations of the WPs will present a report (using the report form prepared, outcome no. 3) of the achievements and challenges faced. The achievements / challenges will be discussed at project level in order for the coordinator to make the final report to the commission.</p> <p>Minutes of the meetings will be available for the project group through the intranet.</p>
	Due date	30-8-2020
	Languages	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	2.1.2	
	Title	Country/region coordinators online meetings	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Country/region coordinators online meetings will be more inofficial way to run the project. Between the managerial group meetings country/region coordinators, TAMK (EU), ITMO (Russia) and SKSU (Kazakhstan), will keep in contact, monitor and support partners in Russia ja Kazakhstan, separately. This will smoothen the project flow and ensure good coordination of the project. The country/region coordinator online meetings are timetabled in the kick-off meeting and listed in the projectäs intranet.	
	Due date	30-8-2020	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff		

	<input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	2.1.3	
	Title	Project reports	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>Interim reports of the project work and financial report are delivered to EACEA in accordance with the rules and guidelines of the grant.</p> <p>The coordinator will gather all the monitoring reports from the consortium members as well as other documentation produced during the project and incorporate them into a final report to the commission according to the rules and guidelines of the project.</p> <p>First report (14-12-2018), second report (14-12-2019), Final report (14-10-2020)</p> <p>Financial audit will be done with regular national audit practices. Annual audit is done to control all expenses, time spending, proper procedures for equipment purchase etc.</p>	
	Due date	14.10.2020	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> EACEA		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International		

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	2.1.4	
	Title	Model of monitoring report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The coordinator will create a model of an e-form which will be used to monitor the progress and achievements of each WP. The model will be sent to all consortium members for comments and a joint e-form will be created. The e-form</p>	

		must be ready before implementation of WP3 ends (12/2018) as the lead partner of WP3 will use this form for reporting the achievements of this WP to all participants in the Intermediate project meeting 01/2019 (project meetings are listed under WP 7).
	Due date	30.12.2018
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> General Public	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	2.1.5	
	Title	Project management meetings/ Minutes of the meetings	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Project management meetings will be held face-to-face once a year during the project. Online meetings form an important part of the project management and there will be 7 online meetings altogether: Meetings will be held: 10/2017, 01/2018, 06/2018, 11/2018, 06/2019, 11/2019, 04/2020, 08/2020. The achievements and possible difficulties in the project work will be discussed. Each lead partner of a WP will report the status of the work in WP's. Minutes of the meetings will be available for the project group through the extranet.	
	Due date	30-8-2020	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	2.1.6	
	Title	Final management meeting of the project	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Closing event of the project will be held at St.Petersburg. All consortium members as well as the members of the steering group will participate in this 2-day meeting. In the meeting the lead organizations of the WPs will present a report (using the report form prepared, outcome no. 3) of the achievements and challenges faced. The achievements / challenges will be discussed at project level in order for the coordinator to make the final report to the commission.	
	Due date	31.05.2020	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Work package type and ref.nr	DEVELOPMENT	3
Title	Curriculum design and accreditation of the curricula/modules	
Related assumptions and risks	Language – teachers might not have the necessary English skills and/or are not used to use English in teaching activities. Cultural differences – can have an impact on e.g. communication and cooperation Differences in education environment Delays in curriculum framework planning work on the learning modules Delays in the accreditation process Changes in national distance learning platform organisations	
Description	Aim: The main aims of this WP are 1) to improve the capacity of the academic staff of the partner universities to build online learning modules and modern Masters' programme curricula corresponding the current EU-standards and 2) to complete the accreditation process of a new Master's degree programme and the acceptance of the online modules as part of existing Masters' programmes in all partner universities. Objectives:	

	<ul style="list-style-type: none"> -to train the academic staff of partner universities in curriculum design and online learning module design -develop the competence of academic staff in Professional English in Sustainable Waste Management -to acquire and setup the necessary eLearning and laboratory infrastructure for building local capacity for the modernisation, accessibility and internationalisation of HEIs in Sustainable Waste Management education -to agree upon the content areas of the online modules and to pinpoint the needs for localization -to divide responsibilities concerning the learning module topics and to plan work timing -to complete the needs analysis of competences started during the application process with stakeholders, -to start and finalize the accreditation process of the modules and curricula. -to agree upon the rights and responsibilities of the participating universities concerning the use of modules after the end of the project to ensure the financial sustainability of the project outcomes <p>The modules will be available after the project on three intensity levels:</p> <ol style="list-style-type: none"> 1.free material available for all (no fee) 2.special material and exams for those wishing to get a certificate for the studies (fee) 3.additionally 1) a company-based study project or 2) hands-on experience on laboratory work included in modules 3,7 and will offered for those wishing to gain more practical hands-on experience on top of the theoretical material covered at levels 1 and 2 (fee) <p>This arrangement will ensure availability of the learning materials for a large audience. It will also enable the continuation of the supply and development of the material in a financially sustainable way.</p>
Tasks	<p>3.1 Start of the curriculum design and accreditation process</p> <p>3.1.1 Two-day workshop for improving the competences of academic staff and starting the design and accreditation processes</p> <p>3.2 Curriculum/Module Designing</p> <p>3.2.1 Competence workshops for working life representatives and academic staff</p> <p>3.2.2 Report of the completed needs analysis</p> <p>3.2.3 Workshop on curriculum/module design, structure and quality assurance, ITMO</p> <p>3.2.4 Detailed description of Curriculum/Module Designs</p> <p>3.2.5 Competence development in Professional English in Sustainable Waste Management through an online course</p> <p>3.2.6 Setup of the eLearning and laboratory infrastructure</p> <p>3.2.7 Minutes of online meetings for monitoring the WP progress</p> <p>3.3 Accreditation of the curriculum/modules</p> <p>3.3.1 Introduction of the curricula to company experts, rectors of Partner Universities and Ministry of Education of Kazakhstan.</p> <p>3.2 Written proposals of the curricula for the accreditors</p> <p>3.3.3 Minutes of meetings with the openedu.ru (Russia) and moocs.kz (Kazakhstan) stakeholders for the integration of the study modules into these platforms</p>

Estimated Start Date (dd-mm-yyyy)	15-10-2017	Estimated End Date (dd-mm-yyyy)	15-06-2020
Lead Organisation	P4 - ITMO		
Participating Organisation	All partners		

Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.1.1	
	Title	Two-day workshop for building the competences of academic staff and starting the curriculum/modules design and accreditation processes	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The two-day workshop organized next to the kick-off meeting aims at 1) building the capacities of the academic staff in curriculum and online learning module design in line with the best EU-practices 2) starting the curriculum design process and providing hands-on support to the target group 3) formatting and structuring the modules so that coherent modules will be created based on the skills/activities/contents of the modules. 4) starting the accreditation process of the planned curricula and online learning modules by comparing the practices in Russia and in Kazakhstan, exchanging experiences of practical matters concerning the accreditation of new modules into existing curricula or accrediting a new curricula and drafting a blueprint of milestones to implement the accreditation processes. (The travel costs and costs of stay are budgeted in WP1.)</p>	
	Due date	30.10.2017	
	Languages		
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.2.1.
	Title	Competence workshops for working life representatives and academic staff

	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Six competence workshops will be organized by the partner universities: three in Russia - in St.Petersburg (ITMO), in Yekaterinburg (UrFU) and in Tuymen (TSU) and three in Kazakhstan - in Kokshetau (KokSU), in Almaty (KazNU) and in Shymkent (SKSU). The target groups for the workshops are local companies, local and regional authorities and academic staff in the field of sustainable waste management. The aim of the workshops is to define the competence needs of future professionals in the field of sustainable waste management. The results of the workshops will be collected, analysed and highlighted in an intermediate report will be written by each partner university. The intermediate report will be shared on the intranet of the project.	
	Due date	30.11.2017	
	Languages	Russian, Kazakh, English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	If you selected 'Other', please identify these target groups. (Max. 250 characters) Local companies and authorities in the field of sustainable waste management		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input checked="" type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.2.2	
	Title	Report of the completed needs analysis	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	A further needs analysis after the initial needs analysis during the application stage is implemented by collecting additional information from university academics in other universities and by student interviews. The new data is analysed together with the results from the working life competence workshops and a final report is written by the lead organization combining the results into a list of recognized competences. These results will be used to finalize and complete the contents of the learning modules and the new curricula.	
	Due date	15.12.2017	
	Languages	English	

Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	3.2.3	
	Title	Workshop on curriculum/module design, structure and quality assurance of learning modules, ITMO	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	During a workshop of one week (in November 2017) the academic staff of the partner country universities will continue the planning of the learning modules and curriculum started in the two-day workshop at TAMK (task 3.1.1) supported by specialists of education from TAMK. The support will include short introductions on various issues in module and curriculum design and workshops to complete the basic structure of the planned units. Quality issues will be discussed, methods of quality evaluation of the designs will be introduced, workshop on quality evaluation will be held to get hands-on experience on the quality evaluation methods used in education. The workshop will be organised in the premises of ITMO. The lead organisation of the WP will write a report on the forthcoming of the workshop and it will be published in the project's intranet.	
	Due date	31.01.2018	
	Languages	English (Russian, Kazakh)	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other <i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	3.2.4	
	Title	Detailed description of Curriculum/Module Designs	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	<p>As a result of the lectures and workshop event in St. Petersburg (ITMO) Detailed descriptions of the new curricula and online learning modules will be produced. Each partner country university is responsible of finalizing their detailed descriptions of the structures and planned contents and share them on the intranet of the project. For each learning module a document is produced which describes in detail the learning objectives, design, structure and quality assurance plan of the curricula/learning modules.</p>	
	Due date	31.01.2018	
	Languages	English (Russian, Kazakh)	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	3.2.5	
	Title	Competence development in Professional English in Sustainable Waste Management through an online course	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The online course of Professional English will support the development of the capacities of the academic staff in partner country universities. The online studies will be available for the teachers during the three years of the project. The aim of the course is to support the participating teachers' oral, written and passive knowledge of professional terminology in waste management in English and to encourage them to enlarge their network of international contacts in the field. The aim is also to help them to feel comfortable to teach waste management in English. 4 teachers from each partner country university will participate on the course.</p>	

	Due date	31.05.2020
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.2.6	
	Title	Setup of the eLearning and laboratory infrastructure	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	The eLearning and laboratory infrastructure will support the development of the capacities of the academic staff and students (also continuous and lifelong learning after the project) in partner country universities to modernise and internationalise the HEIs. The main task is to to acquire and setup the necessary eLearning and laboratory infrastructure.	
	Due date	31.12.2017	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input checked="" type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> After the project's end the students of continuous training and lifelong learning		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.2.7	
	Title	Minutes of meeting on online meetings for monitoring the WP progress	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product

	Description	At the beginning of the WP implementation the lead organization agrees together with the participating universities upon a schedule for online meetings. The purpose of the meetings is to support the monitoring of the WP progress, to create a forum for discussing issues concerning the ongoing tasks and for giving peer feedback. The lead organization will write a minutes of meeting which will be published in the intranet of the project.	
	Due date	30.03.2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.3.1	
	Title	Introduction of the curricula to companies, rectors of partner universities and Ministries of Education in each Partner Country	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Information sessions will be organized by each partner country universities to introduce the new curricula and modules to rectors, deans and heads of departments of the project consortium's partner universities. The aim is to disseminate information about the new curricula and actively contribute to continuation of the process of accreditation in the partner universities. At least six information sessions will be organized altogether. In addition, KazNu and ITMO will be responsible for presenting the new curricula and modules to the Ministry of Education in their own country.	
	Due date	30.01.2018	
	Languages	Russian, Kazakh	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians		

	<input checked="" type="checkbox"/> Other <i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> Representatives of Ministries of Education in Russia and in Kazakhstan.		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input checked="" type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	3.3.2	
	Title	Written proposals of the curricula and modules for the parties of the accreditation process accreditors	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	<p>This task will officially start the accreditation process in each Partner country university. The process follows the individual processes of each university and might differ slightly between the universities. The process will include sending the written plans of the modules/Master's program will be sent for approval and signing to parties involved in the accreditation process.</p> <p>As an example the process valid at ITMO university will be described:</p> <ol style="list-style-type: none"> 2. -Signing of the module description/curriculum by the head of the department 3. -Commenting and signing of the module description/curriculum by at least two independent experts from industry 4. - Submitting the module descriptions/curriculum to the dean for acceptance. 5. - Department for Planning of Educational Programs approves the module descriptions/curriculum 6. - Rector approves. <p>This process will take one year and the due date is estimated to be 30.8.2019.</p> <p>Written plans of the new curricula for the new Master's program will go through the above process and in addition it will be inspected by the Ministry of Education. This process will take more than one year with the estimated due date of 15.6.2020 .</p>	
	Due date	15.6.2020	
	Languages	English	
Target groups	<input type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff (heads of department, deans, rectors) <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		

	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input checked="" type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	3.3.3	
	Title	Minutes of meetings with the openedu.ru (Russia) and moocs.kz (Kazakhstan) stakeholders for the integration of the study modules into the platforms	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>KazNU and ITMO will start negotiations with the organisations of national learning platforms to include the new learning modules into the national learning platforms (openedu.ru in Russia and moocs.kz in Kazakhstan) and to finalise the accreditation process with the member universities of the platforms.</p> <p>In Kazakhstan the following universities are members of the national online learning platform (moocs.kz): Karaganda State Technical University, D. Serikbayev East Kazakhstan State Technical University, Akhmet Yassawi University, M. Kozybayev NKSU, M. Dulaty TarSU, Kazakh Ablai khan KazUIR&WL, Atyrau State University, Kazakh State Women's Teacher Training University, Aktobe Regional State University, S. Yessenov Caspian SUTE, Kostanay Engineering and Economic University, al-Farabi Kazakh National university.</p> <p>In the Russian national online platform member universities are: Moscow State University, Peter the Great St. Petersburg Polytechnic University, Moscow Institute of Physics and Technology, , St.Petersburg State University, National University of Science and Technology MISiS, Higher School of Economics, Ural Federal University and ITMO University.</p> <p>Acceptance of a new learning course on a national platform means automatically that the module will be accepted as part of the studies of the students in these universities).</p> <p>In both countries universities in this project are members of the national platforms which gives the project a channel to introduce the new learning modules for accreditation. Minutes of the meetings will be written by KazNu and ITMO and published in the intranet of the project.</p>	
	Due date	30.05.2020	
	Languages	English, Russia, Kazakh	
Target groups	<input type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff		

	<input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other <i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> Representatives of the administrative staff in the organizations controlling the national learning platforms openedu.ru ja moocs.kz.
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International

Please copy and paste tables as necessary.

Work package type and ref.nr	DEVELOPMENT	4
Title	Curriculum Content Planning and Teacher Training	
Related assumptions and risks	Language – teachers might not have the necessary English skills and/or are not used to use English in teaching activities Cultural differences – can have an impact on e.g. communication and cooperation Background knowledge - Insufficient background knowledge on the subject area. Changes of the staff during the project Not enough staff participants willing to participate	
Description	<p>This WP has two aims: 1) to train teachers in the knowledge, methodology, application and available media on the subject area of Sustainable Waste Management adapted to partners 2) to plan the contents of the new curricula/learning modules in Sustainable Waste Management. The tasks for reaching these both aims will run parallel.</p> <p>The training activities will be interactive trying to involve teachers and professors in the learning process. The training workshops will include talks from specialists; technical visits; laboratory work; project based learning; seminars; use of specific software; discussing forums, etc. The methodology will be based on multidisciplinary team work and focused in analysis and selection of alternatives based in real cases.</p> <p>Visits to leading European institute and partner countries' research laboratories and pilot plants and regional industrial plants operating in the field are included in the Workshops. The necessary English vocabulary on the area is discussed with the participating professors.</p> <p>Initial contents of learning modules are described in Work Package 4.1.7. Beside other interactive activities, laboratory contents and technical visits are included as part of the learning process. The practical classes will focus on water, wastewater, air and soil characterization; physico chemical processes as coagulation, flocculation, sedimentation, adsorption and chemical precipitation; and biochemical processes as biodegradability, biofiltration, aerobic and anaerobic processes.</p>	
Tasks	4.1 Content planning and Teacher continuous training 4.1.1 Online meetings for monitoring the WP progress 4.1.2 Information session for the use of electronic media 4.1.3 1st Intensive Teacher Training and Curriculum Content Planning Workshop	

	4.1.4 2nd Intensive Teacher Training and Curriculum Content Planning Workshop 4.1.5 3rd Intensive Teacher Training and Curriculum Content Planning Workshop 4.1.6 Communication and Discussion in social media 4.1.7 Descriptions for Curriculum / Learning Module contents		
Estimated Start Date (dd-mm-yyyy)	15.09.2017	Estimated End Date (dd-mm-yyyy)	30.6.2019
Lead Organisation	P3 - UVa – Spain		
Participating Organisation	P4 - ITMO - Russia; P5 - UrFU - Russia; P6 - TSU- Russia; P7 - KazNU - Kazakhstan ; P8 - KokSU - Kazakhstan; P9 - SKSU - Kazakhstan; P10 - Spetsavtobaza - Russia; P1 - TAMK – Finland; P2 - EAL - Denmark		

Deliverables/results/outcomes

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	4.1.1	
	Title	Online meetings for monitoring the WP progress	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	At the beginning of the WP implementation the lead organization agrees together with the participating universities upon a schedule for online meetings. The purpose of the meetings is to support the monitoring of the WP progress, to create a forum for discussing issues concerning the ongoing tasks and for giving peer feedback. The lead organization will write a minute of each meeting, which will be published in the intranet of the project.	
	Due date	30.6.2019	
	Languages	English	
Target groups	<input type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	4.1.2	
	Title	Information session for the use of electronic media	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	A session will be organised to introduce the different kinds of electronic material, tools, learning platforms and software that could be used in the training and learning	

		activities, and their applications during kick-off meeting (09.2017). Information related to the main database, web pages, social media, communication tools and specific software in this field will be discussed, and the availability of these resources in the partner universities will be introduced, selecting the more appropriated ones and providing basic training for their use.
	Due date	31.12.2017
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	4.1.3	
	Title	1st Intensive Teacher Training and Curriculum Content Planning Workshop	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The first Intensive Teacher training and Curriculum Content Planning Workshop will be organised in the premises of Tyumen State University for 14 days in February 2018. The workshop includes teacher training and planning of a first proposal of curriculum content.</p> <p>Selected preparatory material will be sent to the participants one month in advance. During the month before the workshop the partners will solve previous doubts and will discuss the more relevant information by electronic communication media.</p> <p>This training workshop will include talks from lecturers; forums; problems based learning; analysis of diagram processes; modelling of systems; seminars and field visits. The field visits include appropriate visits to West-Siberian Innovation Centre and some local companies in the field of waste management. The participants will discuss and decide the content of the modules from the training experience. Both mentoring partners, P2 (EaL) and P3 (UVa) will join the workshop and bring their expertise.</p>	

		The participants will work to finish the proposed activities the next month, using electronic media and on-line meetings to solve doubts and share and discuss results.
	Due date	30.03.2018
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	4.1.4	
	Title	2nd Intensive Teacher Training and Curriculum Content Planning Workshop	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The 2nd Intensive Teacher Training and Curriculum Content Planning Workshop will be organised in Valladolid and Sevilla, Spain for 7 days in September 2018. The main goal of the workshop is to learn the latest European best practises in the field of Sustainable Waste Management, profiting the research facilities and tools of Valladolid University.</p> <p>Selected preparatory material will be sent to the participants one month in advance. During the month before the workshop the partners will solve previous doubts and will discuss the more relevant information by electronic communication media.</p> <p>During the workshop, the main activities will be related with practical courses in the laboratory (modules 3, 7 and 8); and the revision and update of the curriculum content planning. In this workshop will be also included technical visits to treatment and valorization facilities and a field visit to Institute for Prospective Technological Studies in Sevilla. A report about the field visit will be written by the participants and published in the project website.</p> <p>The workshop includes teacher training and curriculum content planning will be revised and updated. This planning will be revised again, during the third content</p>	

		<p>planning workshop, considering the feed-back from other work packages.</p> <p>The participants will work to finish the proposed activities the next month, using electronic media and on-line meetings to solve doubts and share and discuss results.</p>
	Due date	31.10.2018
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	4.1.5	
	Title	3rd Intensive Teacher Training and Curriculum Content Planning Workshop	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The Third Intensive Teacher Training and Curriculum Content Planning Workshop will be organised next to the Mid-project management meeting in Shymkent for seven days (January 2019). The travel costs and costs of stay are partly budgeted in WP2.</p> <p>Selected preparatory material will be sent to the participants one month in advance. During the month before the workshop the partners will solve previous doubts and will discuss the more relevant information by electronic communication media.</p> <p>During the workshop, the main activities will be related with advanced training and final revision and update of the curriculum content planning, taking into consideration the feed-back from other work packages.</p> <p>The training activities will focus on studies of selection of alternatives and project based learning, including practical courses using specific software in this field.</p>	

		The participants will work to finish the proposed activities the next month, using electronic media and on-line meetings to solve doubts and share and discuss results.
	Due date	30.02.2019
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	4.1.6	
	Title	Communication and Discussion in social media	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The good practice and ideas will be collected and shared between the partners of the project in a resource blog. This blog will contain good practices, references and ideas about the modules content and the proposed activities in the training workshops.</p> <p>Blog will contain also the preparatory materials, the content of the training workshops and the summary and conclusions of activities of Work Package 4. All the material will be published in the project's intranet.</p>	
	Due date	30.6.2019	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	4.1.7	
	Title	Descriptions for Curriculum / Learning Module contents	
	Type	<input checked="" type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>Curriculum content descriptions are produced and Workgroups on themes are set after the Content Planning Workshops. In the contents planning the national competence standards set for education in the field in Russia and Kazakhstan will be observed and followed.</p> <p>The eight learning modules will be divided into courses with total of 20 courses of 3 ECTS each (60 ECTS altogether). Modules 1, 2, 4 and 6 consist of 6 ECTS each and modules 3, 5, 7 and 8 consist of 9 ECTS each.</p> <p>Detailed content descriptions of the following 8 modules are made:</p> <ol style="list-style-type: none"> 1. Environmental management and technology in waste industry. <ul style="list-style-type: none"> - Introductory module into the Sustainable Waste Management including i.e. legislation, regulations and organization of waste management in each country, environmental management systems. 2. Environmental Entrepreneurship – with special reference to waste management. <ul style="list-style-type: none"> - The module discusses how waste management can be turned to successful business including development needs in terms of waste sorting, reuse opportunities and final disposal of waste 3. Environmental monitoring <ul style="list-style-type: none"> - The module includes monitoring of soil, nature, air and water in landfills and dumpsites, industrial sites where wastes are generated 4. Environmental systems and processes <ul style="list-style-type: none"> - The module discusses topics like dispersion and diffusion of pollutants from waste-related processes and industry, process and system modelling etc. 5. Mass and energy balance in waste processes <ul style="list-style-type: none"> - The focus of the module is on process diagrams, system analysis and modelling including both municipal and industrial waste streams from the beginning to the end. 6. Waste to resource and energy <ul style="list-style-type: none"> - Side products and outputs from the industry and their reuse by other industries 7. Physico-chemical processes in waste management 	

		<p>- This module contains: Mechanical and diffusional separations for wastewater and gas treatment , physical and chemical treatments of wastewater and gas.</p> <p>8. Environmental biotechnology and biological processes in waste management</p> <p>- Fundamentals of environmental biotechnology,bioremediation for waste water, gas and soil treatment and biotechnological processes for waste valorization are discussed in this module</p>
	Due date	30.06.2019
	Languages	English, Kazakh, Russian
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other	
	<p><i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i></p> <p>Accreditors of the curricula/learning modules</p>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input checked="" type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Work package type and ref.nr	DEVELOPMENT	5
Title	Learning Innovation and Entrepreneurship through University - Industry cooperation	
Related assumptions and risks	<p>Language – teachers might not have the necessary English skills and/or are not used to use English in teaching activities</p> <p>Technical difficulties – limited access to Internet, poor Internet connection</p> <p>Cultural differences – can have an impact on e.g. communication and cooperation</p> <p>Differences in education environment – can have an impact on the content of the teacher training seminar</p>	
Description	<p>Aim: The aim of this WP is to introduce and train academic staff from the participating institutions from partner countries in new teaching and learning approaches. That will be achieved by implementing intensive teacher training seminars.</p> <p>During the teacher training seminars, the participants will mainly be trained in problem-based learning and they will be introduced to some specific educational concepts developed and implemented at EAL, e.g. 48-hours and InnoEvent. There is a clear focus on how a university-industry cooperation can be achieved in learning and teaching activities.</p>	

	<p>Objectives: A one-week intensive teacher training seminar will be organised in Denmark. During the training seminar teachers from the partner countries will</p> <ul style="list-style-type: none"> - gain knowledge about innovation, entrepreneurship, university-industry cooperation, and problem-based learning. Furthermore, - they will develop skills and competences in how to develop and implement teaching and learning activities, where innovation and university-industry cooperation are central elements. <p>The training course will combine lectures/ presentations, job-shadowing, workshops and hands-on practical participation to ensure the participants have a clear understanding of how to implement this teaching and learning approach. This WP, and especially the teacher training seminar organized in Denmark, gives input to WP3 (Curriculum design) to ensure the curricula developed in the project focus on innovation, entrepreneurship, problem-based learning and university-industry cooperation.</p> <p>Further, a one-week teacher training seminar will be organized in each partner country. The participants will further develop their skills and competences in how to develop and implement teaching and learning activities where innovation, entrepreneurship and university-industry cooperation are central elements. Furthermore, these teacher training seminars will have a specific focus on how ICT can be integrated in teaching and learning activities. This WP, and especially the teacher training seminars organized in partner countries, is closely linked to WP6 (eLearning pedagogies and tools).</p>		
Tasks	<p>Develop a curriculum for the teacher training seminar organized in Denmark. The curriculum will describe the knowledge, skills and competences the participants should have gained after successful completion of the seminar.</p> <p>Develop a curriculum for the teacher training seminar organized in the partner countries. The curriculum will describe the knowledge, skills and competences the participants should have gained after successful completion of the seminar.</p> <p>Based on the developed curriculums implement teacher training seminars in Denmark, Russia and Kazakhstan.</p> <p>Develop plans for how the participating institutions from partner countries will integrate innovation, entrepreneurship, ICT and problem-based learning in the modules developed in the project (WP4).</p> <p>5.1 New Pedagogies, introduction and training 5.1.1 Training session online for collection best practices 5.1.2 Intensive Training Workshop on Learning Innovation and Entrepreneurship through University - Industry cooperation for teachers. 5.1.3 Training Workshop for teachers on integrating ICT-based innovation and entrepreneurship practices into learning modules in Kazakhstan. 5.1.4 Training Workshop for teachers on integrating ICT-based innovation and entrepreneurship practices into learning modules in Russia. 5.1.5 Plan for how innovation and entrepreneurship will be present in the implementation and contents of the learning modules. 5.1.6 Online meetings for monitoring the WP progress</p>		
Estimated Start Date (dd-mm-yyyy)	01-01-2018	Estimated End Date (dd-mm-yyyy)	31-04-2019
Lead Organisation	P2 - EAL - Denmark		

Participating Organisation	P1 – TAMK –Finland, P3- UVa- Spain; P4 - ITMO - Russia; P5 - UrFU - Russia; P6- TSU - Russia, P7 - KazNU - Kazakhstan; P8 KokSU- Kazakhstan, P9 - SKSU - Kazakhstan
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Deliverables/results/outcomes

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	5.1.1	
	Title	Training session online for collection best practices	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	During the online training session the participants will share best practices in each partner university and in the lead organization. Participants will be able to ask questions and solve mutual challenges through the mentoring of the expert from the lead organization.	
	Due date	30.12.2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	5.1.2	
	Title	Intensive Training Workshop on Learning Innovation and Entrepreneurship through University - Industry cooperation for teachers.	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	A one-week Intensive Training workshop will be organized at Lillebaelt Academy in Denmark for the academic staff of the partner country universities in March 2018. The purpose is to share ideas on new approaches to Innovation and internal entrepreneurship in sustainable waste management through discussions, introductory lectures, visits to enterprises, observation of lectures, events and workshops ongoing at Lillebaelt Academy lecture schedule and to organize workshops for the participants to build their own ideas on how to the discussed themes could be exploited in their teaching. The aim is to build the competences of the participants on how	

		to include innovation and entrepreneurship through university - industry cooperation. After the intensive course the participants will have drafted a first plan of including innovation and entrepreneurship into the online modules and curricula of waste management studies.
	Due date	30.12.2018
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	5.1.3	
	Title	Training Workshop for teachers on integrating ICT-based innovation and entrepreneurship practices into learning modules in Kazakhstan.	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	A one-week training shop will be organized in Kokshetau for the academic staff of the participating universities from Kazakhstan in November 2018. The purpose is to enhance the competences of the participants in the pedagogical understanding, practices and hands-on skills of using various ICT-tools available online specifically for innovation purposes and to support entrepreneurship. The aim is to complete the plan of learning modules to include innovative and entrepreneurship related practices into the learning modules and curricula on waste management. Experts from Lillebaelt will act as mentors in this workshop.	
	Due date	30.11.2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups.</i>		

	(Max. 250 characters)		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	5.1.4	
	Title	Training Workshop for teachers on integrating ICT-based innovation and entrepreneurship practices into learning modules in Russia.	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	A one-week training shop will be organized in Yekaterinburg for the academic staff of the participating universities from Kazakhstan. The purpose is to enhance the competences of the participants in the pedagogical understanding, practices and hands-on skills of using various ICT-tools available online specifically for innovation purposes and to support entrepreneurship. The aim is to complete the plan of learning modules to include innovative and entrepreneurship related practices into the learning modules and curricula on waste management. Experts from Lillebaelt will act as mentors in this workshop.	
	Due date	30.11.2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input type="checkbox"/> Other		
	If you selected 'Other', please identify these target groups. (Max. 250 characters)		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	5.1.5	
	Title	Plan for how innovation and entrepreneurship will be present in the implementation and contents of the learning module.	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Each participant university will publish at the end of this WP a design of the modules or curricula that they are responsible for preparing during the project. The blueprint will be based on the plan made during WP 3 on the	

		curriculum and learning module basic structure plans. At the end of this WP the blueprint will be completed with a description of the tools and pedagogic approaches for including entrepreneurship and innovation into the online module/curriculum. The blueprint will at the same time be completed with the actual content descriptions prepared during WP4. The plans will be published by each partner country university on the intranet of the project.
	Due date	31-04-2019
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	5.1.6	
	Title	Online meetings for monitoring the WP progress	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	At the beginning of the WP implementation the lead organization agrees together with the participating universities upon a schedule for online meetings. The purpose of the meetings is to support the monitoring of the WP progress, to create a forum for discussing issues concerning the ongoing tasks and for giving peer feedback. The lead organization will write a minutes of meeting which will be published in the intranet of the project.	
	Due date	31-04-2019	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		

Dissemination level	<input type="checkbox"/> Department / Faculty	<input type="checkbox"/> Local	<input type="checkbox"/> National
	<input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Regional	<input type="checkbox"/> International

Work package type and ref.nr	DEVELOPMENT	6
Title	eLearning pedagogies and tools	
Related assumptions and risks	<ul style="list-style-type: none"> -web-conference meeting does not succeed due to technical reasons -weak internet connections in participating universities in Russia and in Kazakhstan -reluctance of professors and teachers to use ICT-based learning tools in teaching - previous training of teachers and professors in Partner Countries HEIs to operate in online platforms is not adequate 	
Description	<p>Aim: This work package aims at enhancing the pedagogical and technical knowledge and skills of the participating academic staff on how to use eLearning and teaching tools to create an online learning environment that supports and encourages the learning students. Video technologies are introduced for day-to-day use in learning and teaching. The target group of this WP is the academic staff of the participating universities.</p> <p>The purpose of this work package is to ensure that the academic staff involved in the development and implementation of sustainable waste management education will be able to recognize the added value of new online and mobile learning tools in designing learning environments and in their teaching and learning facilitation, to have the necessary technical and pedagogical skills to use the chosen tools and to guide students to use them in a way that supports learning. The focus of the development process will be on the pedagogical aspect of virtual learning.</p> <p>This work package is closely related to WP3, WP4 WP5 in providing support in the use of ICT-based tools in designing the learning module.</p> <p>Objectives:</p> <ul style="list-style-type: none"> -to ensure that the target group members will be able to understand the benefits and challenges of online learning and teaching online as well as the changed identities and positions of teachers and students in an online learning environment -to enhance the knowledge and skills of the academic staff of the pedagogical affordances of different online learning tools so that after the completion of the WP they will be able to choose pedagogically suitable tools for various purposes and situations in learning -the enhance the technical skills of the academic staff to use and to facilitate their students in using ICT-based learning tools in a proper way that will support the students' learning. After the completion of the WP the target group members will also be able to create educational videos, to integrate them into the used learning platform and use them with ease also together with students. Further, they will be able to support their students in using the videos and other tools in their learning. -to draft a plan the pedagogically sustainable use of online learning tools in the modules and curricula on waste management 	
Tasks	6.1 eLearning pedagogy and tools 6.1.1 Resource blog: Online discussion and sharing existing good practices online and in social media	

	6.1.2 Web-conference: identifying the ICT-based tools needed in building the learning module to bring added value to learning 6.1.3 Intensive workshop: Pedagogical affordances and technical skills of using ICT-based learning tools in learning and teaching 6.1.4 Completed plans for the learning modules and/or curricula 6.1.5 Online meetings for monitoring the WP progress		
Estimated Start Date (dd-mm-yyyy)	01-05-2018	Estimated End Date (dd-mm-yyyy)	30-08-2019
Lead Organisation	P1 - TAMK - Finland		
Participating Organisation	P2 - EIA - Denmark; P3- UVA- Spain; P4 - ITMO - Russia; P5 - Ural - Russia; P6- TSU - Russia, P7 - KazNU - Kazakhstan; P8 KokSU- Kazakhstan, P9 - SKSU - Kazakhstan; P10 - Spetsavtobaza - Russia		

Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	6.1.1	
	Title	Resource blog: Online discussion and sharing existing good practices online and in social media	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	<p>A knowledge resource blog will be created for sharing and collecting good practices and ideas between the members of the target group and the mentor from TAMK. This knowledge resource blog will contain a collection of good practice examples and experiences of using ICT-based learning tools in education by the participating teachers from partner universities. Blog will contain also introduction and evaluation of tools used in designing learning modules.</p> <p>A survey for the professors and teachers for attitudes and skills for technical aspects of the usage of the ICT-based learning tools is performed and analyzed. Results will be published on the resource blog.</p>	
	Due date	30-05-2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	6.1.2	
	Title	Web-conference meeting: identifying the ICT-based tools needed in building the learning module to bring added value to learning	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>During the web-conference meeting held by the mentor from TAMK the target group members will be presented online and mobile learning tools. They will also have a possibility to try out the tools by themselves. Tools for different learning needs will be introduced like Padlet or answergarden.ch for brainstorming and feedback collection, tagxedo.com for creating word-clouds of expectations of students concerning a course of lecture, Kahoot and other online quiz-tools for activating the students or measuring their knowledge on a specific topic, tools for making videos like EDpuzzle, Magisto.com, Adobe Spark Video which can be used for activating the students f.ex. to presentent the results of their learning, google-drive or equal for collaborative knowledge building etc. Also technical staff from the partner country universities will attend the meeting for the purpose of being aware of the tools available, to be able to help the teachers in using the tools and for being able to locate new tools online.</p>	
	Due date	30.09.2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	6.1.3	
	Title	Intensive workshop: Pedagogical affordances and technical skills of using ICT-based learning tools in learning and teaching	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The pedagogical affordances of online learning tools, the pedagogically sustainable use of them as well as issues concerning copyright in the context of online materials will</p>	

		<p>be discussed through lectures, workshops and discussions during a two-week intensive workshop at TAMK in October 2018 . The target group of this intensive workshop will be the academic staff in the partner country universities. The collaborative nature online learning will be discussed during the course to give the participants a better understanding of benefits and challenges of online learning, the position and identity of the online teacher and that of the online-students.</p> <p>Issues concerning particular learning needs and the suitable tools for them will be discussed f.ex. the use of blogs as a tool for reflection through writing a learning diary or as an area.</p> <p>Technical skills of using online learning tools will be practiced. The technical training will focus on hands-on training and guidance of the use of the tools at an individual level. It will include making, editing and publishing of short learning videos. The new film studio and editing equipment at TAMK will be used as a learning environment. As a result of the practise each participant will film, edit and publish a short learning video in the context of waste management.</p>
	Due date	30.10.2018
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	6.1.4	
	Title	Completed plans for the learning modules and/or curricula	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The blueprints for the online learning modules including the hands-on laboratory courses started in WP3 (structure), continued in WP4 (content) and WP5 (innovation and entrepreneurship) will be completed with a full description of the contents - learning materials, tasks (including online tools), exams - and the structure - schedule, assessment practices, feedback - will be finalized and published in the intranet of the project. Each module description will be commented and assessed by other project group members.</p>	

	Due date	30.08.2019
	Languages	English, Russian
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> Accreditors	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	6.1.5	
	Title	Online meetings for monitoring the WP progress	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	At the beginning of the WP implementation the lead organization agrees together with the participating universities upon a schedule for online meetings. The purpose of the meetings is to support the monitoring of the WP progress, to create a forum for discussing issues concerning the ongoing tasks and for giving peer feedback. The lead organization will write a minutes of meeting which will be published in the intranet of the project.	
	Due date	30.08.2019	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Work package type and ref.nr	DISSEMINATION & EXPLOITATION	7
Title	Piloting new curricula and learning modules and exploitation of the materials	
Related assumptions and risks	-Technical problems - technical learning environment is not ready for the pilots -Learning material is not ready for piloting	

	-Number of piloting students is not enough -target groups are not reached		
Description	<p>Aim: Firstly, the aim of this WP is ensure that the planned online learning modules on Sustainable Waste Management function properly and that they will give a good and efficient learning experience to the students. To exploit the project's results the planned modules will be piloted on the ifmo.courses.ru (Russia) and open.kaznu.kz (Kazakhstan) platforms by students from all the participating universities. Secondly, to promote the dissemination of the project's results the WP aims at informing and convincing universities outside the project consortium, local and national authorities and other stakeholders of the good quality and relevance of the produced modules.</p> <p>Objectives:</p> <ul style="list-style-type: none"> - to test the functions of the planned online learning modules - to collect student experience of the learning modules - to inform the other universities about the availability of the study modules online and convince them about the quality and relevance of the modules for their students with the aim of speeding up of accreditations processes and approval of the modules into the study programmes of students - to inform local, regional and national authorities in Russia and Kazakhstan about the new learning modules and curricula to speed the accreditation process - to inform and motivate students to participate on the online learning modules <p>The pilot will be conducted during spring and autumn semester 2019. At the beginning and at the end of the piloting data will be gathered from the students and the participating teachers concerning the expectations and learning/teaching experiences of using the online modules. Further, data concerning accessibility and technical usability of the study materials will be collected. Simultaneous translations are utilized to ensure smooth communication in the Closing and evaluation meeting of the WP and in Information sessions, demonstrations and training sessions for stakeholders according to the need.</p>		
Tasks	7.1 Execution of the pilot in all partner HEIs 7.1.1 Piloting learning modules in partner HEIs 7.2 Analysis of the pilot and further development of learning modules 7.2.1 Analysis and report of student and teacher surveys concerning the piloted learning modules 7.2.2 Finalized online modules on sustainable waste management ready for use 7.2.3 Closing and evaluation meeting of the WP in Almaty 7.2.4 Information sessions, demonstrations and training sessions for stakeholders 7.2.5 Minutes of online meetings for monitoring the WP progress		
Estimated Start Date (dd-mm-yyyy)	01-02-2019	Estimated End Date (dd-mm-yyyy)	30-06-2020
Lead Organisation	P7 - KazNU - Kazakhstan		
Participating Organisation	All participants		

Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	7.1.1	
	Title	Piloting learning modules in all partner HEIs	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	<p>Each partner country HEI will pilot the modules prepared during the project. Four online modules will be piloted in Russia and four in Kazakhstan. Additionally, a hands-on laboratory course will be piloted in learning modules 3, 7 and 8. Especially the learning modules 3, 7 ja 8 include educational videos filmed from a practical laboratory class. In the learning module 3, there are videos of monitoring and analysis in the laboratory and in modules 7 and 8 videos of real treatment plants or pilot research plants. At least 12 educational videos will be produced. Lecture recordings/videos can be used in all learning modules depending on the pedagogical benefits. The division of responsibilities between the HEIs will be decided during the kick-off meeting in Tampere (WP1). Each partner country university will have a facilitation responsibility for 1-2 modules. The students from Russian partner universities will be granted access to ifmo.courses.ru -platform for four modules and Kazakh students will access the open.kaznu.kz -platform to study four pilot courses. Piloting will start in February/2019. The estimated number of students participating in pilot modules is 120.</p>	
	Due date	30.01.2020	
	Languages	English, Russian, Kazakh	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students: Physical sciences students, Chemistry student, Ecology students, Business students, Law students, Engineering students. Altogether at least 120 students. <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	7.2.1	
	Title	Analysis and report of student and teacher surveys concerning the piloted learning modules	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product

	Description	<p>A report will be drafted by the lead organization of the WP using the analysis materials based on data collected and analysed by the academic staff in the partner country universities. This report will summarize the findings of the piloting of the online learning modules on sustainable Waste Management. The main questions to be answered in this report are:</p> <ul style="list-style-type: none"> -What is the learning experience of the students? Online learning and laboratory courses. -What is the teachers' experience on online course planning and implementation? - What are the technical and pedagogical aspects that need to be edited? <p>Altogether 8 surveys will be run (one/module) and the partner country responsible for the piloting of the module(s) is also responsible for the accomplishment of the survey(s). The report will be published on the project website and at an academic conference.</p>	
	Due date	28-02-2020	
	Languages	English, Russian, Kazakh	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	7.2.2	
	Title	Finalized online modules on sustainable waste management ready for use	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	<p>The Analysis report written based on the analysis of the user-experience, technical and pedagogical data on the piloting will be used by each of the HEIs to edit and finalize the learning module that they were responsible for developing. The learning modules will be ready for use and for transfer on national online learning platforms by the completion of the WP. Each partner country HEI will produce a report on the improvements implemented in the learning modules and they will be published in the</p>	

		project's intranet. These results will also be presented in the Final International Conference of the project (WP9).	
	Due date	30.04.2020	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input checked="" type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	7.2.3	
	Title	Closing and evaluation meeting of the WP	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>A final meeting concerning the results of the development work based on the report on the experiences of piloting, division of facilitation and development responsibilities of the online modules and laboratory classes in the future, discussion on the practicalities concerning implementation the modules and further development of modules to meet international and national requirements will be organized in Almaty, (KazNU) in February 2020.</p> <p>The lead organization will complete the existing report on piloting with the accounts of the partner country universities concerning the exploitation events, decisions made concerning the future maintenance of the online modules and development work done concerning the modules during the meeting.</p>	
	Due date	28 - 02 -2020	
	Languages	English, Russian, Kazakh	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	7.2.4	
	Title	Information sessions, demonstrations and training sessions for stakeholders	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The new online learning modules and curricula available will be discussed with the target groups (academic staff in partner and other universities, students, representatives of local companies and local/regional/national authorities) in a series of events organized by the partner country universities (See also WP9/outcome 9.1.4). A multiplier effect of the activities is expected through the networks of the event participants and social media.</p> <ol style="list-style-type: none"> 1) Information sessions f.ex. roundtable discussion sessions will be organized for representative of local companies and local and regional authorities concerning the newly developed online modules. The aim of these sessions will be to inform employers of the skills of future professionals educated through the new master's programmes and about the availability of new continuous training possibilities for the staff members or organizations. Through the information sessions the local authorities and companies will get more aware of the current trends in sustainable waste management which is expected to impact the local activities and planning in the field. Each partner country university will organize one session in the third year of the project. Expected amount of participants: 10 2) Training sessions of the contents of the modules and how to use them will be organized face-to-face or in online webinars. The target group will be academic staff of universities in Russia and in Kazakhstan. The aim is to convince the other universities of the benefits of the learning material which is expected to impact the willingness of the professors to accept the modules into the study programmes of the students. Each partner country university will organize one training session during the third project year. Expected amount of participants: 15 3) Demonstrations of the modules (face-to-face or online) will be organized for all interested, mainly, however, for students from partner universities and from other universities. The study process and contents as well as practical matters like registering on the course, acceptance of the modules into student's own study programme, the three levels of participation (WP3) etc. will be discussed. The aim is to encourage and motivate students to participate on the courses. Each 	

		partner country university will organize one demonstration event in the third year of the project. Expected amount of participants: 20.
	Due date	30-06-2020
	Languages	Kazakh, Russian
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> Representatives of local, regional and national companies and authorities representatives of local companies	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input checked="" type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	7.2.5	
	Title	Minutes of online meetings for monitoring the WP progress	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	At the beginning of the WP implementation the lead organization agrees together with the participating universities upon a schedule for online meetings. The purpose of the meetings is to support the monitoring of the WP progress, to create a forum for discussing issues concerning the ongoing tasks and for giving peer feedback. The lead organization will write a minutes of meeting which will be published in the intranet of the project.	
	Due date	30.06.2020	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Please copy and paste tables as necessary.

Work package type and ref.nr	QUALITY PLAN	8
Title	Quality Assurance and Monitoring	
Related assumptions and risks	none	
Description	<p>The main aim of this work package will be to assure that the activities performed in the project are completed in time and with desired high level of quality. Moreover, the project will be systematically evaluated to assess and improve the planning, implementation and impact of the project. Three main tasks will be performed: 1) A quality plan consisting of internal and external quality assurance and monitoring is created and refined in cooperation. 2) The project will be evaluated yearly by external experts to identify design flaws or missed opportunities in the project. 3) The project including the developed curricula and learning module syllabi will be finally evaluated to understand the real usefulness of the intervention for all participating countries.</p> <p>Objectives:</p> <ul style="list-style-type: none"> - evaluate the impact, relevance, efficiency, effectiveness and long-term sustainability of the project - confirm that the tasks of WPs of the project are fulfilled and the project work can move on - give opportunities for project members to learn and to improve the results of the project based on evaluation reports - give opportunities to open discussion and reflection on project performance - get expertise evaluation to improve the project's results <p>The quality assurance and monitoring will take place during the whole lifespan of the project. The quality plan is refined in a one-day-workshop together with all partners next to the kick-off meeting at the beginning of the project. The quality plan is published in the project intranet. Regular online and face-to-face meetings support the aims and objectives of the WP.</p> <p>Internal quality evaluation</p> <p>An internal quality evaluation plan will be created and distributed among partners in the form of qualitative surveys and quantitative reports. The internal quality evaluation is performed mainly through self evaluation and peer mentoring. The surveys and reports will be executed on a quarterly basis per project year and the results will be published quarterly on the project's intranet. Altogether 10 surveys and reports will be performed. The results of the internal quality evaluation will be discussed face-to-face in yearly quality assurance meetings in order to improve good practice and performance and avoid pitfalls. The managerial group will participate in the yearly quality assurance meetings.</p> <p>External quality evaluation</p> <p>External quality evaluation will be performed for 1) the project 2) the developed curriculum/learning modules. External experts are invited to do this task. The external evaluation will provide the project higher degree of objectivity into the evaluation work and add to the credibility of the project. It will also enhance the accreditation processes in HEIs inside and outside the project consortium.</p>	

	This WP is connected to the WP2 through the work of the managerial group, which will have quality assurance sessions. Therefore this a cohesive act for the whole project work progress and to its quality.		
Tasks	8.1 Quality assurance 8.1.1 Creation and refinement of the Quality Plan 8.1.2 Minutes of the online meetings for monitoring the WP progress 8.1.3 Yearly Quality Assurance Meetings and online meetings 8.2 External evaluation 8.2.1 Yearly external expert evaluation 8.2.2 Curriculum Evaluation by External Experts and Direct and Indirect Beneficiaries		
Estimated Start Date (dd-mm-yyyy)	15-10-2017	Estimated End Date (dd-mm-yyyy)	30-06-2020
Lead Organisation	P5- UrFU - Russia		
Participating Organisation	All partners		

Deliverables/results/outcomes

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	8.1.1	
	Title	Creation and refinement of the Quality Plan	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The quality plan is drafted by the leader organisation of the WP with the support from Partner P8.(UrFU and KokSU). The plan will also include: - self-evaluations sheets</p> <p>In a one-day workshop a consensus about the quality assurance and monitoring will be found together with all partners at the beginning of the project. The leader organisation of the WP will publish the refined Quality plan in the project intranet in English and with a Russian translation.</p> <p>The workshop is organised next to the kick-off meeting and therefore budgeted in WP1.</p>	
	Due date	31-12-2017	
	Languages	English, Russian	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	If you selected 'Other', please identify these target groups. (Max. 250 characters) Funding Agency		

Dissemination level	<input type="checkbox"/> Department / Faculty	<input type="checkbox"/> Local	<input type="checkbox"/> National
	<input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Regional	<input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	8.1.2	
	Title	Minutes of the online meetings for monitoring the WP progress	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	At the beginning of the WP implementation the lead organization agrees together with the participating universities upon a schedule for online meetings. The purpose of the meetings is to support the monitoring of the WP progress, to create a forum for discussing issues concerning the ongoing tasks and for giving peer feedback. The lead organization will write a minutes of meeting which will be published in the intranet of the project.	
	Due date	30.04.2020	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	If you selected 'Other', please identify these target groups. (Max. 250 characters)		
Dissemination level	<input type="checkbox"/> Department / Faculty	<input type="checkbox"/> Local	<input type="checkbox"/> National
	<input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Regional	<input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	8.1.3	
	Title	Yearly Quality Assurance Meetings and online meetings	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>Quality assurance meetings will be organised yearly after starting the quality assurance and monitoring work at the beginning of the project (next to the kick-off meeting) . The lead organisation of the WP will present the collected results of the internal quality evaluation and they will be discussed and needed measures are decided to improve the performance of the project in reflection to the project's milestones. Three face-to-face meetings will be organised:</p> <ul style="list-style-type: none"> - 1st Quality assurance meeting 05/2018 for four days next to a conference in St. Petersburg (ITMO) - 2nd Quality assurance meeting 05/2019 for 7 days Yekaterinburg (UrFU) 	

		<p>- 3rd Quality assurance meeting for 2 days next to a conference and Final management meeting in St. Petersburg (ITMO).</p> <p>The timing of the meetings is planned to coincide with important project milestones such as active development phase in year 2018, piloting phase in year 2019 and final reporting at the end of the project.</p> <p>The lead organisation will write a report on each Yearly Quality Assurance Meeting.</p> <p>The online meetings on Quality assurance and monitoring will be organised during the same day with the online Managerial group meetings. There will be 7 online meetings altogether: Meetings will be held: 01/2018, 06/2018, 11/2018, 06/2019, 11/2019, 04/2020, 08/2020. Each leading organisation of a WP will report the status of the quality assurance work in WP's. Minutes of the meetings will be available for the project group through the intranet.</p> <p>(The travel costs and costs of stay for the 3rd meeting are budgeted in WP2.)</p>
	Due date	30.6.2020
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	8.2.1	
	Title	Yearly external expert evaluation	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	This deliverable will consist on the analysis that external experts have performed during the execution of the project. External experts identify possible design flaws or missed opportunities in the project. These reports will be published in the project web page (when applicable) and used for improving the learning modules and project implementation. The results of the evaluation will be discussed and reflected in the yearly quality assurance meetings and also on line.	
	Due date	30-06-2020	

	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
	Funding agency	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional <input type="checkbox"/> National <input checked="" type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	8.2.2	
	Title	Curriculum Evaluation by External Experts and Direct and Indirect Beneficiaries	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	This deliverable will consist on the analysis on developed curriculum/learning modules that external experts have performed during the execution of the project. Three external experts are invited representing European Community, Russia and Kazakhstan to understand the real usefulness of the intervention for all participating countries. This will also benefit to the accreditation process of the project significantly. These three external experts are also invited to the Final Conference of the project to promote the dissemination of the project results. These reports will be published in the project web page (when applicable) and used for improving the learning modules and project implementation.	
	Due date	30.06.2020	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
	Funding Agency		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional <input type="checkbox"/> National <input checked="" type="checkbox"/> International	

Please copy and paste tables as necessary.

Work package type and ref.nr	DISSEMINATION & EXPLOITATION	9
Title	Project Dissemination	
Related assumptions and risks	<ul style="list-style-type: none"> - not enough participants take part in the dissemination events - the planned dissemination events cannot be implemented - the project pages are not updated frequently enough - the planned dissemination channels do not reach enough audience - problems using some dissemination channels 	
Description	<p>This is the second Dissemination and exploitation type of WP of the project. Please see the WP7 for Piloting new curricula and learning modules and exploitation of the materials.</p> <p>Aims: The main aim of this work package is to spread the project's results to 1) students and staff of other HEIs in Kazakhstan, Russia and Europe, 2) stakeholders like private companies and local and national authorities, 3) wider community. Secondly, the work package aims at contributing to the Partner countries national processes in curriculum development. Thirdly, this WP together with WP7 provides a basis for wider acceptance of the learning modules and their integration into existing curricula in other HEIs (also in the neighbouring countries) that are not part of the project consortium.</p> <p>Objectives:</p> <ul style="list-style-type: none"> - to inform the staff of HEIs inside and outside the project consortium about the results of the project - to inform students from participating Partner country HEIs and HEIs outside the project consortium about the learning modules and online learning possibilities - to inform surrounding society including private companies, local and national authorities, non-profit organizations and associations in the waste management related field about the results of the project - to encourage private companies and local and national authorities in the partner countries to participate in defining the competences needed of future specialists working in the field - to inform the Ministries of Education in Russia and in Kazakhstan about the project and the online learning materials being prepared during the project and thus to ease the accreditation process of new masters' level programmes and acceptance of the modules into existing curricula - increase the awareness of surrounding society and authorities about the environmental concerns <p>Dissemination of the background, process and results of the project continue throughout the project starting from the WP1. During WP1 the website, which will be one of the major information channels of project, will be launched. The website will have an internal and external information surface. The intranet is a restricted access area for management purposes for the partners and it is described in more detail in WP1. The open access site is where the general public can review information about the cooperation, motivation, background, impact and results of the project. Also, relevant information about conferences, national seminars and information sessions are highlighted. After the piloting (WP7) the</p>	

	<p>links to the platforms containing the learning modules are published. The communication potential of the website will be empowered via interconnection to a dedicated Facebook page, Youtube channel and Twitter account, which will be linked to the social media (for example LinkedIn) of the consortium members to obtain a multiplier communication effect. An overview of the project is also presented in the Erasmus+ Project Results Platform. The most relevant findings of the project will be presented at international conferences, specialist fairs and articles in professional and/or scientific publications (see below).</p> <p>Through six Competence Workshops (WP3) organized in partner countries (three in Russia and three in Kazakhstan) targeted on local private enterprises and authorities, and through their networks a larger audience, the beneficiaries will be reached and the aims and future results of the project introduced. Also, in WP3 the project and the curriculum development work is introduced to the representatives of private companies, rectors of consortium partner universities and Ministries of Education in each Partner Country with the main aim to promote the accreditation process. In addition KazNu and ITMO will be responsible for presenting the new curricula and modules to the Ministry of Education in their own country.</p> <p>In WP7, the pilot modules will train students and professionals (as part of their continuous learning process) from private companies or local authorities in state-of-the-art sustainable waste management practices and processes.</p> <p>In this WP9 project national workshops and webinars will be organized by each partner country university (one workshop and one webinar/year) which will provide a direct dissemination channel for the project results to academic staff, heads of departments and deans from other partner country universities about the structure, availability, contents and delivery of the online learning modules and other results of the project.</p> <p>The dissemination in all event types are expected to have a multiplier effect through the networks of each target group.</p> <p>Outreach articles: Each partner will write at least one article in a local newspaper, professional journal, international or national, or conference proceedings in the 1st and 3rd year of the project, presenting the results and outcomes of the project. A final conference of the project will be organized in Shymkent in April 2020. This conference will target scientists, industrial end-user actors and other beneficiaries in the field of sustainable waste management. The proceedings from the final conference, along with lecture notes from the six workshops and six webinars, will be also disseminated via project website. Finally, dissemination to the scientific audience will be also annually conducted through seminars and conferences organized by each partner university locally and through international conference presentations.</p> <p>Throughout the project the members of the project consortium will exploit their existing contacts and networks to spread information about the project and its results.</p>
Tasks	<p>9.1 Project Dissemination</p> <p>9.1.1 Refinement and completing of the Dissemination and exploitation plan during Kick-off meeting</p> <p>9.1.2 Website and social media updates</p> <p>9.1.3 Outreach articles</p> <p>9.1.4 Project national information days, workshops and webinars</p>

	9.1.5 Conference presentations, Conference proceedings published 9.1.6 Dissemination of project final results in an International Conference in Shymkent (SKSU) 9.1.7 Online meetings for monitoring the WP progress		
Estimated Start Date (dd-mm-yyyy)	15-10-2017	Estimated End Date (dd-mm-yyyy)	30-08-2020
Lead Organisation	P9 - SKSU- Kazakhstan		
Participating Organisation	All partners		

Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	9.1.1	
	Title	Refinement and completing of the Dissemination and exploitation plan	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	The project coordinator will present a draft of Dissemination and exploitation plan for the project. During the Kick-off meeting this plan will be refined, completed and put into action during and after a specific workshop. The managerial group including all local managers from the partner HEIs will participate. The overall aim of the Dissemination and exploitation plan is to ensure long-term impact of the project in the partner countries' HEIs.	
	Due date	31-11-2017	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	9.1.2	
	Title	Website and social media updates/ Interview with TV	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	For widespread dissemination we will organize the creation of video film about project EduEnvi, in shooting of	

		<p>which will participate all partner universities with involvement of students, teachers, administrative staff. They will open the project aims and objectives, and role of the project not only for education but also for society in whole. Each partner university will shoot small part of the film. All of people are familiar with emerging social media landscape such as YouTube, Vimeo and other popular social media sharing websites. One of the main of objective of the project is to have impact on the education, industry, and on society development. Some of these results will be published in specialized international conferences Proceedings, newspapers, but it is read by only limited number of people, especially among young people. We can use video technologies as one of the main medium of communication. If video film about project were streamed via online channels it would allow rapid feedback on project findings. It would also reach a much the current handful of readers of newspaper and academic journals. Disseminating project results via online would also promote exchanges between participants of project and the public. This will has impact on how we will proceed with the project and also give us the opportunity to interact with the public to solve problem to manage waste. Also each national partner university organises media report or interview with TV about project EduEnvi to attract wide auditorium.</p>	
	Due date	30.8.2020	
	Languages	English, Kazakh, Russian	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input checked="" type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	<p><i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i></p> <p>General public Scientific community Surrounding society</p>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	9.1.3	
	Title	Outreach articles	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	Outreach articles: Each partner will write at least one article in a local newspaper, professional journal,	

		international or national, or conference proceedings in the 1st and 3rd year of the project, presenting the results and outcomes of the project. Additionally, by the end of each year of the project all partners publish an article in a public newspaper or university newsletter about project results.
	Due date	30.8.2020
	Languages	English, Russian, Kazakh
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input checked="" type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> General Public, scientific community	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	9.1.4	
	Title	Project national information days, workshops and webinars	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	<p>The purpose of the project national workshops and webinars is to disseminate information about the project activities and results. The dissemination aims also at speeding the accreditation of the online learning modules in HEIs outside the project. Three sets of events will be organised in the partner country HEIs: 1) Introduction of the planned learning modules/curriculum to the target groups at the beginning of 2018 (by 03/2018) 2) Presentation of the mid-term progress of the project's development work on learning modules/curriculum at the beginning of 2019 (by 03/2019) and 3) Results of the development of the learning modules/curriculum at the beginning of 2020 (by 04/2020).</p> <p>The topics include for example "accreditation process", "project highlights", "sustainable waste management in education", "national learning platforms". Each Partner Country HEI will organise one national workshop and one webinar per project year 2018, 2019 and 2020 (see WP7, outcome 7.2.4 concerning the organization and contents in more detail). Altogether 18 workshops and 18 webinars will be organised.</p>	

		The targeted audiences are heads of departments/deans, teachers, professors and other academic staff outside the project consortium and companies, local authorities, non-profit organizations and associations in Kazakhstan and Russia. Webinars allow participation across the countries and they are targeted especially to the neighbouring countries. The expected amount of participants in workshops is 10/workshop, total 180; in webinars 15/webinar, total 270.
	Due date	30.04.2020
	Languages	Kazakh, Russian
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input checked="" type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> associated partners, company representatives, local authorities, non-profit organizations and associations, other beneficiaries.	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input checked="" type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International	

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	9.1.5	
	Title	Conference presentations, Conference proceedings published	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Conference presentations in scientific and methodological conferences: <ul style="list-style-type: none"> - 1 day conference in St. Petersburg next to the Quality assurance meeting for all partners to present, 05/2018. (The travel costs and costs of stay are budgeted in WP8.) - 1 day conference in St. Petersburg next to the Final management meeting for all partners to present, 05/2020. (The travel costs and costs of stay are budgeted in WP2.) The project's results will be presented in national conferences (four/partner in Russia and in Kazakhstan). The project's results will be presented in European international conference (one/partner). Articles about the project will be published in conference proceedings.	
	Due date	30.08.2020	
	Languages	English, Russian, Kazakh	
Target groups	<input checked="" type="checkbox"/> Teaching staff		

	<input checked="" type="checkbox"/> Students <input checked="" type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> Scientific community
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	9.1.6	
	Title	Dissemination of project final results in an International Conference	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	<p>Leader organisation of the WP (SKSU) will organise an International Conference to disseminate the final results of the project in Shymkent, Kazakhstan in April 2020. During the Conference the results and outcomes of the project are presented to the target groups - heads of departments/deans, teachers, professors and other academic staff outside the project consortium and companies and local authorities in Kazakhstan and Russia. Simultaneous translations are utilized to ensure smooth communication and efficient dissemination of the project's results.</p> <p>Through the networks of a well-known keynote speaker a multiplier effect will be achieved. Information about the seminar will be disseminated also through press releases, Twitter, and on the project websites. Networks of the participating universities will be used to attract participants into the conferences. Articles describing the work-flow and results will be published in Conference Proceedings.</p> <p>During the International conference the lead organisation organises also video conference with on-line translation where other universities of Kazakhstan and Russia will be invited to take part to multiply the impact of the conference.</p> <p>For dissemination purposes each partner university will produce a handbook or methodological instructions leaflet highlighting the project's results from the point of view of pedagogics, field of substance, ICT tools in education etc. for dissemination. The lead organisation will put together lists of contents for these handbooks or leaflets. Printed handbooks and leaflets will be distributed in the</p>	

		International Conference. Costs of printing are planned to the cofinancing budget.
	Due date	30.06.2020
	Languages	English, Russian
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input checked="" type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input checked="" type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i> Scientific community	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	9.1.7	
	Title	Online meetings for monitoring the WP progress	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	At the beginning of the WP implementation the lead organization agrees together with the participating universities upon a schedule for online meetings. The purpose of the meetings is to support the monitoring of the WP progress, to create a forum for discussing issues concerning the ongoing tasks and for giving peer feedback. The lead organization will write a minutes of meeting which will be published in the intranet of the project.	
	Due date	30.08.2020	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input checked="" type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Please copy and paste tables as necessary.

H.2. Explanation of work package expenditures

Please explain what costs will be associated to each work package and covered by lump sums, flat rates, unit costs, and real costs. Provide information on the travels necessary to complete the workpackage. Detailed information on each travel must be indicated in the Budget Excel table. If purchase of equipment is required, explain how the respective equipment addresses the needs identified in the project. Remember that the specification of each item, including the partner country university/ies at which equipment will be installed, must be detailed in the Budget Excel table. If any subcontracting is considered necessary for the implementation of the project, please explain why the task cannot be performed by the consortium members themselves (limit 3000 characters).

WP1 (Preparation): The setup of the project will require 35 270 €. From this sum, 15 920€ will be used for 126 work days among the partners. Kick-off meeting in Tampere requires 19 350€ including managerial meeting, 2 days of WP3 curriculum design and a day of WP8 Quality plan design.

WP2 (Management): This WP requires 132 425€. From this sum, 93 345€ will be used for 829 work days among the partners. The managerial meeting in Shymkent (including costs of stay for WP4 workshop) and St. Petersburg (StP) (including costs of stay for WP8 and WP9 meetings) will consume 35 080€. External auditors are subcontracted with 4 000 €.

WP3 (Development): Curriculum design and accreditation will be 348 962 €. From this sum, 22 456€ will be used for 298 work days among the partners. Competence workshops and Introduction of Curricula to the accreditors will be organised regionally. Seven-day workshop for curriculum design in StP requires 14 550€. The main costs will be the equipment costs. Partner HEIs will build local capacity for the modernisation, accessibility and internationalisation of HEIs in Sustainable Waste Management education through the acquisition of eLearning and laboratory infrastructure, electronic literature and specific software requiring 260 956€. To build capacity in professional English of academic staff an online English course is subcontracted (total 51 000€).

WP4 (Development): The design and implementation of curriculum contents will be 116 406€. From this sum, 59 136 € will be used to pay 773 work days among the partners. Three Intensive Workshops to train teachers and develop contents in Tyumen (2 weeks), Valladolid and Sevilla (1 week) and Shymkent (1 week) will require total cost of 57 270€.

WP5 (Development): To build capacity in New Pedagogies of the partner country HEIs, 58 644€ are required. From this sum, 27 854€ is for 235 days of staff among the partners. Three Training Workshops each one-week for teachers in Odense, Kokshetau and Yekaterinburg will require in total 30 790€

WP6 (Development): To build capacity in eLearning pedagogies and tools, 42 946€ are required. From this sum, 18 146 € is for 206 days of staff among the partners. To build capacity of academic staff in eLearning a two-week workshop will take place in Tampere requiring 24 800€. Other activities are online.

WP7 (Dissemination and exploitation): To pilot the learning modules, analyse and develop them in the partner HEIs, 82 141€ are required. From this sum, 56 726€ is for 892 work days among the partners. A concluding one-week meeting in Almaty will require 20 015€ also serving general dissemination purposes, so simultaneous translation is subcontracted with 5400€. Information and training sessions and demonstrations will be organized locally.

WP8 (Quality plan): To assure and monitor the quality of the project, 110 716€ are required. From this sum, 54 276€ is for 444 work days among the partners. The external evaluators, with a total cost

of 17 400€, will be subcontracted to improve the results of the project. Yearly Quality meetings for one week each in StP and in Yekaterinburg will require 39 040€.

WP9 (Dissemination and exploitation): To disseminate the results of the project, 72 386€ are required. From this sum, 44 831€ is for 451 work days among the partners. The final international conference in Shymkent requires 22 155€, for general dissemination simultaneous translation is subcontracted with 5400€. National information events are organized locally or online.

*If your project involves a **Special Mobility Strand**, please explain what support will be required under each budget heading in order to cover organisational costs (such as special needs, exceptional, non-online linguistic support, etc.) (limit 2000 characters).*

N.A.

H.3 Consortium partners involved and resources required to complete the work package

Indicative input of consortium staff - The total number of days per staff category should correspond with the information provided in the budget tables.

Work Package Ref.nr	Partner nr	Partner acronym	Country	Number of staff days ¹					Role and tasks in the work package
				Category 1	Category 2	Category 3	Category 4	Total	
PREPARATION WP1 - Project opening	P1	TAMK	Finland	15	6	1	5	27	Lead partner of the work package, project opening, kick-off meeting, website setup
	P2	EAL	Denmark	6	4	0	2	12	Implementing partner participating in all tasks
	P3	UVa	Spain	6	4	0	2	12	Implementing partner participating in all tasks
	P4	ITMO	Russian Federation	6	4	0	2	12	Implementing partner participating in all tasks
	P5	UrFU	Russian Federation	6	4	0	2	12	Implementing partner participating in all tasks
	P6	TSU	Russian Federation	6	4	0	2	12	Implementing partner participating in all tasks
	P7	KazNU	Kazakhstan	6	4	0	2	12	Implementing partner participating in all tasks
	P8	KokSu	Kazakhstan	6	4	0	2	12	Implementing partner participating in all tasks
	P9	SKSU	Kazakhstan	6	5	0	2	13	Implementing partner participating in all tasks, start of the dissemination

¹ Please see Programme Guide, Part B for your action, Table A – Project Implementation (amounts in Euro per day) Programme Countries and Table B - Project Implementation (amounts in Euro per day) Partner Countries.

	P10	Spetsavtobaza	Russian Federation	2	0	0	0	2	Participation only where necessary to fulfil the obligations
	P11	Ministry of Education and Science	Kazakhstan	0	0	0	0	0	Participation only where necessary to fulfil the obligations
SUBTOTAL				65	39	1	21	126	
DEVELOPMENT WP3 - Curriculum Design and accreditation	P1	TAMK	Finland	9	14	0	0	23	Mentoring partner participating in several tasks. Provides experts of education to the Workshop.
	P2	EAL	Denmark	1	1	0	0	2	Mentoring partner participating in some tasks
	P3	UVa	Spain	2	3	0	0	5	Mentoring partner participating in some tasks
	P4	ITMO	Russian Federation	5	44	0	1	50	Lead partner of the work package, Workshops, Needs analysis, Presenting curricula to the Ministry of Education
	P5	UrFU	Russian Federation	3	38	0	1	42	Implementing partner participating in all tasks
	P6	TSU	Russian Federation	3	37	0	1	41	Implementing partner participating in all tasks
	P7	KazNU	Kazakhstan	5	41	0	1	47	Implementing partner participating in all tasks. Presenting curricula to the Ministry of Education
	P8	KokSu	Kazakhstan	3	38	0	1	42	Implementing partner participating in all tasks
	P9	SKSU	Kazakhstan	3	37	0	1	41	Implementing partner participating in all tasks
	P10	Spetsavtobaza	Russian Federation	2	0	0	0	2	Implementing partner participating in some tasks

	P11	Ministry of Education and Science	Kazakhstan	3	0	0	0	3	Implementing partner participating in accreditation process
SUBTOTAL				39	253	0	6	298	
DEVELOPMENT WP4 - Curriculum Content Planning and Teacher Training	P1	TAMK	Finland	0	21	0	0	21	Mentoring partner participating in several tasks
	P2	EAL	Denmark	0	12	0	0	12	Mentoring partner participating in several tasks
	P3	UVa	Spain	10	98	0	0	108	Lead partner of the work package: main role in the planning and implementation of three Intensive Training Workshops and online meetings. Host of one-week Intensive Training Workshop.
	P4	ITMO	Russian Federation	0	96	0	0	96	Implementing partner participating in all tasks
	P5	UrFU	Russian Federation	0	94	0	0	94	Implementing partner participating in all tasks.
	P6	TSU	Russian Federation	20	112	0	0	132	Implementing partner participating in all tasks. Host of two-week Intensive Training Workshop. Offers additional support for content planning.
	P7	KazNU	Kazakhstan	0	90	0	0	90	Implementing partner participating in all tasks
	P8	KokSu	Kazakhstan	0	92	0	0	92	Implementing partner participating in all tasks
	P9	SKSU	Kazakhstan	10	115	0	0	125	Implementing partner participating in all tasks. Host of one-week Intensive Training Workshop.
	P10	Spetsavtobaza	Russian Federation	3	0	0	0	3	Implementing partner participating in some tasks

	P11	Ministry of Education and Science	Kazakstan	0	0	0	0	0	Not participating
SUBTOTAL				43	730	0	0	773	
DEVELOPMENT WP5 - Learning Innovation and Entrepreneurship through University - Industry cooperation	P1	TAMK	Finland	1	0	0	0	1	Mentoring partner participating in few tasks
	P2	EAL	Denmark	12	58	0	0	70	Lead partner of the work package: main role in the planning and implementation of three Training Workshops and online meetings. Host of one-week Intensive Training Workshop.
	P3	UVa	Spain	0	0	0	0	0	Not participating
	P4	ITMO	Russian Federation	6	22	0	0	28	Implementing partner participating in all tasks.
	P5	UrFU	Russian Federation	6	21	0	0	27	Implementing partner participating in all tasks.
	P6	TSU	Russian Federation	6	21	0	0	27	Implementing partner participating in all tasks.
	P7	KazNU	Kazakstan	6	21	0	0	27	Implementing partner participating in all tasks.
	P8	KokSu	Kazakstan	6	22	0	0	28	Implementing partner participating in all tasks.
	P9	SKSU	Kazakstan	6	21	0	0	27	Implementing partner participating in all tasks.
	P10	Spetsavtobaza	Russian Federation	0	0	0	0	0	Not participating
	P11	Ministry of	Kazakstan	0	0	0	0	0	Not participating

		Educational and Science							
SUBTOTAL				49	186	0	0	235	
DEVELOPMENT WP6 - eLearning pedagogies and tools	P1	TAMK	Finland	10	18	10	0	38	Lead partner of the work package: main role in the planning, implementation and hosting of two-week Intensive Workshop, web-conference, resource blog and online meetings.
	P2	EAL	Denmark	0	2	0	0	2	Mentoring partner participating in few tasks
	P3	UVa	Spain	0	1	0	0	1	Mentoring partner participating in few tasks
	P4	ITMO	Russian Federation	0	29	3	0	32	Implementing partner participating in all tasks. IT support. Completed plans for two modules.
	P5	UrFU	Russian Federation	0	24	1	0	25	Implementing partner participating in all tasks. Completed plan for a learning module.
	P6	TSU	Russian Federation	0	24	1	0	25	Implementing partner participating in all tasks. Completed plan for a learning module.
	P7	KazNU	Kazakhstan	0	24	3	0	27	Implementing partner participating in all tasks. IT support. Completed plan for a learning module.
	P8	KokSu	Kazakhstan	0	29	1	0	30	Implementing partner participating in all tasks. Completed plans for two learning modules.
	P9	SKSU	Kazakhstan	0	24	1	0	25	Implementing partner participating in all tasks. Completed plan for a learning module.
	P10	Spetsavtobaza	Russian Federation	1	0	0	0	1	Implementing partner participating in few tasks.
	P11	Ministry of Education	Kazakhstan	0	0	0	0	0	Not participating

		on and Science							
SUBTOTAL				11	175	20	0	206	
DISSEMINATION & EXPLOITATION WP7 - Piloting	P1	TAMK	Finland	6	7	0	0	13	Mentoring role in several tasks.
	P2	EAL	Denmar k	0	7	0	0	7	Mentoring role in several tasks.
	P3	UVa	Spain	6	7	0	0	13	Mentoring role in several tasks.
	P4	ITMO	Russian Federati on	12	139	20	1	172	Implementing partner participating in all tasks. Piloting of two learning modules.
	P5	UrFU	Russian Federati on	12	97	5	1	115	Implementing partner participating in all tasks. Piloting of a learning module.
	P6	TSU	Russian Federati on	14	97	5	1	117	Implementing partner participating in all tasks. Piloting of a learning module.
	P7	KazNU	Kazakst an	25	131	20	1	177	Lead partner of the work package: main role in the planning, implementation and hosting of one- week meeting. Pilot analysis and surveys.
	P8	KokSu	Kazakst an	12	139	5	1	157	Implementing partner participating in all tasks. Piloting of two learning modules.
	P9	SKSU	Kazakst an	12	103	5	1	121	Implementing partner participating in all tasks. Piloting of a learning module.
	P10	Spetsavt obaza	Russian Federati on	0	0	0	0	0	Not participating
	P11	Ministry of Educati on and Science	Kazakst an	5	0	0	0	0	Participation in the Closing and Evaluation Meeting
SUBTOTAL				104	727	60	6	892	

QUALITY PLAN WP8 - Quality Assurance and monitoring	P1	TAMK	Finland	48	7	0	0	55	Implementing partner participating in all tasks. Assisting role in drafting Quality Plan.
	P2	EAL	Denmark	30	7	0	0	37	Implementing partner participating in all tasks.
	P3	UVa	Spain	31	7	0	0	38	Implementing partner participating in all tasks.
	P4	ITMO	Russian Federation	40	7	0	0	47	Implementing partner participating in all tasks. Host of two face-to-face meetings.
	P5	UrFU	Russian Federation	59	19	0	0	78	Lead partner of the work package: main role in the planning and implementation of three Quality meetings. Online meetings, surveys and reports. Quality Plan. Host of a one-week meeting.
	P6	TSU	Russian Federation	33	7	0	0	40	Implementing partner participating in all tasks.
	P7	KazNU	Kazakhstan	33	7	0	0	40	Implementing partner participating in all tasks.
	P8	KokSu	Kazakhstan	49	18	0	0	67	Implementing partner participating in all tasks. Supporting role in producing Quality Plan.
	P9	SKSU	Kazakhstan	33	7	0	2	42	Implementing partner participating in all tasks.
	P10	Spetsavtobaza	Russian Federation	0	0	0	0	0	Participation only where necessary to fulfil the obligations
	P11	Ministry of Education and Science	Kazakhstan	0	0	0	0	0	Participation only where necessary to fulfil the obligations
SUBTOTAL				356	86	0	2	444	
	P1	TAMK	Finland	23	16	1	0	40	Implementing partner participating in some tasks.

DISSEMINATION & EXPLOITATION WP9 - Dissemination									
	P2	EAL	Denmark	14	13	1	0	28	Implementing partner participating in some tasks.
	P3	UVa	Spain	14	13	1	0	28	Implementing partner participating in some tasks.
	P4	ITMO	Russian Federation	20	31	1	0	52	Implementing partner participating in all tasks.
	P5	UrFU	Russian Federation	20	31	1	0	52	Implementing partner participating in all tasks.
	P6	TSU	Russian Federation	20	31	1	0	52	Implementing partner participating in all tasks.
	P7	KazNU	Kazakhstan	20	31	1	0	52	Implementing partner participating in all tasks.
	P8	KokSu	Kazakhstan	20	31	1	0	52	Implementing partner participating in all tasks.
	P9	SKSU	Kazakhstan	32	57	5	0	94	Lead partner of the work package: main role in organizing dissemination and in planning, implementation and hosting of International Conference for Final Results. Dissemination and Exploitation plan.
	P10	Spetsavtobaza	Russian Federation	1	0	0	0	1	Implementing partner participating in some tasks.
	P11	Ministry of Education and Science	Kazakhstan	6	0	0	0	0	Implementing partner participating in several tasks.
SUBTOTAL				190	254	13	0	451	

MANAGEMENT WP2 - Project Management	P1	TAMK	Finland	72	36	0	66	174	Lead partner of the work package: Project management. Main role in the planning and implementation of three Managerial Group meetings. Online meetings, project reports. Project monitoring.
	P2	EAL	Denmark	30	17	0	31	78	Implementing partner participating in all tasks.
	P3	UVa	Spain	30	17	0	31	78	Implementing partner participating in all tasks.
	P4	ITMO	Russian Federation	40	17	0	35	92	Implementing partner participating in all tasks. Host of a one-week meeting. Assisting role in project monitoring as country coordinator.
	P5	UrFU	Russian Federation	33	17	0	35	85	Implementing partner participating in all tasks.
	P6	TSU	Russian Federation	33	17	0	35	85	Implementing partner participating in all tasks.
	P7	KazNU	Kazakhstan	33	17	0	35	85	Implementing partner participating in all tasks.
	P8	KokSu	Kazakhstan		17	0	35	52	Implementing partner participating in all tasks.
	P9	SKSU	Kazakhstan	42	17	0	35	94	Implementing partner participating in all tasks. Host of a one-week meeting. Assisting role in project monitoring as country coordinator.
	P10	Spetsavtobaza	Russian Federation	2	0	0	2	4	Implementing partner participating in some tasks.
	P11	Ministry of Education	Kazakhstan	2	0	0	0	2	Implementing partner participating in some tasks.

		on and Science							
SUBTOTAL				317	172	0	340	829	
TOTAL				1174	2622	94	375	4265	

Please insert rows as necessary

Subcontracting of tasks to external bodies should be very occasional. The specific competences and particular expertise needed to reach the project objectives should be found in the consortium and should determine its composition. Subcontracting is intended for specific, time-bound, project-related tasks which cannot be performed by the Consortium members themselves.

Tasks that will be subcontracted:

Work Package Ref.nr	Partner responsible for sub-contracting (Acronym)	Country	Number of days (where appropriate)	Brief description of task
WP2.1	P1 - TAMK	Finland		Auditing of the project
WP8.2	P5 - UrFU	Russian Federation		External evaluation of the project once per project year
WP8.2	P5 - UrFU	Russian Federation		External Evaluation of the project and curriculum/modules
WP3.2	P4 – ITMO	Russian Federation		Language course, professional waste management in English
WP3.2	P5 - UrFU	Russian Federation		Language course, professional waste management in English
WP3.2	P6 - TSU	Russian Federation		Language course, professional waste management in English
WP3.2	P7 – KazNU	Kazakhstan		Language course, professional waste management in English
WP3.2	P8 – KokSU	Kazakhstan		Language course, professional waste management in English
WP3.2	P9 - SKSU	Kazakhstan		Language course, professional waste management in English
WP7.2	P7 – KazNU	Kazakhstan	5	Simultaneous translations in Conclusive Meeting of Piloting and Dissemination
WP9.1	P9 - SKSU	Kazakhstan	5	Simultaneous translations in International Conference for dissemination of Final results

Please insert rows as necessary.

PART I – Special Mobility Strand

Applies **ONLY** to cooperation projects with partner countries from **REGIONS 1, 2 and 3**

Projects may organise mobility activities of students, researchers and staff so far as they support/complement the other activities of the **Capacity Building** project and bring added value in the realisation of the project's objectives. Mobility activities do not constitute the main activities for Capacity Building.

I.1. Relevance of mobility activities

Please describe what kind of mobility activities are foreseen in the Special Mobility Strand, what are their objectives and expected results. Explain how the mobility activities of students, researchers and staff support/complement the other activities of the Capacity Building and bring added value in the realisation of the project's objectives (limit 3000 characters).

N.A.

I.2. Identification and selection of the participants

Please describe the procedures set up for identification and selection of participants for the mobility activity (limit 1000 characters).

N.A.

I.3. Preparation and support

Please describe the structure for preparation of the participants for the mobility activity, including specific training or course, linguistic preparation etc. Please explain the support provided in terms of accommodation, insurances, etc. Please explain the quality measures set up in the sending and receiving organisations for monitoring the mobility activity and measures to be taken if the results foreseen are not met (limit 2000 characters).

N.A.

I.4. Involvement of people with fewer opportunities

Does your project involve people with fewer opportunities? ☐ YES ☐ NO

IF YES, how many participants coming from which countries and organisations would fall under this category? Specify the type of situation of fewer opportunities these participants are facing (limit 2000 characters).

N.A.

Please explain the nature of the support required and how it will be addressed, so that these persons can fully engage in the foreseen activities (limit 1000 characters).

N.A.

I.5. Recognition and validation of learning outcomes

Please explain how the project intends to recognise and validate the teaching and/or learning outcomes of the participants (limit 1000 characters).

N.A.

PART J - OTHER EU GRANTS

Please list the **projects** for which the organisations involved in this application have received financial support from EU programmes.

Programme or initiative	Reference number	Beneficiary Organisation	Title of the Project
Central Baltic Programme 2014-2020	CB473	Tampere University of Applied Sciences Ltd	FINEEX
Erasmus + KA2 Strategic partnership	2016-1-CZ01-KA202-023972	Tampere University of Applied Sciences Ltd	Collaborative Steps into Employment
Erasmus + Sport	(not known at the moment)	Tampere University of Applied Sciences Ltd	Sport Active Campus Europe (ACE)
Erasmus + KA2 Strategic partnership	2015-1-UK01-KA202-013499	Tampere University of Applied Sciences Ltd	Sustainable Manager in Tourism Sector
Erasmus + KA2 Strategic partnership	2015-1-FI01-KA203-009044	Tampere University of Applied Sciences Ltd	Future Mathematics
Erasmus + KA1 Mobility	2015-1-FI01-KA107-008669	Tampere University of Applied Sciences Ltd	Erasmus + Global Mobility Lebanon 2015-2017
Erasmus + KA1 Mobility	2015-1-FI01-KA107-008669	Tampere University of Applied Sciences Ltd	Erasmus + Global Mobility Palestine 2015-2017
Erasmus + KA2 Strategic partnership	2014-1-BE02-KA200-000441	Tampere University of Applied Sciences Ltd	Communication for Professionals - Nursing (ComforPro-N)
Erasmus + KA2 Strategic partnership	2014-1-FR01-KA200-008565	Tampere University of Applied Sciences Ltd	Harvesting with Marteloscope Methodology in a European Ring (HAMMER)
Erasmus + KA2 Strategic partnership	2014-1-DE01-KA203-000706	Tampere University of Applied Sciences Ltd	OnCreate
Erasmus + KA2 Strategic partnership		Tampere University of Applied Sciences Ltd	Coaches of SME's: 5POINTS Training
Lifelong Learning/ KA3 Multilateral Networks	543516-LLP-1-2013-1-NL-KA3-KA3NW	Tampere University of Applied Sciences Ltd	Higher education Online: MOOCs the European Way
Lifelong Learning /Multilateral projects	539923-LLP-1-2013-1-FI-Erasmus - EQR	Tampere University of Applied Sciences Ltd	eMenthe
ERDF	A72170	Tampere University of Applied Sciences Ltd	6AIKA: PalRob – Palvelurobotiikan virtuaalinen innovaatioalusta (Virtual innovation platform for service Robotics)
ESF	S20563	Tampere University of Applied Sciences Ltd	Digimyrsky - digitalisaatio osaamisen kehittämisessä (Digital storm – digitalisation in developing know-how)

ESF	S20490	Tampere University of Applied Sciences Ltd	Hiilinielu Design Studio (Carbon Gulf Design Studio=
ESF	S20576	Tampere University of Applied Sciences Ltd	ProDigiOUs - Productivity with Digitalisation, Open data and Usability
ESF	S20502	Tampere University of Applied Sciences Ltd	Serious Games Platform for Business and Education (SeGaBu)
SMGR	530326-TEMPUS-1-2012-1-IT-TEMPUS-SMGR 15.10.12 -14.10.15 Prolonged to April 2016	Al-Farabi Kazakh National University	Quality of Engineering Education in Central Asia (QUEECA)
JPCR	530718-TEMPUS-1-2012-1-UK-TEMPUS-JPCR (2012-2015)	Al-Farabi Kazakh National University	Integrating Water Cycle Management: Building Capability, Capacity and Impact In Education and Business
JPCR	544490-TEMPUS-1-2013-1-ES-TEMPUS-JPCR (2013-2016)	Al-Farabi Kazakh National University	A Methodology for the Formation of Highly Qualified Engineers at Masters Level in the Design and Development of Advanced Industrial Informatics Systems (MEDIS)
JPCR	543720-TEMPUS-1-2013-1-DE-TEMPUS-JPCR (2013-2016)	Al-Farabi Kazakh National University	Strengthening Education in Space-based remote sensing for monitoring of eco systems in Israel, Azerbaijan, Kazakhstan” SESREMO
JPCR	544319-TEMPUS-1-2013-1-FR-TEMPUS-JPCR (2013-2016)	Al-Farabi Kazakh National University	PROfessional network of Master’s degree in Informatics as a Second competence (PROMIS)
JPHES	543808-TEMPUS-1-2013-1-BE-TEMPUS-JPHES (2013-2016)	Al-Farabi Kazakh National University	PICTET: EQF – based professional ICT training for Russia and Kazakhstan
Erasmus Mundus	545696-EM-1-2013-1-AT -ERA Mundus-EMA21 2013-2017	Al-Farabi Kazakh National University	Spatial ICTInfrastructures for SmartPlaces GSMART
Erasmus Mundus	545765--EM-1-2013-1-IT -ERA Mundus-EMA21 2013-2017	Al-Farabi Kazakh National University	SILKROUTE-SILKROadUniversitiesTowards Europe

Erasmus Mundus	551999-EM-1-2014-1-ES-ERA MUNDUS-EMA21 2014-2018	Al-Farabi Kazakh National University	CASEU - Central ASian and European Universities
Erasmus+ KA1 Mobility (2015 - 2017)	N.A.	Al-Farabi Kazakh National University	Mobility for learners and staff – Higher Education Student and Staff Mobility
Erasmus+ KA1 Mobility (2015 – 2021)	N.A.	Al-Farabi Kazakh National University	Mobility for learners and staff – Higher Education Student and Staff Mobility
Erasmus+ KA1 Mobility (2015-2017)	N.A.	Al-Farabi Kazakh National University	Mobility for learners and staff – Higher Education Student and Staff Mobility
Erasmus+ KA1 Mobility	N.A.	Al-Farabi Kazakh National University	Mobility for learners and staff – Higher Education Student and Staff Mobility
Erasmus+ KA1 Mobility	N.A.	Al-Farabi Kazakh National University	Mobility for learners and staff – Higher Education Student and Staff Mobility
Erasmus+ KA1 Mobility	N.A.	Al-Farabi Kazakh National University	Mobility for learners and staff – Higher Education Student and Staff Mobility
Erasmus+ KA1 Mobility	N.A.	ITMO University	Erasmus+ Project for the International credit mobility for higher education students and staff (KA107)
Erasmus+	2016-1-PL01-KA203-026471	ITMO University	Innovative Open Education on IoT: improving higher education for European digital global competitiveness
H2020	H2020-FETOPEN-1-2016-2017	ITMO University	MetaMaterials antenna for ultra-high field MRI
H2020	H2020-MSCA-RISE-2016	ITMO University	Fracture Across Scales and Materials, Processes and Disciplines
FP7	FP7-ICT-2013-10	ITMO University	Policy Compass
H2020	H2020-MSCA-RISE-2015	ITMO University	Solitons and frequency combs in micro-resonators
H2020	H2020-FETHPC-2014	ITMO University	Computing Patterns for High Performance Multiscale Computing
TEMPUS	516802-TEMPUS-1-2011	M.Auezov South Kazakhstan State University	«STUdents self-governance & Democratic Involvement in Kazakhstan» STUDI-K

TEMPUS	530326-TEMPUS-1-2012-1	M.Auezov South Kazakhstan State University	«Quality of Engineering Education in Central Asia» QUEECA
TEMPUS	530793-TEMPUS-1-2012-1-SE-JPCR	M.Auezov South Kazakhstan State University	«Master programmes on Renewable Energy and Energy Efficiency in Buildings in Central Asia and Russia»
TEMPUS	530786 - TEMPUS-1-2012-1 –NL – Tempus - SMHES	M.Auezov South Kazakhstan State University	«Towards a Central Asian Higher Education Area: Tuning Structures and Building Quality Culture» TuCAHEA
Erasmus Mundus	2010-2347/001-001	M.Auezov South Kazakhstan State University	Erasmus Mundus Action 2 (1) Lot 9 Project CENTAURI 2010-2347/001-001
Erasmus Mundus	2013-2718/001-001	M.Auezov South Kazakhstan State University	Erasmus Mundus Action 2 Project SILKROUTE «SILKRoad Universities Towards Europe»
TEMPUS IV - JPCR	ETF-JP-00276-2008	Shokan Ualikhanov Kokshetau State University	“Création de 4 Ecoles Supérieures Hôtelières d’Application”(ESHA)
TEMPUS IV - JPCR	ETF-JP-00471-2008	Shokan Ualikhanov Kokshetau State University	“Professionnalisation des enseignements en travail social”(LMTS)
TEMPUS IV - JPCR	511172-TEMPUS-1-2010-1-DE-TEMPUS-JPCR	Shokan Ualikhanov Kokshetau State University	“Curriculum Invoking Bologna-Aligned Education Leading to reform in Environmental Studies (CIBELES)
TEMPUS IV - JPCR	517313-TEMPUS-1-2011-1- IT-TEMPUS-JPCR	Shokan Ualikhanov Kokshetau State University	Environment Protection through development and Application of Sustainable Agriculture Technologies (EPASAT)
TEMPUS IV - JPCR	530718-TEMPUS-1-2012-1-UK-TEMPUS-JPCR	Shokan Ualikhanov Kokshetau State University	Integrating Water Cycle Management: Building Capability, Capacity and Impact in Education and Business (I-WEB)
TEMPUS IV - JPCR	544126-TEMPUS-1-2013-1-ES-TEMPUS-JPHES	Shokan Ualikhanov Kokshetau State University	Strengthening Career Centres in Central Asia Higher Education Institutions to empower graduates in obtaining and creating quality employment (UNIWORK)

ERASMUS + KA2	561553-EPP- 1-2015-1-BG-EPPKA2-CBHE-JP	Shokan Ualikhanov Kokshetau State University	Accessibility and Harmonization of Higher Education through curriculums' modernization and development in the Partner Countries from Central Asia (ACADEMICA)
ERASMUS + KA2	561969-EPP- 1-2015-1-DE-EPPKA2- CBHE-JP	Shokan Ualikhanov Kokshetau State University	Sustainable Agriculture and Rural Development (SARUD)
ERASMUS + KA2	573901-EPP-1-2016-1-ITEPPKA2-CBHE-JP	Shokan Ualikhanov Kokshetau State University	Licence, Master professionnels pour ledéveloppement, ladministration, la gestion, la protection des systèmes et réseaux informatiques dans les entreprises (LMPI)
ERASMUS + KA2	574099-EPP-1-2016-1-ITEPPKA2-CBHE-SP	Shokan Ualikhanov Kokshetau State University	Paving the way to interregional mobility and ensuring relevance, quality and equity of access (PAWER)
Erasmus+	ERASMUS+ (2015 - 2018): Project 561775-EPP-1-2015-1-DE-EPPKA2-CBHE-JP	Tyumen State University	Trans-Regional Environmental Awareness for Sustainable Usage of Water Resources (TREASURE-WATER)
Tempus IV/VI	543873-TEMPUS-1-2013-1-DE-TEMPUS-JPCR	Tyumen State University	Initial and Further Education and Training for Educationalists and Managers in Education in the field of Diversity
Tempus IV	544117-TEMPUS-1-2013-1-HR-TEMPUS-JPCR	Tyumen State University	European and International Law Master Programme Development in Eastern Europe
Tempus	544161-TEMPUS-1-2013-1-UK-TEMPUS-JPCR	Tyumen State University	Developing the Teaching of European Languages: Modernising Language Teaching through the development of blended Masters Programmes» DeTEL (2013-2016)
LIFE PLUS 2009	Life 09 ENV ES 447	University of Valladolid	The Green Deserts - The Green Deserts: new planting techniques for tree cultivation in desertified environments to face Climate Change new planting techniques for tree cultivation in desertified

			environments to face Climate Change
7PM-CAPACIDADES-CIENCIA EN SOCIEDAD	266589	University of Valladolid	PROFILES: Professional Reflection-Oriented Focus on Inquiry-based Learning and Education though Science
FP7-KBBE-2010-4	265483	University of Valladolid	REPHRAME: Development of improved methods for detection, control and eradication of pine wood nematode in support of EU Plant Health policy
7PM- RED DE EXCELENCIA	257462	University of Valladolid	HYCON2: Highly-complex and networked control systems
7PM-NMP3-LA-2011-263363	263363-2 CP-IP	University of Valladolid	INNOVABONE: Novel biomimetic strategy for bone regeneration
ALFA III-LOTE 1-PROYECTOS CONJUNTOS	ALA/19,09,01/10/21526/245-566/ALFA III	University of Valladolid	UNICA:Higher agricultural training program for rural youth
7 PM-HEALTH.2011.2.4.3-1:	279074-2	University of Valladolid	EPREDICE: Early Prevention of Diabetes Complications in people with Hyperglycaemia in Europe,
7 PM- HEALTH-2011-two-stage	278557-2	University of Valladolid	THE GRAIL: Tissue in Host Engineering Guided Regeneration of Arterial Intimal Layer
7PM-OCEAN.2011-1	SCP1-GA-2011-288145	University of Valladolid	H2OCEAN: Development of a wind-wave power open-sea platform equipped for hydrogen generation with support for multiple users of energy
LIFE PLUS 2011	LIFE11-ENV/ES/535	University of Valladolid	CO2 OPERATION: Integrated agroforestry practices and nature conservation against climate change
7PM-NMP 2012	NMP3-LA-2012-314744	University of Valladolid	EVOLUTION: The Electric Vehicle revolution enabled by advanced materials highly hybridized into lightweight components for easy

COMENIUS	518346-LLP-1-2011-1-UK-COMENIUS-CMP	University of Valladolid	POPULLAR: Motivating secondary school students to learn languages with relevant media
POCTEP 2ª CALL	0561-INESPO	University of Valladolid	INESPO: Rede de Transferência de Conhecimento Universidade-Empresa. Região Centro de Portugal-Castilha y León
FP7-NMP-2011-LARGE-5	280983	University of Valladolid	SHYMAN: Sustainable Hydrothermal Manufacturing of Nanomaterials
FP7-ICT	318496	University of Valladolid	INTUITEL: Intelligent Tutoring Interface for Technology Enhanced Learning
FP7- PEOPLE 2012-ITN	PITN-GA-2012-317304	University of Valladolid	ANGIO MATTRAIN: Development of Biomaterial-based Delivery Systems for Ischemic Conditions- An Integrated Pan-European Approach
FP7-PEOPLE-ITN	PITN-GA-2012-316959	University of Valladolid	DOHIP: Training Program for the Design of Resource and Energy Efficient Products by High Pressure Processes
COMENIUS Lifelong Learning Programme	531262-LLP-1-2012-1-ES-KA3-KA3MP	University of Valladolid	METIS : Meeting teachers co-design needs by means of Integrated Learning Environments
COMENIUS- Lifelong Learning Programme	526965-LLP-1-2012-1-GR-COMENIUS-CMP	University of Valladolid	PREATY: Proposing modern E-Assessment approaches and Tools to Young and experienced in-service teachers
FP7-PEOPLE-IRSES	GA-318942	University of Valladolid	DRUM Disguise Ritual Music
COMENIUS Life Long Learning Programme	526596-LLP-1-2012-1-ES-COMENIUS-CMP	University of Valladolid	TC4 PI: Teachers competences for plurilingual integration
Lifelong Learning Programme	2012-1-FR1-LEO5-34246	University of Valladolid	EOM ADL Network: European Orientation and Mobility and Autonomy in the Daily Living network
FP7-CLEAN SKY-CS-GA-2012-03	338534 Clean Sky Joint Undertaking SP1-JTI-CS-2012-03-ECO-01-061	University of Valladolid	NEMESIS: New trends and Market Survey for the end of life of aircrafts. Eco design Guideline
SESAR WP-E.DE EUROCONTROL	CONTRACT REF. 12-120610-C18	University of Valladolid	ACCESS: Application of Agent-Based Computational Economics to Strategic Slot Allocation

CULTURA 2013	536370-CU-1-2013-1-IT-CULTURE-VOL11	University of Valladolid	EMAP: European Music Archaeology Project
FP7-PEOPLE-2013-IAPP	612208.	University of Valladolid	WINESENSE: Research on extraction and formulation intensification processes for natural actives of wine
7PM-KBBE.2013.1.2-07	N.613762	University of Valladolid	SIMWOOD: Sustainable Innovative Mobilisation of Wood
FP7-PEOPLE-2013-IAPP	N.612218	University of Valladolid	3DNET: Drug Discovery and Development for Novel Eye Therapeutics
7PM-NMP.2013.3.0-1	604068-2 MORE CP-FP	University of Valladolid	MORE: Real-time Monitoring and Optimization of Resource Efficiency in Chemical Plants
POCTEP 3 CALL	N: 0693	University of Valladolid	INESPO II: Rede de Transferência de Conhecimento Universidade-Empresa. Região Centro de Portugal-Castilha y León
Lifelong Learning Programme	LLP-1-2013-1-UK-KA2-KAMP N: 543561	University of Valladolid	VIDEOFORALL: Digital video as a basic tool for language learning
PROGRAMA TEMATICO AGENTES NO ESTATALES Y AUTORIDADES LOCALES EN EL DESARROLLO-ACCIONES EN CUBA LOTE 1-SECT.CULTURAL	Europaid/134126/I/ACT/CU	University of Valladolid	NUESTRO PATRIMONIO, NUESTRO FUTURO
Competitiveness and Innovation Framework Programme (CIP)	CIP-ICT-PSP.2013 Theme 2: Digital content, open data and creativity) Mobile, Ubiquitous and Open Learning	University of Valladolid	ECO_Elearning, Communication and Open-data: Massive
TRIH-Translational Research Initiative for Hearing		University of Valladolid	Identification of aminoglycoside antibiotic congeners with reduced ototoxicity: Combating aminoglycoside-induced hearing loss

EURAMET	ENG54-REG1	University of Valladolid	Metrology for Biogas-ENG54-REG1
LIFE13 ENV/ES	001251	University of Valladolid	INTEGRAL CARBON: Development and global enforcement of GHG capture photobioreactors in agroindustrial activities
ERASMUS PLUS K2-COOPERATION AND INNOVATION FOR GOOD PRACTICES	2014-1-IT01-KA200-002490	University of Valladolid	COM-WORK: Exchanging practices for recognize and validate competences of social and educational professionals.
STATE ACTORS AND LOCAL AUTHORITIES IN DEVELOPMENT. RAISING PUBLIC AWARENESS OF DEVELOPMENT ISSUES AND PROMOTING DEVELOPMENT EDUCATION IN THE EUROPEAN UNION	EuropeAid/134863/C/ACT/MULTI	University of Valladolid	Rural DEAR Agenda – EYD 2015
COST ACTION FPS	FP1406	University of Valladolid	PINESTRENGTH: STRategies for managEmeNt of Gibberella circinaTa in greenHouses and forests
HORIZON 2020	RETOS SOCIALES-YOUNG-2-2014	University of Valladolid	MOVE: Mapping mobility – pathways, institutions and structural effects of youth mobility in Europe
HORIZON 2020	H2020-INFRAIA-2014-2015-654109	University of Valladolid	ACTRIS II: Aerosols, Clouds, and Trace gases Research InfraStructure Network)
HORIZON 2020	H2020-NMP-2014-two-stage—646075	University of Valladolid	ELASTISLET : Tailored ElsatIn-like Recombinamers as Advanced Systems for Cell Therapies in Diabetes Mellitus: a Synthetic Biology Approach towards a Bioeffective and Immunoisolated Biosimilar Islet/Cell Niche. (COORDINADORES)
HORIZON 2020	H2020-MSCA-ITN-2014- 643073	University of Valladolid	CRITICS CRITICAL Transitions In Complex Systems
HORIZON 2020	H2020-MSCA-ITN-2014- 642687	University of Valladolid	BIOGEL : Engineering responsive and biomimetic hydrogels for biomedical therapeutic and diagnostic applications.

H2020-COMPET-2015		University of Valladolid	PTAL : Planetary Terrestrial Analogues Library - A multi-instrument spectral data
ERASMUS+	EPP-1-2015-1-IT-EPPKA2-SSA	University of Valladolid	CARESS : SeCtor skills for elderly homecare-An integRatEd framework for domiciliary healthcare Skills development.
HORIZON2020	H2020-MSCA-ITN-2015	University of Valladolid	PRONTO: PROCess upgrading and autoMATIC operation: Progressing automation and control of industrial plants for increased efficiency, sustainability and safety.
HORIZON2020	H2020-LCE-2015-2	University of Valladolid	MEDEAS : Guiding European Policy toward a low-carbon economy. Modelling Energy system Development under Environmental And Socioeconomic constraints.
EU PROGRAMME FOR EMPLOYEMENT AND SOCIAL INNOVATION - EASI	VP/2014/008/135 6	University of Valladolid	PACT : ProActive Case-based Targeted model for social inclusion.
Horizonte 2020	H2020-EE-2015-3-MarketUptake	University of Valladolid	INTESS-PA: a systematic approach for inspiring training energy-spatial-socioeconomic sustainability to public authorities
Horizonte 2020	H2020-WATER-2015-two-stage	University of Valladolid	INCOVER: Innovative Eco-Technologies for Resource Recovery from Wastewater
Horizonte 2020	H2020-WATER-2015-two-stage	University of Valladolid	BREADFORALL: improving gluten-free flours functionality by mw treatments; a tool for high quality of glutenfree bakery (physical, sensorial and nutritional)
Erasmus +	ERASMUS+-K2	University of Valladolid	Multicultural Schools:Enhancing Cultural and Linguistic Treasure of Europe through Teachers
Horizonte 2020	H2020-MSCA-ITN-2016)	University of Valladolid	URBANHIST 20th Century European Urbanism
Horizonte 2020	H2020-H2020-IND-CE-2016-17	University of Valladolid	COPRO : Improved energy and resource efficiency by better coordination of production in the process industries

INTERREG SUDOE	INTERREG SUDOE 2016	University of Valladolid	PLURIFOR: Planes de gestión de riesgos transnacionales para los espacios rurales forestales sensibles a los riesgos bióticos y abiótico
LIFE	LIFE 2015 ENV	University of Valladolid	AMMONIA TRAPPING: Development of membrane devices to reduce ammonia emissions generated by manure in poultry and pig farms
Horizonte 2020	H2020-SC1-2016-RTD	University of Valladolid	RESPINE REgenerative therapy of intervertebral disc: a double blind phase 2b trial of intradiscal injection of mesenchymal stromal cells in degenerative disc disease unresponsive to conventional therapy
Horizonte 2020	H2020-MSCA-RISE-2016	University of Valladolid	3D NEONET Drug Discovery and Delivery NEtwork for ONcology and Eye Therapeutics
Erasmus +	ERASMUS+ Cooperation for innovation and the exchange of good practices	University of Valladolid	STEML4MATH A European project for Math learning in Integrated STEM Education
Horizonte 2020	H2020-INFRADEV-2016-2017	University of Valladolid	ACTRIS PPP Aerosols, Clouds and Trace gases Preparatory Phase Project
Horizonte 2020	H2020-BBI-JTI-2016	University of Valladolid	URBIOFIN Demonstration of an integrated innovative biorefinery for the transformation of Municipal Solid Waste (MSW) into new BioBased products
ERASMUS+	ERASMUSPLUS-2015-1-ES01-KA107-015474	University of Valladolid	Mobility for learners and staff – Higher Education Student and Staff Mobility
ERASMUS+	ERASMUSPLUS-2015-1-ES01-KA103-013179	University of Valladolid	Mobility for learners and staff – Higher Education Student and Staff Mobility
ERASMUS+	ERASMUSPLUS-2014-1-ES01-KA103-000075	University of Valladolid	Mobility for learners and staff – Higher Education Student and Staff Mobility

ERASMUS MUNDUS	2012/2658/001-001 MUNDUS LINDO	University of Valladolid	
Erasmus+ KA2 Strategic partnership	2015-1-FR01-KA202-015267	Lillebaelt Academy	European Bachelor
Interreg Deutschland-Danmark		Lillebaelt Academy	STARforCE (Strong Talents Ready for Crossborder Education)
LLP	540032-LLP-1-2013-1-AT-LEONARDO-LMP	Lillebaelt Academy	ConClip

Please insert rows as necessary.

Please list **other grant applications** submitted by your organisation, or by any partner organisation in this project proposal. For each grant application, please mention the EU Programme concerned and the amount requested.

Programme concerned	Beneficiary Organisation	Amount requested
ERASMUS+ CAPACITY BUILDING FOR HIGHER EDUCATION	M. Auezov South-Kazakhstan State university	Network for QA in Professional Higher Education(QAPHENET

Please insert rows as necessary.

CHECK LIST

Please make sure that you fully completed each part of this application form, as follows:

- ☒ PART D - Quality of the project team and the cooperation arrangements
- ☒ PART E - Project characteristics and relevance
- ☒ PART F - Quality of the project design and implementation
- ☒ PART G - Impact, dissemination and exploitation, sustainability
 - ☒ Logical Framework Matrix
 - ☒ Workplan
- ☒ PART H - Work packages
- ☐ PART I – Special Mobility Strand (where applicable)
- ☒ PART J - Other EU Grants