Summary Expert Meeting e-harbours

This short document summarizes the main findings of the expert meeting that was organized in Antwerp on January the 21st , 2014.

Present:	*Main interests:*
Guy Vekemans (Vito)	Energy strategy, Smart Cities. Moderator
Gerrit Buist (University of A'dam)	Juridical and financial aspects of energy
Yves de Weerdt (Urban Europe)	Energy transition, the city as a source of change, sustainable cities
Stefan Smets (KIC-Innoenergy)	Innovation and start-ups
Sander Kooistra (e-harbours)	Report

Written input:

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General observations

On the basis of the material collected in the showcases, the experts state:

- Even very large companies, with a huge energy consumption, still seem to lack the expertise to make a full use of the opportunities of energy integration. In many cases, the staff is only limited. Where experts are flown in, this mostly concerns technology experts. Energy is time and again perceived as a techno-economical problem. The showcases in Antwerp and Hamburg, on the other hand, show convincingly that technology is not the restricting factor, in many cases it is the social and commercial embedding that raises the threshold.

- At the same time we can conclude, that the price of energy really begins to weigh in the competition between countries, harbours and industries. How then is it possible, that the urgency still is not percieved? The awareness and specific impact for industrial energy end-users needs to be continuously quantified and enhanced.

- We see two types of initiatives that could further increase the impact of the results within e-harbours.

  First, aiming at daily practices: look for support from bottom up, the cases are ready and available, they just have to be put to practice. That asks for organisational power, both economic and social.

  Secondly, aiming at transition: we need to change the framework in which the stakeholders think. That asks for a different type of initiatives, directed more towards an exchange between stakeholders, for example using a knowledge platform.

- Local initiatives form the key to change, also for changes on a supra-national level. The change comes from bottom up. When initiatives can flow together, they will become more effective. The technology is available. Enable stakeholders to make their own arrangements,

facilitate that, avoiding conflicts of interest. The e-harbours activities in the Municipality of Zaanstad have illustrated how this can be done.

- Finally: You do not have to be the owner of the business to change things!

General remarks on the showcases

1. The business cases form an important tool to convince stakeholders. In this context it is important to adopt a professional approach in developing the business cases. E.g a clear overview of benefits and investments should be developed, where feasible also on a multi-stakeholder level (since in this specific field of energy matching the costs of an action can be attributed to one stakeholder, while the benefits are credited to another party). When this clear overview is presented, the business cases can act as an inspiration to other parties.

2. The show cases offer an interesting mix of value chains. In this context it is relevant to present more information on the value chain, that is the focus of the showcase. Indicate where the hidden costs are located, and where the hidden revenues land. Present a list of factors for success, that make clear what is the *roll-out* potential of the business case. For example, discuss the critical mass needed to achieve viable business cases: the number of electric boats that can produce a smart transport business case, the number of reefers that is needed to make the combined flexibility they can offer profitable.

3. Replication will remain a difficult issue anyway, since it appears from the showcases that an individual evaluation of demand side management is necessary due to the different types of flexibility, processes and consumption patterns that were encountered in the different industries.

4. *A lot of project approaches start from a technological point of view (they are 'framed in a technological way'). When you can place a showcase into a wider framework (like 'sustainable tourism' or 'sustainable mobility') new chances appear. "Reframing could greatly enlarge the effectiveness of the business cases, since it brings other value chains within reach."*

5. The showcases offer a good basis for exchanging experiences. Assuming that the number of show cases in the field of smart energy systems and flexibility will grow during the next few years, an interesting platform might be attainable. It would be beneficial if some organizations join forces to organize this exchange.

6. e-harbours is not a technological project, it is a project of users. It is about the mutual arrangements that users can make. The key question is: How to organise this? Each country has its own specific background, but sufficient legal tools are available to come to agreements between stakeholders; the legal instruments therefore should be considered as an asset, rather than a barrier.

7. In presenting future show cases it is necessary to make a very clear distinction between (energy) efficiency and flexibility. Sometimes they will be in line, sometimes they will not. Also the measures linked to energy efficiency on one side and flexibility on the other side can be significantly different.

Conclusions on each show case (based on the e-harbours reports 3.5 and 3.7, filed by the showcases)

Amsterdam:

- This showcase concerns only one industry (boating), that makes the project clear-cut and easy to 'sell' to policy makers.

- The savings potential is huge. The main challenge is finding the actors that dare to take the first decisive step.

- The business case of the canal cruise boats in Amsterdam shows what happens when you propel the boats in a different way. That is a strongly technology driven 'frame'. It might be beneficial to place this action in a broader framework (e.g. sustainable tourism) in order to open up new perspectives and opportunities.

Antwerp:

- This is clearly a showcase in which large companies with long-term contracts are decisive.

- In this type of showcase the impact of large energy companies is an important regime element, determining the pace of progress. It is difficult to change ingrained patterns, everything has to change, even the way the bookkeeping is organized. In this case, too, economic and social considerations play a larger role than technological factors.

- Although the business cases are in still in their preliminary phase, the showcases make clear that the Antwerp harbour offers chances for 'business creation' – when there is an initiator, a businessman that effectively wants to tackle the business case. Who will become the energy brokers in the Antwerp harbour?

Hamburg:

- In this case, too, large industrial companies are involved. The Hamburg showcase clearly demonstrates that each case has an unique character. Every organization has its own users profile, and needs a special treatment, whether it is flexibility we are looking for, or energy savings.

- In this context the question remains whether we can produce a 'generic case', a sort of average of all local cases, that makes visible what the drivers of the business case are, and what exactly makes the case viable in a business sense. Probably more comparable showcases are necessary to arrive to this point.

- In the Hamburg showcase the phenomenon of flexibility has been analyzed quite extensively. This detailed evaluation of flexibility is a key issue since flexibility has a lot of different quality aspects: time scale (concerning seconds, minutes or hours), control level (automatically disposable or operated by hand), type of energy quality (power, kWh,…)

Malmö

- In this project the individual consumer has an important role, this also requires an active involvement of the end-users. Living labs should develop this part extensively, taking into account social analyses (e.g. rebound effects).
- The conditions for scaling up for these type of projects remain a continuous challenge.

Zaanstad
- This is a good example of starting small, and ending up somewhere else than you had imagined beforehand. In the showcase, a sort of cascade of ideas has originated.
- The interesting concept of REloadIT, although started on small scale, offers opportunities for scaling up. At a certain point in time a bottom up approach (however valuable) needs to be completed with additional actions (also social) to realise this scaling up.

Next steps – suggestions and remarks

- e-harbours has provided a very valuable starting base for an experience platform that could be developed further on EU level.

- In addition the business cases as investigated are ready to be developed further into specific business trajectories. Clear chances for *business* creation are present, on the condition that an entrepreneur takes the initiative to realise them. A first step in the follow up of the E-harbours project could be to initiate specific business initiatives that have been identified in the project. An institution like Kic-innoenergy already sponsors *startups* in this field.

- *Power to heat* and *power to gas* have a potential in the short run for delivering energy flexibility in harbour regions. This might be an additional innovation line.

- A possible follow up could also be to bring together two (or more) harbours areas , en look at their common energy balance. You could balance between the harbours of Antwerp and Amsterdam, or between Hamburg and Zaanstad. Experiences that show the feasibility of such cross-border approaches could be derived from the Scandinavian NordPool project.

- In the near future the cases should also be placed in a broader framework. Take 2050 as a vantage point. Design a virtual harbour city, and include all the different business cases that have been identified within e-harbours. Then investigate in what value chain you end up, and where the profit can be found.

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