

Developing sustainable energy projects

A STEP UP guide for cities







STEP UP brings together excellence in energy and urban planning from four European cities to achieve a greater sustainability impact

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Introduction to this guidebook

STEP UP

In 2012-2015, four European cities – Glasgow, Ghent, Gothenburg and Riga – joined forces with research and commercial partners in the EU FP7funded project STEP UP – Strategies Towards Energy Performance and Urban Planning.

The aim of the twelve partners in the project has been to improve the integration of energy and urban planning; to help cities enhance their Sustainable Energy Action Plans (SEAPs), as developed under the European Commission's Covenant of Mayors initiative; and to develop innovative projects at the intersection of the transport, energy and ICT sectors.

For more information on STEP UP, please visit the project website at **www.stepupsmartcities.eu**.

Lighthouse initiatives

One of the objectives of the STEP UP project has been to identify and promote iconic lighthouse initiatives in the four cities, following the European Commission's Smart Cities and Communities lighthouse criteria. Lighthouse initiatives are projects which take an integrated approach, have high impact and replication potential, and cover a range of different sectors. They tend to be centred on the key themes of long-term political leadership, collaboration and engagement with stakeholders, contribution to multiple policy objectives, and project economics and business models.

Most of the initiatives identified through the STEP UP project focus on at least two of the EC's smart cities sectors: energy, transport and ICT, including the transformation of transport systems, retrofitting of existing districts or establishment of new districts. Decreased energy consumption is often the central goal, with ICT as a support tool that helps to achieve this goal. However, there is not one way to organise a lighthouse initiative. In many cases, the initiatives have a main focus, and then have a variety of other building blocks attached to them depending on local circumstances.

Aims of this guidebook

This guidebook presents key points for cities to consider in the planning stages of a new low carbon or sustainability project. The aim is to inspire and guide cities across Europe in the development of new innovative and integrated projects, based on the experiences of, and knowledge gained by, the four STEP UP cities. It may be useful for city planners, municipalities, energy strategists and business developers in the European context.

The lighthouse initiatives featured in this guide are best practice examples from the STEP UP cities, promoted through the project but developed prior to the project. The guidebook covers the meaning and benefits of an integrated approach, some key winning elements and learnings from the STEP UP project, recommendations and key points for cities to consider in the development of their own projects, as well as pointers for where more information can be found.

The STEP UP process of enhancing SEAPs, and how other cities can adapt this for their own local contexts, is also covered in a separate guidebook, 'Developing enhanced Sustainable Energy Action Plans: A STEP UP guide for cities', available on the STEP UP website at: www.stepupsmartcities.eu



Covenant of Mayors

 Through the Covenant of Mayors initiative, cities across Europe are making a voluntary commitment to meet and exceed the EU 20% CO₂ reduction target by 2020. A Sustainable Energy Action Plan (SEAP) is the key document in which each Covenant of Mayors signatory outlines how it intends to reach its target, defining the programme of activities and measures put in place, together with the timeframes, assigned responsibilities and plans for monitoring and review.

+ Learn more at: www.covenantofmayors.eu



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Integrated vs traditional approach



In the STEP UP project maintaining and promoting an integrated approach to energy planning and project development has been crucial.

By adopting an integrated approach a project is able to achieve more holistic solutions to complex problems by bringing together different kinds of stakeholders, sectors and technologies and by combining the three dimensions of sustainability in order to deliver environmental, social and economic benefits to the city and its inhabitants. By using an integrated approach, cities can address multiple vital themes together, including: energy and technology; economics; organisational issues such as decision making structures; and stakeholder engagement and communication. In this way, an integrated approach can help cities achieve both better energy efficiency and economics than a traditional approach to project development.



The table below sets out the key differences between an integrated and traditional approach to project development, with examples for each.

INTEGRATED	TRADITIONAL
Integration of sectors such as energy, transport, housing and ICT, using innovative technologies.	Every sector works in silos, with no, or limited, integration and a focus on well- established technologies.
• A smart mobility project, car sharing with e-vehicles and e-bikes with an app for booking, working together with an energy company for the charging infrastructure.	+ A car sharing project.
Integration of stakeholders, combining actors from business, politics, NGOs, citizens, etc.	Stakeholders are not working together; actors are more engaged in their own organisation rather than the development of the project.
stakeholders from the municipality, SMEs and a cycling-focussed NGO.	• The car sharing project is owned by a company, not represented in the city, and with no, or very little, communication with end-users, the municipality or NGOs.
A holistic view, combining different dimensions of sustainability; one project tackling energy poverty, and also employment and energy security. A clear focus of the project overall, where	Only one focus at any point, handling issues one by one, and not taking the holistic view of how a change somewhere will affect other parts of the city.
social issues are not just a sideshow. Car sharing for mobility, reduction of CO_2 and energy use, but also as a way of having fewer cars in the city, making the city more liveable, reducing air pollution and improving health. Sharing as a way of tackling the climate challenge.	Car sharing is for people that do not want or are not able to own their own car; the project is designed to meet this need only.

Key winning elements of integrated projects



Through the STEP UP project, cities have identified a number of lighthouse initiatives – existing projects which:

- + Take an integrated approach;
- + Have high impact and replication potential; and
- + Feature a range of different sectors.

These iconic projects are broad in scope and range from large district solutions to small retrofit developments. By examining these initiatives, and their success factors, STEP UP has highlighted four key winning elements found to be present in effective and inspiring city initiatives, which other cities may find helpful to consider when developing their own projects. These winning elements are described in more detail on the following pages.



Political leadership with a long-term approach

Strong leadership is vital due to a local authority's unique position to influence other actors in the city. STEP UP's research shows that successful projects have local political leaders who can champion projects and act as enablers to make a concept become reality. As sustainable energy projects can last for decades, it is important that the approach taken has a long-term focus and the ability to look beyond short-term political cycles.

Sustainable travel initiatives in Gothenburg

The City of Gothenburg is working to create a long-term sustainable transport system based on increased cycling, walking and use of public transport. As part of an overarching strategy for the West of Sweden region, the city has recently implemented two initiatives; **New Travel Habits** and a **Congestion Charge**, for which political leadership with a longterm approach has been of great importance.

These initiatives are powerful infrastructure measures to make it easier and more attractive for people to choose other ways to travel instead of the private car. Sustainable travel and reduced emissions from cars is also one of the targeted areas in the City of Gothenburg's SEAP and Climate Strategy.

Changes in people's travel behaviour can be made through voluntarily contributions, regulations, incentives and taxes. The New Travel Habits initiative aims to help the region's residents make an active choice to reduce their car use, and to inspire and motivate people to take up new travel habits. Examples of projects that have been implemented are: street smart dialogue, dialogue with households, mobility week, travelling coach, and school projects concerning safe biking. "We are going to increase sustainable travelling and create an attractive city for cycling, which is space-efficient, climate smart and sustainable. The political foundation is very important. We have a clear mandate from our politicians to increase sustainable travel and reduce car traffic. Without this assignment, we would not have focussed on new travel habits."

Eva Eriksson Marketing Coordinator at the Traffic Department City of Gothenburg



Collaboration and dialogue with all stakeholders

Continued communication and collaboration with stakeholders is a key winning element for many projects. As integrated projects tend to involve cooperation across various sectors, such as transport, energy and ICT, and utilise a variety of technologies, it is vital that organisations are able to keep an open dialogue going between them in order to secure support and involvement throughout the duration of the project, and enable effective communication, knowledge and information exchange. This can lead to improved project outcomes, enhancing potential for future expansion, replication or further collaboration.



Car free city centre in Ghent

In 1996, Ghent created a **car free city centre** in order to tackle several problems, including persistent traffic congestion, poor pedestrian and cyclist safety, high energy use and low air quality. Major benefits from the car free zone include a reduction in transport energy use and a more liveable city for the city's citizens.

A clear key winning element of success has been Ghent City Council's consistent collaboration and dialogue with all stakeholders. The creation of additional initiatives alongside the car free city centre, such as bike hire and park and ride routes, has made the scheme more attractive to residents and visitors, and made it easier to engage with different stakeholders.

According to Indra Van Sande from the Department of Environment, Green and Health at Ghent City Council, "Whilst local shops and retail companies initially protested, environmental and mobility organisations supported the idea from the start. Through an intensive information and participation campaign, running for about a year before the actual launch, the borders of the car free zone got their shape, support grew, and the first car free zone in Europe of this size was established. This engagement with stakeholders has helped ensure the success of the car free zone, in combination with the revaluation of the city centre, not least concerning energy consumption and carbon emissions reduction. Therefore, our mobility plan 2014–2020 schedules a doubling of the actual car free area in the city centre."

> "We strongly believed that creating a car free zone would have positive effects on the environment, liveability, the economy and tourism."

Indra Van Sande Department of Environment, Green and Health Ghent City Council

Contribution to multiple policy objectives

The low carbon energy and sustainability agenda should not be perceived to be solely targeted towards environmental objectives. Instead it should be aligned with the wider policies and strategies of the local authority so as to gain support from, and offer benefits to, as many areas as possible. The ability of a project to fit with the overall city vision, address multiple city challenges and deliver on many policy fronts is therefore seen as a key winning element for sustainable energy projects, in order for them to help the city achieve a low carbon and sustainable future.

"The development of the Athletes' Village helps to address multiple city challenges, namely delivering affordable warmth to citizens, regeneration of the city, reducing carbon emissions, increasing energy efficiency, and developing district heating networks."

Gavin Slater City Energy and Carbon Manager Glasgow City Council

Commonwealth Games Athletes' Village in Glasgow

Often the aim of addressing multiple policy objectives is built into integrated projects, and is a key part of their nature. One clear example from STEP UP is the **Athletes' Village** in Glasgow, a sustainable housing project in one of the poorest parts of the city, initially developed to house athletes for the 2014 Commonwealth Games. In this project, which is the first large scale carbon neutral project in Scotland, environmental objectives have been combined with the social and economic objectives of regenerating deprived urban areas, including addressing fuel poverty through lower cost heating (in this case delivered through an efficient district heating network), and providing affordable housing for local residents.

According to Gavin Slater, City Energy and Carbon Manager at Glasgow City Council, "The result of this ambitious development has been the creation of new and innovative energy efficient housing in the East End of Glasgow; which brings affordable warmth for families who have bought or rented homes, and delivers low carbon heat to the Emirates Arena and Sir Chris Hoy Velodrome, and a 250-bed care home. The Village will serve as an example of innovation and excellence through its integrated approach to development and partnership working; and the creation of a smarter and more sustainable Glasgow."



Business models that attract investment

A key challenge for cities lies in structuring projects in the right way to successfully attract investors and reduce risk, in order to increase their scale and impact. Business models should be appropriate to the local context. However, many of the STEP UP lighthouse initiatives organised their business models around public-private partnerships so that the public sector can reduce the costs of capital investment and borrowing required and the private sector can assume an element of financial, technical and operational risk and control in the project.

District regeneration in Riga

In Riga, the large-scale neighbourhood **Torņakalns complex** is being planned and constructed in the existing Torņakalns district. The Torņakalns complex is an attractive project to investors or funders as it builds on existing initiatives of strategic interest, including the city's administrative centre and the university campus. The first stage of the initiative focusses on the establishment of the university buildings and their equipment, and is partly financed by the European Regional Development Fund and partly by Latvian governmental organisations. The infrastructure and roads will be financed by municipal funds. Decisions have not yet been made on which business models will be used for future stages of the project; however, a 2009 research study suggested developing the area through a public and private partnership (PPP).



"One of the city's visions is that funding for development and construction in the district will be provided by the local the development of the territory as a public interest, with Riga City Council Administrative buildings complex and municipal social housing stock. Another vision is that district preparation for construction and fundraising will be provided by the local administration, hiring land plots to private developers, resulting in mixed land use including public buildings and buildings with Different financing models, such as PPP (DBFO, BOOT and others) have been found and combined with other models to create an appropriate financing model for the district."

City Development Department representative Riga City Council

Recommendations for city project development

Developing successful sustainable energy projects can be challenging, but if done well they can deliver significant benefits to cities and their inhabitants. STEP UP partners have identified a number of ways in which integrated, innovative projects can be strengthened in order for these benefits to be realised.



The following recommendations for city project development have been established by STEP UP partners after analysing the existing lighthouse initiatives in each STEP UP city. They may be useful to other cities considering developing their own integrated, innovative projects and can serve as guidance in the early stages of project planning.

The recommendations are explained in more detail over the following pages, with STEP UP lighthouse initiatives given as best practice examples, and points to consider for cities developing their own innovative, integrated projects.

To find out more about the STEP UP lighthouse initiatives, visit the City Projects pages of the STEP UP website at: **www.stepupsmartcities.eu**

Recommendations

- + 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





Start off small

Sometimes it is wiser to start off small and scale up the initiative if successful, rather than to acquire substantial amounts of resources to develop a large-scale project from the beginning. A small-scale start often equals lower capital expenditure and risks, and enables you to test the viability of solutions before scaling up.

The **Sustainable Urban Districts** -**Hamnhuset to Kvillebäcken** initiative in Gothenburg demonstrates a good example of successful upscaling. The overall aim of the development of the Kvillebäcken district is to set a new model for sustainable city planning and building in Sweden and beyond. The development of Kvillebäcken is a learning process for how to develop a new city district on the basis of social, economic and ecological values. The Kvillebäcken initiative is itself the result of a passive house that was built in 2008 in Gothenburg: Hamnhuset. This building has set an example for energy efficient buildings and smart systems in Gothenburg and has become a model for the building of the new city district with housing that has a quarter of the heating requirements of a normal apartment building, 75% lower CO₂ emissions, the same rent and a healthier indoor environment.

Points to consider

- Is your project the "right" size; large enough to get tangible results, but small enough to still be a viable project with a certain amount of flexibility?
- Does your project have the potential for upscaling if a positive impact is achieved? What kind of information would you need in order to test this?
- + Tip:

Looking at, and learning from, some existing pilot or small-scale projects may help to identify opportunities for upscaling.

Build in an integrated, innovative approach early on

When projects are at an early stage of planning or development, it is important to ensure that the key factors which make a project innovative and integrated are well understood and built in. This should also include plans for regular monitoring of performance and impacts, and consideration of the potential for replicating and scaling up. Where this is not possible, the potential to add in important elements later, such as the integration of additional sectors, should be explored so that key windows of opportunity are not missed. The **Riga Smart Cards** project focusses on an innovative and easy payment solution in the form of a common electronic card system. It is a multifunctional system that can be used as payment for public transport, to register for different social services, for city car parking, park and ride or access to different kinds of discounts for certain social groups. The use of a common ICT infrastructure has meant that the smart card sustem can deliver new services within different sectors and to different actors at the same time, contributing to a number of policy objectives in the city. Additionally, the system generates data which can then be used to enhance it further and there is strong potential for new elements to be added in the future, such as possible integration with suburban trains and taxis.

Points to consider

- + What key factors make your project innovative and integrated?
- + What are the potential growth areas for the project in the future?
- Tip:
 Think about any new elements that could be added to the project in the future to make it more integrated.



Build on existing initiatives

Innovative projects do not always have to start from square one. Analyses made in the STEP UP project show that it is possible to get help with resources and promotion by basing a new project on an existing initiative which has high status or symbolic value in the city.

One good example from Glasgow is **Clyde Waterfront**, the biggest regeneration project ever undertaken in Scotland. As many as 250 individual projects fall under the umbrella of Clyde Waterfront, which brings together public and private sectors to rejuvenate 20km of the city alongside the River Clyde to develop a vibrant and thriving area around the river. Two such projects include the NHS South Glasgow Hospital campus, due to be officially opened in May 2015, which will be the biggest hospital in Scotland and one of the biggest in the UK; and Fastlink, a transport project promoting rapid transit 'tram on tyres' energy efficient buses. A number of projects within Clyde Waterfront have been developed as the overall initiative has progressed, capitalising on new opportunities that have emerged; as a result, some projects are nearing completion but others are just getting underway.

Points to consider

- Are there existing projects or initiatives in the region or city which your project could be linked to or work closely with for mutual benefits?
- Can linking with an existing project offer opportunities to share resources or enhance the promotion and status of both initiatives?
- + Tip:

Consider which stakeholders you would need to build relationships with in order to make this possible.

Think cross-sector

When developing an integrated, crosssector project, new ways of addressing challenges can be explored and benefits can be realised across multiple sectors and stakeholders.

The energy, transport and ICT sectors were, for example, all involved in the urban renewal project **Ledeberg Alive** in Ghent. The City of Ghent aimed to add new value and energy to a historic neighbourhood and improve the quality of life within six domains: green spaces, energy efficiency of dwellings, traffic management, active travel, transport infrastructure and community spaces. The project has achieved a range of impacts which have been made possible through connecting different sectors with an integrated approach. The project has focussed on establishing new buildings in challenging areas, as exemplars to show the potential social, environmental and economic benefits. Linking the initiative to the City of Ghent light plan has made the area both safer and more attractive for residents and visitors. The project has also improved connections with the city centre, making it easier for residents to travel for work or social activities, and leaving them feeling less isolated from the rest of society.



Points to consider

- What kind of challenges need to be addressed in this area of the city

 would expanding this project to include other sectors help to tackle these?
- Are there other stakeholders with shared interests who it would be beneficial to work with?

Tip: Creating a map of current and planned city projects can help to identify cross-sector opportunities based on the location of projects.



Secure long-term political support

Successful initiatives need both local and national political leaders who champion the initiatives and act as enablers over the longterm. Sustainable energy projects are likely to last for decades, so it is important for projects to look beyond short-term political cycles and secure cross-party support for the long-term.

In Glasgow, all the actors in the **Clyde Waterfront** regeneration project acknowledged that the project could not be delivered through one organisation only, due to the large regeneration area crossing three local authorities and the resulting multiple interests, actors and priorities. To address this, a Strategic Partnership Board was created to drive the transformation and ensure all efforts along the river are carefully planned and co-ordinated in order for the project to successfully deliver on its objectives. All three local authorities and the Scottish Government are board members; making this project a good example of how long-term political support can be ensured.



Points to consider

- What are the key political priorities at the local and national scale, and how could your project help to support these?
- How can you ensure that changes in political leadership don't affect your project's progress?
- How will you provide political leaders with appropriate information on your city's project?
- + Tip:

Tailor your message to show politicians how the project's impacts will help achieve the city's political priorities.



Collaborate and engage with stakeholders

The development and implementation of integrated projects in, and by, cities needs to be carried out in conjunction with high quality stakeholder engagement and collaboration, to ensure city-wide support from a variety of stakeholders throughout the project's lifetime.

Explore different funding sources and business models

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Structuring projects and creating business models appropriate to the local context is a critical foundation for a successful initiative. An integrated approach provides opportunities to explore new types of funding: for example, when various stakeholders and sectors are combined in an initiative, there can be opportunities for resources to be generated from several different sources at once.

Points to consider

- Who are the key stakeholders to involve in the project? Which other stakeholders do you also need to keep informed?
- Tip:
 Make a thorough stakeholder analysis early on in the project, and update this as the project evolves.
- + Tip:

Don't forget that existing networks can be important channels to reach out to.

Points to consider

- + What are the different funding sources which may be available for your project?
- Which stakeholders can you engage with to discuss potential partnerships?
- + Tip:

Have a look for projects in other cities with a successful business model which you could adapt to your local context.

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When projects are conducted in an integrated way, they are able to contribute to multiple objectives within the city, providing environmental, social and economic benefits for the city and its citizens. This is, for example, the case in Glasgow's **Clyde Waterfront** project, in which economic development such as retail, commercial development and housing are being provided at the same time as social facilities like leisure and public amenities, as well as improved infrastructure.

Points to consider

- + Can your project address more than one challenge in your city, region or country?
- Which other sectors or stakeholders could be engaged in the planning of your project, to address multiple objectives without additional resources?
- + Tip:

Tailor your communications messages to make the various benefits the project offers clear to key stakeholders.

Monitor project information and data, evaluate and review your project

Energy and carbon data can be difficult to get hold of, but is key to monitoring and demonstrating project impacts. Projects and initiatives differ in how much data is available, but also in how easy they are to monitor, depending on their complexity. In an example from Glasgow, the **Technology Strategy Board (TSB) Future Cities Demonstrator**, collecting and monitoring data has been central to this innovative city project. This is a UK government initiative in which public, private and academic sectors have combined their expertise, using the latest technology to enhance day-to-day life in the city. By integrating technologies and applications in public safety, transport, health, technology and sustainable energy, Glasgow is set to become a smarter city, with the knowledge, data and integrated systems it needs to develop further opportunities to become more sustainable. The continuous measurement of performance is a key component of the Glasgow City Management System, which consolidates data and makes it more accessible and available to a wider community.

Points to consider

- Are there existing data sources that your project might be able to access?
- Are there key stakeholders who are willing to share data to help support the project?

Tip: Where data is not available, try to estimate impacts based on known averages or results of similar projects (being clear what assumptions have been used).



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Document progress, engage in peer learning and understand replicability

Consistent documentation is a key factor for learning from the development, implementation and impacts of projects. Documentation is needed both for a city's own learning during the project, but also to enable the transfer of knowledge to others. Linking to other cities through established networks or knowledge exchange activities can lead to unexpected benefits in the shape of mutual learning and development, contribution to a prosperous region, and support for sustainability in other European cities.

Documentation of project progress may also help other cities to replicate elements of projects, transferring and adapting them to their own local contexts. However, city-specific factors such as culture, economy, politics, technology and geography are likely to mean that a copy and paste approach, where an identical version of the initiative is transferred to another place and time, is not possible.

Points to consider

- Does your project contain elements that might be of general interest to other cities?
- + Could your project or part of your project be adapted by other cities?
 - Tip: Building a learning network with other cities might help to enable learning and knowledge exchange in a natural way.
- + Tip:

+

Document and learn from your project from the start – both should be part of project planning, delivery and monitoring



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Communication matters!

Most of the STEP UP initiatives have been promoted within the cities: some initiatives have gained public acceptance early on in the process, while others have not. Whilst this can cause problems along the way, this has also helped the cities to learn from these experiences and improve communication plans as a result. For some more controversial initiatives, promotion has needed to focus on creating acceptance among the public. However, it can prove beneficial to invest resources in this early on in a project's development, to increase understanding and achieve greater acceptance and support among the general public from the beginning. There are many different ways to communicate initiatives, including public awareness campaigns and linking to high profile events. Broadly similar methods have been used in all four cities; the municipalities have invested resources in order to spread information to the general public through communication campaigns, using posters, leaflets and new websites. In other cases, public dialogues have been held to increase understanding among stakeholders and to seek their points of view. A clear key to successful communication is to know your target group, and to plan ahead.



Points to consider

- Who is affected by the project, who will benefit from the results, and who do you need to keep informed of progress?
- What difficulties might appear along the way and how can effective communication help to avoid this?
- Tip: Tailor your communications to suit your target audience's interests and priorities.
- Tip:
 Plan for communication
 activities early on to ensure
 sufficient resource is available;
 monitor their effectiveness and
 be flexible about making changes.



Learn from mistakes

An important part of project planning, development and implementation is to understand elements of projects that are weaker or do not work, and learn from this to develop future projects that have a higher impact. It can be beneficial for cities to identify and accept mistakes or weaknesses in order to learn from these, and to share these learnings with colleagues and wider networks that could also benefit.

Points to consider

- + How will less successful parts of the project be managed?
- How will you learn from successes and mistakes, or weaker parts, and with whom will you need to share these learnings?
- + Tip:

Allow time for learning along the way, including time for reflecting over mistakes or problems.

Further information and resources

Below you can find some links to relevant sources of information for integrated project planning and development:



STEP UP

On the STEP UP website, you can find detailed case studies about all the lighthouse initiatives highlighted in this brochure, as well as a guide to developing an enhanced Sustainable Energy Action Plan (SEAP) for your city, 'Developing enhanced Sustainable Energy Action Plans: A STEP UP guide for cities.'

STEP UP has also developed two new Masters programmes, building on skills, knowledge and outputs from the project – an MSc in Global Sustainable Cities at the University of Strathclyde and an MSc.Ing in Energy Efficient Infrastructure for Smart Cities at Riga Technical University.

Visit the website to find out more: www.stepupsmartcities.eu



Covenant of Mayors

Read existing SEAPs for cities across Europe, download a copy of the 'How to develop a Sustainable Energy Action Plan' guidebook and view frequently asked questions from other Covenant signatories: www.covenantofmayors.eu



European Commission

Read the communication that launched the European Innovation Partnership on Smart Cities and Communities – find out more about the EC's criteria for lighthouse projects, which was used by STEP UP cities to identify their own lighthouse initiatives: http://ec.europa.eu/eip/smartcities/files/ ec_communication_scc.pdf

STEP UP is focussing on holistic solutions for smart and sustainable city planning that deliver real environmental, economic and social benefits to cities and their inhabitants

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Our partners

