	**IDEA 1 – ERRIN Development seminar – 20/03/2013**

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	Eur&ca Ernestina Bagatella +39 02 48015098 +39 02 48002752 ec.project@eurca.com
Priority call 2013	INTEGRATED INITIAVES – 10.4.1 - Energy efficiency and RES in building (2nd priority)
Proposed title	EPC FOR SMART ENERGY SAVING
1. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	The project aims at increasing buildings refurbishment rates in order to optimize energy efficiency in private sector, SMES for instance (e.g. shopping centres) designing a new EPC that will assist the final user for a long time not limited to the repayment plan of the ESCo. In fact, we would assist the customer guaranteeing a complete assurance of all a long time, assisting and suggesting him the needed services to obtain a good maintenance of the energy efficiency. The project aim also at designing a EPC standard model for the countries involved. Scepticism about EPC is due to a lack of communication and transparency so the project will foresee a strong communication plan to raise awareness among the target group. Furthermore, a web tool to calculate energy, CO2 and money saved thanks to the EPC implementation would be increase confidence on EPC.
2. Current situation in the target countries/region	n.a.

3a. Intended consortium (participant names and profile) – List of the European partners (name, address, legal status) already in the consortium and who are you looking for? **3b. Target groups:** – Actors who benefit from the results of your action, now and in the future. **3c. Key actors (if possible):** – Actors whose involvement is essential to achieve the results of your actions.	– Sorgenia spa, Italy, energy supplier – Politecnico di Milano, Italy, Technical University suitable partner: Energy services provider, energy management companies, – european energy network – energy sme cluster – sme association – cities promoting commerce urban district Target group: groups of SME in the retail field, e.g. Shopping centre, or commerce urban district (a limited urban area characterized by a lot of small shops, where themunicipality arranges initiatives to attract customers in order to revitalize the area- tipically the inner city) Key actors: -Energy management services -sme association
4. Objectives of the proposed action - Specific objectives of the operation (during the action): - Strategic objectives (for the longer term – to 2020)	Specific objectives: -increase energy efficiency among SMEs -EPC standard model including the customer care after the ESCo's repayment plan Strategic objectives: improvement of energy efficiency for SMEs so -less GHG emissions -increased rate of energy from RES
5. Budget (if possible) – Total budget of the project (in EUR) – Budget requested from the Commission (in EUR)	n.a.

6. Brief description of the Work program (if possible to be structures in work packages as follow) – Work packages – 1. Management – 2. … – 3. Communication – 4. Dissemination	WP. 1-Management WP2- buildings refurbishment – state of the art - comparative assessment between project partners, in order to share competences, case histories and experiences - evaluation of best available/innovative technologies and market trend - mapping and evaluation of existing EPC - shopping centres needs identification for countries involved by the project WP. 3 – new epc model - setting of standard EPC model considering financial, legal and technic issues (common to all project countries) including energy services in long term period - setting of specific attachments per adattare il modello starndard alle esigenze del paese (so many attachments, so many countries) WP. 4– CASES STUDIES – monitoring WP. 5- web tool WP. 6 – raising / training / stakeholder involvement WP. 7 - dissemination WP. 8- results evaluation
7. Deliverables	ECP standard model, national attachments for the countries involved by the project Integrated monitoring tools Training materials web tool

8. If possible: schedule of activities (<u>example</u> of timetable, please modify as you wish)

Phase/Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	…
Work package 1: management																			
Work package 2: name																			

Work package 3: name																			
Work package 4: task 4.1 name																			
Work package 4: task 4.2 name																			
Etc…																			
Work package n: communication																			
Work package n: dissemination																			
Project meetings																			
Workshops/events																			
Project information sheet & slides to EACI																			
Project webpage/site creation and update																			
Project deliverables																			

- **Duration of your project in months (compulsory): 36 months**

9. Impacts and performance indicators	-Number of new EPC signed -measure of energy saved compared to the situation before EPC -less GHG emission thanks to new EPC implementation
10. EU added value – Evidence of the benefit of EU collaboration – Geographical focus – transferability	The project's eu added value is given overall from the offered possibility to define a EPC standard model able to easily spread the possibility to increase the implementation of such a convenient financial scheme able to reduce energy consumption saving GHG emissions and money. In fact, we think that EPC lack of transparency can be tackle by opting for a standard european EPC model, which can be eventually integrated by specific attachments containing national law reference. Furthermore, offering a standard model give the possibility to have a spreader european competition among suppliers resulting in better conditions for consumers. Finally, a EPC comprising the customer care service beyond the ESCo's repayment plan, give to the consumers more confidence about this new kind of investement. Ending, the project has a sure added value because of the creation of a EPC european standard model from the active involvement of stakeholder, so taking account of different issues, offers a common solution to the same question without forget national peculiarities.

IDEA 2 – ERRIN Development seminar – 19/03/2013

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	Facilities and Energy Management Ltd David Browne T: +44 (0)8456 891257 M: +44 (0)7513 994936 F: +44 (0)2890 566 509 david@fandem.co.uk
Priority call 2013	CIP-IEE-2013 Save
Proposed title	Practical Web and Virtual World Based Resource Management Training
1. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	Resource management training initiatives are usually very traditional in nature where content delivery requires the onsite presence of a tutor and attendees. The standard approach is a PowerPoint/workshop format which facilitates some level of interactivity and student engagement. This formal setting, with strict timetabling and the lack of a practical element is very rigid by nature and lacks the flexibility/reusability needed in the current economic climate to deliver results cost effectively at scale. This project seeks to develop an innovative web based resource management training solution that utilises web delivery and virtual world content. • Development of a resource management behavioural change training environment • Create user selectable avatars and environments • Use information pop-ups to reinforce messages and behaviours • Unique User name and password registration for each user • Accessible via computer, tablet and smart phone • Capable of standalone operation without broadband access • Staged, iterative features to facilitate learning over time • User feedback to recognise sustained behaviour change • Strategic information reporting to monitor user activity • Strategic information reporting to facilitate policy formation Cost effective large scale persistent reductions in energy and utility demand are expected to be delivered by this project.
2. Current situation in the target	Historically Northern Ireland commercial energy prices have been amongst the highest in Europe. As a consequence, over the past 20 years there has been significant effort expended locally to educate and inform virtuous resource efficiency behaviour. These behavioural change programmes have relied heavily on traditional training methods.

countries/region	Emerging virtual worlds' technologies offer new and exciting opportunities for trainers and educators. The last number of years has seen exponential growth in the proliferation and use of virtual worlds. A recent report from the eLearning Guild found that over 93% of Guild members report that teaching in immersive learning environments have produced results that are either somewhat or much better than other forms of rich-skill practice. In the broader context of mainstream adoption, analyst firm Gartner stated, "By the end of 2011, 80% of active Internet users (and Fortune 500 enterprises) will use some type of immersive world for everyday use."
– – **3a. Intended consortium (participant names and profile)** – List of the European partners (name, address, legal status) already in the consortium and who are you looking for? **3b. Target groups:** – Actors who benefit from the results of your action, now and in the future. **3c. Key actors (if possible):** – Actors whose involvement is essential to achieve the results of your actions.	☑ Facilities and Energy Management Ltd, 250 Ravenhill Road, Belfast, BT6 8GJ, Northern Ireland ☑ Invest Northern Ireland, ☒ A large public or private sector utility with a statutory requirement to undertake customer demand side management initiatives. [REQUIRED] ☒ An academic institution with a 'best in class' IT programme, including web and games development. [REQUIRED] ☒ An academic institution with a strong psychology programme and experience of conducting field research in multiple geographies. [REQUIRED] While initially focused on improving energy and utility resource efficiency for the financial and environmental benefit of all European citizens, this project has relevance to all those who continue to squander resources across the globe through poor management practices. • An academic institution with 'best in class' web and games development expertise to translate the training messages into fun and interactive learning exercises. • A large public or private sector utility to provide a suitable customer and employee numbers with which to conduct user testing of the blended learning environment at scale. • An academic institution with experience of conducting field research in multiple geographies to determine the effectiveness of the project and inform design through detailed physiological testing before, during and after development.
4. Objectives of the proposed action - Specific objectives of the operation (during the action):	Drawing on significant expertise in the area of Energy and Sustainability Training gained in Northern Ireland over the past 15 years, this project seeks to develop a modular training package that utilises a blended learning environment to provide exciting and persistent training to facilitate the following key objectives: • Delivering innovative knowledge exchange, learning and awareness solutions • Developing an adaptable architecture to support the design of diverse business and domestic virtual world environments • Structuring a dynamic environment through which users take ownership of key learning objectives • Reporting on user learnings to inform management decision making and incentive programs • Designing cost effective one-to-many solutions which promote real return on

- Strategic objectives (for the longer term – to 2020)	investment. The proposed training environment and virtual world wire frames would have the potential to be tailored to various other sectors and to take account of specific language and cultural requirements; be they European or global.
5. Budget (if possible) – Total budget of the project (in EUR) – Budget requested from the Commission (in EUR)	 TBA – subject to identification and agreement with appropriate collaborative partners TBA – subject to identification and agreement with appropriate collaborative partners
6. Brief description of the Work program (if possible to be structures in work packages as follow) – Work packages – 1. Management – 2. ... – 3. Communication – 4. Dissemination	**Work Package 1: Scoping and Conceptual Design** During this stage the project team to define the scope and deliverables from the project and assign ownership of work packages. This will include evaluating and commenting on technical demonstrations of existing e-learning technology frameworks developed by serious games and virtual worlds teams. Psychological research will be undertaken to determine the most appropriate and effective learning keys to build into the proposed environment and to define the development limits and reporting requirements. **Work Package 2: Detailed Design, beta testing and refinement** Existing resource efficiency training material will be repurposed for use with in the blended learning environment. Drawing on available open source resources the blended learning environment will be developed to accommodate the repurposed training material and virtual world training constructs. The interaction and audit functions of these elements will be tested and refined. **Work Package 3: Multi jurisdiction testing, monitoring and evaluation** Further to beta testing in Work Stream 2 the blended learning environment will be productised and tested across multiple European jurisdictions to access it's suitability and effectiveness; both in physiological and carbon abatement terms. **Work Package 4: Commercial development and global marketing** Following further refinement from feedback gained in Work Package 2, together with other market assessment activity, the blended learning environment will be marketed in jurisdictions outside of the EU. **Work Package 5: Post project evaluation and case study development** During the final stage of the project the key project deliverables, the e-training simulation and project report will be presented for review and commentary.
7. Deliverables	- Physiological market assessment and drivers report - Training material resources ready for import - Art assets and virtual world prototype simulation code - Functional blended learning environment and content management system on

	dedicated server - Testing reports - Strategic user interaction reports - Final project report and case studies

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8. If possible: schedule of activities (example of timetable, please modify as you wish)

Phase/Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	…
Work package 1: Scoping and Conceptual Design																			
Work Package 1: Task 1.1 Physiological research																			
Work Package 1: Task 1.2 eLearning environment research																			
Work Package 1: Task 1.3 Consolidation of existing training resources																			
Work package 1: Task 1.4 Assignment of Work Packages																			
Work package 2: Detailed Design, beta testing and refinement																			
Work Package2: Task 2.1 Training material repurposing																			
Work Package 2: Task 2.2 Platform identification and licence acquisition																			
Work Package 2: Task 2.3 Learning environment design																			
Work Package 2:Task 2.4 Virtual world elements design																			
Work Package 2: Task 2.5 Element interaction and testing																			
Work Package 3: Multi jurisdiction testing, monitoring and evaluation																			
Work Package 3: Task 3.1 Refinement for specific jurisdictions																			
Work Package 3: Task 3.2 Live testing with customers and employees																			
Work Package 3: Task 3.3 Physiological testing of effectiveness																			
Work Package 3: Task 3.4 Carbon abatement effectiveness assessment																			
Work Package 4: Commercial development and global marketing																			
Work Package 4: Task 4.1 Market research																			
Work Package 4: Task 4.2 Route to market strategy																			
Work Package 4: Task 4.3 Marketing Activity																			
Work Package 4: Task 4.5 Coding of control, camera & interaction																			
Work Package 5: Post project evaluation and case study development																			
Work Package 5: Task 5.1 Draft Final Project Report																			
Work Package 5: Task 5.2 Review Project Report																			
Work Package 5: Task 5.3 Present Project deliverables																			
Workshops/events																			

Project webpage/site creation and update																			

- **Duration of your project in months (compulsory): 18**

9. Impacts and performance indicators	A wide range of performance indicators will be used and tracked over the life of the project and associated training initiative roll outs. These will include but are not limited to; €/tCO2 saved per training event, kWh/m2, kg CO2/m2, kWh/trainee, kg CO2/trainee, out of hours kW and baseloads. Discussions are underway with a potential European partner to consider linking real time consumption information to the unique user identifiers to validate in real time the training effectiveness.
10. EU added value – Evidence of the benefit of EU collaboration – Geographical focus – transferability	**Cost effective learning** The proposed blended learning environment will provide an effective platform for cross EU behaviour change and awareness programmes. Traditional training methods in a classroom situation would involve multiple trainers and classroom facilities, requiring significant cost and expense. This project facilitates the roll out of one-to-many virtual world environments generating significant cost savings over traditional training methods. **Motivated and enthusiastic users** Through the use of engaging computer gaming technology and appropriate reward and recognition programmes, interacting with the proposed blended learning environment will be at least as motivating as interacting with the real world, Hence, learning can be structured to be more interesting and fun, improving user commitment and motivation. **Fostering Communities** Engagement by multiple users in a shared virtual environment experience will encourage collaboration and foster the learning of new skills and behaviours within connected user communities. **Adaptability** Learning can be tailored to each learner's characteristics and needs; each user will have differing characteristics, learning rates and styles. Behaviour change can be learnt at each user's own pace and during different time periods, not fixed by a regular class schedule **Evaluation and assessment** Users will be able to utilise each virtual environment as a tool for evaluation; every session in the virtual environment can be easily monitored and recorded thus facilitating regular assessment and reward and recognition programmes. **Return on Investment** The SeePotential virtual world offers DEWA the opportunity to foster active engagement of homeowner, office workers and other user communities within EU member states and globally. The delivery of engaging virtual environments for

	each user community has the capacity to increase user motivation and interest – conditions which are crucial in the learning process and achieving behavioural change. The proposed project will offer entirely new capabilities and experiences to be provided to user communities that would be difficult and costly to implement in the real world. Subsequent reduction in energy wastage through improved user behaviours has the capacity to deliver a significant return on investment.

IDEA 3 – ERRIN Development seminar – 19/03/2013

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	Catalonia Institute for Energy Research (IREC) Jardins de les dones de Negre 1 08930 Sant Adrià del Besòs, Barceloa, SPAIN www.irec.cat Manel Sanmartí e-mail: msanmarti@irec.cat Tel.: +34 933 562 615 Fax.: +34 933 563 802
Priority call 2013	**Programme:** IEE STEER **Key Action:** 10.3.1 Energy Efficient Transport
Proposed title	EuroLIVE, European Logistics for the Implementation of the Electric Vehicle
3. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	This project aims at supporting European mid-size cities in accelerating the introduction of Electric Vehicles by setting up a network of local "EV Promotion Offices". The Transport White Paper seeks to significantly reduce transport CO2 emissions with the long term objective of halving the use of conventionally fuelled vehicles in urban transport by 2030 and phasing them out in cities by 2050. Having cleaner vehicles in cities in the near future becomes all the more important with increased urbanization. In 2008, the UN estimated that the global urban population exceeded that of rural areas, thanks largely to the frantic pace of urbanization in China. Electric vehicles have a great potential to become a clean and efficient alternative for urban transport. Nevertheless, there are many challenges ahead for a massive adoption of Electric Vehicles in European cities: technology maturity, local legislation, fragmented market, little citizen awareness… The Barcelona case – the LIVE Office Barcelona has overcome most of these barriers during last years, becoming one of the leading cities in Electric Mobility worldwide. LIVE Office (Logistics for the Implementation of the Electric Vehicle) has been one the main drivers for this success. LIVE Office is an open public-private platform that promotes the use of electric vehicles in the city as an opportunity to position Barcelona as a centre of innovation in electric mobility on a worldwide scale. It is promoted by the Government of Catalonia, Barcelona City Council, the Spanish Government, SEAT, ENDESA, SIEMENS and B:SM, and managed with the support of Edenway.

	Regarding activities for citizens, LIVE set up the first office in Europe to provide information regarding electric mobility for citizens or companies interested in this question. LIVE is also responsible for issuing the electric vehicle user's card required for using the municipal network of recharging points. LIVE has also assembled multi-stakeholder working groups that include city planners, automakers, utilities, infrastructure suppliers, academic and research institutions, and city and national officials. These groups work together to create a roadmap for EV readiness that considers all stakeholder perspectives and seeks to identify and address technical, economic and regulatory barriers to EV adoption and integration. Project description This projects aims to benefit from this experience to create a network of local offices and coordinated actions for accelerating the introduction of electric vehicles in European mid-size cities. The activities envisaged are the following: a) Identifying local stakeholders and needs with regard to eMobility b) Definition of a local strategy and roadmap for accelerating EV introduction c) Implementation of local "EV Promotion Offices" based on Barcelona experience d) Ensuring an efficient transfer of knowledge among participating entities: i. Analysis of good practices ii. Provision of training materials iii. Workshops e) Definition of a generic framework for accelerating EV introduction in European mid-size cities
4. Current situation in the target countries/region	
– – **3a. Intended consortium (participant names and profile)** – List of the European partners (name, address, legal status) already in the consortium and who are you looking for? **3b. Target groups:** – Actors who benefit from the results of your action, now and in the future. **3c. Key actors (if possible):**	3a. IREC (Research Center, Spain) CREAFUTUR (Non-Profit Foundation, SME, Spain) BARCELONA MUNICIPALITY (Public Entity, Spain) EDENWAY (SME, France) STUTTGART REGION (Public Entity, Germany) The partnership consortium will be formed by City or Regional authorities, consulting firms, SME and research centers specialized in electro mobility and transport planning, especially for those who have participated in the implementation of the LIVE Office in Barcelona. 3b. Regional and City electro mobility & transport planners, mobility and public/private transport companies, EV industry including manufacturers, infrastructure and services providers, fleet managers, EV end-users, consulting companies 3c.

– Actors whose involvement is essential to achieve the results of your actions.	Regional or City authorities, electro mobility and transport planners, electro mobility and transport services companies
11. Objectives of the proposed action - Specific objectives of the operation (during the action): - Strategic objectives (for the longer term – to 2020)	Strategic objectives of the project: a) Creation of a European network of local offices, EuroLIVE, and coordinated actions for accelerating the introduction of electric vehicles in European mid-size cities. b) Implementation of European local "EV Promotion Offices" based on Barcelona experience c) Ensuring an efficient transfer of knowledge among EuroLIVE participating entities by: • Analysis of good practices • Provision of training materials • Workshops d) Definition of a European local strategy and roadmap for accelerating EV introduction in European mid-size cities.
12. Budget (if possible) – Total budget of the project (in EUR) – Budget requested from the Commission (in EUR)	
13. Brief description of the Work program (if possible to be structures in work packages as follow) – Work packages – 1. Management – 2. ... – 3. Communication – 4. Dissemination	

14. Deliverables	a) Creation of the European network of local offices, EuroLIVE. b) Implementation of European local "EV Promotion Offices". c) "White Book" (best practices) for EV introduction in European mid-size cities d) Training materials for the "EV Promotion Offices" e) Workshops f) European local strategy and roadmap for accelerating EV introduction in European mid-size cities.

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15. If possible: schedule of activities (<u>example</u> of timetable, please modify as you wish)

Phase/Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	…
Work package 1: management																			
Work package 2: name																			
Work package 3: name																			
Work package 4: task 4.1 name																			
Work package 4: task 4.2 name																			
Etc…																			
Work package n: communication																			
Work package n: dissemination																			
Project meetings																			
Workshops/events																			
Project information sheet & slides to EACI																			
Project webpage/site creation and update																			
Project deliverables																			

- **Duration of your project in months (compulsory): 24 months**

16. Impacts and performance indicators	Individual indicators will be set up for each participating city in order to assess the impact in terms of number of EV introduced, charging infrastructure deployed and EVs usage by citizens. Moreover, the project will propose a standardized procedure for energy efficiency and environmental impact of electric vehicles in cities. It will reuse the indicators defined in CIP ICT-PSP project smartCEM and FP7 project Green E-Motion, two of the reference electromobility projects in Europe.
17. EU added value – Evidence of the benefit of	Experience from existing Barcelona LIVE Office and the additional Offices that will be put in place during the project will strengthen the cooperation among European cities for EV deployment. Issues like interoperability, technology performances, user perception… will be

EU collaboration – Geographical focus – transferability	shared among partners in different cities in order to provide a European-wide approach. The transferring process will follow a methodology based on the analysis of good practices and the provision of training materials and workshops. This continuous learning process, together with the analysis of each single city, will result in the elaboration of a powerful methodology to extend the concept to further cities. Based on the Barcelona experience, the project targets mid-size EU cities in order to maximize European impact. Present committed partners will cover Mediterranean and Central Europe cities although it is not limited to them. The European local "EV Promotion Offices" deployed during the project will be the founding partners of the European network of local offices, which aims to be enlarged with other existing and/or new "EV promotion offices" in order to support the massive deployment of EV in Europe. Training materials and Best practices White Book will allow extensive replication. The European local strategy and roadmap will define the implementation plan of "EV promotion offices" in order to support and accelerate EV introduction in European mid-size cities

IDEA 4 – ERRIN Development seminar – 19/03/2013

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	 Municipality of Viladecans (Barcelona), Spain http://www.aj-viladecans.es/ Mrs. Marina Jarque – Corporate Communications&International Relationships Mgr. Tel. (+34) 93 635 18 09 mjarquef@viladecans.cat
Priority call 2013	**Programme:** 10.1 SAVE: Energy efficiency **Key Action:** 10.1.1 SAVE: Consumers and products
Proposed title	"ESCO AT HOMES: Implementing solutions for saving energy at home"
5. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	**Description and objective of the operation:** The objective is to motivate household energy savings, by facilitating the adoption of energy efficient equipment and services by the end consumers. In order to achieve the objective, the project will make accessible efficient energy systems to a number of European households, allowing consumers to experience real savings and be able to measure them. The project will also test the new business model proposed by Energy Services Companies (ESCO's), based on financing both the upfront installation and the equipment costs and getting a pay-back from the savings incurred. Focus will be put on two different areas: • Household lighting • Household heating Main activities will be the following: 1. **Feasibility Study and Household Segmentation:** characterize the different profiles of consumers based on energy consumption and other variables. 2. **Audit:** Pick a sample of households based on previous segmentation. Perform audits to evaluate domestic energy efficiency. 3. **Deployment** of most suitable energy efficient solutions for each household of the sample 4. **Savings demonstration:** measure energy savings **Main expected output:**

	Segmentation of families/homes in different cities in Europe, by energy consumption levels and other variables (motivational segmentation) Test of ESCO models Measure of energy savings in a number of homes in Europe and evaluation based on indicators (energy savings, economic savings, carbon emission,...)
6. Current situation in the target countries/region	Domestic energy efficiency has still a big growth potential all over Europe. So far efforts have been made mostly to raise awareness and consciousness among citizens and so has the UE policies and funding gone accordingly. This call states precisely a new step, which is to effectively change consumer's behaviors. Accurate household segmentation and deployment of ESCO models are needed in the transition to more efficient homes and buildings. Northern European countries have slightly shown more initiatives in this regard.
– – **3a. Intended consortium (participant names and profile)** – List of the European partners (name, address, legal status) already in the consortium and who are you looking for?	**3a Intended consortium:** 1. Municipality of Viladecans, Spain 2. Creafutur Foundation, Spain (http://www.creafutur.com/en) Joint Venture between ESADE Business School and Generalitat, Regional Government of Catalonia. Main focus is consumer research, understanding attitudes, behaviours and unmet needs in order to define requirements and solutions. 3. ESCo Partners SL, Spain (http://www.esco-partners.com/) Specializes in energy efficiency consulting for buildings, retail,… and implementation of low consumption lighting equipment via an ESCO model (financing the installation and equipment) 4. Quimera Association, Spain (http://www.quimera-project.com/) International cluster of companies assembled to manage sustainable projects in urban areas. It involves more than 60 companies and institutions. Focus on transport and energy efficiency 5. Municipality of Bristol, UK (TBC) 6. Municipality of La Spezia, It (TBC) 7. Swego, Sweden (TBC) 8. LivingPlantIT, Portugal (TBC) Who are we looking for? Local Public Administrations, ie Municipalities (Local Energy Agencies)

3b. Target groups: – Actors who benefit from the results of your action, now and in the future. **3c. Key actors (if possible):** – Actors whose involvement is essential to achieve the results of your actions.	Audit and/or consulting entities specialized in energy efficiency Engineering companies, Research Centers and/or Utilities Energy efficient equipment suppliers (smart mettering, leds, PV cells manufacturers/distributors, clima). **3b Target groups:** The project is intended to help save household energy throughout europe. Through dissemination actions, the main actors who will benefit from this are end consumers. **3c Key actors:** • Market and consumer research companies • Consultants in home energy efficiency (ESCO's) • Energy efficient equipment manufacturers/distributors • Dissemination entities • Households
18. Objectives of the proposed action - Specific objectives of the operation (during the action): - Strategic objectives (for the longer term – to 2020)	**Specific Objectives for the action:** 1. Understand the different household profiles based on energy consumption levels and other variables (i.e. motivations to save energy, attitude towards sustainability,..). 2. Make end consumers aware of their home's current level of energy efficiency. 3. Test energy efficient equipment or smart mettering devices at homes. 4. Test the ESCO models as drivers of change in domestic energy consumption **Strategic objectives** The main long term objective is to effectively achieve consumer change in energy consumption via 100% funded deployment of existing energy efficient solutions. A strong dissemination of results and an accurate implementation of the ESCO model in domestic environment is key to achieve the objective.
19. Budget (if possible) – Total budget of the project (in EUR) – Budget requested from the Commission (in EUR)	Total budget: 1.9M (approx.) Requested from the comisión: 1.43M

20. Brief description of the Work program (if possible to be structures in work packages as follow) – Work packages – 1. Management – 2. ... – 3. Communication – 4. Dissemination	**WP1: Management** **WP2: Feasibility study:** • Analysis of existing technology/equipment in energy efficient domestic applications for Lighting and Heating/Cooling • International Benchmark of efficient energy initiatives • Analysis of demand: Consumer segmentation in each city, defining different household profiles based on energy consumption levels (ie high energy consumption, medium and low). • Qualitative market research (focus groups, in-depth interviews). • Quantitative analysis (surveys), minimum 400 interviews per city. Total of 1.600 interviews (assuming 4 cities) • Workshops with public and private local entities **WP3**: **Audit of households energy systems:** • Select a sample of each the consumer segments to implement the pilot. The sample will be minimum 20 households per city. Total of 80 audits (assuming 4 cities) • Perform an energy efficiency audit at the selected households in order to measure current energy consumption (baseline) and evaluate efficiency levels (isolations, electronic households, lighting, clima). **WP4: Deployment and savings demonstration:** • Install new equipments (low consumption light bulbs, clima, ..) where needed • Measure the energy savings compared to the baseline. **WP5: Dissemination** • Spread results among key stake holders
21. Deliverables	1. Feasibility study of each city / region including. 2. Audit reports of every the household selected for deployment. **3.** Final report of savings demonstration.

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22. If possible: schedule of activities (example of timetable, please modify as you wish)

Phase/Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Work package 2: Feasibility study																			
Work package 3: Audit of households																			
Work package 4: Deployment																			
Work Package 5: Dissemination																			

- **Duration of your project in months (compulsory): 19 months**

23. Impacts and performance indicators	Number of audited households Number of equipment deployments Energy savings in kW/h or Euros … .
24. EU added value – Evidence of the benefit of EU collaboration – Geographical focus – transferability	A European-wide approach is needed in order to understand consumer's concerns and needs in energy savings for different countries, so then the different European segments of household energy consumption can be drawn. During dissemination, some cities may learn from best practises in others and promote ESCO models throughout the territory. When selecting cities, a "follower-leader" approach might be useful.

IDEA 5 – ERRIN Development seminar – 20/03/2013

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	Intercommunale Leiedal President Kennedypark 10 8500 Kortrijk Belgium Filip Vanhaverbeke – Manager Sofie Rapsaet – EU projects officer Dominiek Vandewiele – Energy projects officer Sofie.rapsaet@leiedal.be Dominiek.vandewiele@leiedal.be 056/24 16 16
Priority call 2013	10.4.1 Energy efficiency and renewable energy use in buildings *Energy efficiency and renewable energy use in buildings": "Transforming the existing building stock: actions which result in accelerated rates of refurbishment of existing buildings towards Nearly Zero-Energy Buildings. This could include actions assisting public or private sectors, bringing together industry elements to provide packaged solutions, promoting frontrunners, financing mechanisms, etc.*
Proposed title	REFURB 2.0 - Regional housing refurbishment programs to nearly zero energy standard
7. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	**Brief description of the operation/activities proposed** – **Background of the project** The energy refurbishment of existing housing stock is a major challenge to reduce CO_2 emissions and energy consumption. 70% of the houses in 2050 exist in 2013. The current refurbishment dynamics are not high enough: if we want that all homes are energy neutral by 2050, the yearly rate of home renovation should be increased dramatically. On subnational policy level (local and regional) already several instruments are put into practices to stimulate the refurbishment rate by multiple actors such as financial incentives, interest-free loans, energy scans, multi screenings, group purchases, planning advice... But, both the dynamics and the synergy are to strengthen. The potential of the

power of the bottom-up initiatives is underutilized. The involvement of stakeholders should broaden: from a wide range of public actors and public organizations over private actors such as housing corporations, banks and funds, real estate sector, building companies, etc. to knowledge and research centers.

The lack of coordination and integration of the initiatives is a clear non-technical barrier on local/regional level to accelerate the refurbishment of the existing housing stock. The power of the wide range of multiple actors, both public and private, should be deployed in a smart way to tackle bottlenecks.

Subnational housing renovation policies should be reinforced as these policy levels are closest to citizens and are able to tackle non-technical bottlenecks. The transition towards a zero energy built environment only will succeed if several multiple policy levels take complementary action. E.g., the European Union decided on the building directive and national policies offer financial incentives to accelerate the building refurbishment.

Improving housing quality –energy performance and beyond- is a key action that contributes to multiple targets: energy (energy efficiency, renewables, energy dependency), climate mitigation (CO2), economic development (triggering investments, job creation), social issues (energy poverty), health issues…

These programs are integrated as they combine and coordinate new and existing actions of multiple local and regional governments and stakeholders. The joint action is essential to reinforce and maximize the effects, and to become a complementary cantilever to EU and national policies.

An acceleration of home refurbishment is achieved by **a combination of detection, awareness, active guidance, financing, implementation and monitoring into "packaged solutions".**

Within the project, several similar regions will set up integrated housing renovation programs. Together, they will

- focus on regional bottlenecks in the refurbishment of houses, e.g. the private rental market , poorly insulated private housing and other precarious housing segments, to tackle the non-technical barriers for nearly zero energy renovation.

- develop innovative approaches and process innovation to scale the current housing refurbishment up to yearly quota of "zero energy building refurbishments", involving public and private stakeholders.

-

General objective of the operation

The project will focus on the development, optimization and implementation of integrated housing renovation programs that will last beyond the scope of the project. The project will enable regional authorities to create programs that accelerate to meet the ambition in energy renovation of the existing building stock.

– **Outcomes of the project**

Ambitious but realistic energy and environmental renovation plans must lead

	towards - multi-actor and multi-level process innovation - regional public-public and public-private schemes that foster zero-energy renovations (yearly targets) - acceleration of housing refurbishment - tackle bottlenecks in regional housing markets -
8. Current situation in the target countries/region	The partnership focusses on three regions that identified the housing renovation as a major challenge to reduce energy consumption and CO2-emission, and that have stated a clear the ambition to scale-up the renovation towards: Province Fryslan, Netherlands (the 100.000 houses-plan), the Lille Métropole Communauté Urbaine, France (100.000 houses-plan), and region of Leiedal, Belgium (100.000 houses). This is a major contribution towards the realization of their regional energy strategis of climate plans (e.g. energy neutral built environment in 2050, Leiedal region, BE). The partnership consists of regions in the same climate zone and with similar building tradition. The regions, a number of cities/municipalities, jointly tackle the challenge, convinced that using multi-level and multi-actor process innovation is the key. e.g. in the Leiedal-region, the energy performance of a pre-1980 house (500 kWh/m²/year) is 7 times less than a new 2013 house (70 kWh/m²/year). But 74% of the housing stock is pre-1981. The renovation dynamics (1.700 houses yearly) must be doubled to obtain the 2050 target, and bottlenecks in some housing segments are clearly detected in all regions.
– **3a. Intended consortium (participant names and profile)** – List of the European partners (name, address, legal status) already in the consortium and who are you looking for? **3b. Target groups:** – Actors who benefit from the results of your action, now and in the future. **3c. Key actors (if possible):**	– **3a. European Partnership** The partnership consists of actors from regions that meet similar challenges. In each participating region several kinds of actors will participate in the action. 1. **Leiedal (Be):** A regional consortium is under development: Intercommunale Leiedal as association of 13 cities and municipalities in Kortrijk region (lead) with possible participation of regional parnters Welzijnsconsortium, SVK, Samenlevingsopbouw, sociale economie. The consortium might be extended by the city of Ghent might to increase capacity and impact. **2. Lille Métropole Communauté Urbaine (Fr)** **3. Province Friesland (Nl)** **3b. Target groups** Citizens, tenants, owners… for better housing conditions

– Actors whose involvement is essential to achieve the results of your actions.	Public sector, because of increased efficiency in public spending Banks, building sector, housing corporations, real estate sector because of increased investments in housing refurbishment. **3c. Key actors** - public actors such as cities, municipalities, Provinces, public bodies and institutions, public organisations… - Private actors, such as associations of building companies, associations of architects, banks, pension funds, sector organisations…. - citizens and neighborhood actions, that work on the field and involve citizens in concrete refurbishment actions
25. Objectives of the proposed action - Specific objectives of the operation (during the action): - Strategic objectives (for – the longer term – to 2020)	- The project will focus on the development, optimization and implementation of integrated housing renovation programs. The project will enable regional authorities to create programs that accelerate to meet the ambition in energy renovation of the existing building stock. This means that an important number of houses will be refurbished each year. - For the longer term, the project must lead towards 100.000 refurbished houses per region. This is one of the major contribution towards energy neutral regions for the future.
26. Budget (if possible) – Total budget of the project (in EUR) – Budget requested from the Commission (in EUR)	To be completed
27. Brief description of the Work program (if possible to be structures in work packages as follow) – Work packages – 1. Management – 2. …	– **Main activities (draft)** Possible actions of the Kortrijk region within the project: **WP1 project management** **WP 2 Regional process innovation** - The development or innovation of regional housing renovation programs through coordination and mulit-actor and multi-level collaboration, by setting up public-private-research networks - implementation of the regional housing renovation program **WP 3 business cases for zero energy building refurbishment** - Setting up a business case, including match funding for the development

— 3. Communication — 4. Dissemination	and implementation of regional housing renovation program. - Development of business models in close cooperation with housing associations, owners, - Process innovation **WP 4 monitoring** - data management (e.g. GIS) for the detection of problems, the measurement of policy effects, monitoring quality home ... - **WP 5 communication** **WP 6 dissemination**
28. Deliverables	- 3 new or renewed regional housing refurbishment programs with public-private-research coalitions that last beyond the scope of the IEE-project - a yearly rate of refurbished houses in each participating region - neighborhood actions in each region …

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29. If possible: schedule of activities (example of timetable, please modify as you wish)

Phase/Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	…
Work package 1: management																			
Work package 2: name																			
Work package 3: name																			
Work package 4: task 4.1 name																			
Work package 4: task 4.2 name																			
Etc…																			
Work package n: communication																			
Work package n: dissemination																			
Project meetings																			
Workshops/events																			
Project information sheet & slides to EACI																			
Project webpage/site creation and update																			
Project deliverables																			

- **Duration of your project in months (compulsory): 36**

30. Impacts and performance indicators	- total number of houses - number of neighborhood actions - number of business models

	- number of new processes ….
31. EU added value – Evidence of the benefit of EU collaboration – Geographical focus – transferability	TO be completed (20/20/20 targets, Gothenburg, Lisbon strategy, horizon 2020…)

IDEA 6 – ERRIN Development seminar - 20/03/2013

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	 Brainport Development Jan Roggeband … j.roggeband@brainportdevelopment.nl First Contact: Anthony van de Ven Eindhoven-Brainport EU office 0031653706769 Anthony.vd.ven@eindhoven.nl
Priority call 2013	10.2.4 ALTENER – Renewable Energy Consumers
Proposed title	***"Capturing the Energy in Our Neighborhood" - CEON***
9. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	The ESCO project will aim to develop the empowerment of individual private energy consumers through actions focusing on: ○ The improvement of the individual and collective energy consumers understanding of the possibilities to realise, to their own and the environments benefit, the energy potential of their houses and their districts by managing their own production, storage/buffering potential and energy consumption using local suitable sustainable energy solutions. ○ The development of a method/approach that allows the design / development, together with local inhabitants, of 'their' future-ready model for the technical installation integrated in their neighbourhood and/or home. 'Future-ready' means that the installation model incorporates- as much as suitable – those solutions allowing the capture of the required energy from nearby renewable sources. In practical terms this means that these sources are on their roofs, in their neighbourhood and with a certain choice of the

level of ownership.

- In the context of this project, the method/approach delivers several (5) models of technical installations for the production, storage en management of the use of energy that are harnessing the potential of the individual houses as well as the street/district in which the resident lives. The models consist of a mix of different energy technologies offering different levels of sustainable (local) energy production and incentives to stimulate energy savings that offer different scores on parameters such as CO_2 emissions and energy neutrality.
- Assessment and adaptation of these models in different geographical environments within the EU
- Development of local business cases in fieldlabs, actual demonstration cases, within the city partners of the project, empowering renting inhabitants to take control of their local potential for sustainable energy management. Specific attention is given to integrating several aspects (organisation, legal and financial structure, risk management etc) within an Energy Service Company focussing on creating possibilities in which the inhabitant can be involved. Especially financial schemes such as 'pay as you save'.

The overall objective of the project is to make significant steps towards energy neutrality in the districts / neighbourhoods within the project by offering a greater understanding to energy consumers of the energy potential and how to harness it within their direct environment. By doing this, the project will significantly increase the production of renewable energy and reduce the energy that is necessary to buy from outside the demonstrating neighbourhood.

At the core of the project will, therefore, be the development of an approach to design several energy management models. In this project 5 results of this approach are demonstrated. These (5) packages/models of energy measures, containing different combinations of individual measures and/or technologies and/or several levels of allowing the consumer to make his/her choice among the technical solutions offered. The project will also support the consumer to make the best possible choice in relation to financial involvement (pay as you save-schemes) for the particular situation he/she/they find themselves in at the time of choice and during the exploitation period.

While the project strives to achieve a cooperative approach, it also recognises the individuality of citizens. It accepts that individual citizens, living alone, in partnership, or as families with children, have sometimes divergent wishes and possibilities when it comes to the selection of the energy measures package.

The project will also address the development of innovative cooperation structures, ESCO's, as means for energy consumers to manage their energy consumption / production effectively by bringing together individual energy consumers that would normally only be clients. These structures are geared to support individual consumers to take control of their energy consumption and develop their renewable energy production.

Even when giving possibilities to 'capture energy on the own roof/in the own district' and to become a "pro-sumer", it is still expected that people often will doubt because of the potential hassle connected with this. The project will develop and offer approaches that limit this hassle to a minimum. The ideal mix of '(financial/legal) involvement' en 'self action (based on information)' is expected to be different for different groups of users (market segmentation), and this will be facilitated by the systems offered in the context of the project.

The major outputs of the project are as follows:

	○ Guidance on the dialogue with citizens on raising their know how of the energetic potential of their surroundings, as well as support mechanisms for citizens to harness this potential through taking the most suitable decisions for them, or their situation ○ Up to 5 *reproducible technical models* tested in different EU environments ○ Marketable business cases, the implementation of which would not be the subject of this project, but would be picked up by relevant interested organisations.
10. Current situation in the target countries/region	The current situation in the partner cities is, while very different in respect of climatological and regulatory circumstances, comparable as far as the target groups are concerned. The project addresses groups of citizens that rent dwellings that are owned by housing corporations. The houses that are subject of this project were mostly built in the 1960-70's and are, by today's standards, deficient when it comes to their energy performance. These housing corporations have the responsibility to maintain and upgrade the energetic situation of these houses. While, in the past, large scale renovation projects were the moment for the corporations to improve the energy performance of larger groups of dwellings in one go, today, the approach is different: ○ There should be greater involvement of those who rent and live in the houses in order to create/find (local sustainable energy) solutions which enlighten them and work for them. The solutions should suit their personal interest/drives whether these are financial (doing more with my money) or ecological (what can I/we capture (our)self on my roof/in the neighborhood). ○ As proposed in this project, the approach should be more tailor made to the needs of those living in the houses, allowing choices for different combinations of technical solutions dependent on the individual choices based on the options available within the district ○ There is a need to combine both the individual and the district level potential impact. One could think, for example, of innovative combinations such as public lighting solutions powered by the surplus energy delivered by the inhabitants of the district. Or: a public road providing the heat for filling the seasonal heat storage of the individual households.
– – **3a. Intended consortium (participant names and profile)** – List of the European partners (name, address, legal status) already in the consortium and who are you looking for? **3b. Target groups:** – Actors who benefit from the results of your action,	3.a. Intended Consortium Lead partner: Brainport Development Partners/stakeholders: Eindhoven: - City of Eindhoven - Woonbedrijf (housing cooperation) - Endinet / Alliander (energy infrastructure) - Installation companies - electrotechnical "Stichting KIEN" (Knooppunt Innovatieve Electrotechnici Nederland) - heat installers - Heliomax - installation architects – WVTTK architecten - Twee Snoeken (has an ict tool (bouwconnect) supporting the process of citizen decision making concerning construction related changes of houses. The boundaries of these choices are set by the housing cooperation (because they are willing to finance these constructional changes in return for a raise in the rent. Insight is given

now and in the future. **3c. Key actors (if possible):** – Actors whose involvement is essential to achieve the results of your actions.	how much people save on their energy bill (in the 'ist' situation)) . Remark: the tools does not (yet) include choices about the installation) Partner 2 – Northern Europe – South Denmark – City ? Partner 3 – Southern Europe Partner 4 – Southern Europe – Italy? Partner 5 – Northern Europe – South Sweden? 3.b. Target Groups The target groups benefitting for this project are the following: - In first instance the citizens / groups of citizens inhabiting the neighborhoods / districts consisting of dwellings with different functionalities apart from private housing, that are subject of the project - As the project will include modeling activities to roll out the approach further than the pilots, potentially all citizens renting housing from housing corporations will benefit - The housing corporations are a further benefitting group, as they will gather valuable knowledge on the development and implementation of the item '(local) sustainable energy production,storage and usage' in renovation processes involving citizens to a much greater extent leading to more content tenants and more sustainable housing. - In the wider sense European cities will benefit from the know-how obtained about the development and successful implementation of ESCO's as an instrument for improved energy management. While this project focuses on the establishment of ESCO's for groups of citizens, the know-how obtained will prove to be valuable for the establishment and implementation of ESCO's in a wide range of (residential) situations. 3.c. The key actors to be involved are: - Housing corporations - City administrations - Owners of the energy infrastructure - KIC INNO energy for realy creating impact in society by sharing knowledge about the best known insight of items in the business (canvas) model. Like combining services making and financial schemes (like 'pay as you save') attractive for the dwellers in their situation. - …
32. Objectives of the proposed action - Specific objectives of the operation (during the action):	Specific Objectives of the project include: 1. Developing a systematical approach for raising the know how of individual household

- Strategic objectives (for the longer term – to 2020)	energy consumers on the sustainable energy potential within their direct surroundings (houses / neighborhoods/districts) and which can be made direct available for them 2. Developing several technical models for a local (flexible) situation (neighborhood in combination with the activities which are taking place there/the users) that harness the energy potential of a house/street/district 3. supporting the individual energy consumer in his/her decision making concerning the best possible model allowing for their drives/wishes, measured both according as adding to sustainability, and in particular energy related, standards as well as other parameters such as adding to financial and acting freedom ~~4.~~ Giving content to structures for the management of energy, such as an Energy Service Companies (ESCO), which ensure that the management of energy production and consumption will suit the wishes of individual (operational, communicational, information, financial, legal) involvement. The ideal mix is expected to be different or different groups of users (market/service level segmentation). 5. raising the percentage of renewable energy produced on a 'nearby' way and raising the involvement in the energy situation of the neighborhood.. And as additional result lowering the (need for) energy consumption of the fieldlab areas/neighborhoods. Expecially the energy which is 'inported (from fossile sources)' in the fieldlab area/neighborhood. Strategic objectives of the project include: 1. A contribution to the European Unions energy ambitions 2. The development of a method that designs (based on local possibilities and needs) an installation that is able in 'capturing the energy in our neighborhood' 3. …
33. Budget (if possible) b Total budget of the project (in EUR) b Budget requested from the Commission (in EUR)	The expected total budget is estimated at around €1,500,000 The expected requested funding from the European Commission is 75% of the budget amounting to €1,125,000
34. Brief description of the Work program (if possible to be structures in work packages as follow) b Work packages b 1. Management b 2. …	The work programme is set up as follows: **1. Project management** Including content management, financial management, reporting **2. Dissemination and communication** *2.1. Local communication with relevant stakeholders and potential clients*

b 3. Communication b 4. Dissemination	Local communication with relevant stakeholders and potential clients in the context of this project focuses fully on the (new) energy installation/household' to be installed in the 'to be refurbished buildings and their district'. This means that this is merely one element of the total communication that is necessary in relation to the refurbishment of a district to develop it to a new state of energy sustainability (for example Energy neutral). Nevertheless there is a mutual interaction between this total communication about the strategy and direction of the refurbishment and the refurbishment of the energy installation in a district. *2.2. EU wide Communication and dissemination of the project outputs and deliverables* This will be carried out through the preparation of appropriate project communication materials, the organization of workshops in the context of relevant existing EU wide networks, the establishment and maintenance of a web presence as well as the use of social media. **3. Model development.** The project will aim to develop a method/approach 'to design with the possible sustainable local energy sources' several (5) technical models for a local energysystem which contribute to the development towards energy neutral districts. *3.1. Designing five types of energetic installations using local possibilities and are suitable for the specific local activities* Installation architects and users will be developing this together using a (model / virtual) representation of the district and bringing in a range of possible types of equipment to 'capture energy from your own roof/district', distribute it, store it and operate it on all the human control levels, which are, for example, (a.o. a lamp), a room, a house, a group of dwellings (peers) and a district (how is my district doing in comparison to..)). This process of communication is designed and accompanied by 'social (innovation) designers' (for example, from the Brainport Region Eindhoven designer community). Probably including the cooperation of ict-designers to make virtual representations of the impact of the choices on an individual level and on a district level. *3.2. Assessment of the models developed in different locations of the partner cities/regions* This work package involves the analysis and 'dry' testing/discussion/calculation gaining know how on how these five types of energy installation score on ambitions such as: 1. (evolving to) energy neutrality 2. (evolving to) CO2 neutrality 3. (evolving to) energy self reliance, i.e. getting the 'energy from your own roof' (meaning: what is the participation/involvement level) 4. (evolving to) optimal energetic mix (meaning: what is the level of smart conversions

of local available sustainable energy)

4. Stakeholder / user involvement

4.1. Dialogue and learning

The Work package will evolve into a structured dialogue with the users about how to integrate possible local sustainable energyresources (for heat and electricity), buffering/storage and efficient usage to fulfill several needs on individual (i.e. investingopportunity, independency) and community level (i.e. energy and climate goals).

More and more people are aware of the fact that *there are* solutions in relation to a more energy neutral house and/or neighborhood (=buurt), (district=wijk). However, they generally lack an understanding of how to effectively achieve such solutions in practice. In particular the understanding of the need to integrate different technical solutions in order to reach the optimum result, as well as the complications of operation of such integrated systems is often lacking.

Therefore: consumers need to obtain an understanding, and familiarize themselves with what relevant technology is available on the market, and what should they obtain in order to be able to 'Capture energy on their own roof /in their own district' and become a pro-sumer with as little as possible "hassle and dazzle". This ideal mix may well be different for different groups of users (market segmentation).

The dialogue and learning has two phases:
a- during the period of the refurbishment of the district. Meaning: the periode the refurbishment is discussed, plans are made en the real (construction and installation)changes in the buildings and surroundings are made.
b-the period after the refurbishment. In this period people can (continue) change their (legal, financial etc) involvement in (parts of) the installation (and the yields coming from this).

4.2. Guidance in process of selecting the best possible financial scheme

This work package focuses on developing the activities which will help consumers to take informed decisions. How to contribute to an investment in renewable production and services. For example: pay as you save schemes in which the consumer determines the level of his/her ownership of the technology installed, thereby determining the level of savings for future yields (based on the principle that the writing off a technology is quicker than its effective life cycle.

5. Implementation of the – for a situation (location, activities, users) - best suitable installations configurations and financial schemes in five neighborhoods

In five neighborhoods – their five - best suitable installations and financial schemes will be

	implemented. This is done in the form of fieldlabs. During implementation and exploitation (during 2 years) the activities are monitored and data is gathered and analysed to learn from to improve the way 'the energy service' is delivered to the individual users. The information is also analysed to improve the energetic performance of the district installation and as a contribution to improving the business case of the involved parties to fulfill their individual and collective wishes. Based on the experience of this fieldlabs as a result of the method/approach 'design with local energy possibilities' an approach for the systematic use/roll out of the method/approach over larger urban areas (in Eindhoven, SRE-gebied, Brabant, Zuid oost Nederland, in….etc).) is developed. *)fieldlab = technology is confronted with the (integrated) use in real life. with real customers, real buildings, a real district and real (financial) contract for delivering the (energy) service.*
35. Deliverables	The deliverables within the context of this project are: 1. An approach/method for 'design with the possibilities of local sustainable energy and creating nearby (financial, legal) involvement by users'. 2. The completion of five technical models of energetic installations as a result of this approach/method 3. The review reports of these models in 5 different geographical/cultural/financial environments on 4 kinds of ambitionscores. 4. the reports of 5 times minimum 2 workshops developing and maintaining the dialogue with the consumer, leading to a increase in know how of this consumer on energy production and savings in his/her direct environment (house, street, district) in the phase before refurbishment. Also 5 times 1 workshop in the year after the refurbishment leading to more involvement (financial participation) in relation to the use of the renewable sources at home and/or in the district 5. 5 analysis of the energetic potential of areas among the project partners 6. A set of guidelines on how to successfully raise the local adaption and using of the method/approach to design together the technical system and other relevant items of the functioning of an 'ESCO-of and for dwellers'. (a.o. the financial scheme 'pay as you save') 7. Also: how to harness this to their benefit and to the benefit of the environment, and on how to use the experiences of the five pilot more widely 8. five action plans for the wider application of the approach within urban areas/districts

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36. If possible: schedule of activities (example of timetable, please modify as you wish)

Phase/Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	…
Work package 1: management																			
Work package 2: name																			
Work package 3: name																			

Work package 4: task 4.1 name																			
Work package 4: task 4.2 name																			
Etc…																			
Work package n: communication																			
Work package n: dissemination																			
Project meetings																			
Workshops/events																			
Project information sheet & slides to EACI																			
Project webpage/site creation and update																			
Project deliverables																			

- **Duration of your project in months (compulsory): 3 years (36 months)**

37. Impacts and performance indicators	The project is expected to deliver the following impacts: b A significantly better understanding of energy consumers in the fieldlab areas of the partner cities/regions can make use of local sustainable energy possibilities and fullfil individual energy related needs/wishes and contribute to (regional) climate goals. b An understanding of the energy potential of selected areas, and a widely applicable process for determining the sustainable energy production and efficient and more (investment) involvement in the using of energy in areas across the EU b Following from the fieldlabs, an increased renewable energy production and contributing to using less 'fossile' energy coming from the outside the district/region. The project will be measured according to the following indicators: -effectiveness of the approach/method in relation tot making 'future ready energy households' making it possible to capture the energy of the own neighborhoods. Indicator is percentage of the estimated energyusage of the functions in a district is coming from energy from local sustainable sources/storage equipment. -how many dwellers invest themselves (= indicator for involvement) in the 'nearby' energy equipment (that is: using financial schemes like 'pay as you save')
38. EU added value 6. Evidence of the benefit of EU collaboration 7. Geographical focus	The EU benefit will be achieved through the ambition of the project to stimulate EU citizens, energy consumers to raise- by using an 'what can we capture in our own neighborhood' approach- their understanding about the potential of producing and efficient using renewable energy in their direct environment. In addition, the project will develop, through fieldlab actions, contributions to support mechanisms that EU local and regional authorities may initiate to stimulate and guide individuals or groups in making choices about raising renewable energy productioncapacity and actions for

8. transferability	reducing energy consumption. The geographical focus of the project. The objective is to achieve a partnership of up to 5 different EU areas, with different contextual situations allowing for better generalization of the recommendations and guidelines to be developed in the context of the project. Transferability of the outputs is central to the project. While carrying out the pilots in five areas, a strong additional focus lies on ensuring the generalization of the approaches.

IDEA 7 – ERRIN Development seminar – 20/03/2013

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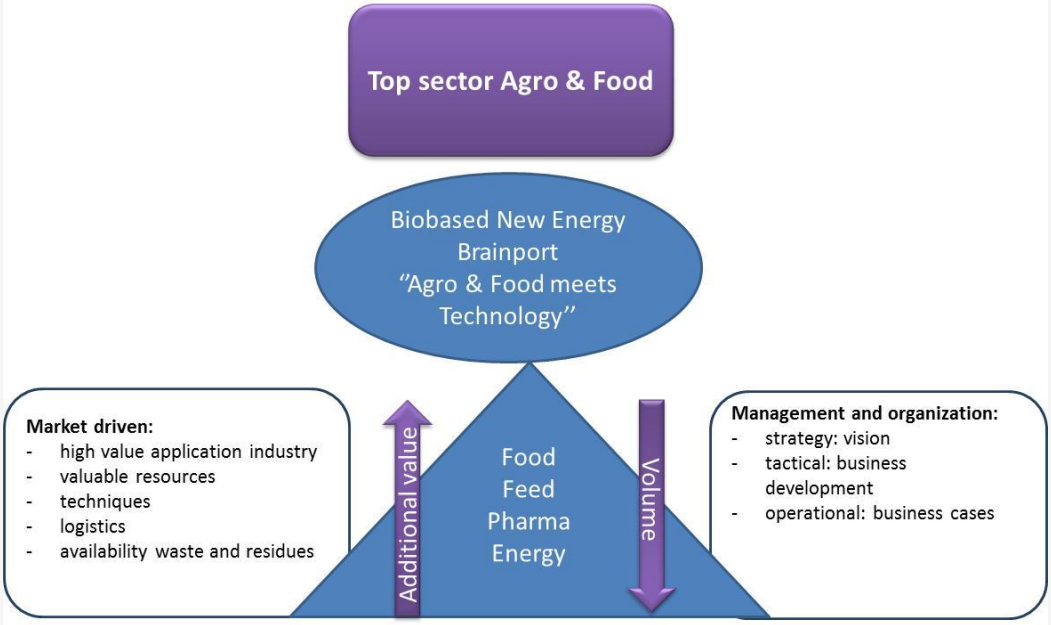
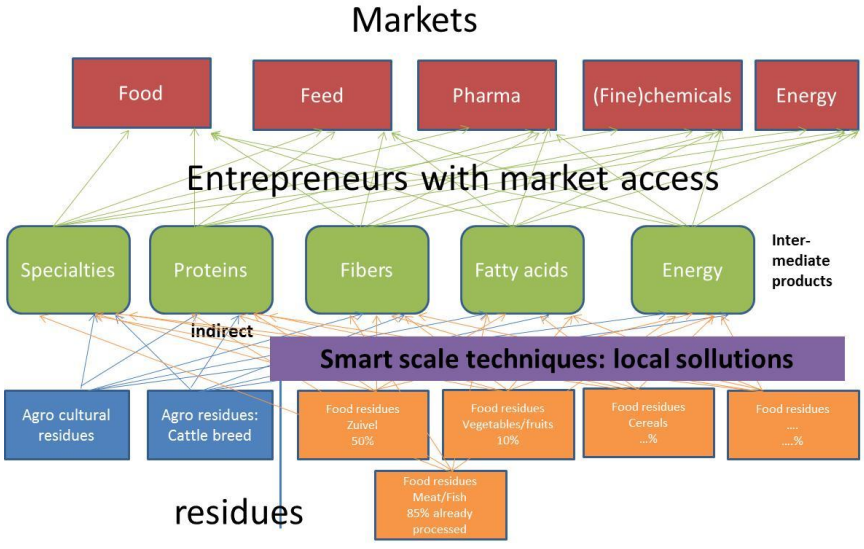
Priority call 2013	ALTENER Bio Energy (10.2.3.)
Proposed title	Touchdown Biobased New Energy Solutions
11. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	**The project starts from the ambition of the Brainport Eindhoven region, represented here by SRE (Eindhoven Region, 21 municipalities) , to achieve a so called "*energy transition*". This means that SRE wishes to shift from the current, largely fossil fuel based energy system to a comprehensive system based on sustainable, local/regional energy production and consumption for the whole Brainport Eindhoven region.** The challenge is to develop a business model to create a landscape with different energy innovations integrated in new (infra) structures. To achieve this, different barriers must be overcome: locations, permits, physical planning, investors and cooperation between different partners (triple helix). If successful, the benefits will be both ecological and economical. The implementation and marketing of new energy solutions will create new green jobs and sustainable economic growth. In order to achieve this it is important to address the sectors of industry, agriculture and built environment in parallel, and within those sectors a whole series of elements must be addressed. ***This IEE project proposal focuses on creating a business case (360° approach : awareness, as well as regulatory, technological and financial aspects) to facilitate the take off of the regional energy transition, more specifically in rural areas, with agricultural businesses as pivotal partners and as sources of sustainable energy production.***

	As different European regions work within different contexts, the EU level cooperation and exchange is essential to come to transferable approaches and widely applicable sets of solutions from which individual regions can select the optimal mix. After identifying the strengths of the different regions (regulations, finance, technology, organization) the project will organize business development support systems with the main goal to realize new energy showcases and regional living labs. ***Agricultural sector***: In the Brainport Eindhoven region agriculture is accountable for 9% of total energy consumption. It is therefore not the major energy consumer, but the sector does have a major potential for energy production. Moreover, the economic importance of the sector is large but under pressure. Sustainability and public support of the sector are major topics. Bio based new energy solutions are important to improve the image and the quality of agriculture business. Next to the utilisation of roof surface for solar based energy production, the shift to a bio based economy utilising green resources for non-food applications and the use of biomass and rest heat from the agricultural processes to supply sustainable energy is a challenge for the agriculture sector. The potential is considerable, but the challenges are equally large: how to harness all this energy, how to manage the distribution and storage, how to do all of this without placing too much of an extra burden on the agricultural core business… As the agricultural sector does not operate in isolation, the project will also address the other two pillars of 'industry' and 'built environment'. This in order to identify and realise an integrated approach that, commonly, closes the energy cycle. The project will address the different pillars with the view of identifying and realising the integrated approach that allows the different pillars to, together, close the energy cycle: b ***The built environment***; no less than 55% of energy in the SRE region is used for heating and cooling of the built environment. This includes housing, offices and factories. As renovation towards energy neutrality is often not an option in the foreseeable future, a whole set of measures should be considered in an appropriate mix. Challenging is for example how to link the potential offered by the agricultural sector with the need identified in the housing sector. b ***The industrial sector*** is responsible for 19% of energy consumption within SRE. The production of renewable energy through, for example, the use or reuse of heat has considerable potential as well as the link with other bio based new energy production activities such as drying, separating, up cycling and solar (electricity and heat). Not only with the focus on individual companies but also in industrial symbiosis concepts on industrial parks and smart solutions in relation with the surrounding (agricultural) area. The project will focus on the development of appropriate business development support strategies and structures linking the above mentioned sectors to the strengths of different regions (knowledge, companies, government) and thereby creating the win-win situations we need if we wish to achieve the overall ambition of energy neutrality by 2040 and cash the economical changes related to this challenge
12. Current situation in the target countries/region	Bio mass material is often transported over hundreds of kilometers to big bio mass installations in order to produce energy. The transport of this material is not environmental friendly in itself and requires a lot of energy. Basically, the energy is produced far from its source (regional rural area) and a lot of energy is lost during transportation from the production area to the rural area. Energy

	officially labeled 'green' is in fact not green at all. Basically every country/region/village would want to be a self sufficient supplier of energy. With this project the partners would like to work towards scenarios in which rural areas start using their potential to become self sufficient, or that would even become net energy producers, thereby also supporting the urban areas adjacent. Europe is now making the first steps to create independency of traditional sources like oil and gas. This project contributes to that objective. The philosophy of the Eindhoven region is based on the Biobased economy. Green, renewable raw materials take over the role of scarce materials. The technology has been rapidly developed. So at this moment it is possible to use animal waste as a high quality energy source. the perspective is to have closed cycles and economic benefit for regions and companies which specialize in this technique. 
– – **3a. Intended consortium (participant names and profile)** – List of the European partners (name, address, legal status) already in the consortium and who are you looking for? **3b. Target groups:** – Actors who benefit from the results of your	3a) Maximum 8 partners in different countries working in a quadruple helix collaboration (governance, university, business partners, farmers) A tentative interest has been shown by several participants of the first ERRIN session: Cantabria Emilia Romagna South Sweden Preferred partners include European regions which combine a large rural area with surrounding urban areas and industrial activity. 3. b) Directly benefiting are:

action, now and in the future. **3c. Key actors (if possible):** – Actors whose involvement is essential to achieve the results of your actions.	- Farmers in the participating regions - industry within the participating regions - Farmer organizations/corporations - Universities (knowledge development) - Inhabitants living in the rural area 3.c) Key actors 1) Several European regions with the above listed characteristics 2) One or two knowledge partners providing expertise on the state of the art 3) Regional governments with clear and ambitious energy transition plans
39. Objectives of the proposed action - Specific objectives of the operation (during the action): - Strategic objectives (for the longer term – to 2020)	• To define a strategic agenda Biobased economy with partners in the quadruple helix (government, universities, industry, farmers) • The development of a service desk to assist the partners about knowledge exchange/corporation and project development • Support of demonstration projects • To create a European platform for all partners in the quadruple helix • lower fossil energy dependency and lower energy dependency in general • lower green house gas emissions • European platform for exchange of knowledge about Biobased techniques/economy • To develop a business plan that fits to the market 
1. Budget (if possible) – Total budget of the project (in EUR)	The total budget of the project is estimated at between €1,200,000 and € 1,400,000

– Budget requested from the Commission (in EUR)	The budget requested from the EU is 75% of the above amount (€900,000 - €1,050,000)
2. Brief description of the Work program (if possible to be structures in work packages as follow) – Work packages – 1. Management – 2. ... – 3. Communication – 4. Dissemination	1. Project management 2. Dissemination and communication. Communication is subdivided into regional communication (focusing on mobilizing regional stakeholders) and European communication focusing on the dissemination of the project outputs and deliverables 3. Analysis of regional ambitions towards energy transition and the level of implementation of these ambitions within the individual regions, with a special focus on the role of agriculture in this. Assessment of the energy potential of each individual region. 4. State of the art concerning integrated sustainable energy management and assessment of the state of the individual regions (Peer review process) Following the peer review process, the development of guidelines and recommendations on developing the regional energy potential which will be widely applicable. 5. Strategies for the creation of ***Business Case for the region*** in the context of regional energy transition strategies 6. 8 pilot Regional Transition Action Plans (one in every region).
3. Deliverables	The following deliverables are expected: b Platform quadruple helix (with database) b 8 peer reviews outlining : i. Individual regions energy ambitions ii. individual regions energy potential b 8 energy transition strategies b General recommendations/guidelines on development of a regional energy transition strategy b 8 business cases including pilot transition plans

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4. **If possible: schedule of activities (example of timetable, please modify as you wish)**

Phase/Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	…
Work package 1: management																			
Work package 2: name																			
Work package 3: name																			
Work package 4: task 4.1 name																			
Work package 4: task 4.2 name																			
Etc…																			
Work package n: communication																			
Work package n: dissemination																			
Project meetings																			
Workshops/events																			
Project information sheet & slides to EACI																			
Project webpage/site creation and update																			
Project deliverables																			

- **Duration of your project in months (compulsory): 3 years (36 month)**

  The project will have a run time of 36 months.

5. Impacts and performance indicators	The projects success will be measured through: Communication and dissemination: 1. a project web site 2. project brochure 3. local energy transition workshops 4. … Contents - 8 energy potential scans - The presentation of 8 energy transition strategies - X8policy implementation plans - A set of general guidelines on harnessing energy potential and delivering regional energy transition
5. EU added value – Evidence of the benefit of EU collaboration – Geographical focus	Evidence of the benefit of EU collaboration: The project will - Stimulate regions towards energy transition, away from fossil fuel dependency and lead to acceleration of the development and implementation of policies towards energy transition in European regions - Stimulate regions to become aware, develop and implement their energy related policies following the principles of a biobased economy

— transferability	- Stimulate regions to become aware, develop and implement their economic policies taking account of the principles of circular economy (Cradle to Cradle??)

IDEA 8 – ERRIN Development seminar – 19/03/2013

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	**City of Eindhoven** While presenting the idea, the city of Eindhoven does not necessarily wish to take the lead in this project proposal. Bernadette Bergsma Project manager – Eindhoven EU office Mobile: +32 479645331 - Office tel: +32 (0) 27377220 b.bergsma@eindhoven.nl Maarten van den Nieuwenhof, senior projectmanager City of Eindhoven, 0031 40-2386444, 0611-539514, maph.vd.nieuwenhof@eindhoven.nl
Priority call 2013	10.1.2 SAVE – Businesses OR 10.1.3 SAVE – Energy efficiency services and obligations
Proposed title	*"Business parks of the future"*
13. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	Within the Eindhoven Brainport Region (the Southeast of the Netherlands) the Brainport Innovation Campus (BIC) is under development. The ambition of the BIC campus will be to become the home of second and third tier production facilities delivering their production to the already present high tech businesses in the region. The campus will be created in an area characterized by a largely rural and green character and by high standards of access and mobility. Since it will be situated between urban and green environments the ambition is to develop this Campus and the surrounding land into an attractive park landscape, in order to strengthen the attractiveness of the Brainport region even more for the international knowledge workers and businesses. The afforested areas alternated with farmlands which are bordered by wooded banks and country roads are an ideal setting to develop this area in a sustainable way. The concept is to make the sustainable development of the area a core characteristic of the image of BIC. The ambition is to develop the whole BIC campus using a Cradle to Cradle (C2C) approach. Through the creation of the BIC campus Eindhoven wishes to create an impact, to make new innovations happen and to break the taboo concerning sustainability in relation to business campus development. In order to reach this ambition, sustainability and, in particular, sustainable energy management, must become an integral part of all our campus development activities. One of the core activities contributing

	to achieving the ambitions is the establishment of an integrated Campus Management for BIC. The aim is that this organization will take on activities geared towards the sustainable energy management of the Campus as a whole on top of the regular run of the mill responsibilities of a campus management body. It will address issues concerning the management of the energy use and energy production potential of all businesses present, with the ultimate goal of becoming self sufficient in the long run. This we aim to do, together with other European partners, who are working on the same idea and have the same ambitions, or EU partners that already are in the implementation phase from who we could learn. **Issues to address within this IEE project:** ➢ The objective of the BIC campus is to host SME businesses in the production sector with a high tech profile. What will this mean for their energy consumption? It will require monitoring aspects. An individual energy DNA per business should be prepared of: o The expected energy consumption and the potential to limit this use; o The potential energy production, individually as well as in cooperation with others and the organisational aspects around this; o In the wider sense it will require a smart grid development within the park, but also a link to the outside. ➢ An approach must be prepared to stimulate businesses to accept, a priori, the impacts that the requirements following their establishment within this new Campus will have. Businesses should be clear about these requirements and they should be convinced that this approach is an added value to them and their business. The project will pay particular attention to the effective dialogue on energy management issues with prospective businesses. What works and what doesn't… ➢ The businesses within the Campus are high tech SME's and not likely to be able or willing to spend considerable time addressing the energy/sustainability aspects of their business. How can the park management organise structures and support alleviating most if not all of the extra burden from the SME's? At the end of the project several individual action plans will be drafted and approved on how to create such park management systems and to become a business park of the future; a template and guidelines for the establishment of such campuses will be developed and a network will be developed of EU partners who have the same ambition on the field of Energy park management systems.
14. Current situation in the target countries/region	Sustainable Park/Campus management is an issue of interest to business parks all over the EU. Many parks are in continuous development with an ultimate objective to become energy neutral or environmental and green business parks. Some business parks are already in a phase of implementation and can already show some results and transfer knowledge on how to become such an energy efficient park.
– – **3a. Intended consortium (participant names and profile)**	3a) Maximum 8 partners in different countries working in a triple helix collaboration (governance, university, business partners)

– List of the European partners (name, address, legal status) already in the consortium and who are you looking for? **3b. Target groups:** – Actors who benefit from the results of your action, now and in the future. **3c. Key actors (if possible):** – Actors whose involvement is essential to achieve the results of your actions.	A tentative interest has been shown by several participants of the first ERRIN IEE session: ➢ Business Kolding (Kolding – Denmark) ➢ EnergiMetropol (Esbjerg – Denmark) ➢ Italian business park (Forli – Italy) ➢ ENEA – Italian National Agency for New Technologies, Energy and Sustainable Economic Development (Italy) Preferred partners include European Regions which are developing business parks with the aim to be energy neutral or environmental and green business parks, or business parks that are already in a phase of implementation of such sustainable park management. 3. b) Directly benefiting are: ➢ Businesses based in these business parks of the participating regions ➢ People working in these business parks of the participating regions ➢ Potential campus/park inhabitants ➢ Local/regional government of the participating regions (the economy by attracting more businesses and knowledge workers) ➢ University (knowledge development) 3.c) Key actors: ➢ Several European regions with the above listed characteristics; ➢ One or two knowledge partners providing expertise on the state of the art; ➢ Regional governments with clear ambitions on green, environmental and sustainable business parks.
40. Objectives of the proposed action - Specific objectives of the operation (during the action): - Strategic objectives (for the longer term – to 2020)	Specific objectives of the project: 1. Stimulating an exchange of experiences and ideas contributing to the drafting, adopting and implementing of local action plans on Sustainable Park Management Systems with a view to become a business park of the future; 2. To exchange existing best practices relating to sustainable park management, with a focus on energy management and with the ambition to contributing to the roadmap of campuses across the EU to become energy neutral; 3. To develop a template for the setting up of the sustainable integrated park/campus management, including the do's and don'ts; 4. To initiate a dialogue with potential campus/park inhabitants taking account of their wishes and capacities in the field of sustainable energy management. This dialogue should allow a mapping of the position of SME's, users of such business parks, when it comes to needs and potential contributions, and should lead to the development of guidelines on the dialogue with occupants of business parks across the EU. 5. To obtain and share knowledge and expertise on the financial aspects of the exercise, in order to draft a list of recommendations. Strategic objectives of the project: To create a sustainable European network of partners promoting and cooperating towards energy neutral business parks/campuses, by helping the businesses which are based in these parks to lower their energy consumption and to make use of other energy solutions. While working on this, these energy flows should be managed from one central point. This should lead to significant steps towards a closed energy cycle at park/campus level and to the set up of smart grids in these parks in order to become

	energy neutral.
41. Budget (if possible) – Total budget of the project (in EUR) – Budget requested from the Commission (in EUR)	The expected total budget is estimated at around €1,200,000 The expected requested funding from the European Commission is 75% of the budget
42. Brief description of the Work program (if possible to be structures in work packages as follow) – Work packages – 1. Management – 2. ... – 3. Communication – 4. Dissemination	Work package 1. Project management ➢ Financial management ➢ Planning, deadlines, etc. ➢ Logistic management of study visits and meetings Work package 2. Communication and Dissemination ➢ Development of logo's, templates, a brochure, roll-up, website, etc. for communication activities; ➢ Preparation of an approach to stimulate businesses to accept, a priori, the impacts that the requirements following establishment in this new business park/campus have. Businesses should be clear about these requirements and they should be convinced that this approach is an added value to them and their business; ➢ A communication strategy should be set up with the aim of stimulating the businesses to make this approach interesting for them so that businesses want to move to these energy neutral and sustainable green parks; ➢ Communication and promotion of such park management systems to externals. Work package 3. Analysis of regional ambitions towards sustainable, green and energy neutral business parks/campuses by implementing park management systems. Work package 4. State of the art concerning energy management systems for business parks/campuses and an assessment of the state of the individual regions (Peer review process?), including the individual energy DNA of each business in such park. Work package 5. To organise structures and support in order to alleviate most of the extra burden the SME's based in these parks would have when addressing their energy/sustainability aspects. Work package 6. Development of an action plan on how to create such park management system and how to become such park of the future, including financial aspects that need to be taken into account, do's and don'ts, etc.

43. Deliverables	➢ A network will be developed of EU partners who have the same ambition in the field of Energy park management systems and to become energy neutral business parks/campuses; ➢ X individual sustainable park management action plans; ➢ At the end of the project an action plan would be set up on how to create such park management systems and to become a business park of the future, including a template for the setting up; ➢ Showcases (collection of good practices). ➢

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44. If possible: schedule of activities (example of timetable, please modify as you wish)

Phase/Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	…
Work package 1: management																			
Work package 2: name																			
Work package 3: name																			
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Work package n: dissemination																			
Project meetings																			
Workshops/events																			
Project information sheet & slides to EACI																			
Project webpage/site creation and update																			
Project deliverables																			

- **Duration of your project in months (compulsory):**

45. Impacts and performance indicators	The project will strive to achieve the following impacts: - Developing greater knowledge about the best possible approaches to integrate energy management issues into the business plans of SME's; - Developing a working approach to sustainable energy management of business parks/campuses across the European Union; - Gain knowledge on the energy savings and renewable energy production potential of industries joined in a business park, and on how to harness this potential in the most effective manner. Project indicators:

	To be determined
46. EU added value – Evidence of the benefit of EU collaboration – Geographical focus – transferability	➢ Stimulating business parks to become environmental friendly, sustainable and energy neutral; ➢ Stimulating businesses to establish themselves in such business parks/campuses; ➢ Awareness raising at EU level of the importance and impact of such park management systems; ➢ Making it easier for business parks/campuses to implement such park management systems (by using the action plan); ➢ … The geographical focus of the project. The objective is to achieve a partnership of up to 5 different EU areas, with different contextual situations allowing for better generalization of the recommendations and guidelines to be developed in the context of the project. Transferability of the outputs is central to the project. While carrying out the pilots in five areas, a strong additional focus lies on ensuring the generalization of the approaches.

IDEA 9 – ERRIN Development seminar – 19/03/2013

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	**FONDAZIONE LOMBARDIA PER L'AMBIENTE (FLA)** (LOMBARDY FOUNDATION FOR THE ENVIRONMENT) **www.flanet.org** FLA is a non-profit scientific body established in 1986 by the Lombardy Regional Administration and five major universities of the region, to promote research, data collection and training on the assessment and prevention of impact by anthropogenic pressures on the environment and human health. During its 25 years of activity, FLA has acquired a robust expertise on a wide range of environmental problems through a multi- and interdisciplinary approach. FLA been leading or taking part to several EU, national and regional projects providing science-based tools and decision-support systems to local and national policy-makers in the field of environmental protection, risk assessment and energy management. **Address:** Largo 10 Luglio 1976, 1 – 20822 – Seveso (MB) **Project Responsible:** Antonio Ballarin-Denti +39 028061611 antonio.ballarin@unicatt.it **Contact Person:** Mita Lapi +39 0280616112 mita.lapi@flanet.org
Priority call 2013	**STEER: Energy in Transport** **Key action: *Energy Efficient Transport* and *Clean and energy-efficient vehicles***
Proposed title (provisional)	**Low-carbon and clean urban mobility supported by a smart and sustainable energy management**
15. Proposal summary (abstract) – Brief description of the operation/activities proposed	The project aims to assess the feasibility and to promote the development of an integrated urban/regional mobility system based on electric vehicles fuelled by high-efficiency and/or RES-powered plants and managed by smart and user-friendly IT tools. A limited number of European cities/regions will be selected as case-studies. The choice will be based on the existence (or advanced planning) of CHP and/or RES-

– General objective of the operation – Major outputs and expected results	fuelled power plants able to cover a major fraction of the electric energy required by the conversion of the existing fleets of vehicles to an electric-propelled transport system (for passengers and goods). The local transport system considered will be gradually implemented by the local policy-makers and will include public transportation (buses), commercial vehicles, taxi-fleets, cars and bikes for sharing, private cars (all electric or hybrid). A set of measures will be outlined to steer public investments and local policies toward an energy-efficient and environmentally sustainable transport system. The overall system's sustainability will be evaluated in terms of carbon and pollutants emissions, noise pollution and traffic congestion with the final goal of reaching by 2020 (in the cities/regions considered) the target of 50% carbon emissions reduction, the most restrictive air quality standards for PM_{10}, $PM_{2.5}$ and NO_x set by the present EU legislations and the limit-values for population exposure to air pollutants suggested by the World Health Organization. The electricity required to convert the local/urban transport systems will be supplied by power plants operating in cogeneration mode (CHP) and/or fuelled by renewable energy sources (RES) as municipal solid waste, agricultural/forest biomass, wind turbines, PV panels, geothermal energy. Consequently, the project aims also to accomplish two other main goals set by the IEE programme: energy efficiency and renewable energy sources.
16. Current situation in the target countries/region	The choice of the European cities/regions involved in the project is based on the existence (or advanced planning) of CHP and/or RES-fueled power plants able to provide, in the short term or in perspective, a relevant fraction of the electric energy required by an innovative and sustainable transport system (passengers and goods). An example of a proposed case-study is represented by the city of Brescia (Lombardy Region, Italy). BRESCIA (200.000 inhabitants) is located in the most developed Italian industrial area and is interested by intense passengers and commercial transport flows within and across its borders. The surrounding region is affected by an heavy air pollution widely exceeding the value-limits set by the current EU legislation. Moreover, it faces the demanding challenge to comply with the carbon-emissions reduction target required by the European policies (20-20-20 Climate-Energy package). On the other hand, Brescia is provided with one of the most advanced energy systems presently existing in Europe, based on a large-size incinerator (fueled by MSW and biomass), operating in CHP mode, able to feed the entire urban area through an extensive district-heating (DH) network and supplying more than 50% of the city's electricity demand. However, the urban transport system is still critical, since most of the passengers and goods transport relies on fossil fuels and is responsible of more than half of the total GHGs and polluting emissions. The city and regional governments are committed to promote a gradual shift toward a cleaner and less polluting mobility. Yet, what is still lacking is a more integrated vision

	of the physical and economic inter-connections between the transport and the energy sectors. Only a more holistic and innovative approach to an energy-for-transport strategy, founded on integrated and smart transport systems based on cleaner vehicles, will allow to better evaluate a cost-effective transport planning and management aimed at achieving co-beneficial targets of higher energy efficiency, lower carbon intensity and reduced pollutants emission. In this perspective, the on-going and up-coming measures taken by the local authorities (new metro-line, car and bike sharing, low-emission buses, logistic platforms for commercial traffic) can represent preliminary steps of a more ambitious strategic road-map leading to a fully sustainable transport systems supported by a zero-carbon and clean energy supply.
– **3a. Intended consortium (participant names and profile)** – List of the European partners (name, address, legal status) already in the consortium and who are you looking for?	**3a.** ***(the following subjects have already expressed their interest to join the consortium)*** **Economic Development Department** (Stuttgart, Germany) Reha Tözün: reha.toezuen@region-stuttgart.de Regional Public Authority **Örebro Regional Development Council** (Örebro, Sweden) Susanne Rosendahl: susanne.Rosendahl@regionorebro.se Regional Public Authority **ICLEI – Local Governements for Sustainability** (Freiburg, Germany) Ruud Schuthof: ruud.schuthof@iclei.org ICLEI is an Association of over 1,200 local governments that represents the interests of local authorities within the United Nations and at international policy forums. A movement driving positive change on a global scale through programmes and campaigns on local sustainability. A resource centre offering information, tools, networking, training and consulting services. **CEEI – Centro Europeo de Empresas e Innovacion** (Burgos, Spain) Juan Carlos Martinez Barrid: jcmartinez@ceeiburgos.es CEEI BURGOS was founded in 1994 as a tool specializing in local development under the model, quality criteria and sponsorship of the European Commission, and promoted by regional and local organizations and institutions with a strong commitment to boost the social and economic development of our territory. **Energyville** (Boeretang, Belgium) Peter Verboven: peter.verboven@energyville.be Knowledge center focused on green energy and energy technology which at its start will host some 200 researchers. **DHC+ Technology Platform** (Brussels, Belgium) Nicolas Fevrier: nf@euroheat.org An initiative dealing with research and innovation for district heating, district cooling and kindred technologies.

	Austrian Institute of Technology (Vienna, Austria) Ralf-Roman Schmidt: Ralf-Roman.Schmidt@ait.ac.at Austria's largest non-university research institute, it is among the European research institutes a specialist in the key infrastructure issues of the future. **SP Technical Research Institute of Sweden** (Stockholm, Sweden) Oskar Räftejård: oskar.raftegard@sp.se SP applies its internationally leading competence to the development and evaluation of technologies, material, products, and processes to meet its customers' needs and provide an effective link between research and commercialization. **Catholic University of Brescia – CRASL (Research Center for the Environment and Sustainable Development)** Maria Chiesa: maria.chiesa@unicatt.it The CRASL interdisciplinary research facility is able to provide advanced techniques in physical and economic sciences for the environmental impact assessment of transport and energy systems. **Polytechnic of Milan** (Milan, Italy) Fabio Casiroli: casiroli@systematica.net The Polytechnic University of Milan will provide robust scientific support to the planning of transport systems and logistic networks.
3b. Target groups: – Actors who benefit from the results of your action, now and in the future.	**3b.** **Energy:** Energy industry, providers of energy services, bodies involved in energy management and planning. **Environment:** Health protection agencies and services, environmental protection agencies, citizen associations and environmental movements. **Transport**: Local/regional public transport authorities, urban/regional planners and policy-makers, electric vehicles producers and equipment providers, taxi-syndicates, commuters associations, bikers-movements.
3c. Key actors (if possible): – Actors whose involvement is essential to achieve the results of your actions.	**3c.** Local energy providers and utilities, municipal/regional authorities, public transport agencies, industrial associations
47. Objectives of the proposed action	The project aims to outline and start an integrated (intermodal) urban mobility system based on electric vehicles (metro, buses, commercial fleets, car-sharing, bike-sharing, private cars) whose energy demand can be supplied, at a large extent, by high-efficiency and/or RES-fuelled power plants (already existing or planned). The projects actions are specifically tailored to speed up the implementation of the

- Specific objectives of the operation (during the action): - Strategic objectives (for the longer term – to 2020)	EU policies of a further sensible reduction of carbon emissions and a marked improvement of the urban air quality. The final goal is to envisage a carbon-neutral, clean, low-noise, decongested urban transport system, capable to sensibly improve the quality of life in the European cities. According to the project's strategic policy development, the public fleets will be transformed to e-vehicles by public investments (and/or financial outsourcing) and the private sector (commercial vehicles and private cars) will be gradually converted by means of appropriate transport policies (limited-access zones, pollution or congestion charges) aimed at favoring electrical vehicles and/or discouraging traditional oil-fuelled vehicles. The innovative aspect of the project lies on the concept that the electricity required to feed a such gradually growing transport systems will be supplied by power plants operating in cogeneration mode (electricity + heat) and/or fuelled by renewable energy sources (urban solid waste, agricultural/forest biomass, wind turbines, PV panels, geothermal energy). **Specific objectives *(during the action)*:** Scenarios' studies will be carried on to assess: • the technical and social feasibility of the measures considered by the project; • the environmental and economic benefits arising from the conversion of local transport systems from fossils- to electricity-fueled vehicles. The marginal share of electric energy required by the system's transformation has to be obtained only through the increase of the efficiency of the energy-providing plants (i.e. CHP) and/or by resorting to renewable energy sources (RES). **Strategic objectives *(for the longer term – to 2020)***: The cities/regions selected as case-studies within the present project are predicted to attain, within the year 2020: • the carbon-emissions target set by EU policies by 2050 (50% carbon emissions reduction); • the most restrictive standard of air quality set by the current EU legislation (directive 50/2008 CE) for fine particulate matter (PM10, PM2.5) and nitrogen oxides (NOx); • the limit-values of the population's exposure to the main air pollutants proposed by the World Health Organization.
48. Budget (if possible) – Total budget of the project (in EUR) – Budget requested from the Commission (in EUR)	 – Total budget of the project (k€): 2,000 –2,500 – Budget requested from the Commission (k€): 1,500-2,000

49. Brief description of the Work program (if possible to be structures in work packages as follow) – Work packages – 1. Management – 2. ... – 3. Communication – 4. Dissemination	The project's work program will be organized into five work packages (WPs): WP1. Project Management WP2. Logistics and smart management of the transport system WP3. Optimization of energy supply, energy budget and economic scenarios WP4. Environmental impact assessment WP5. Communication and dissemination **WP2. Logistics and smart management of the transport system** Since the effect to be achieved is to increase the number of non-oil fuelled (electric & hybrid) passengers and/or goods vehicles in urban areas, the "transport" work package should evaluate, in relation to the different targets of urban mobility (public transport, good delivery, private car user, etc.) needs and constraints to better favor the shift to non-conventionally fuelled vehicles. As a first step, the mobility needs of the cities involved in the project will be analyzed (number of trips, occupancy, trip distances and OD, interchange nodes, etc.) , using available data. Secondly, an evaluation of the existing technologies for "non-conventionally fuelled vehicles" will be carried out for public transport, goods delivery and private cars (also related to interchange, car sharing, micro-mobility). Customer satisfaction, revealed preferences and stated preference will be considered to favor the propensity to a behavioral change, helping allocate the ideal system for each target. The survey aims also to optimize the communication strategy. Opportunity to put into action policies and regulation for limited access to "green areas" will be evaluated to promote the shift towards a more sustainable mobility and to enforce the preservation of green and low polluted city areas. Moreover, to create a complete smart and efficient system, IT services and apps for an user-friendly access to the system could be proposed. Considering some of the existing technologies for private non-conventionally fuelled private cars, there is an extended possibility to add a disabled mobility need performance too. **WP3. Optimization of energy supply, energy budget and economic scenarios** The amount of energy to be supplied to the electric component of the local/urban transport system will be calculated under different scenarios. An inventory of the existing or planned cogeneration power plants (CHP) and RES fuelled plants (from energy public and private providers and private owners) will be created. In the case of CHP plants the amount of energy available to the transport (to be inserted as entry into the energy budget) is calculated as the difference between the total energy output produced by CHP plant(s) and the correspondent energy produced by a traditional plant (separate heat and power generation) fed by the same energy input. In the case of RES the whole amount of energy produced by the RES-fueled plant(s) will be accounted for. The project's actions will be represented by: i) energy balance of the power generation + transport system under different scenarios; ii) strategic policy outline, pilot actions and implementation of system's components depending on the different cases-studies. **WP4. Environmental impact assessment**

	For each regional/urban system considered, an integrated environmental impact assessment will be carried out by means of a Life Cycle Analysis (LCA) applied to all the components processes of the whole energy and transport system. The assessment will be based on a series of key parameters: • CO_2 emissions saved by the integrated system (electric transport + heat + electricity produced) comparing energy efficiency and performances of the innovative vs traditional system. • emissions of the main air pollutants (PM10, PM2.5, NO_x, SO_2, CO). Once obtained the appropriate emissions scenarios, a risk assessment analysis will be performed regarding the population exposure and the impact on ecosystems and cultural heritage. • Noise pollution • Reduction of traffic congestion.
50. Deliverables	- Criteria, protocols, decision support systems for planning, monitoring and implementing electricity-based solution in the urban transport sector; - Tools for the evaluation of energy policies in pilot areas (regions or cities) based on optimization of energy efficiency and RES facilities as a function of related transport strategies, environmental quality and sustainability criteria; - Environmental impact assessments for EU case-studies (in Austria, Belgium, Germany, Italy, Spain, Sweden).

51. If possible: schedule of activities (example of timetable, please modify as you wish)

- **Duration of your project in months (compulsory):** 36 months

Phase/Duration of the action (in months)	1/3	3/6	6/9	9/12	12/15	15/18	18/21	21/24	24/27	27/39	30/33	33/36
Work package 1: Project Management												
Work package 2: Logistics and smart management of the transport system												
Work package 3: Optimization of energy supply, energy budget and economic scenarios												
- ask3.1 Optimization of energy supply												
- task3.2 energy budget												
- task3.3 economic scenarios												
Work package 4: Environmental impact assessment												
Work package 5: Communication and dissemination												
Project meetings												
Workshops/events												
Project information sheet & slides to EACI												
Project webpage/site creation and update												
Project deliverables												

52. Impacts and performance indicators	• Environmental assessment indicators (pressures, vulnerabilities, impacts), carbon and pollutants emissions , C-intensity). • Energy indicators (thermodynamic efficiency and economic performances, energy-intensity of single and integrated components). • Transport parameters (traffic flows, number and type of vehicles, number of trips, occupancy, trip distances and OD, interchange nodes, etc. related to sustainable transport systems versus number of fossil fuelled-based transport systems).

53. EU added value – Evidence of the benefit of EU collaboration – Geographical focus – transferability	Besides the STEER general objective (more efficient and clean transport) the two other goals of the IEE programme (enclosed in SAVE and ALTENER) will be accomplished by the project: energy efficiency (CHP) and renewable energy sources. Considering the whole urban energy system (transport + electricity + heat), the target of 50% carbon emissions reduction by 2050 set by the EU can be achieved in the case-study cities, within 2020. Moreover, the toxic pollutants emissions (NO_x, SO_2, PM_{10} and $PM_{2.5}$) would be reduced at such an extent to comply with the most stringent values proposed by the WHO. In this perspective, the cities considered by the present project could represent examples of an almost complete environmental and economic sustainability. The project should also include specific policy proposals (to be implemented in the next future) such as extensions of the public transport, car- and bike-sharing fleets, and intermodal structures as parking lots, plug-in stations and bikes shelters.

	IDEA 10 – ERRIN Development seminar – 20/03/2013

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	Thomas More university Paul De Schepper Kleinhoefstraat 4 – 2440 GEEL – BELGIUM  paul.de.schepper@khk.be  +3214562310  +32477234056 www.kenniscentrumenergie.be/en
Priority call 2013	INTEGRATED INITIATIVES ?? SAVE ?? ALTENER ??
Proposed title	Energy savings in monuments and cultural heritage (MENERSA – Monuments Energy Savings)

1. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	**ABSTRACT** High energy prices, energy dependency, increasing awareness on environment en climate change needs to energy efficiency. Strictly speaking monuments are not under the Directive of Building Performance and the related requirements of energy performance. But more and more owners and public authorities are searching for adapted measures for energy saving and renewing energy because the energy costs are very high and become still higher in the future. Concerned the loss of cultural heritage and landscapes, the public authorities have to be an example for the habitants to protect this monuments and cultural heritage. Even to the extent that some of the monuments and other cultural buildings have to be (partly) closed. Owners and authorities want to increase the comfort of users with respect for the monumental value and characteristics. No standard or familiar solutions are available and applicable for the specific demands of those buildings. And if something is possible, this is restrained by laws and regulations. Historical buildings and landscapes can and may not be spoiled with traditional solar panels, windmills, .. because of their often very beautiful and protected landscape . But the energycomsumption in this kind of building is mostly very high, because of the architecture, the impossibility for an exelent insulation and this is not accepted in this difficult economic period and the concerning of the environment. and climate change. In many cases this buildings are used by non profit organisations and/or open for public as museum, library, meeting room, exhibition and so on. We like to find out and like to test different methods for (acceptable and high efficient) energyproduction, energysavings and energy recuperation on the spot. In case of abbey's, monasteries and castles they can strengthen the value for visitors, and put a link with history, since all this places where self sufficient on many ways… In addition, public authorities have a duty to set an example, everyone looks at what the public authorities do to save energy. Example: some find solar panels ugly, which solution gives the owner of a protected monument Often much more is possible then owners and authorities are familiar with and so without affecting the monumental status. The solution is many times more achievable then we should think at first sight. In bringing together the right experts, technicians, SME's (daring SME's) and building managers a lot can be done. Historic buildings and protected monuments can contribute to a significant extent to obtain the EU energy efficiency goals (and maybe do even better by using the right materials, constructions, technical solutions) and innovative and sustainable solutions that are also applicable for other situations. This project wants to involve partners with the same problems and ambition and wants to develop and disseminate new approaches for energy saving, energy production and energy recovery in monuments and other cultural heritage and to test them in real estates. Several European countries are keen to do a maximum energy value to be imposed on monuments and historic buildings. Even with a thorough refurbishment (or re-refurbishment), the cultivated parts still meet certain requirements (minimum U value, minimum ventilation, ...). This means that renovation work in the future will win in importance. Is the job market ready for it, do we have sufficient technical knowledge to staff to carry this out. We have more and more work with high tech materials, high-tech facilities before we can speak of a successful renovation. Good course materials and good technicians must be urgently

	developed for this. Several sources confirm that a renovation will be an important factor to create new employement in the future.
	OBJECTIVES There are already several examples of well executed renovations, including monuments, and this through previously completed IEE projects . Each partner makes a list with the best results of their country. Furtermore every partner deliver 5 buildings to use as a case for renovations During this project we'll visit some of these buildings. Of these projects there are made extensive information sheets, we view these information sheets on the basis of the current state of the technology include vacuum insulation, CHP (combined heat power), solar panels, better materials for airtightness, better insulation, … The main target of the project is to bring together different people, organisations, institutions who are experts in their field. This collaboration will quickly lead to new innovative ideas arise for renovations of monuments and cultural heritage. Work out cases, organizing study visits, site visits, bringing together expertise from different countries can only lead to better results. In 2013, each Member State must have a definition for a nearly zero energy house , we'll check if there are possibilities for monuments after renovation to achieve this definition. With the current techniques it is not possible to achieve a nearly zero energy house for renovation. So, new techniques should be developed to include a renovation of monuments to achieve a nearly zero energy house. Moreover, we are confident to try to come to a positive energy house. For the selected buildings of the partners we try to do better than the minimum requirements imposed by the European Community. This buildings will be an example, will be a standard for other buildings There will be developped a tool so that there is a possibility to calculate the cost prices in related to the gain in energyconsumption and this started from the current energy performance certificate. An estimate of the costs of the renovation will be made and what will be the new EPC value after renovation. This tool will be an important tool for policy makers, in this way that they can estimate - in advance- what the cost will be and what the impact is on the EPC value. Obviously this tool will be different for each country , not only because the EPC value will differ but because the construction cost will be different anywhere. The tool will be designed in that way we sit with a base frame which each country can adapt the tool to the situation in his country. With this tool, one can gradually see what the cost is and what impact this renovation on the EPC value. Thus one does not have all renovations at once to perform. **Major outputs :** • a tool for an investors system to pre-finance these services • practical guide for performing new renovations in protected buildings to achieve the 2020 target of Europe, nearly zero energy homes or even trying to come up positive energy homes. • practical guide with photo's from the renevations

	• practical guide with the explanation of the use of new technologies and reuse of energy to use when renovating monuments

2. Current situation in the target countries/region	Work out by the partners

3a. Consortium

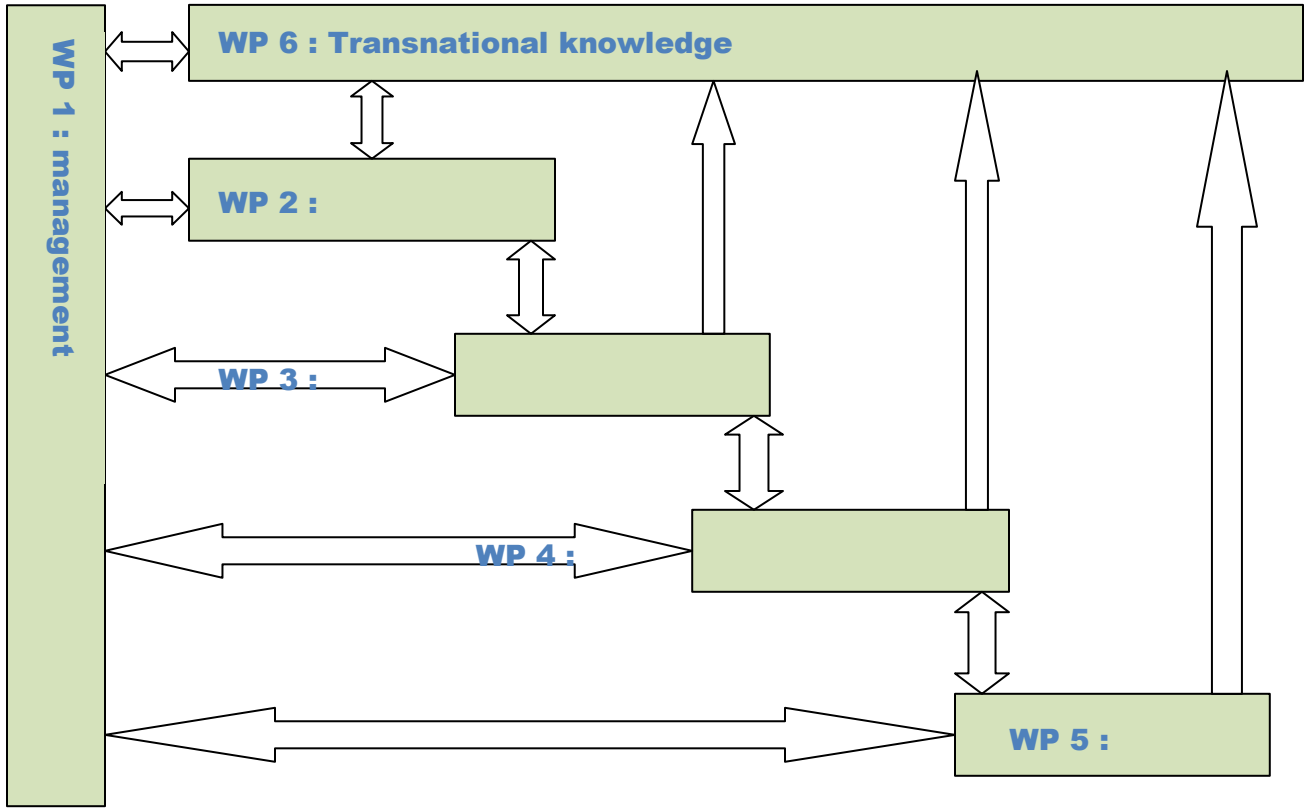
Partners from 11 different countries.

3a. Intended consortium (participant names and profile) – List of the European partners (name, address, legal status) already in the consortium and who are you looking for? **3b. Target groups:** – Actors who benefit from the results of your action, now and in the future. **3c. Key actors (if possible):** – Actors whose involvement is essential to achieve the results of your actions.	**3B. Target groups** • Public sector has been identified as a sector that needs to set an exemplary role in the implementation of energy efficiency measures (Directive 2006/32/EC) • daring and innovative SMEs that go along with new renovation techniques • architects to develop new materials and construction methods for renovation • Energy agencies or municipalities and cities who are closely involved in the management of protected monuments, buildings and cultural heritage

4. Objectives of the proposed action - Specific objectives of the operation (during the action): - Strategic objectives (for the longer term – to 2020)	• To develop new methods and measures to implement refurbishment for the energy efficiency of historic brick buildings without destroying their cultural value. • To develop new technical solutions for refurbishment • develop new methods for recycling of energy and not only the most obvious such as solar energy, wind energy • we want to renovate energy consuming buildings to nearly zero energy buildings so the CO2-emissions will greatly reduce • upgrade the knowledge of craftsmen, architects and engineers • capacity building activities to facilitate SME's in the energy/environment sector to provide services in this field adressed to the public authorities managing this buildings • a tool for an investors system to pre-finance these services • development of innovative systems saving energy in heritage buildings (fe - lighting based on mirrors, vacuuminsulation, use of district heating systems, and so on.
5. Budget (if possible) – Total budget of the project (in EUR) – Budget requested from the Commission (in EUR)	???

6. Brief description of the Work program (if possible to be structures in work packages as follow)

- Work packages
- 1. Management
- 2. …
- 3. Communication
- 4. Dissemination



	WP 1 : Management (WP - Leader : Thomas More) **Objective :** The lead partner (KHK) will organise the project coordination in intensive consultation with all partners but in an efficient and clear way. Therefore a 6 monthly project steering group (PSG) with a representative of all partners will monitor the global progress of the work plan and budget. Partners will also exchange experiences and contribute to each others local actions during work shops linked to the 6 monthly PSG. The PSG will organise a mid term evaluation to make some adjustments to the work plan and/or budget and a final evaluation to make overall conclusions on the partnership, the project results and the continuation after the project duration. The lead partner is responsible for accurate reporting to the IEE programme and for the distribution of grants to the partners. If any irregularity should happen the lead partner is responsible for the reclamation of the already received grants. The lead partner will make a partner agreement to be signed by all partners with clear appointments on the respective roles and obligations. The lead partner (KHK) will work in a intensive consultation with the partners but with clear appointments and an efficient working method. The project steering group (PSG) will have 6 monthly meetings with a formal representative of each partner and coordinated by the lead partner. In between the lead partner will organise on regular base teleconferences or skype talks with all or with some partners to discuss some critical points which seem to delay the project execution. The PSG will : - monitor the progress of the work plan and budget - approve the progress reports to IEE, - prepare the mid term evaluation and the final evaluation - decide about every important issue regarding the formal aspects of the project **Description of the work :** Task 1 : administrative management Task 2 : internal communicatio Task 3 : organization meeting's **Deliverable :** - Roadbook - Web page

WP 2 : Evaluation and selection (WP Leader ???)

Objective :

In this first workpackage we make a categorisation of monuments and cultural heritage. That is defining different categories of monuments and cultural heritage. This categorization will be completed during the start meeting.

An example could be :
categorie 1 : total renovation with also a new target for the building (public building)
categorie 2 : like categorie 1 but on a smaller scale
categorie 3 : Buildings for continu living

An other example :
a classification according to:
- Religious heritage
- Industrial heritage
- Housing heritage
- Cultural heritage

Each partner will select at least 5 buildings. There must be a strong intent to renovate three of these buildings. This intention is confirmed in a letter of interest.

The preparation of lists including listed buildings and monuments, these lists contain the current energy, the energy performance coefficient, the potential energy gains, the estimated cost.
This list will be updated during the project, so that we - at the end of the project - have list per county an overview of monuments and protected buildings and their energyconsumption.

Task 1

Statistics and figures of energy consumption of (that defined) built heritage. Thereby it will be possible to find potential savings and compare to the whole building stock.
We use the calculation methods for the energy performance of building for comparison.

Task 2

Models for decision-making processes before starting energy efficiency measures in built heritage/historical buildings.

This model provides an overview of the costs and benefits for the renovation searching for solutions with EPC (energy performance contracting)

each partner deliver a 5 buildings that we can use as a case. In 3 buildings/partner we realise some energy savings during the project. There will be a list from the different buildings, the possible energy savings, the air thickness,

Task 3 : Literaturstudy
There are already several fine examples of innovative renovations. By a literature study each partner will make a top three of the best practices from their region, so we obtain from the 11 partners the 33 best practices. This project seeks to do better than these examples by achieving a nearly zero energy home or even better by delivering of a positive energy house

Deliverables :

A report of the 33 best examples with a description of the already used technics

a report of the opportunities that these buildings can obtain after completion of our project. Comparing the current EPC (energy performance certificate) value, and those that can be obtained after a re-renovation with the techniques discussed in our project

WP 3: Technical workpackage

Today the starting positions for a refurbishment are not yet analysed comprehensively enough. The implemented measures are based on theoretically calculated values (heat transmission) and ignore the reality. It is necessary to enforce more practical analysis of existing buildings than theoretical calculations. A prime consensus in the work package could be "first thinking, than implementing".

Several local governments are owners of monuments and protected buildings with high energy costs.

These local authorities are asking for this project. They want, through this project, decisions about the future of these buildings, which renovations carry out first, which costs this brings with it, what profits are associated ...

Several monuments and protected buildings are also empty because local governments fear the high renovation costs (which is a one-time cost) but they are afraid of the annual high heating costs.

We give this protected buildings give a new function for public use, exhibit space, conference room, ...

Task :
From the buildings, made of workpackage 1, we will visit some of the buildings with the partners. During a session brainstorming we will search for new innovative ideas. By combining various experts in their fields (architects, energy experts, administrators of buildings, ...) we arrive at new and innovative solutions. These solutions are used in the visited building and the result is viewed.

Task :
search for new innovative examples eg heat accumulating stones for floors. Search for new innovative techniques that go beyond vacuum insulation, specular reflectors, heat pumps, ...

WP 4: evaluation of energy savings as a basic for third party financing

an important workpackages will be the measure of the energysavings. Therfore we will use the International Performance Measurement and Verificaion Protocol (IPMVP).

The framework provided by IPMVP has become the industry standard for savings verification. During the project we'll organise a course regarding this verification. It will be given trough a certifed teachter (Sven Wuyts - Factor 4), It's a two and a half day course followed by a test. This protocol is very important to convince energy saving companies (ESCO's) to invest in the renovation of monuments. Through this project the IPMVP-protocol will be upgraded in Europe. Through this project different energy auditors will have a updated of their acknowledge of energy savings.

WP 5 : effect on refurbishment on thermal comfort and energy use :

A questionary will be generated and completed by inhabitants of the building. Possible questionaries are :

- Thermal comfort bevore and after the renovation

WP 6 : Transnational knowledge exchance

Tasks:

1. Elaboration of training materials

The task leader will develop a set of training materials and will schedule the course for the project consortium. The materials will be prepared as a hand-book in English and then translated by all partners into their local languages as well as an e-learning book that will be uploaded onto the project web-site. The Lead Partner (Thomas More) has already experience with developing a blended learning system. Results can be found on www.hvac leren.eu. This experience has been gained in an Interreg project for HVAC-technicians and a second project about hydrogen projects.
The task leader browsing which courses have already been organized from other IEE projects and examines the possibilities for cooperation Different visits to existing renovations are part of the training programme. The training programme for all partners will be updated during head-to-head meetings with additional expertise provided by every partner, with particular interest on the specificity of the different partner areas. The final result of this train-the-trainer week is the outline of a specific training programme for each partner area and an agreement on the contributions of (some) partners in each training programme of the partner areas.

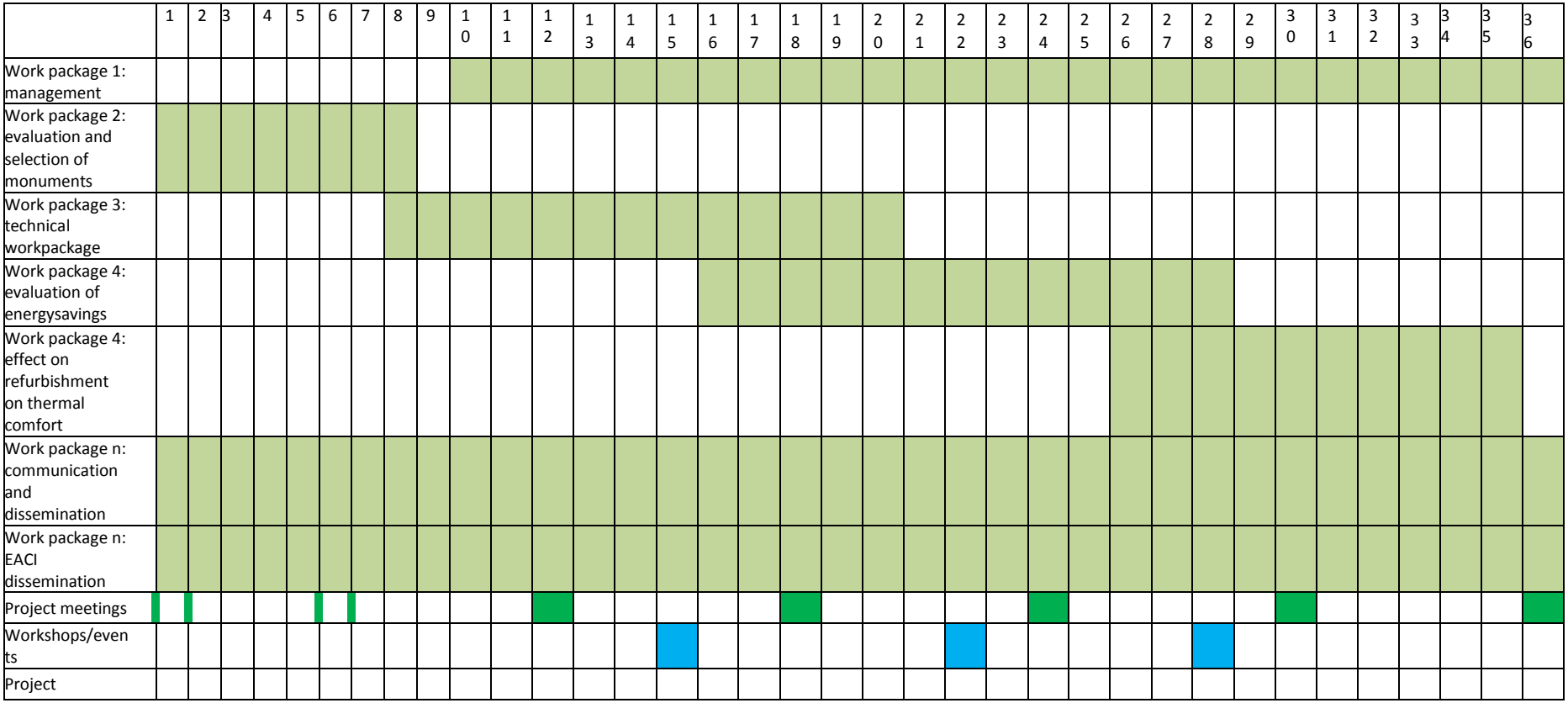
2. Training programme in each partner area

Each partner is responsible for training his regional consortium supported by some other partners. Actions that will be taken into account are assessing the implementing of new innovative renovations techniques, formulating a viable action plan that provides solutions to remove the barriers and finally a business plan
that will provide the necessary tools for the regional consortium to build and manage a renovation site

	3. Further deployment of transnational experience at local level (Task leader – REAP) The aim of this task is to transfer the knowledge that has been achieved by partners during Task 2 to the target groups and key actors of involved partner regions. Each partner who passed the course of the second task will have to organize a local workshop in his/her respective region. There will be at least 30 participants in each regional workshop (at least 150 attendants for the whole consortium) that will be primarily representatives of local/regional authorities, companies of the food industry, agricultural sector and local business. REAP, as a leader of this task will prepare a summary report of all local workshops. Bilateral meetings at local level between partners and above mentioned target groups will be performed **WP 7 : EACI dissemination activities** **Description of work:** The work package covers resources to contribute, upon request by the IEEA, to common dissemination activities to increase synergies between, and the visibility of IEE-supported actions. **Tasks:** **T1.** Contribution, upon request by the EACI, to the development of information material (Intelligent Energy News Review, videos, images,…) as well as inputs to European portals and databases in the quality and form specified **T2.** Participation and/or contribution, upon request by the EACI, to information, training and dissemination events so as contractors' workshops, conferences, briefing days, exhibitions, etc.) related to Intelligent IEE or other relevant EU programmes **T3.** Delivery, upon request by the EACI, of an update/ further input of the action's contribution to the "IEE Common perfomance indicators" **Outputs of this WP:** O 1. delivery of agreed presentation materials and media tools O 2. participation in events such as contractors' workshops, conferences etc. **Deliverables of this WP:** D 1. to be agreed specifically at the time of request D 2. set up of updated IEE Common
7. Deliverables	- Roadbook - Web pages - A report of the 33 best examples with a description of the already used technics - a report of the opportunities that these buildings can obtain after completion of our project. Comparing the current EPC (energy performance certificate) value, and those that can be obtained after a re-renovation with the techniques discussed in our project - Tool to calculate the costs and the benefits for a renovation

-	Upgrading the IPMVP-protocol for ESCO's
-	Course materials

8. If possible: schedule of activities (example of timetable, please modify as you wish)



information sheet & slides to EACI																																		
Project webpage/site creation and update																																		
Project deliverables																																		

- **Duration of your project in months (compulsory):**

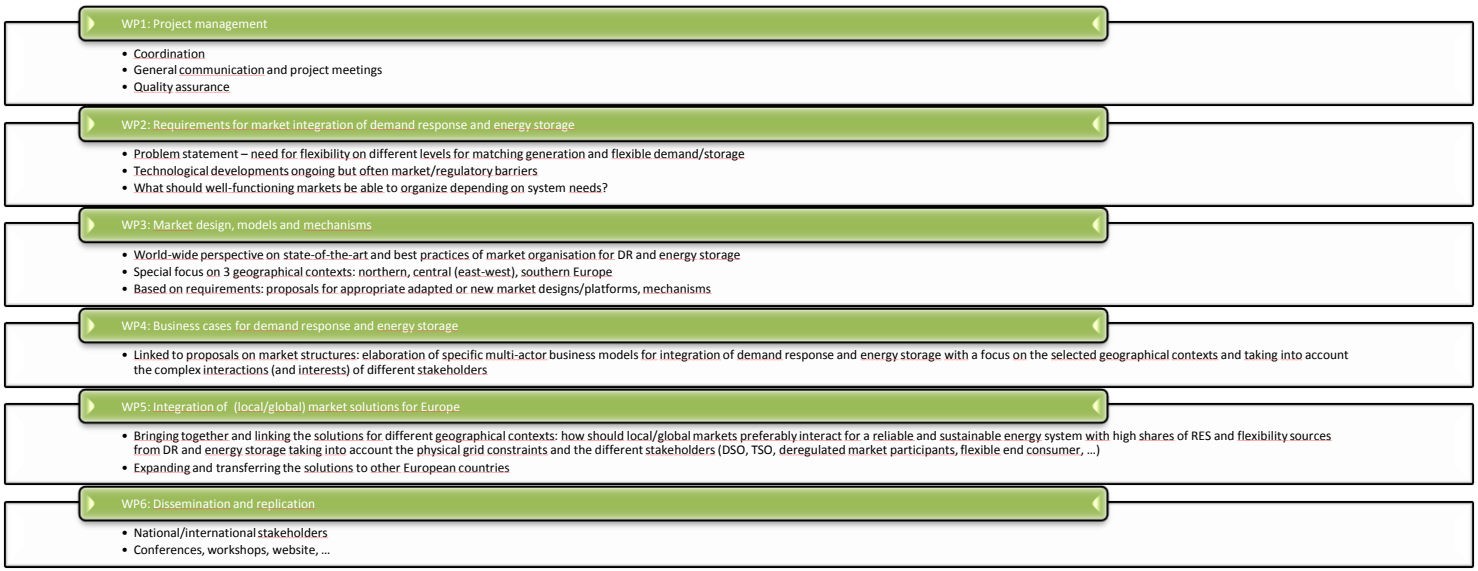
9. Impacts and performance indicators	
10. EU added value – Evidence of the benefit of EU collaboration – Geographical focus – transferability	

IDEA 11 – ERRIN Development seminar – 20/03/2013

Contact details – Organisation/institution – Person responsible for the project (name, telephone, fax, e-mail address):	Energyville Boeretang 200 B2400 MOL Belgium Daan Six +32 14 33 58 47 Daan.six@energyville.be
Priority call 2013	ALTENER - RESe
Proposed title	Markets for Flexibility and Intelligent Operation of Storage Options
17. Proposal summary (abstract) – Brief description of the operation/activities proposed – General objective of the operation – Major outputs and expected results	The focus will be in the first place on the actions on grid issues: - Facilitating dialogues and exchanges of best practice on transmission and intermediate voltage grids and electricity market-related measures which aim to enhance flexibility and deliver large-scale integration of electricity produced from renewable energy sources across the EU - Actions addressing market barriers and promoting best practices for increasing the deployment of small scale of renewable electricity generation connected to distribution grids (including smart solutions, demand response and electricity storage (volume and time)), taking into account the most economic and environmental solutions In general, the objective will be to provide solutions on market structures, design and mechanisms to remove current market barriers for integration of flexibility provided by demand response and energy storage. A proper integration of DR and energy storage is needed to prepare the grid for the integration of massive amounts of electricity generated by

	intermittent Renewable Energy Sources. In addition, a number of business model for flexibility integration (offered by Demand Response and/or energy storage) will be explored and validated with the proposed market solutions. A secondary objective (to be agreed, depending on the level of ambition and to be verified with EC) is to linked to the actions on innovative mechanisms, schemes for public involvement and acceptance and potentially needed support schemes: the proposed market structures and business models could reveal the need for new (innovative) support schemes or for adaptation of current schemes blocking the potential of demand response.
18. Current situation in the target countries/region	. Three countries (Northern, Central and Southern Europe) are being selected. They represent different climatic conditions, varying extents of penetration of different types of renewables and different models of energy markets.
– – **3a. Intended consortium (participant names and profile)** – List of the European partners (name, address, legal status) already in the consortium and who are you looking for? **3b. Target groups:** – Actors who benefit from the results of your action, now and in the future. **3c. Key actors (if possible):** – Actors whose involvement is essential to achieve the results of	**3a**. Energyville Smart Energy Demand Coalition *Negotiations are ongoing with additional players.* **3b.** Final consumers through more transparent price setting and market participation Grid operators through enhanced grid balancing Energy agencies through increased and cheaper penetration of renewables **3c.** TSOs DSOs Renewable Energy Industries Energy agencies of the target countries Energy market operators Actors with knowledge on evolving market models and their effect on consumer participation

your actions.	
54. Objectives of the proposed action - Specific objectives of the operation (during the action): - Strategic objectives (for the longer term – to 2020)	Specific Objectives - Clear statement of the requirements for energy markets to provide flexibility for matching demand with supply and storage - Overview of the state of the art on market design, demand response and storage; with application to the selected areas - Proposals for market models and multi-actor business models for integrating demand response and storage, with a focus on the selected areas - Translation of models and findings to other European countries/settings - Active dissemination of results to the general public and through specialized networks Strategic objectives - Creation of integrated markets (or even a single pan-European market) for flexibility
55. Budget (if possible) – Total budget of the project (in EUR) – Budget requested from the Commission (in EUR)	To be defined, as a result of the ultimate scope (see above). Rough estimate: 2 – 2,5 million

56. Brief description of the Work program (if possible to be structures in work packages as follow) – Work packages – 1. Management – 2. ... – 3. Communication – 4. Dissemination	
57. Deliverables –	

58. If possible: schedule of activities (<u>example</u> of timetable, please modify as you wish)

Phase/Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	...
Work package 1: management																			
Work package 2: name																			
Work package 3: name																			
Work package 4: task 4.1 name																			
Work package 4: task 4.2 name																			
Etc...																			
Work package n: communication																			

Work package n: dissemination																			
Project meetings																			
Workshops/events																			
Project information sheet & slides to EACI																			
Project webpage/site creation and update																			
Project deliverables																			

- **Duration of your project in months (compulsory): 36**

59. Impacts and performance indicators	- # of consumers with access to a flexibility/capacity market
60. EU added value – Evidence of the benefit of EU collaboration – Geographical focus – transferability	EU value added - Energy and flexibility markets need to be cross-border to effectively provide balancing services at all levels - Integrated markets imply similar prices and market access conditions for consumers all over the integrated zone - EU energy and climate policy is more uniformly and efficiently enacted via integrated markets Transferability - Three focus areas/countries represent three archetype situations in Europe - Work at the level of networks like eegi, EtP SmartGrids, EASE, SG task force and the SEDC ensure increasingly parallel frameworks in different countries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