

EMILIE

2nd CAPITALIZATION MEETING

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Minutes

LP AREA Science Park	Fabio Tomasi (FT), Elena Banci (EB), Anja Starec (AS),
PP 2 Instituto Andaluz de Tecnologia (IAT)	Pablo de la Rosa (PDLR)
PP 3 CAPENERGIES (CAP)	Vincent Morfouace (VM)
PP 4 Jožef Stefan Institute (IJS)	Jure Čižman (JC)
PP 5 Foundation CIRCE (CIRCE)	Miguel Marco Fondevila (MMF)
PP 6 Regional energy agency Kvarner (REA)	Darko Jardas (DJ), Lea Perinić (LP) Andrej Čotar (AC)
Central European Initiative (WIDER project)	Slavena Radovanovic
Energetski Institut Hrvoje Požar (REPUBLICMED project)	Margareta Zidar
EURAC (SMARTBUILD project)	Federico Noris
Port of Rijeka Authority (GREENBERTH project)	Rajko Jurman Sandra Juretić Mario Aničić
Slovenian Chamber of Commerce	Jože Renar
Friuli Venezia Giulia Region	Gustavo Zandanel
City of Rijeka	Suzana Belošević
Intermodal Transport Custer	Dražen Žgaljić Marijan Čukrov

Objectives and Methodology

In the frame of the second Capitalization Meeting of the EMILIE project, after a brief presentation of all the projects involved, an interactive workshop was designed to foster the share of ideas, knowledge and know how among the participants (both project partners and other projects representatives).

The objectives of this workshop are:

1. SWOT analysis on “Energy Efficiency Building potential market”;
2. Identification of the barriers that prevent the introduction of innovative solutions in the construction market;
3. Identification of solutions able to overcome these barriers.

The above mentioned issues are crucial for the definition and implementation of the EMILIE capitalization strategy as well as for the other projects and stakeholders participating to the meeting. The participants were divided into three working groups each one 5 or 6 people strong. All of the three tables discussed the first topic for about 25 minutes. At the end a referee from each table presented the outcomes of the discussion in order to share them also with the participants to the other tables.

After these presentations were over people shuffled among the tables and the process described above replied for the second and third topic. The reshuffling of the tables gave to all of the participants the opportunity to speak and share their ideas with all the people attending the meeting.

1. SWOT analysis - Energy efficiency Building potential market

<p>Strengths</p> <ul style="list-style-type: none"> • Now the market is ready for energy efficient technologies • There are many established as well as new promising technologies • A lot of data on savings potential are now available; • The implementation of several European and national legislation supporting energy efficiency in buildings (EEB) and renewable energy sources (RES) will push the EEB market • SMEs are flexible to adapt to the new market requirements • Public awareness and attitude on environmental issues and EEB improved significantly in the last years. 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Most of the existing building stocks is not in good shape (<i>this is also an opportunity</i>) • The economic crisis hit dramatically the construction sector in the MED area (especially new building). • The economic crisis is preventing people from investing in building energy efficiency (retrofitting); • Most of the common citizens are not able to assess the exact benefit of energy efficiency. • Lack of customer’s knowledge about the use of not conventional HVAC systems and NZEB. • Unskilled craftsmen to install the most advanced EEB technologies • Lack of planners/designers able to integrate together different energy systems • Decreasing number of young students studying technical subjects related to EEB; • SMEs cannot easily access to some promising construction markets since they are dominated by large players; • Construction sector is not open to innovation; • Complex rules and regulations related to EEB and RES (permits, grants, subsidies etc,) create barriers to the market.
<p>Opportunities</p> <ul style="list-style-type: none"> • Large number of buildings need retrofitting; • Large saving potential lies still on a better management of the existing buildings and HVAC systems requiring just minimal investments; • Increased electricity prices trend in the long term will improve EEB appealing • New EU directives are supporting building retrofitting • Availability of European funds, several subsidies and tax benefits supporting EEB and RES (constancy is more important than quantity); • New financial schemes are establishing in the market (the most promising is ESCO); • Technologies targeted to specific climate or locally available resources are emerging; • Several technologies are getting more and more common and, due to scale economies, their prices will drop resulting in a wider use and in a larger number of building retrofitted; • EEB investments will lead to the local creation of new jobs in the long term; • Clusters focused on EEB are arising • The electric market integrates several RES sources • Electric market liberalization will reduce energy prices • In the MED new members countries there will be new regulations (like the building energy certificate) and new funds that will boost the EEB market • Ageing is an opportunity to create flats tailored to the needs of semi and not independent elderly people including demotic application and EE solutions; 	<p>Threats</p> <ul style="list-style-type: none"> • EEB National plans require a more constant flow of funds and monitoring of impact • Reliability of efficiency and ROI estimation in regard to several EEB technologies is still not good, hindering the diffusion of the ESCO system • Subsidies RES are or will be cut due to the spending review carried out by most of the MED countries. The uncertainty on the availability of the subsidies prevent companies from investing in EEB • The cost of fracking is getting down reducing the price of oil and so threatening RES • EEB and RES require long term projects and investment, but long term projects do not win political support and social acceptance • Unpredictable energy prices trends in the short term; • Increasing competition from South East Asia countries

2. Barriers that prevent the introduction of innovative solutions in the construction market

Financial

1. Lack of funds (instable state funding)
2. General lack of trust on politicians and public funds
3. High price of new (innovative) technologies → long payback time
4. Reluctance of financial institutions (banks) towards specific funding schemes for EEB (e.g. ESCOs)
5. Too much complex procedures regarding access to funds
6. Lack of available capitals and uncertainty on market trends due to the economic crisis prevent investments

Administrative/Regulatory

1. Too much complex bureaucratic procedures (permits, licences etc.)
2. Lack of know-how on energy monitoring and management (both among private citizens and public sector)
3. Lack of skilled craftsmen, installers and designers in relation to EEB: the educational system is not able to train and update properly designers and craftsmen as well as providing enough refresher courses
4. Best practices are not enough promoted, capitalized and replicated
5. Risk of higher insurance fees
6. Ineffective/insufficient regulatory framework concerning implementation of emerging EE technologies
7. Low acceptance of long term planning and projects

Technological

1. Research and industry do not ‘speak the same language’
2. Lack of simulation tools for reliable prediction of possible savings
3. SMEs and designers are reluctant to integrate innovation: they are focused just on implementing single construction jobs
4. Data from energy monitoring systems are not user friendly

Social

1. Lack of awareness on the cost of energy inefficiency
2. Customers are not able to assess properly the potential of energy/money savings
3. Customers do not trust emerging technologies
4. Customers are not used to not conventional HVAC systems or NZEB and are not able to use them properly
5. It is difficult to explain the benefit of EEB to the customer
6. It is costly to demonstrate the innovativeness of new technologies and their benefits
7. It is costly and difficult to convince customers in purchasing new not yet diffused EEB technologies

3. Solutions to overcome the previously mentioned barriers

Financial

1. Targeting the actual consumer needs
2. Support of implementation of demonstrative projects (creation of ‘success stories’) → Replicating successful business models
3. Public buildings as examples for market acceptance
4. Fiscal benefits and subsidies should be maintained and their availability in future should be clarified in order to win investors trust
5. EU products should be granted higher incentives rate if this doesn't infringe regulations and agreements on international trade
6. Incentives for ICT and demotic applications to improve EEB
7. Public ESCOs should be created
8. Fiscal benefits and taxes arranged by the level of EE in the building
9. Public investments in new tech and R&D
10. Simplify access to funds

Administrative/Regulatory

1. Access to (external) demonstration facilities
2. Include innovative and updated programmes into school curricula in order to create new expert profiles (specialists)
3. Targeted awareness campaigns
4. Fostering the creation of clusters including PA, R&D centers, Companies in order to exchange best practices and promote synergies
5. Increase the number of skilled building workers by addressing the gap in knowledge and skills in the construction sector, upgrading or establishing large-scale qualification and training systems
6. Enhancing the capacity of public authorities to plan and implement sustainable energy policies. Empowering public authorities to plan, finance and implement ambitious sustainable energy policies and plans. Especially sectors with high energy saving potential
7. Public procurement of innovative sustainable energy solutions. Reducing barriers to sustainable energy public spending through e.g. sharing best practice and involve central purchasing organisations
8. Empowering stakeholders to assist public authorities in the definition and implementation of sustainable energy policies and measures. Projects to target specific actors among stakeholders (utilities, industry, financing institutions, non-gov. org., consumer associations, interest groups, trade unions...)
9. Public intervention should be focused on the market: ESCO is the most appropriate solutions since it is in line with market rules. Public sector should support the ESCO by providing clear regulations, using it extensively for the management of public buildings and providing guarantees for investments made by ESCO
10. Public demand should foster new technologies
11. Government should launch long term energy plans
12. Monitoring of energy performance of public building should become mandatory
13. Simplification of bureaucratic procedures

Technological

1. Manufacturing of prefabricated modules for renovation of buildings: Lower cost, ease building integration process, and lead to reduction in total buildings primary energy consumption. Mainly demonstration activities
2. Energy strategies and solutions for deep renovation of historic buildings: Innovative, affordable, non-invasive, reversible solutions to deliver significant improvements in energy efficiency. Insulation, monitoring technologies and systems, integration of renewables etc
3. Demand response in blocks of buildings. Cost effective, real time optimisation of energy demand, storage and supply in blocks of buildings with the help of intelligent energy management systems
4. New ICT-based solutions for EE. Motivate and support behavioural change to achieve greater EE taking advantage of ICT. Creation of innovative IT ecosystems that can develop services and applications making use of information generated by energy consumers or collected from sensors and micro-generation
5. Testing technologies in the long term
6. When testing new technologies an assessment of the costs of the whole process should be carried out

Social

1. Designers should focus on real users before planning
2. Performance contracts (commitment to results)
3. Actions aimed at the creation of specific buildings for elderly people (EE and domotics applications)
4. Improve energy management of buildings (public and private)