Report: Work Package 3

Executive summary for D3.6: Full description of each project

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Executive Summary

Deliverable aims and objectives

This deliverable, the 'Full description of each project', is a key deliverable in Work Package 3, 'Development of innovative projects'. In this work package the STEP UP partner cities are developing a number of innovative projects based on an integrated approach. The key aim of the deliverable is to develop all aspects of the innovative projects according to regular project development practice, including areas such as stakeholders, economics and Key Performance Indicators (KPIs), but also to detail the development of the integrated approach, the replication potential and the innovation and experimentation concept.

The deliverable is central to the STEP UP project. The projects have been selected from inventories of pipeline projects and identified with the help of the analysis of cross-sector opportunities. The projects are designed to help respond to city challenges and opportunities identified earlier in this work package. In addition, the projects have also contributed to the cities' enhanced Sustainable Energy Action Plans (SEAPs), which have been developed within Work Package 2. The learning of this deliverable feeds into the knowledge exchange process where the experiences of the STEP UP partners are being shared with STEP UP companion cities, those in the wider learning network, and other cities across Europe.

City approaches

In order to present a full description of each of the two projects that the cities have selected, the cities created one project plan for each project. A guidance document was created for the cities to follow, which included all headlines that were mandatory for the project plans.

To find all the required information the STEP UP partners were asked to conduct an interview with the project manager or another key person involved in each project. However, whilst all four cities found the relevant information that was needed, this was not always done through interviews.

The key topics included in the projects plans are listed below. Some of the topics have been selected as they cover typical information required for a project plan, while others are more specific to STEP UP, its objectives and the innovative nature of projects.

- Short description of the innovative project
- Project narrative

- Key events

- Technical aspects/the innovation

- Stakeholder analysis

- The integrated approach and winning elements

- Learning and experimentation

- Time plan

- Impact analysis

- Business model, finance and risk management

- Replication potential

The projects

The six projects are briefly presented in a table with summary descriptions provided below.

Overview of the cities' projects

Project title	Responsible city	Timescale	Estimated energy savings (MWh/year)	Estimated reduction in carbon emissions (tonnes CO_2e/year)
Database for multi-apartment residential buildings	Riga	2008-2017	25,000 – 60,000	4,724 – 11,340
Demand side management	Glasgow	2014-2016	High, but not quantified	Medium, but not quantified
District heating schemes and ESCo	Glasgow	2015-2020	63,578	144
Planning for sustainable lifestyles	Gothenburg	2015-2016	Not quantified	Not quantified
Sint-Amandsberg Dampoort	Ghent	2008-2025	158	15
Smart urban logistics	Gothenburg	2016-2018	432.3	45.9

Database for multi-apartment residential buildings

Riga's *Database for multi-apartment residential buildings* is a technical project where an existing database which stores and provides data for individual buildings on specific heat consumption from district heating will be further developed. It addresses the lack of energy efficiency actions in multi-apartment residential buildings by providing an incentive for residents to increase their energy awareness and to undertake energy efficiency measures. The concept will be finalised in 2017, and will encompass data for more than 6,000 buildings in total.

Demand Side Management

The *Demand Side Management* project from the City of Glasgow is a technical project where new techniques and equipment are introduced in public and commercial buildings in order to reduce

energy consumption and peak loads in the power grid. By enhancing energy efficiency in buildings through optimised control and automated energy management, the project addresses the future dilemma of energy security and supply. The project will be finalised in 2016.

District heating schemes and ESCo

District heating schemes and ESCo in Glasgow is a technical/organisational project, aiming to develop the city's district heating networks through a city-owned Energy Service Company (ESCo). Fuel poverty and CO_2 emissions are targeted by this cross-sector project which primarily integrates the energy, building and waste sectors. Currently, the ESCo is being developed and will be formed in winter 2015. The implementation of the ESCo will be finalised by 2018, but the development of the planned district heating schemes will not be completed until 2020.

Planning for sustainable lifestyles

Through *Planning for sustainable lifestyles*, the city of Gothenburg is developing a new tool which will support the introduction of a novel approach to the urban planning process. The tool is a matrix with the intention of making lifestyle-related issues and climate actions more visible in urban development. Thus, it is an urban planning project that integrates the building, energy and transport sectors. At present, the project is in an early planning stage. It is anticipated that the tool will be finalised in 2016 and used in all larger urban development projects from this time onwards.

Sint-Amandsberg Dampoort

Ghent's urban development/regeneration project *Sint-Amandsberg Dampoort* (SAD) aims to transition an existing district with 30,000 inhabitants towards climate neutrality, with a focus on stimulating energy efficient renovations. The project joins together several sectors – mainly energy, ICT and transport – consisting of a number of actions such as developing a district SEAP, linking and improving tools and techniques and setting up stakeholder-driven pilot projects. The majority of actions are already being implemented, and the remainder will be implemented in a step-wise manner. The timeframe for some actions is 2020, while others have a longer scope.

Smart urban logistics

The City of Gothenburg is planning to introduce *Smart urban logistics* in one of its new development areas. This is an urban planning project combining solutions for waste management, logistics and other services, and therefore mainly integrates the goods delivery and waste collection sectors. It aims to decrease environmental impact through smart resource management, reductions in CO_2

emissions and other pollutants, safer traffic and less noise. The pilot of the smart urban logistics will start in the next three to five years.

Key findings

The projects have been analysed from a range of different perspectives, considering the integrated approach applied, the technical aspects/the innovation, stakeholder analysis, impact analysis, business models and replication potential. A number of conclusions and learning points can be drawn, as summarised below.

Projects in an early development phase

All of the pipeline projects will be implemented between now and 2020. As the projects are in very different phases of development, this has made them more difficult to analyse and compare different projects. Some of the projects do not yet have a project plan, project manager or a project budget, even though the city will implement the project within the period to 2020. In addition, because of ongoing project planning, impacts cannot yet be fully described for some of the projects.

Different nature of projects

The innovative projects which are being taken forward by the cities are all very different from each other. Earlier in STEP UP the projects were divided into two themes: technical solutions for better energy performance; and urban planning solutions for better energy performance. However, it has been found that due to the specific nature of each project, the projects categorised as urban planning solutions do not necessarily have a lot in common with each other; and likewise for the technical solutions. This suggests that it may be more constructive to consider what innovative projects have in common as a broader category, and to focus on how integrated, innovative projects can learn from each other and share useful experiences, despite being focused on different city challenges and objectives.

Different time scales for pipeline projects hampers data collection and learning

The intention of this deliverable was that the innovative projects described were pipeline projects, already being developed within the city but with the potential of being enhanced and turned into an innovative project within STEP UP. The instructions when selecting projects were that they should be implemented before 2020, however the time scales for the projects vary significantly, with some already in the implementation phase and others being further developed and implemented over the coming years. The differences in time scales have made it challenging to gather all of the required information about the projects, and also to compare them and learn from other project approaches.

Replication and learning from other cities

Cities are often very interested in learning from other cities and want to know more about different solutions for urban areas. When cities develop a project, they naturally focus on their own context and replication to others is not a priority. However, successful urban projects can work as a showroom for ideas, with other cities benefitting from shared learnings. As such, the replication potential of the projects has been analysed from different perspectives, and key replication factors for successful innovative projects have been identified; however, this is not something that cities traditionally do when they are developing projects. Therefore this has been a new, and interesting, exercise for the STEP UP cities and could be considered more often in future project development.

Integrated approach among the partners

The integrated approach is crucial to STEP UP and it can be seen that all of the projects being taken forward have a clear focus on the integration of sectors and stakeholders. The projects involve many stakeholders from different parts of society, including public, private and NGOs. In addition, the projects all demonstrate an integrated approach to sustainability, taking a holistic perspective of tackling city challenges and creating opportunities to deliver environmental, economic and social benefits for cities and their citizens. In turn, this helps to contribute to multiple policy objectives within the city, and therefore increases the likelihood of gaining support from stakeholders and politicians.

Stakeholder engagement

Stakeholder engagement is essential for the integrated approach and all the projects in the report have identified engagement with stakeholders as an important factor for the projects to succeed. Stakeholder engagement may look different depending on the context of the project. For some projects, the private sector stakeholders are identified as critical for the project to reach its goals; in other projects, effective stakeholder engagement may rely more on finding a strong model where local authorities, NGOs and commercial organisations can work together. Citizen engagement is also very important for many of the projects, in different ways. Sometimes citizens are directly involved in the project; in other cases the project aims to inspire citizens to change their behaviour.

Strong political support

The discussion of many of the projects demonstrates that strong political support and a long-term focus on environmental issues is acknowledged as very important to encourage organisations to develop innovative projects. This is important when thinking of replication, as other cities need to consider their overall environment when examining projects, or specific aspects of projects, which

could be transferred and adapted to their city. Having strong political leadership and support for the initiative can be critical to its success.

Information gaps

It is not always the case that project development within a city is preceded by an investigation where all the data of the project is described and analysed. If there is sufficient commitment, a project can be put into action without all the information, such as impact and finance, yet being clear. For bigger investment projects, financial plans are developed, but for smaller projects this may not be the case. When trying to understand, analyse and even compare the projects, the lack of information has been a problem, and is a challenge that cities will continue to tackle as they go forward with strategies for addressing knowledge gaps suited to their project context.

Limited experimentation or testing

One important part of the innovation process is to test ideas, gain feedback and further develop the projects. However, for the projects discussed within STEP UP, the cities have not provided much information about testing and experimentation, indicating this is an area for the cities to focus on as they continue to develop their projects going forward. If a project starts small-scale the project can be tested and developed during the execution phase. Such an approach then allows for learning from mistakes, which can be an important factor of success.

Key recommendations

A number of recommendations were made for good project development earlier in the STEP UP project. These have been reviewed and built on as the cities have continued to work on developing innovative projects over the course of Work Package 3. These recommendations may be relevant for urban development projects in general, both for STEP UP partners and for other cities and organisations that aim to develop integrated, innovative projects, serving as guidance in the early stages of project planning.

- Start off small
- Build in an integrated, innovative approach early on
- Build on existing initiatives
- Think cross-sector
- Secure long-term political support
- Collaborate and engage with stakeholders

- Explore different funding sources and business models

- Ensure contribution to multiple policy objectives

- Monitor project information and data, evaluate and review your project

- Document progress, engage in peer learning and understand replicability

- Communication matters!

- Learn from mistakes

These recommendations are shown to be relevant to the innovative projects analysed, with some further clarifications and additions detailed below.

Document project information and progress. An innovative project is something new, and it is important to know that the project is following the roadmap of the idea. Cities should document the main ideas and the key factors of the project as this is important both for the project itself but also for new projects to build on.

Documentation is also relevant when it comes to replication and maintaining up to date project information. Replication of initiatives in other cities is rarely a priority for cities; yet, innovative and effective projects can be a good means of sharing learning with others. If there is good documentation of project information, learnings will be more valuable and easier for cities to understand. This also makes it easier for the same city to learn from the project if a similar project is implemented later, and overcomes any challenges relating to staff changes, preventing knowledge from being lost.

Gather data and use indicators to monitor project performance. Data and Key Performance Indicators are important for monitoring a project. If projects lack monitoring, then it will be difficult to evaluate successes. Monitoring does not necessarily need to be numbers, finance and statistics only; a qualitative approach can be relevant and can be combined with quantitative facts for more comprehensive monitoring.

Monitoring and data are also linked to replication. If a project can show that it is a success, the replication potential is much higher. When there is both data and documentation of a project, cities will benefit from being able to evaluate and review the project easily, and then further developing it for a better result.

Test, experiment and learn from mistakes. Talking about innovation means that there is a new idea, new process or a new solution that is going to be tested. For the STEP UP cities, and other cities looking to develop innovative projects, the cities themselves are the living labs in which innovative projects are tested. The idea of innovation is to start small-scale, test the idea and then evaluate and further develop the project. This can be a long process of small-scale testing and experimentation with a lot of mistakes along the road, but this should not scare the innovators as mistakes are one step on the road to success.

To achieve this, innovative organisations should encourage testing, experimenting and learning from mistakes. Talking about and sharing mistakes will also raise the replication potential of initiatives, and support better impacts over the long-term.

Collect knowledge about the stakeholders and communicate with them. With an integrated approach it is common to have many stakeholders involved in projects. They can represent different sectors, backgrounds and have different areas of expertise in the project. They may also have varying opportunities to join the project in terms of size or type of organisation, time and resource availability. For sound project management, take time to understand the priorities and interests of stakeholders and communicate with them in a suitable way.

Communication is also key for innovative projects which are complex and contribute to multiple policy objectives. It is not always easy for citizens, or sometimes for all project stakeholders, to understand the complexity of a project. The project management team will always have an information advantage but can share relevant information in useful and easily understandable ways for the receivers, tailored to their involvement, interests and expertise.

Next steps

These projects will be analysed with a focus on how the integrated approach achieves better impact than the traditional approach, through consideration of factors such as energy and economics, risks, stakeholders, sustainability and project development. The projects will also be further developed within each city, during the remainder of the STEP UP project and beyond.

Discussions are also continuing between the cities on opportunities to share ideas and experiences and explore the potential for common development further. There are ongoing discussions around the legacy of the STEP UP project and opportunities for the cities to continue working together.

The innovative projects will be communicated and disseminated at the city level in all four cities, as they continue to be developed and implemented. The ways in which this will be done will be based on the communications plans developed by the cities. Learnings are also being discussed and shared with the companion cities, and with the wider learning network – including during the All-Energy conference in Glasgow in May 2015 and the EU Sustainable Energy Week in Brussels in June 2015.

Dissemination activities are also ongoing, and for this purpose there are two guidebooks developed: one focusing on how to create and develop innovative integrated projects; and the other on the STEP UP process for enhancing SEAPs. Lessons learned relating to the development of innovative projects are being incorporated into these guides, providing other cities with practical advice and recommendations to support their own project development. These publications will be shared through learning network events, conferences, the website and other dissemination activity across the STEP UP cities.