Project no. 314277

STEEP PROJECT

Systems Thinking for Comprehensive City Efficient Energy Planning

Seventh Framework Programme

Theme Energy

D1.2 Collection of City objectives/framework/constraints in detail

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CO	Confidential, only for members of the consortium (including the Commission Services)	

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1 The vision

The major goal of this report is to perform a full internal review of the strategies and visions in each city partner in the Steep project, and each city's socioeconomic and technical situation and setting the common sustainability targets.

The three partner cities have already started to drive their development policies to "Smart Cities" model as an effective response to today's and tomorrow's new needs due to the social and cultural change.

It seems to be a very ambitious challenge and there is the need of a clear strategy in designing the growth to achieve a better quality of life through innovation.

The vision for a sustainable energy future is the guiding principle of the local authority's Master Plan work because it points out the direction in which the three local authorities want to head.

A comparison between the vision and the local authority's current situation is the basis for identifying which actions and developments are needed to reach the desired objectives.

This report aims to identify what makes a city Smart from the three partner's point of view looking in detail the targets and the constraints of each city as well as the similarities and the common aspects which could link the three master plans.

1.1 The strategy and the objectives the municipalities intend to achieve

The vision serves as the uniting component that all stakeholders can refer to; meaning everyone from leading politicians to citizens and interest groups. It should be realistic taking into account existing and future boundaries but at the same time ambitious and SMART (Specific, Measurable, Achievable, Realistic, and Time-bound).

Smart growth identifies the very best opportunities for city's development, plans ways to cope with its demands, integrates environmental thinking, and ensures that all citizens take part and share the benefits.

1.1.1 Bristol

Bristol city has a number of plans which outline the strategic approach (in respect of issues such as transport, housing, planning and energy management) and the overarching 'vision' for the city which has been articulated in the '20:20 plan'.

However, since its formal adoption, a constitutional change in the political infrastructure of Bristol has seen the first elected mayor voted into office in November

2012. Since this time, the Mayor has outlined his own strategic priorities and 'vision' for the city, which continues the work of the 20:20 plan:

http://www.bristol.gov.uk/page/mayor/vision-bristol

The overarching aim of the *Bristol 20:20 plan* is to set priorities which will enable Bristol to become one of Europe's Top 20 Cities by 2020. It is hoped that Bristol will appear at, or close to, the very top of the league tables measuring sustainability, quality of life and achievement among European cities.

Bristol City Council Climate Change and Energy Security Framework

In November 2009 Bristol City Council adopted a target to reduce CO2 emissions by 40% by 2020 from a 2005 baseline. In February 2010 the Council adopted a Climate Change and Energy Security Framework which sets out how they will work with partners to deliver this target. The framework also includes energy and resilience targets for Bristol's road transport, business/public sector and homes, with clear accountabilities and monitoring. The City Council proposes that each sector will reduce emissions by 25% by 2015 and 40% by 2020 at a steady rate of change.

This Bristol Community Strategy for Energy has been developed through the Bristol Energy Network by local community groups and the organisations that they work with. The Strategy sets out aims and steps for community level action on energy and seeks to enable local community groups to work in collaboration with local authorities, the private sector and third sector organisations on sustainable energy issues.

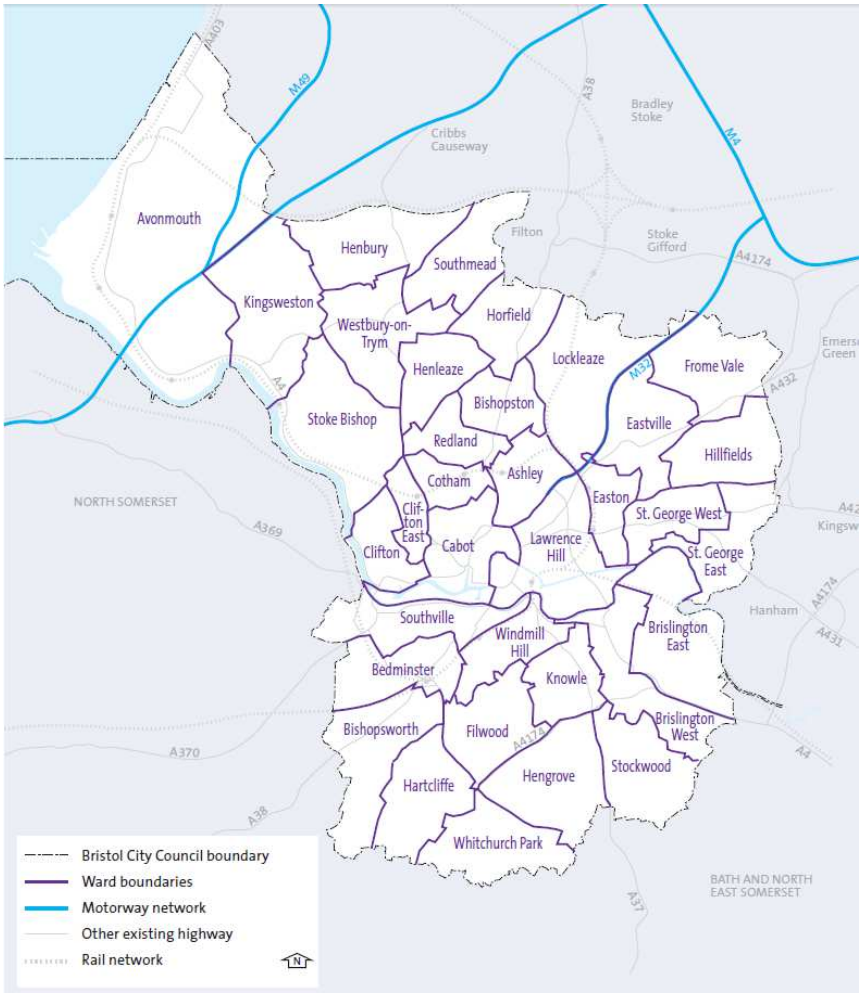
It is driven by international and national targets for reducing carbon emissions, concern over climate change impacts, the growing cost (and reduced availability) of cheap fossil fuel, dependence on imported gas, and by fuel poverty highlighting economic disparities across Bristol.

This strategy focuses on reducing energy use in domestic and non-domestic buildings through increased energy efficiency and energy conscious behaviours, an increase in community-led 'green' electricity generation, and hence to address fuel poverty and increase the community's resilience to rising energy costs.

The community energy sector has the potential to play a key role in addressing these issues. The strategy recognises that there is already a significant level of action across the city through the council, third sector organisations like the Centre for Sustainable Energy, businesses, social enterprises, and grassroots community groups. However more, and better co-ordinated activity towards core goals will make the vision more achievable.

The strategy vision is for: "*a city where everyone has access to sufficient affordable low-carbon energy for their needs; where wise and innovative use of energy empowers citizens and enhances the economy, with active communities across the city generating and managing a significant amount of their energy need.*"

The 20:20 plan applies to the local authority area covered by Bristol City Council:



1.1.2 Florence

By joining the Covenant of Mayors (by unanimous approval of City Council resolution no. 2010/C/0008), the City of Florence has joined in the fight and is working to reach the declared goal of reducing CO2 emissions in its own territory by at least 20% by the year 2020. A policy choice of this nature has a direct and pervasive impact on operational and administrative decision-making, guiding the territory towards sustainable development and the pursuit of energy savings and the reduction of CO2 emissions. If it is true that "no man is an island" and that "cities are not a problem; cities are the solution," then the only way to systematize a public action, to make it proactively sustainable and to involve the entire population, including associations and professional organizations, is by means of a comprehensive plan for publicity and communication.

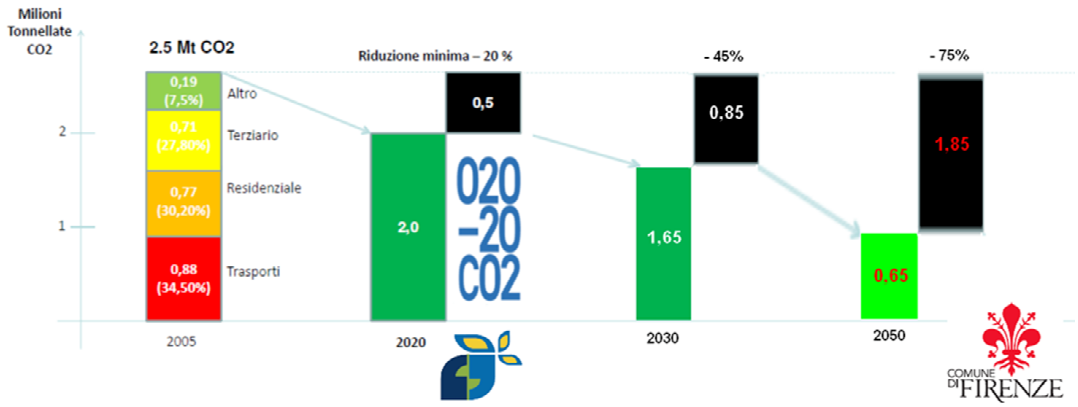
The concept underpinning the recent Structural Plan – to free up greater potential through physical, environmental and socio-economic regeneration – manifests itself in a series of actions designed to make Florence more attractive, more open and more liveable so as to add sustainable or green to this cities description and transform Florence into an ecocity.

The 'Florence of the future' strategy began with an administrative programming document (For a more courageous, simpler and more beautiful Florence, October 2009) and moved forward through plans that have recently been approved (Structural Plan, June 2011 – SEAP, july 2011).

This scenario, which is rightfully and necessarily founded on the principle of public/private subsidiarity, is where the political commitment to reduce territorial CO2 emissions by at least 20% (the forecast is for 20.2%) enters in. Although this step itself is both meaningful and highly demanding (emissions would have to be reduced by over 500,000 t. by 2020), it is in fact only the first of many steps down the road to year 2050.

While it is true that nothing can be achieved which is simultaneously good, fast and cheap (we can have only 2 of the 3), this does not mean that all 3 results cannot be achieved over the medium-to-long term.

It can be said that Florence's Action Plan is fast (just 9 years since its approval) and cheap: to optimize results we must in fact have a broader aim in mind. While with 2020 we might reasonably think that we can reduce CO2 emissions by 20.2%, joining the Energy Roadmap 2050 may allow us to consider also achieving the third objective, i.e. "optimization", or a prosperous Europe with low carbon emissions. A new perspective on the future of the European energy system shows that reducing greenhouse gas emissions by between 80 and 95% at the European level is technically feasible within 2050, as well as being economically and environmentally sustainable. The intermediate stage on this European roadmap, scheduled for 2030, aims to reduce greenhouse gas emissions by 45%;Florence, with the approval of the Sustainable Energy Action Plan, can say that it has set out on this path and that it has set 2020 as the first meaningful, relevant result stage, the first on a path that we have set ourselves today through to 2050.



1.1.3 San Sebastián

With the approval in 2002 of the First Local Agenda XXI Action Plan and, in 2007, of the Municipal Programme against the Climate Change, Donostia-San Sebastián became in one of the first cities in the Basque Country in having sustainability as main goal for the city. Citizens are specially driving this stream as it can be seen by the number of questions and issues arisen by citizens in the Environment Department of the City Council (increased by almost 100% between 2005 and 2012).

In 2008 the city signed the Covenant of Majors, committing to the achievement of the 20-20 strategy. Thus, in 2011 a SEAP (Sustainable Energy Action Plan) was prepared with 91 different measures distributed by sectors and technologies for the timeline 2012-2020. Every second year, following the submission of the Action Plan, an implementation report is elaborated for evaluation, monitoring and verification purposes. During 2013 the first implementation report is being prepared.

The Council committed to an achievement level beyond the objectives set by the EU for 2020, reducing emissions in the city by at least 20%, reducing the energy demand by 20% and increasing the use of renewable energy sources by 20%. For instance in the case of consumption due to the Council and its infrastructures the commitment reach to a reduction of 40%.

In the same way other departments, such as movility or ICT, also have their own commitments for a sustainable city. However actions and measures taken by sll departments have not been integrated in any manner and sometimes overlapping actions and collisions of interest may happen.

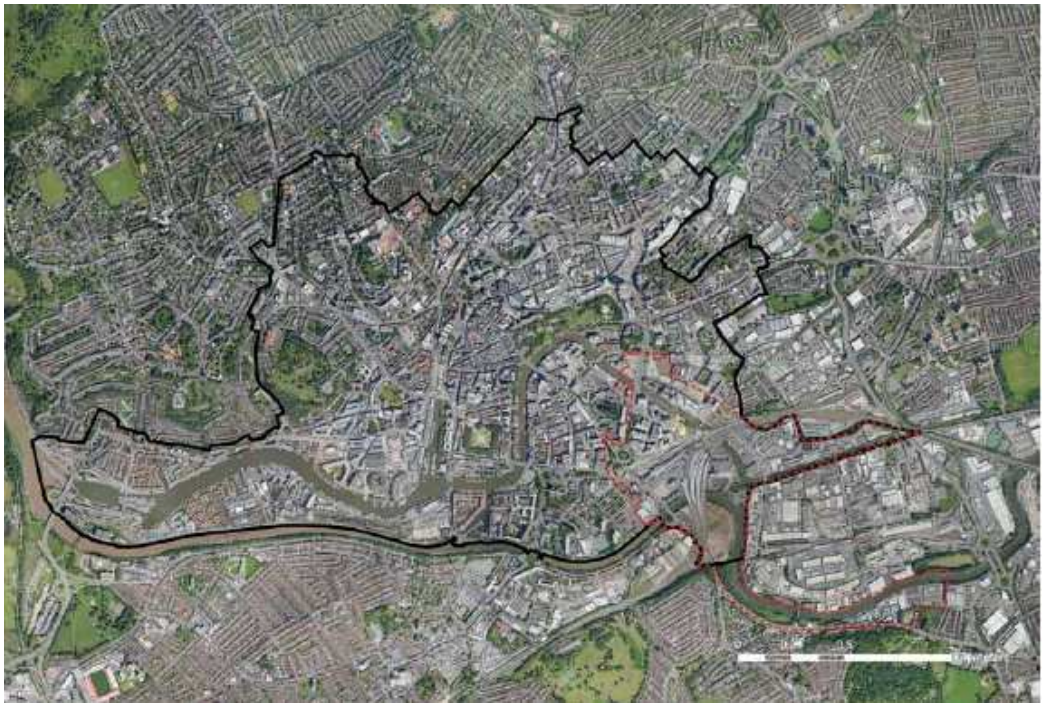
Due to this fact the city has adopted a Smart city plan as main goal in the short term. The plan will foresee: “The development of a local strategic sustainable smart city plan which address the efficiency of energy flows across all the key sectors on the energy value chain in an integrated manner". The adoption of the Smart City Strategy will be the tool to modernize the city, take advantage of technology to be more sustainable but specially to coordinate actions and priorizise projects.

1.2 Strategies in the pilot areas

Three districts have been selected in each city to be modelled following a systems thinking approach, with the purpose of supporting learning and reaching conclusions on which will be the best mix of measures to incorporate to a Smart City Plan and to apply citywide. These three areas will play a pilot role for the whole city development: this paragraph intends to underline the specific charactyeristic of each area, the common aspects and the targets foreseen.

1.2.1 Bristol

The specific district area of Bristol identified under STEEP, is the Temple Quarter Enterprise Zone and covers a mixed-use area surrounding the main railway station Temple Meads:



It has been chosen for the project due to the aspiration to make it *the city's first carbon neutral development*. The challenge of both retrofitting historic buildings and designing new builds, in addition to integrating sustainable transport infrastructure, make the area an ideal test bed for developing an integrated systems approach to energy management.

A study into three key aspects of energy master planning has been commissioned by Bristol City Council and the work – undertaken by CSE – is currently on-going. The study aims to gather information regarding:

1. The spatial configuration of energy needs and
2. Generation opportunities, and
3. How the development of low carbon infrastructure should be phased.

This will be based on 10 key objectives:

1 – Evidence framework: provide a projection and timeline for energy demand.

2 – Baseline and context appraisal: conduct an assessment of the opportunities and constraints created by existing energy networks.

3 – Projected infrastructure and investment requirements: identify the infrastructure and investment requirements necessary to realise Bristol City Council's long-term carbon reduction targets

5– Identify energy generation potential: identify appropriate targets for renewable and low carbon energy technologies and energy outputs necessary to support zero carbon development.

6 – Scenario modelling: explore possible scenarios for meeting and exceeding Building Regulations.

7 – Land-use planning: with regard to the technology portfolios, identify the potential land take and site characteristics that would be required to achieve the proposed targets

8 – Role of ESCos: Identify and outline the potential role of Energy Service Companies

9 – Business planning

10 – Opportunity identification methodology: provide a framework and methodology / criteria for identifying site and area specific opportunities for achieving a greater use of decentralised and renewable or low carbon energy.

1.2.2 Florence

Florence's Cascine Park represents a multi-purpose ecosystem in the city centre composed by seven main ambiances, with mixed use of land (green, sports and leisure, events, information point for sustainable tourism, buildings, river, bike paths and tracks), public and private property (including old decommissioned industrial sites, public administration offices and dwellings). It is thus an area of great interest and attention at the city and national and international level, considering his reputation. The park is therefore the experimental bench for testing an integrated system of actions (mobility, attention of the building rehabilitation, info-information, attention to green, sustainable accessibility) that departing from its typicality – a park in the city centre, the largest in Europe considering its total extent about 340 ha – can be the start-up of a city where the well-being is together the point of departure and arrival.

The first objective is mobility to extend and connect this park to the city with a quality soft mobility. The idea is to regulate access to the park via LTZ, improve the accessibility of public transport and parking areas adjacent to the Park. We also intend to encourage its discovery by guidance systems <Walking Florence> (centrum-park-centrum) and connected pedestrian paths.

A second priority is buildings and lighting to complete the work on the historic areas. It's is essential to ensure, for security reasons, a lighting system such as to experience

the park in all seasons and at all hours. For this, there is a pilot project aim to test a system of adaptive lighting that should respond to the needs in a sustainable manner.

The third step involved WIFI and ICT to enable a combination of smart mobility, buildings and lighting measures.

The park seems to play an exemplar role to be extended to the rest of the city to reach the 2020 targets implementing all the possible integrate actions to exploit the sustainability potential.

It has been selected because *it reflects the city's priority* (mobility-buildings-ICT) and *its characyeristics will be helpful in the dissemination and communication strategies*.

1.2.3 San Sebastián

The Urumea Riverside District combines a residential (neighbourhood of Txomin), old light industrial technology park (Poligono 27) and green zone (Ametzagaina Park) uses. This will be the largest new urban area of the city for 2014-2020 with the construction of 1.482 new houses in 65 new buildings in over 140.000 m^2. The envisioned scenario for this zone is a *symbiosis of these three different uses of the territory*.

A number of initiatives are being taken in this area. The whole new urbanization process will be accompanied by the installation of a District Heating system to which it is expected that over 95% of new residential houses will connect. The system foresees heat recovery from a wastewater treatment plant in the nearby so that the need for energy production using a biomass boiler will be reduced. This system will allow reduction in energy cost of up to 15%.

ICT solutions will be provided to citizens and small enterprises. The whole area will be cabled with optic fiber and free Wi-Fi points as in the rest of the city. The installation of the broadband as well as better road and pedestrian connections with the city center and other cities will make the technology park more attractive to new enterprises. For instance in Poligono 27 it has been built the Enertic Center which is a zero emission building to gather companies from the renewable energy and energy efficiency sector. This will be the hub for other projects related to R+D in energy efficiency as well.

Another type of uses for the Ametzagaina Park will also be considered. This is the largest urban park in the city but a little bit far from the city center. Better connections would help to activate more activities and life around the park and its surroundings.

The implementation of renewable sources of energy will be also considered within the frame of a Smart Energy Master Plan.

1.3 Timeline for the objecives achievement

The time horizon for the targets achievement has been set by each city in its vision: the cities' growth is fast and the long term strategies should consider it. To fulfil the sustainable growth needs there ought to be a time linked path with a defined timeline, milestones and detailed actions at short term.

These aspects are fundamental for a winning strategy; in designing the City Master Plan we will have to deal with the deadlines already set and to fix those who haven't been set yet.

1.3.1 Bristol

Each of Bristol's strategy documents are time bound:

-The Bristol 20:20 Plan: Implemented up until 2020

- Bristol Development Framework/ Core Strategy: Adopted June 2012, for the subsequent 15-20 years

- Bristol City Council Climate Change and Energy Security Framework: Implemented between 2012-2015.

- Joint Local Transport Plan: Implemented between 2011-2026.

In this case the problem is to integrate the different time bound targets and to summarise the overall objective in a unique Master Plan

1.3.2 Florence

Each of the 27 actions included in the SEAP is defined in terms of duration and targets at 2020.

At 2030 the overall target is -45% of CO2 emissions.

A monitoring analysis has been done at 2010 to state the achievements: the 2010 emission inventory shows a decrease of the 8.9% pro capite which means that the municipality is in line with its objectives (-20.2% at 2020).

In particular the public sector is under strict monitoring and at 2012 it has reached the 21,8% of consumption decrease.

The city seems to have a clear scheduled path which is starting slower but it shows very ambitious targets at long term: it will be important to assess if the city will be able to accelerate the speed of the implementation otherwise the master plan should reset the long term targets or the time horizon.

1.3.3 San Sebastián

In the case of San Sebastián the SEAP establishes a timeline from 2012 to 2020 for the development of the 91 actions. The actions are not related to a specific cronogram though. Therefore it is difficult to measure the level of implementation by year. It must be taken into account that other plans from movility department and so on have their own timelines. For instance, in the described case the horizon is 2024 although some goals are established by 2016.

Deadlines already set by different plans will need to be respected by the new Smart City Plan. However, the exercise of priorizising actions will probably come up with new possibilities that should consider the integration of all interventions in the best possible way.

1.4 Links to other public strategies

A city is not an isolated planet: good city leaders also think about regional growth because as a metropolis expands, they will need the cooperation of surrounding municipalities and regional service providers. Integrating the environment into economic decision making is vital to smart growth: every competent body must invest in sustainable projects to put together every possible effort to reach the target easily.

On the other hand it is very important to be aware of other public authorities' plans because they could represent an obstacle if their targets, their policies or their timeframes weren't in line with the city's ones.

What we are investigating in this paragraph is the link of the three cities targets with other strategies at upper level to find synergies in the implementation phase: the aim is to establish whether the cities have checked if others' objectives and goals are supporting or conflicting.

1.4.1 Bristol

Bristol is also a signatory of the European '*Covenant of Mayors*': by their commitment, Covenant signatories aim to meet and exceed the European Union 20% CO2 reduction objective by 2020.

The covenant requires that Bristol

- Develops adequate administrative structures, including allocation of sufficient human resources, in order to undertake the necessary actions;
- Prepares a Baseline Emission Inventory and submits a Sustainable Energy Action Plan including concrete measures leading to at least 20% reduction of CO2 emissions by 2020;

- Submits an implementation report at least every second year after submission of their Sustainable Energy Action Plan for evaluation, monitoring and verification purposes

To comply with the crucial necessity of mobilizing local stakeholders in the development of the Sustainable Energy Action Plans, signatories also undertake to:

- Share experience and know-how with other local authorities;
- Organise Local Energy Days to raise citizens awareness of sustainable development and energy efficiency;
- Attend or contribute to the Covenant of Mayors annual ceremony, thematic workshops and discussion group meetings;
- Spread the message of the Covenant in the appropriate fora and, in particular, encourage other mayors to join the Covenant

The 20:20 vision also contributes to the *UK Carbon budgets/targets to 2050* which aims to reduce the UK's greenhouse gas emissions by at least 80% (from the 1990 baseline) by 2050. It will also help the UK become less reliant on imported fossil fuels and less exposed to higher energy prices in the future.

The *Government* is committed to a set of challenging sustainable energy policies including a significant tightening of Building Regulations. There is increasing evidence to suggest that progressive policies at the local level are now being successfully implemented in response to these proposals. Bristol therefore now has an opportunity to build on this evidence and identify where it can formulate policies that go beyond prevailing Building Regulation standards and encourage sustainable energy generation across the city.

The city's strategy is also in line with:

- DECC strategies, including; carbon plan, smart meter rollout plans, heat strategy, etc
- DCLG plans, including; the NPPF, housing standards review proposals, Building Regs – zero carbon home/allowable solutions proposals, CIL arrangements, etc
- WoE shared plans; joint local transport and waste plans and the WoE Planning Toolkit

Bristol City Council forms part of the West of England group of local authorities and hence should consider working alongside North Somerset Council, South Gloucestershire Council and Bath and North East Somerset Council in regard of opportunities for sustainable energy. This is already occurring with waste management through the identification of sites incorporating energy recovery from waste but could

also include assessing the opportunities for biomass supply chains and sustainable energy supply strategies for cross-boundary urban extensions.

1.4.2 Florence

The sustainability path began in 1998 with the signing of the *Aalborg Charter* (City Council motion no. 24 of 26.01.1998) and was reinforced in 2005 with the signing of the Aalborg commitments (City Executive resolution no. 2005/G/00399 of 14.06.2005), which committed the Administration to more incisive actions by identifying specific objectives through a process of participation and sharing with its own citizens. This joint approach is ensured by the *Agenda 21* forum, a participation process that lies at the base of all paths of development and debate about the city's own strategic options.

Florence adopted the EU policies signing the *CoM* and setting long term targets in line with the EU set plan.

At national level the city has been sustained by the campaign Sustainable Energy for Europe (*SEE*) coordinated by the environmental ministry.

Both the *Tuscany region as well as Florence province* have joined the CoM as supporting structures and their policies (*energy plans*) are in line with the city's SEAP (same baseline year and inventory)

1.4.3 San Sebastián

With the signature of the *CoM* the city adopted EU policies and targets. These are also in line with the Energy National Plan set by the Government of Spain, and with the Basque Energy Plan set by the Government of the Basque Country. The Basque Energy Agency (EVE) helped in the development of the SEAP by the city and therefore setting goals in accordance with Regional goals (Basque Country) and National goals (Spain).

The follow up of the SEAP implementation every two years will guarantee that the goals keep in line with EU targets.

1.5 Analysis of the potential

A SMART strategy ought to be based on a deep analysis of the potential to set adequate, realistic and at the same time amibitious targets; the municipality should be aware of its exploitable potential to select the best set of objectives in its policies for the next future.

1.5.1 Bristol

There are a number of documents and data collection exercises that inform/have informed the objectives set out in the strategic planning documents. In terms of energy management specifically, the city authority commissioned a local non-profit organisation 'Centre for Sustainable Energy' to conduct research into the potential for sustainable energy measures in the city. The following information provides a brief précis of the report and its recommendations:

The *Bristol Citywide Sustainable Energy Study* has been produced by the Centre for Sustainable Energy and Adrian Smith, Independent Planning Consultant: the underlying aim of this study is to assist Bristol City Council in developing LDF policies which positively encourage reduced energy consumption and carbon emissions from buildings and greater sustainable energy generation.

The baseline calculated within the CoM framework gives a detailed emission profile for every sector related to energy and it will be recalculated for every monitoring step.

For specific sectors (especially buildings) and restricted areas (example Avounmouth) there is/will be soon a feasibility study of the saving potential related to RES and district heating implementation.

1.5.2 Florence

The work started from the emission inventory in the baseline year, then the RES&RUE possibilities in every sector, starting from the higher consumptions, have been scanned in detail. After that technical phase the achievable targets have been set but also other measures (not quantified or presenting concrete obstacles) have been included in the plan to have a complete landscape of the savings exploitation.

1.5.3 San Sebastián

Local potential has been roughly analysed. But for instance, the potential of renewable energy in the city has been studied by Fomento San Sebastián (wind power, photovoltaic, thermal and wave energy fields). The SEAP based in 2007 figures also gives an important base to measure the achievements and expected commitments.

However objectives were set up in accordance to the Covenant of Mayors and EU policies rather than based on real potential. This has been due to the fact that this commitments could be reasonably achievable, or at least be desirable for the city.

2 Implementation: priorities and tools

There could be many ways to reach the sustainability targets: a kind of ranking list should be developed selecting the most effective measures on the basis of indicators and priorities.

It won't be possible perhaps exploit the entire potential and the different mixing of actions could achieve different targets because every measure could support or afflict the others.

The ranking criteria are characteristic of each reality and should be selected taking into acount the local framework.

In the definition of the measures it's foundamental to analyse the supporting tools for the implementation of the actions to assess if they are adequate and employable: to be put in practise the strategies need a reliable set of tools to be defined in each different case.

2.1 Priorities set for the targets achievement

From which sector/action will the implementation start? Which measures will be performed first? We are investigating how this ranking has been set to compare the criteria of the three cities.

2.1.1 Bristol

Bristol 20:20 Priorities are four, as listed below, and especially the fourth involves detailed prioritisation in development sectors:

1. A city of strong and safe communities;

2. Reduce health and wealth inequalities ;

3. Raising the aspirations and achievements of young people and families

4. Making our prosperity sustainable securing the improved transport, environmental and broadband infrastructure, delivering sustainable economic recovery by providing targeted support to the five key and emerging sectors (creative and media; advanced engineering, aerospace and defence; micro-electronics and silicon design; environmental technologies/marine renewable industries; tourism), sustain the development of new technologies, facilitating the supply of a readily available workforce with the skills that business need, promoting Bristol's profile as a culturally vibrant and innovative city and Green Capital to underpin sustainable inward investment.

The Bristol City Council Climate Change and Energy Security Framework sets out 19 broad strategic activities under which there are then 65 more specific actions; a short description of the activities in the main sectors under city's competence is reported below (for the detailed list please see the questionnaire annexed)

Buildings: Reduce emissions from public buildings by 40% by 2020 providing RES&RUE

Sustainable Energy Supply: Plan & implement sustainable energy integrating sustainability targets into all council projects, programmes & strategies.

Planning: Create & implement a low carbon & energy resilient planning policy framework

Green Digital Economy: Help create a low carbon economy reducing public sector organisations direct & supply chain carbon emissions , strengthening digital infrastructure & using smart technologies to deliver carbon savings & economic benefits, promoting Bristol's environmental technology, innovation & services sector

Transport & Travel: Implement citywide travel & transport programmes to reduce transport energy use delivering our corporate travel & transport policies

Adaptation & Resilience: Review the vulnerability of all council services and of Bristol's food systems to peak oil, energy security & climate change by increasing their resilience & enhancing their adaptability

Communities & Culture: Support action on climate change & peak oil response and work with schools & our cultural partners to improve their sustainability & raise awareness of climate change issues

Waste & Recycling: Increase resource efficiency by optimising residents' and Council's waste management, developing waste treatment innovations & improving sustainability of BCC trade & street waste collection & disposal services

In the Joint Local Transport Plan sets a priority on mobility issues and selects a set ofsetailed measures.

2.1.2 Florence

Several actions have already been put into practice as they are currently in the implementation phase or included in the short-term program.

In particular with regard to mobility, an area which is problematic and difficult to tackle for all municipalities as a result of the economic situation, several actions have already been implemented with results that exceed the stated forecasts.

Another priority has been set on public properties consumption because the PA ought to play an exemplar role. The communication and the urban planning are the other priorities which could improve the savings in short term in the building sector.

2.1.3 San Sebastián

No priorities have been set for the targets. Each department is responsible for the achievement of their own goals set in their own strategy documents. But there is not any coordination level among the initiatives that are being taken.

The lack of prioritarisation makes that, for instance, although an action in the mobility sector (that represents 40% of the CO_2 emissions of the city) hasn't the same impact compared with an action on municipal buildings (3% of the total CO_2 emissions) there is not any preference of actuation for this department.

However the city has three main sectors in which the city is taking actions: Energy, Mobility and ICT.

2.2 Foreseen tools for the objectives concretization and current plans

To implement and concretize every measure the cities are going to use different tools which should have been analysed and selected as more effective (Plans and master plans, regulations, projects, project finance,…)

2.2.1 Bristol

As previously stated, the 20:20 plan has been formally adopted by the city council, and is supported by *a number of other plans to enable its delivery*. With regards energy efficiency and carbon reduction measures, the following documents have been developed to allow realisation of Bristol's ambition to have cut carbon emissions by 40% before 2020:

1) Bristol Development Framework/ Core Strategy
2) Bristol City Council Climate Change and Energy Security Framework
3) Bristol City Council Corporate Strategy

The Joint Transport delivery Plan has been developed in partnership with other authorities and as such is supported by other tools as the Delivery Plan that will look to *maximise funding* from as wide a range of sources as possible

ELENA

The council has recently been awarded a £2.5 million technical assistance grant under the European Investment Bank's European Local Energy Assistance (ELENA) programme to develop investment programmes in energy efficiency and renewable energy projects in Bristol and the wider sub-region – with an estimated potential investment of up to £140 million.

2.2.2 Florence

The realisation of each action included in the SEAP strategy has been traced in detail: mainly the plan involves statements for other *planning tools* (structural plan, buildings regulation, traffic plan,…) and it needs a wide consensus based on the *communication strategies*.

The shortly adopted measures needing a quick implementation have been concretised trough *council decisions or Mayor decisions*.

Agreements with financial institutions and stakeholders association (as for done for the minimum boilers efficiency measures which has been stated in a Mayor decision with the support of the installers and a bank) are foreseen to facilitate the implementation of several actions.

2.2.3 San Sebastián

The tools selected are the *plans* that have been mentioned before and several *supporting policies*:

- Local policy on construction under Energy Efficiency criteria.
- Tax reduction policies on (efficient vehicles, construction)
- Local subsidies for building retrofitting actions.

There are also specific regulations and subsidies from EU, Spanish Government, Basque Government and Provincial administrations

2.3 Monitoring and control: performance review

A control of the implementation must be foreseen for the sustainable policy to make it effective. Based on the total quality management systems, the Deming cycle (Plan-Do-Check-ACT) is the best methodology which could ensure the effectiveness of a planning activity. Each measure and policy should foresee a proper monitoring methodology with a set of indicators and timeframes. The monitoring plays an important role also to obtain a continuous interest and useful data regarding the results for the communication. The control methodologies should imply also a business as usual trend assessment and different scenarios to adapt the action set to the global vision.

2.3.1 Bristol

Bristol's Annual Monitoring Report (AMR) is part of the Bristol Development Framework. This report monitors the period 1st April 2010 to 31st March 2011. The primary purpose of the report is to share the performance and achievement of the planning service with the local community.

The report shows:

- How the Local Development Framework (LDF) is progressing,
- The extent to which the strategic objectives and policies of the adopted Core

Strategy, are being achieved; and

- Progress against targets and indicators.

Bristol City Council Climate Change and Energy Security Framework: the various different strategic actions contained within the framework have differing monitoring processes and timescales involved in their implementations.

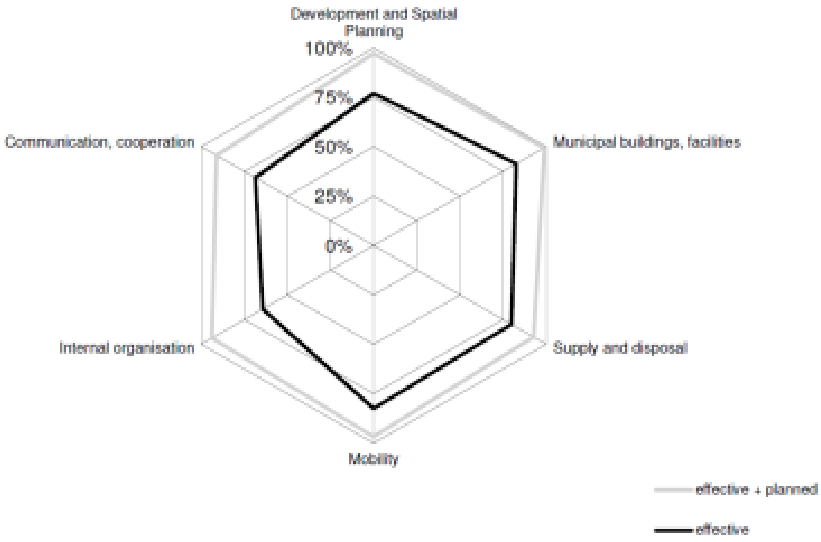
The Joint Local Transport Plan states that robust monitoring procedures will be put in place using established baseline data. We will publish an annual monitoring report. A mid-term review will inform the Delivery Plan. Targets will be fully reviewed and updated for the following two five year periods of the plan.

2.3.2 Florence

The baseline has been set at 2005. The first monitoring has been calculated at 2010 (the nearest year with a complete set of data available) but from now on a 2 year monitoring procedure will be performed.

The PA consumptions are available with yearly detail.

The energy management system engaged is very helpful in controlling the achievements and including other new improvement chances.



2.3.3 San Sebastián

Every two years a greenhouse gas inventory is made to monitor the progress made. In addition to that the SEAP is also reviewed every two years (in 2013 the first review is being done).

Rest of Plans in mobility or ICT have their own monitoring and evaluation systems. In the case of mobility there are different milestones in the plan (2008-2024). There is also a Consultive Group Meeting (between 30 to 40 stakeholders participate) per department that meets three or four times per year for the follow up of these plans.

3 Citizen involvement

The vision a SMART city adopts should be out of ordinary and ambitious: a smart growth represents an opportunity for all the citizens and from this point of view it's crucial to forge stakeholders consensus and win support for change.

The strategy focus on the environment but it involves economic and social performances and it ought to have a wider territorial perspective to expand the SMART conditions to the neighbourhood.

Innovation, integration, involvement and information are the "4 I's" fundamental principle to work with.

3.1 Stakeholders

Administrators must engage stakeholders with their policies and planning processes to obtain collaboration, expertise, foundings and anything needed for the implementation of the strategy.

First of all the stakeholders list should be pointed out to start with the involvement; of course it's not exaustive and in the different phases of the process this will be improved and widened.

3.1.1 Bristol

As a citywide strategy, the 20:20 plan encompasses all stakeholders within the city, as well as key external stakeholders (such as central government and external business investments). A list of organisations has been identified within the 20:20 plan as being 'key' stakeholders: Avon & Somerset Constabulary, Avon Fire & Rescue, Bevan Brittan, Black Development Agency, Bristol Cultural Development Partnership, Bristol City Council, Business West, City of Bristol College,Destination Bristol, eckhoBristol, NHS Bristol, the Care Forum, University of Bristol, University of the West of England (UWE), Volunteering Bristol, VOSCUR, The Watershed, West of England Partnership (more details about the roles in the questionnaire annexed).

Neighbouring Authorities

Bristol works with neighbouring authorities to both promote and collaborate on a number of issues affecting our region. From transport and economic growth to larger intiatives, we regularly work together to share knowledge, experience, and resources: Bath & North East Somerset, North Somerset Council, South Gloucestershire Council.

Bristol is one of 8 cities which make up England's Core Cities. Core Cities are a unique and united local authority voice to promote the role of our cities in driving economic growth. The combined group represents the councils of England's eight largest city economies outside London (Be Birmingham, The Manchester Partnership, The Leeds Initiative, Sheffield First Partnership, Liverpool First, Newcastle Partnership, One Nottingham).

3.1.2 Florence

Citizens are the main stakeholders we refer to: they could be reached by wide communication activities (spread meetings, social networks,…) or through their associations representatives.

Also builders associations, professionals as well as designers will be important.

Installers and energy providers has been already involved.

Industrial sector could be interesting but the main interest is in the tourism and in the neighbouring municipalities involvement (metropolitan area which manage several services like waste and water management as well as mobility).

3.1.3 San Sebastián

The main stakeholders actually pointed out are:

- City council departments, local councillors and politicians, which make policies to boost the necessary changes,
- The banks and other financial stakeholders to help with the funds needed,
- Utilities and operators which provide the energy for consumption.
- Consumers (citizens, NGOs, organizations and companies)

3.2 Communication strategy

To implement and achieve the objectives of the plan, the adhesion and participation of the civil society is essential: communication plays a very important role in creating the so called "culture of accountability" making all individuals responsible for progress towards the vision. Even a well designed plan or a good project could fail if it's not supported by a proper information strategy which is able to create the consensus and multiply the results.

There should be first an internal information within the local authority to make all the departments part of the vision. Then the municipality could decide a different

communication involvement for each phase of the planning process (definition, adoption, implementation, follow up).

Let's investigate what the three cities have done or have planned about communication.

3.2.1 Bristol

The 20:20 plan was formally adopted by the authority in 2010, has been in implementation since then and is communicated/disseminated via the work of the Bristol Partnership.

Bristol green capital 2015 represents also a big chance to disseminate information about city's sustainable policies.

3.2.2 Florence

The repercussions of the development processes hypothesized in the structural plan, also known as "zero volumes," were analysed in relation to the above principle in order to fine-tune the analysis of the different environmental components that we can affect by finding ways to mitigate their potential negative impact. This path of analysis was subject to European Community guidelines and the Region of Tuscany's law on popular participation in urban planning, but it was also subject to public participation processes that involved the citizens themselves in city development issues through the 'Florentines change the City' event. 100 meetings in 100 places, on 28th September 2010. The analysis led to a series of conclusions for each of the environmental components that were raised.

To achieve the predefined objectives of the Plan, it is extremely critical, in practical terms, to be an active part of the Plan itself, to foster the active involvement of every level of local stakeholder and the population at large (an essential component for achieving reductions in CO2 emissions) and to stimulate research and raise the awareness of participating enterprises and other units in the territory so that they can cooperate harmoniously to achieve this fundamental goal for the city.

From the perspective of active implementation, which describes how the current administration adopts all of its Plans (beginning with the Structural Plan, which used the Town Meeting instrument to ensure maximum transparency and active citizen participation), the communication plan was created on the basis of two primary tools:

non-stop institutional communication: a dedicated space was opened on the public municipal network (located under Administration - Plans and projects) where all information and updates can be accessed at any time (the SEAP page)

direct participation: via scheduled meetings aimed at specific actors and opened to the entire population.

The reduction of CO2 emissions needs to be a common, shared goal that extends across the entire territory and involves every sector – this is the assumption underlying the communications plan, which is pervaded by the notion that the process must take place before, during and after the SEAP itself is approved.

Participation is an indispensable condition for the city's sustainable development, which means that sufficient communication of the SEAP objectives is as fundamental as the sharing of the city's future with other institutions, local actors and the citizens. The Administration, therefore, has opened a dialog with different subjects in the worlds of business, scientific research, labor unions, associations, representatives of production categories and the world of associationism more generally in order to cultivate these themes with a variety of different means and methods.

The basic structure of communication and involvement, as a result, has been organized into three main phases:

pre: presentation of the draft Action Plan for Sustainable Energy and opening of a discussion designed to gather suggestions and proposals for initiating collaboration improving on operational aspects of existing collaborations

post: presentation of the Sustainable Energy Action Plan, as approved by the City Executive and the City Council

on-going: periodical meetings for updates in correspondence with monitoring sessions

The Communication Plan, therefore, forms an integral part of the Sustainable Energy Action Plan, which accompanies every moment of its formation and every single phase that cyclically reproposes and reexamines ongoing results and updated forecasts that serve to recalibrate, when necessary, the planned actions.

3.2.3 San Sebastián

There's no integrated communication plan which includes the different activities made.

Each department periodically informs about the development of the projects, but this information is not viewed from an integrated point of view and a common communication objective.

Only the Local Agenda 21 has been well communicated and periodically the main stakeholders meet together to carry on the planning of the agenda.

The local agenda 21 has been a participating process within the adoption and implementation phases.

4 Strategy assessment

While drafting the strategy, a local authority should identify every factor which could be of any support or in conflict with it. A kind of SWOT analysis could be helpful to foresee the main obstacles and find a way to overcome them as well as to point out the positive aspects which could be usefully exploited.

This evaluation is linked to the effectiveness of the city's strategy and to the time schedule for the implementation: an unforeseen obstacle could require much more effort and time to reach the result affecting the overall targets deadline.

4.1 Obstacles

Which are the barriers the cities are already facing? They could be of any kind (policy, public acceptance, financial, technological,…) and each one needs the elaboration of a specific solution.

4.1.1 Bristol

There are a number of potential barriers to implementation of the 20:20 plan, as articulated in the 'Core Strategy' document:

Bristol's people

If recent trends continue, Bristol's population is projected to grow by 26% between 2006 and 2026 to 519,800. Compared to the rest of the region, the population profile of Bristol is relatively young, with more children aged under 16 than people of pensionable age. At an estimated 49,700 (11.9%)

Bristol has the largest black and minority ethnic population of all local authorities in the South West. This population is not evenly distributed.

The total number of students at Bristol's two main universities – University of Bristol and University of the West of England – has risen substantially since 2001, however, there are some parts of Bristol which are in the most deprived 10% nationally for education, skills and training deprivation, with particular concentrations in South Bristol wards.

Bristol's transport

Although below the South West average (65%), the majority of employed people in Bristol (57%) travel to work by car. Traffic congestion and journey time unreliability make Bristol one of the most congested cities in Britain.

Bristol's homes

The affordability of home ownership has decreased in Bristol over the last ten years. Owner occupation in Bristol is lower than the South West and national averages whereas renting from the local authority and privately is higher.

The proportion of detached housing in the city is much lower than the South West average. The proportion of terraced housing and flats or converted houses is much higher than the South West average.

Bristol's economy

Bristol's economy has performed well in the last ten to fifteen years Nevertheless relatively high levels of economic exclusion persist particularly in certain parts of South Bristol, the Inner East and the Northern Arc.

Bristol's environment

Bristol has more green spaces than any other British city and a wealth of urban wildlife.

However Air Quality Management Areas have been established covering central Bristol and major arterial roads to monitor air quality in these locations where air quality objectives are not consistently met.

Bristol and its neighbours

Bristol is situated at the heart of the West of England sub-region and has close links with its neighbouring unitary authorities: Bath and North East Somerset, North Somerset and South Gloucestershire Councils. One of the key interrelationships is the strong transport and economic linkages between Bristol and South Gloucestershire. For example, the "North Fringe" experienced rapid employment and retail growth in the 1990s and is now one of the largest employment areas in the sub-region. However, a lack of public transport infrastructure has resulted in significant road traffic congestion problems. Furthermore, it is also evident that a number of relatively deprived north Bristol communities have not benefited from this growth in employment opportunities.

4.1.2 Florence

At 2020 the main problem could be represented by the financial crisis which make the public sector less efficient and not charming for investors.

Another issue could be linked to the national politics which could influence in many ways the municipal future.

The cultural heritage of the city entails, expecially in the historical centre, direct constraints and landscape that could become operational barriers.

The land area still restrict the testing of shares whose profit depends on the breadth of application.

The objectives are the result of a long-term strategy that goes beyond the remit of the political administration. The elections could lead to subsequent choices different from those currently used.

4.1.3 San Sebastián

The main barriers are economical (financing), state policies that make restrictions on local policies, and finally the citizens.

There's a rejection feeling towards new and therefore unknown technologies.

The citizens don't perceive the strategic actions involving a long time period, they want to see the changes occur in the short term. Sometimes it is difficult to tackle with short term needs versus long term strategy.

4.2 Strenght and weaknesses

A rough SWOT analysis of all the three contexts has been asked to the cities to evaluate how aware they are of their own chances to concretise the SMART program.

4.2.1 Bristol

Strengths

- Able to draw on a large number and variety of 'green' organisations/activities in the city – voluntary groups and established organisations (such as CSE) i.e. better support in strategy delivery
- Broad strategies and vision to address the wider sustainability issues
- Overarching emissions target
- Robust evidence base of resources, constraints and opportunities to draw on

Weaknesses

- Strategies often get out of date with relevant national policy changes and other activites – difficult to update certain strategies & documents due to change process
- Possibly too much reliance on the timely roll-out of central government initiatives, which may delay implementation of schemes e.g. Building Regulations review, Green Deal

- Ownership of most strategies is under the council, so doesn't always get sufficient wider buy-in from other stakeholders.
- Sometimes a disconnect between high expectations or assumptions in policies/strategies and what the decision makers actually allow or prevent. Ambition vs practical delivery.
- A lack of clear integration of strategies and policies

4.2.2 Florence

The main strength lies in the citizens involvement through the communication strategy and in the concrete actions selected to reach the first step target at 2020.

The major weakness is the ambitious target to 2030 and 2050 which could be obstacled by the structural characteristics of the city:

-too many boundaries, the old part of the city will be difficult to be refurbished with RES & RUE principles

-too many users, the commuters and the turists could slightly influence the energy demand without being "part of it"

- too many employees, the "system thinking" approach used could be stopped by a change in the personnel involved

- too many interests in common with the neighbourhoods (mobility, waste and water management).

4.2.3 San Sebastián

- Strengths:

San Sebastián started three decades ago transforming the city towards sustainable mobility, that's one of the reasons why the mobility model can be considered consolidated among all the stakeholders in the city. Public transport, conversions from roads to pedestrian walkways, exclusive and inclusive bicycle paths and other actions, are taken with the compliance of the citizens. There's a strong political and social support for all this issues.

ICTs are well introduced among citizens. The number of internet users increases every year.

Energy efficiency actions are strongly supported by the local council and there's an increasing awareness rising on this topic.

-Weaknesses:

One of the main weak points of the city is the lack of coordination among the diverse actions and objectives. Lack of common planning and internal communication from a common goal perspective. There is not an adequate communication towards the citizens. Many things are being done but no properly communicated and the result is that these actions are no visible to citizens.

City goals are set up but there is not a real implementation plan that integrates initiatives and avoids duplicity.

No priorization of the actions undertaken.

Economical crisis context: probably many of the actions will face difficulties to be implemented

5 Conclusions

The target of this report is to establish all the objectives and the framework for action, as well as the constraints, for its achievement in more detail.

The template this report is based on and that has been filled in by the three cities (see attachements) was aimed to describe:

-The vision

-The city/district main characteristics

-The priorities

-The tools

-The obstacles

-The stakeholders

The table below tries to summarise the main topics that have been analysed and the different approach of each city.

The common fil rouge in the three cities is the energy and emissions reduction objective which is scheduled with different timelines and targets because of the local environmental and socioeconomic situation.

Nevertheless the three cities visions go beyond the boundaries widening the strategy to a broad concept aimed at optimising the quality of life in every sector within the cities' competencies and also in the neighbourhoods.

	Bristol	Florence	San Sebastián
Vision **(targets and time horizon, adoption instruments)**	CO2 emission targets adopted in 2009: -25% by 2015 -40% at 2020 Strategic plans: > Bristol 20:20 >city council climate & energy framework > Bristol Community strategy for energy	Florence of the future targets adopted in 2011: -20% CO2 at 2020 -45% CO2 at 2030 -75% CO2 at 2050 Strategis plans: >SEAP >Structural plan "zero volumes"	SEAP commitments(2011): -20% CO2 at 2020 -40% of the city council energy consumptions Strategic plans: > SEAP >Smart city plan
Pilot district startegy	The Temple quarter has been chosen for the project due to the aspiration to make it the city's first carbon neutral development.	The Cascine park has been selected because it reflects the city's priority (mobility-buildings-ICT) and its characyeristics will be helpful in the dissemination and communication strategies.	The Urumea area represents a rich mix of uses and it shows limits in its spatial development as the whole city suffers.
Priorities	The priorities are formally detailed: the Bristol city council climate change and energy security framework sets out 19 broad strategic activity in 8 sectors with 65 specific actions	The main priorities are mobility and buidings; the second one is targeted trough planning and public properties as exemplar role. Communication is the other priority to multiply the results in those two sectors.	There has been no prioritisation in the implementation of the objectives set in the SEAP even if the sectorial targets have been differentiated and detailed.

	Bristol	Florence	San Sebastián
Tools	A number of other plans to anable the 20:20 plan delivery. ELENA technical assistance	Planning tools to reflect and detail the strategy Communication activities Council or Mayor decisions for fast measures Agreements with financial institutions and stakeholders associations	The tools selected are plans and supporting policies regarding construction criteria, taxes and subsidies.
Obstacles and barriers	In the "Core strategy" document the main obstacles are listed considering different aspects like population, transport, residential buildings, economy, environment and neighbourhoods. Other weak points consist in the match with national policy and initiatives and in the lack of clear integration of all the strategies.	Financial crisis and investments restrictions; National policies; Wide cultural heritage; Long term strategy that goes beyond the remit of political administration;	Economical crisis context; Integration lack among the different objectives; National policies; Rejection feeling towards new technologies; Citizens' need of short term results

	Bristol	Florence	San Sebastián
Stakeholders and communication strategy	In the 20:20 a list of key stakeholders has been identified both within the city as well as external. The neighbouring Authorities and the 8 England's Core Cities association are also involved. The communication has mainly interested the 20:20 plan and the 2015 Green Capital represent a big chance for dissemination.	Citizens are the main stakeholders the city refers to. The crafts and professionals associations have already been involved. The tourism sector will be targeted as well as the neighbouring municipalities (metropoklitan area which manages several services). The communication strategy already in place offers a very wide range of tools from the public participation processes (direct meetings like "100 luoghi") to the institutional web information or the social networks.	The main stakeholders considered so far are The city council departments and councillors The financial institutions The utilities providing energy. The local agenda 21 is considered as a best practice for the communication strategy.

It is clear that the sustainability issue has been targeted in different ways perhaps tailored on the specific situation; all the three approaches show strengths and weaknesses and they all have produced relevant good practices detailed in WP1.1: the challenge then will be the harmonisation of the policies to build up master plans as much effective and inclusive as possible in the next WPs.

6 Relevant links

Bristol:

http://bristolpartnership.org/partnership/reduce-inequality/

http://www.bristol.gov.uk/page/transport-and-streets/local-transport-plans#jump-link-0

http://www.bristol.gov.uk/sites/default/files/documents/planning_and_building_regulations/planning_policy/local_development_framework/Bristol%20Development%20Framework%20Core%20Strategy%20June%202011.pdf

http://www.travelplus.org.uk/our-vision/joint-local-transport-plan-3/read-the-final-jltp3-strategy

http://www.bristol.gov.uk/sites/default/files/documents/environment/climate_change/CC%26ESF%202012-15%20FINAL.pdf
http://www.bristol.gov.uk/page/mayor/vision-bristol

http://bristolenergynetwork.org/content/bristol-community-strategy-energy

ELENA:
http://www.bristol.gov.uk/page/environment/strategic-energy-unit

Bristol Energy and Carbon Initiatives:
http://www.bristol.gov.uk/sites/default/files/documents/environment/environmental_policy_and_performance/energy_management/Bristol%20Energy%20and%20Carbon%20Initiatives%20booklet.pdf

Florence:
http://www.comune.fi.it/export/sites/retecivica/comune_firenze/piani_progetti/patto_sindaci.htm

http://parcodellecascine.comune.fi.it/index.html

http://www.comune.fi.it/export/sites/retecivica/comune_firenze/mobilità

http://pianostrutturale.comune.fi.it/

http://www.becycle.comune.fi.it/becycle.html

http://opendata.comune.fi.it/

http://www.comune.fi.it/export/sites/retecivica/citta_firenze/100luoghi.html

twitter:@PAESFirenze

San Sebastián

http://www.donostia.org/info/ciudadano/ma_areas.nsf/vowebContenidosId/0F64BF49EC59FD9CC1257AA1003EF5D3/$File/Documento%20PAES.pdf

http://www.donostiamovilidad.com/documentos/

http://www.cristinaenea.org/pagina.php?queidioma=1&pg=35

http://www.fomentosanSebastián.org/

http://donostiafutura.com/eus/portada.php

7 Annexes

Annexed the three documents which this report is based on, the questionnaire that have been drafted by SPES and filled in by the three cities:

-Bristol questionnaire

-Florence questionnaire

-San Sebastián questionnaire

7.1 Annex 1 – Bristol questionnaire

Submission date	25/11/2013

Participant name	Bristol City Council

E-mail	Jon.Brookes@bristol.gov.uk

Describe your strategy and the objectives your municipality intends to achieve

Bristol city has a number of plans which outline the strategic approach in respect of issues such as transport, housing, planning and energy management. The following information has been provided to give an overview of these various plans and the overarching 'vision' for the city which has been articulated in the '20:20 plan'.

However, since its formal adoption, a constitutional change in the political infrastructure of Bristol has seen the first elected mayor voted into office in November 2012. Since this time, the Mayor has outlined his own strategic priorities and 'vision' for the city, which continues the work of the 20:20 plan:

http://www.bristol.gov.uk/page/mayor/vision-bristol

The Bristol 20:20 Plan

The overarching aim of the Bristol 20:20 plan is to set priorities which will enable Bristol to become one of Europe's Top 20 Cities by 2020. It is hoped that Bristol will appear at, or close to, the very top of the league tables measuring sustainability, quality of life and achievement among European cities.

Bristol Development Framework/ Core Strategy

The Bristol Development Framework (BDF) considers how the city will develop over the next 15 to 20 years. The BDF documents form part of the statutory Development Plan for the city. The Development Plan is used to help direct a range of 'urban design' implementation plans and decisions on planning applications.

The new process means that not all documents of the BDF need to be prepared simultaneously. The series of documents that make up the BDF will be prepared over

time. The Local Development Scheme sets out the details of the documents the council will prepare in the next few years and when each will be prepared.

The Core Strategy is a spatial plan which is informed by other plans and strategies and which helps support their delivery. There is a critical relationship between the BDF and the Joint Local Transport Plan which sets out specific proposals for delivery of transport schemes in the city. It also sets out the longer term transport vision for the sub-region.

The Core Strategy has also been developed with respect to Bristol Partnership's Sustainable Community Strategy "the 20:20 plan" as set out above.

The Core Strategy is the primary document in the BDF. In summary, it sets

out:

- A **Spatial Portrait** which uses a wide evidence base of information, statistics, studies and community involvement to identify the city's main social, physical and economic characteristics and the key, strategic **issues** it faces.
- A **Spatial Vision** and **Strategic Objectives which** look forward to 2026, setting out how we want the city and its neighbourhoods to have changed and developed.
- A **Delivery Strategy** which is the means of delivering the vision and objectives.
- A **Spatial strategy** – which contains the council's strategic policies for different parts of the city. It sets out the type, scale and broad location of where new homes, transport improvements, jobs, shops, open spaces and services will be located in the period to 2026.

The Core Strategy does not set out site-specific proposals or allocations; instead it looks at the broad locations for delivering new development. Other BDF documents will include site allocations and detailed development management policies and will have to be in conformity with the policies contained in the Core Strategy.

Bristol City Council Climate Change and Energy Security Framework

In November 2009 Bristol City Council adopted a target to reduce CO2 emissions by 40% by 2020 from a 2005 baseline. In February 2010 the Council adopted a Climate Change and Energy Security Framework which sets out how they will work with partners to deliver this target. The framework also includes energy and resilience targets for Bristol's road transport, business/public sector and homes, with clear accountabilities and monitoring. The City Council proposes that each sector will reduce emissions by 25% by 2015 and 40% by 2020 at a steady rate of change. Whilst reducing congestion and managing traffic flow will deliver some carbon benefits, it is recognised that achievement of the 40% target for transport will require a reduction in car-based trips within the urban area.

Joint Local Transport Plan

The Joint Local Transport Plan is produced by the four Local Authorities in the West of England region. These are Bath & North East Somerset, Bristol, North Somerset and South Gloucestershire, with the plan being effective in all four authority areas. The Plan will be co-ordinated by the West of England Partnership.

This JLTP is the third plan in a series of Local Transport Plans. The first plan was effective between 2001 and 2006, the second plan runs from 2006 to 2011 and JLTP3 is currently effective, starting in 2011 and expiring in 2026.

The plan will specifically focus on physical movement of people and goods by all modes of transport. It will set out policies to support economic growth via major schemes, whilst also improving the quality of life in the area by tackling congestion, improving accessibility, road safety and air quality whilst supporting economic growth.

Bristol Community Energy Strategy

This Bristol Community Strategy for Energy has been developed through the Bristol Energy Network by local community groups and the organisations that they work with. The Strategy sets out aims and steps for community level action on energy and seeks to enable local community groups to work in collaboration with local authorities, the private sector and third sector organisations on sustainable energy issues.

It is driven by international and national targets for reducing carbon emissions, concern over climate change impacts, the growing cost (and reduced availability) of cheap fossil fuel, dependence on imported gas, and by fuel poverty highlighting economic disparities across Bristol.

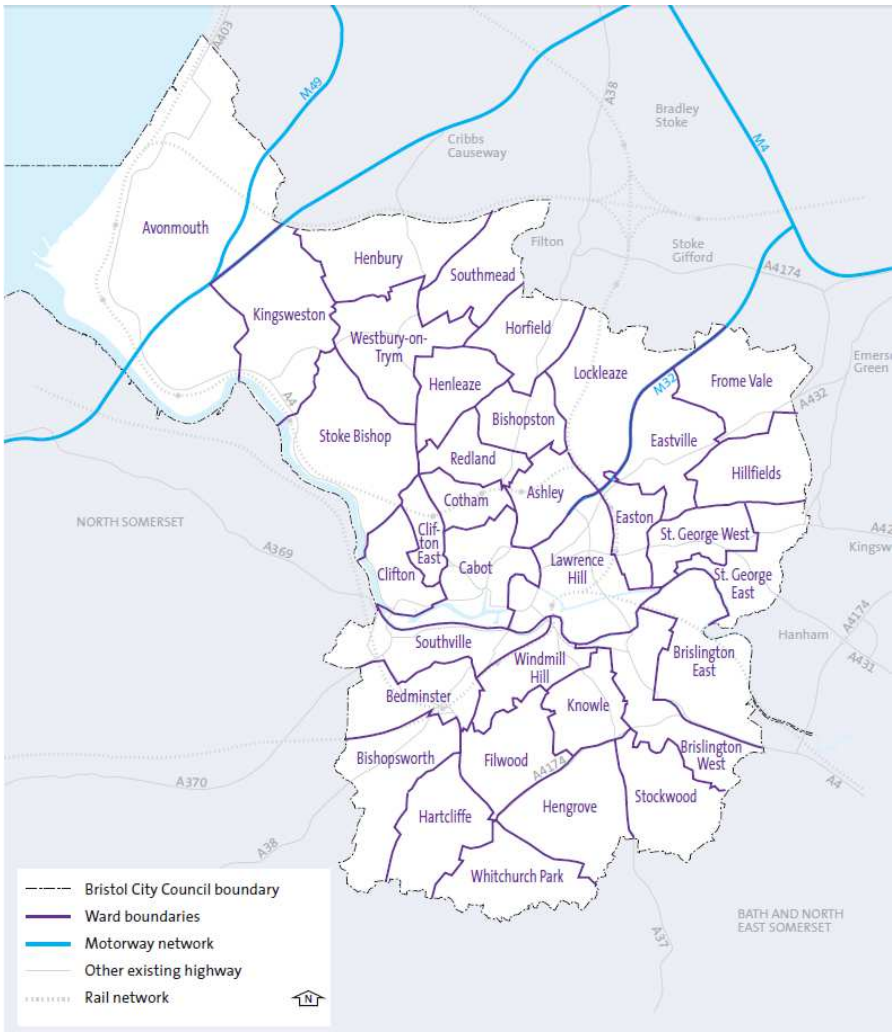
This strategy focuses on reducing energy use in domestic and non-domestic buildings through increased energy efficiency and energy conscious behaviours, an increase in community-led 'green' electricity generation, and hence to address fuel poverty and increase the community's resilience to rising energy costs.

The community energy sector has the potential to play a key role in addressing these issues. The strategy recognises that there is already a significant level of action across the city through the council, third sector organisations like the Centre for Sustainable Energy, businesses, social enterprises, and grassroots community groups. However more, and better co-ordinated activity towards core goals will make the vision more achievable.

The strategy vision is for:

"a city where everyone has access to sufficient affordable low-carbon energy for their needs; where wise and innovative use of energy empowers citizens and enhances the economy, with active communities across the city generating and managing a significant amount of their energy need."

The 20:20 plan applies to the local authority area covered by Bristol City Council:

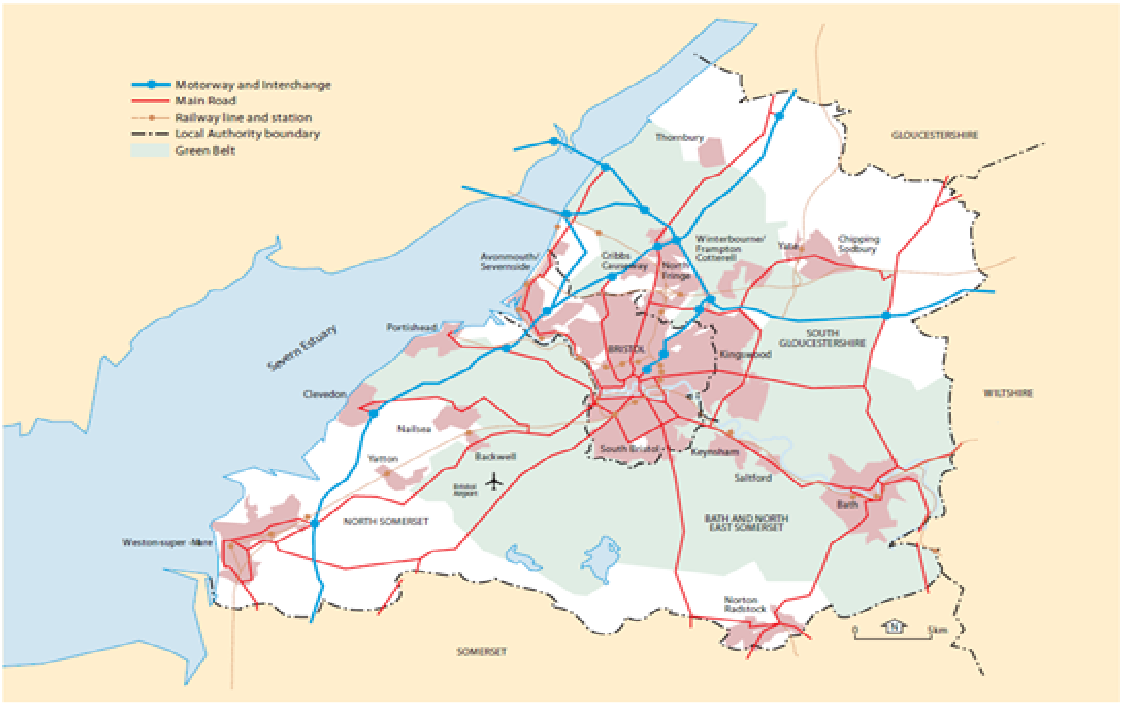


In terms of Transport, Bristol forms part of a group of local authorities coordinating activity to provide transport solutions across the region. This 'West of England Partnership' is made up of:

- Bristol
- South Gloucestershire
- North Somerset
- Bath and North East Somerset

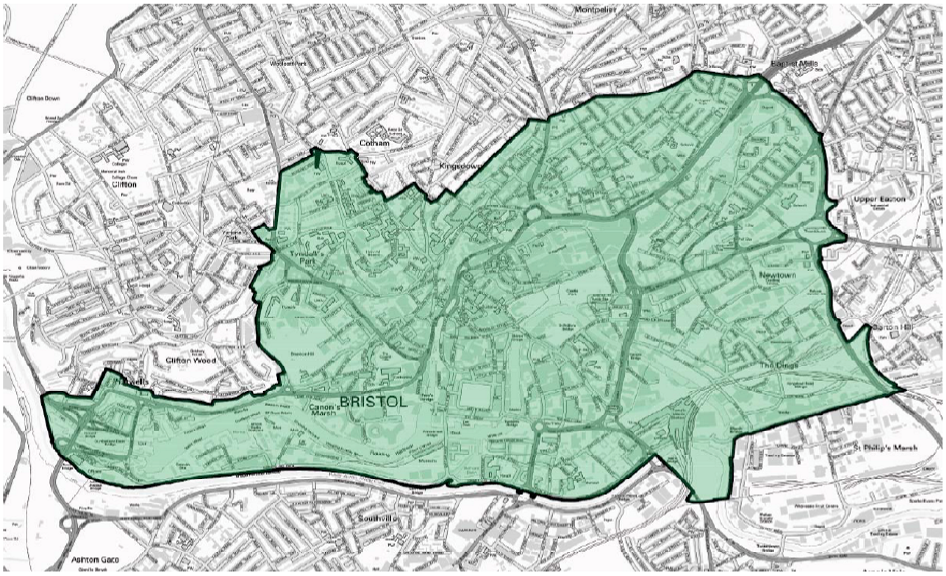
Covering the following area:

The 'Joint Local Transport Plan' covers the following area:



With regards strategic planning activity, Bristol has developed a 'Core strategy' which covers the entire city of Bristol, with localised plans developed subsequently. For example, the Bristol 'Central area plan' is due for publication in 2014 and covers the following area of central Bristol:

Map of Bristol Central Area Plan coverage



The specific district area of Bristol identified under STEEP, is the Temple Quarter Enterprise Zone and covers a mixed-use area surrounding the main railway station Temple Meads:

The municipality has defined priorities in the implementation of the objectives?

The Bristol 20:20 Plan

Bristol 20:20 Priorities and Actions

1. A city of strong and safe communities:

i. Empower and sustain resilient, cohesive communities that influence local decisions and shape public services. Strengthen volunteering and the voluntary and community sector. Promote equalities and reduce the gap created by historic inequality
ii. Address the potential risks of the cumulative impact of the current economic and fiscal decisions affecting some communities and groups disproportionately
iii. Reduce crime across the city; tackle the impact of substance misuse; ensure access to drug and alcohol treatment. Priority focus on reduction of re-offending
iv. Develop more sustainable communities through increasing the supply of affordable homes; maximising the number of empty homes brought into use; promoting a high quality built environment, local shops, high quality parks, jobs and regeneration outcomes.

2. Reduce health and wealth inequalities

i. Support and facilitate employment opportunities; target activity and skills development to young people, long-term workless, and areas of deprivation
ii. In local communities, strengthen the support to informal carers and neighbourhood groups to give sustainable care and assistance to people with care needs
iii. Promote independence, dignity and quality of life of people living with disability and long-term illness. Help people to be more active and live longer in their homes
iv. Deliver actions that promote and sustain 'health and wellbeing for life'; prioritise reduction in smoking, teenage pregnancy, harm caused by drugs and alcohol; promote increasing levels of exercise, active travel and access to healthy sustainable food

3. Raising the aspirations and achievements of our children, young people and families:

i. Keep our children and young people safe

ii. Tackle the causes and effects of child poverty
iii. Ensure that all our children and young people achieve their full potential

iv. Improve our shared understanding and planning for the needs of our children and young people

4. Making our prosperity sustainable

i. Secure the improved transport, environmental and broadband infrastructure that our businesses and communities need; provide access to a range of employment land and premises (in Bristol, through the implementation of Bristol's Core Strategy).
ii. Deliver sustainable economic recovery by providing targeted support to the five key and emerging sectors: creative and media; advanced engineering, aerospace and defence; micro-electronics and silicon design; environmental technologies/marine renewable industries; tourism.
iii. Sustain the conditions for innovation and the development of new technologies, products and services; encourage high levels of business start-up and growth of small businesses.
iv. Facilitate the supply of a readily available workforce with the skills that business need.
v. Promote Bristol's profile as a culturally vibrant and innovative city and Green Capital to underpin sustainable inward investment. In particular, take a lead in tackling climate change and move towards a low carbon economy through delivering the Climate Change and Energy Security Policy

Bristol Development Framework/ Core Strategy

To help implement the high level aims set out in sustainable community strategy and to address the challenges and opportunities, the Bristol Core Strategy aims to deliver:

- A prosperous, cohesive and sustainable city, a regional and green capital which is a great place to live.
- A safe and healthy city made up of thriving neighbourhoods with a high quality of life.
- A city with sustainable economic and housing growth.
- An accessible and digitally connected city with a transport system which meets its needs.
- A city which reduces its carbon emissions and addresses the challenges of climate change.

This citywide prospect leads to a vision for the areas within the city and for the forms of development which will be delivered in the years up to 2026. These are:

1. **Ensuring a sustainable future for Bristol** – a green capital with sustainable development and growth which meets the needs of the city, now and into the future.

2. **Mixed, balanced and sustainable communities** – throughout the city, where places are shared and communities mixed, that are good places for communities to live in and are socially cohesive, and where there is easy access including by walking and cycling to local community and health services, shops, culture and leisure facilities, employment, education and skills training in a high quality environment.

3. **Ambitious and sustainable economic growth** – a thriving and diverse local economy, maintaining the economic growth of Bristol above the regional and national level of economic growth and ensuring continued competitiveness as a core city. Development and regeneration will take place at accessible and sustainable locations throughout the city providing new employment and training opportunities.

4. **Appropriate housing provision** – providing new homes for the city within mixed, balanced and sustainable communities. This housing will comprise an appropriate mix to promote housing choice for all members of the community including the provision of affordable homes to help meet the needs of the population of Bristol in 2026.

5. **Better health and wellbeing** – a pattern of development and urban design that promotes good health and wellbeing and provides good places and communities to live in. Bristol will have open space and green infrastructure, high quality healthcare, leisure, sport, culture and tourism facilities which are accessible by walking, cycling and public transport. This will help enable active lifestyles, improve quality of life and reduce pollution.

6. **High quality built environment** – highly attractive and safe places, with a high quality well designed built environment. A core city with a destination status of international standing, with quality development throughout and good places and communities to live in.

7. **High quality natural environment** – a high quality natural environment where valued open spaces and biodiversity are conserved and enhanced and a green infrastructure network is maintained.

8. **Improved accessibility and connectivity** – improved accessibility and connectivity to and between centres and within the city, to key services places of work and recreation, with improved quality of life, for residents, businesses and visitors alike. Residents and workers will have a reduced need to travel. Congestion will be managed, public transport and walking and cycling provision improved and streets, pedestrian areas and spaces will be safe.

9. **Effective waste management** – sufficient sites for the delivery of sustainable waste management facilities and to have enabled the minimisation of waste in new

development.

10. **Adapting to climate change and promotion of renewable energy** –addressing the causes of climate change through the delivery of sustainable construction methods and renewable energy production. Development in Bristol will take into account the impact of climate change including the increased risk of flooding.

11. **Community involvement and engagement** – communities actively engaged in the planning process through implementation of measures outlined in the Statement of Community Involvement and the Bristol Compact.

Bristol City Council Climate Change and Energy Security Framework

The framework sets out 19 broad strategic activities and these are set out below. Under these there are then 65 more specific actions that are presented in the following table.

Buildings

1. Deliver energy efficiency & integrated renewable energy programmes for the city's buildings
2. Reduce emissions from the council's building & operations by 40% by 2020 including schools from 2005

Sustainable Energy Supply

3. Plan & implement sustainable energy for Bristol, such as district heating, wind, solar & biomass installations
4. Integrate sustainability & carbon & energy targets into all council projects, programmes & strategies.

Planning

5. Create & implement a low carbon & energy resilient planning policy framework & development management process

Green Digital Economy

6. Use our strategic influence & partnerships to help create a low carbon economy & promote national & local business resource
7. Work with public sector organisations to reduce their direct & supply chain carbon emissions & to capitalise on opportunities to develop a low carbon economy
8. Develop Bristol as a Smart City by strengthening digital infrastructure & using smart technologies to deliver carbon savings & economic benefits
9. Promote & develop Bristol's environmental technology, innovation & services sector

Transport & Travel

10. Implement citywide travel & transport programmes, plan land use & deliver integrated, sustainable transport systems to reduce transport energy use & carbon emissions in Bristol
11. Develop & deliver our corporate travel & transport policies

Adaptation & Resilience

12. Review the vulnerability of all council services to peak oil, energy security & climate change & improve their resilience
13. Work with organisations in Bristol on climate change & peak oil response
14. Work with partners to review the vulnerabilities of Bristol's food systems by increasing their resilience & enhancing their adaptability

Communities & Culture

15. Support action by individuals, communities, Neighbour-hood Partnerships & community, voluntary & social enterprises on climate change & peak oil response
16. Work with schools to improve their sustainability through physical infrastructure, management systems & curriculum development
17. Work with our cultural partners to improve their carbon performance & raise awareness of climate change issues

Waste & Recycling

18. Increase resource efficiency by helping residents reduce, recycle & compost their waste, developing waste treatment innovations & improving sustainability of BCC trade & street waste collection & disposal services
19. Increase efficiency of the Council's internal waste management, including procured goods & services

Joint Local Transport Plan

Key Transport Goals:

i. Reduce carbon emissions
ii. Support economic growth
iii. Contribute to better safety, health and Security
iv. Promote accessibility
v. Improve quality of life and healthy natural environment

Contributions of measures towards the Transport Goals:

- Urban Traffic Management & Control systems;
- Car parking enforcement and parkingcontrols.
- Footways and cycleways;
- Highway structures;
- Public lighting;
- Public transport infrastructure;
- Highway drainage;
- Highway signage;
- Public Rights of Way;

- Traffic and road safety management;
- Parking infrastructure. Environment and Public Realm
- Schemes that support regeneration and development;
- Schemes that improve air quality;
- Schemes that improve the public realm;
- Schemes that support Strategic Green Infrastructure.

A vision for Bristol: Bristol's elected mayor George Ferguson:

As mentioned above, the 20:20 plan has been developed and merged into the elected Mayor's vision for Bristol. The following information is taken from the high-level overview document outlining this vision:

A vision for people

Healthy and caring Bristol:

Bristol to be a place where the cared for and the caring, young and old, are respected and valued members of our society; and where living healthy, happy and safe lives is the shared aspiration for every citizen.

How?

• Implement Bristol's Health & Wellbeing Strategy.

• Provide integrated social care and public health services, focusing not just on healthcare but on healthy living and the prevention of ill-health.

• Focus on pre-natal and early years care and support for those families most in need.

• Enable older people to play an active role in their communities and keep living in their own homes wherever possible.

• Promote volunteering and good neighbour programmes throughout the city.

Keep Bristol working and learning:

Bristol to be a learning city where every citizen has access to good education and is able to acquire the skills they need to join Bristol's world class workforce.

How?

• Work with education providers, businesses and public sector organisations to develop a 'City of Learning' action plan to take us to 2020 and beyond.

• Make sure that we fully understand the needs of major employers in the city, and work closely with our neighbouring authorities to ensure that our education system provides people with the right skills.

• Through a targeted scheme in Bristol, every school and youth club to be paired with a

local business or consortium, enabling young people to take more control of their own futures.

• Implement the findings of the Mayor's Education and Skills Commission.

• Help young people currently not in employment, education and training to find suitable jobs.

A vision for place

Keep Bristol moving:

Bristol to be a city where public transport provides an affordable quality alternative to the car, where streets are no longer clogged with traffic, our air is cleaner, and it is increasingly attractive to walk and cycle.

How?

• Work with partners and operators to improve the cost and quality of our public transport.

• Continue to improve our cycle network towards best European standards.

• Reduce emissions across the city to help protect people from the harm caused by poor air quality.

• Remove the blight of commuter congestion and improve flows for public transport and those who need to drive.

• Promote walking, cycling and running as safe and pleasant alternatives to the car. Continue improvements to layouts to create civilised spaces and people friendly streets with an emphasis on safety for children.

Building successful places:

Bristol will be a city of well-connected neighbourhoods with a strong sense of identity and belonging, where a diverse mix of housing types and tenures ensure that homes are increasingly affordable.

How?

• Make sure that more affordable homes are built in the city, with targets of at least 750 a year by 2017 and 1000 a year by 2020.

• Make sure all new developments across the city are designed for the needs and aspirations of the people who will live there.

• Continue the rejuvenation of the historic centre, including the recreation of Bristol's High Street and redevelopment of St Mary le Port.

• Support the regeneration of communities around the city, most notably south Bristol,

with the redevelopment of Hengrove Park as a major new mixed use community with up to 1,000 new homes.

• Continue the regeneration of the Temple Quarter Enterprise Zone, providing a rich mix of businesses, homes of a variety of types and tenures and leisure facilities.

A vision for prosperity

Global Green Capital:

Bristol to harness the energy of everyone in the city to maximise the opportunity of our Green Capital year of 2015 as a platform for promoting the city on the world stage, to attract investment growth and jobs.

How?

• Use European Green Capital as a platform for promoting Bristol and showcasing our strengths across the world, working closely with the Local Enterprise Partnership and national Government.

• Develop a programme of activity for the 2015 year that engages and involves everyone in the city.

• Early in 2015, host a Global Green Cities Summit as a precursor to the UN Global Climate Summit in Paris that year.

Vibrant Bristol:

Bristol to be a place where the streets are alive with activity, and where every citizen and community participates in the cultural life of our city.

How?

• We must ensure Bristol has its much needed arena by 2017.

• Work with both football clubs to ensure they meet their ambitions for new stadia.

• Make sure festivals, events, exhibitions and performances are accessible to everyone.

• Make the best use of the city and its community assets such as schools, community venues or open public spaces to ensure no neighbourhood is left out of the cultural life of the city.

• Ensure that the council and other public agencies support and enable cultural activity, without excessive focus on rules and regulations.

Empowered city

Bristol to be a city more in control of its own future and where its governance is

modernised to fit the mayoral model as part of the movement to free our great English cities from stifling central control.

How?

• Continue to work in partnership with England's other major cities to make the case for more local power over our finances and futures.

• Promote the Mayoral model of city leadership as a way of seeking greater freedoms, flexibilities and resources from national Government.

• Reduce unnecessary bureaucracy and the number of expensive time consuming meetings too often associated with the workings of the council.

Active citizens

Bristol to be a place where we celebrate and champion the diversity of our population and every individual, organisation, business and community is encouraged to play an active role in the life of the city.

How?

• Strengthen support for the work of voluntary and community organisations in the city, making sure we focus on achieving the city's objectives.

• Create a new city-wide framework for volunteering, focusing on the city's objectives and celebrating the success of people and projects.

• Redesign the system of decision-making in the city to help citizens and communities have real influence over what happens in their area, allowing for more devolution of power and resources in exchange for a commitment to helping the city achieve its priorities.

Bristol Community Energy Strategy

The Bristol Community Strategy for Energy is set out along five themes: Community resilience and fuel poverty; Understanding energy and behaviour; Energy efficiency and low carbon technology; Renewable energy generation, and; Local economic development. Under each theme broad goals, indicative steps and measures of success are outlined.

These priorities include statements on (please classify the priorities with numbers starting from 1 – higher to 6 – lower)

☒ buildings ☒ Mobility ☒ Energy production
☒ services ☒ industry ☐ other:_____

Timeline to achieve these objectives: starting year, duration, milestones,…

The Bristol 20:20 Plan

Implemented up until 2020

Bristol Development Framework/ Core Strategy

Adopted June 2012, for the subsequent 15-20 years

Bristol City Council Climate Change and Energy Security Framework

Implemented between 2012-2015.

Joint Local Transport Plan

Implemented between 2011-2026.

Are your objectives linked to strategies or plans those at upper level (Province, Region, Nation, EU,…)?

Yes:

The Covenant of Mayors

Bristol is also a signatory of the European 'Covenant of Mayors':

The Covenant of Mayors is the mainstream European movement involving local and regional authorities, voluntarily committing to increasing energy efficiency and use of renewable energy sources on their territories. By their commitment, Covenant signatories aim to meet and exceed the European Union 20% CO_2 reduction objective by 2020.

In Bristol, the covenant requires that we:

- Develop adequate administrative structures, including allocation of sufficient human resources, in order to undertake the necessary actions;
- Prepare a **Baseline Emission Inventory**;
- Submit a **Sustainable Energy Action Plan** within the year following the official

adhesion to the Covenant of Mayors initiative, and including concrete measures leading to at least 20% reduction of CO_2 emissions by 2020;

- Submit an **implementation report** at least **every second year after submission of their Sustainable Energy Action Plan** for evaluation, monitoring and verification purposes

To comply with the crucial necessity of mobilizing local stakeholders in the development of the Sustainable Energy Action Plans, signatories also undertake to:

- Share experience and know-how with other local authorities;
- **Organise Local Energy Days** to raise citizens awareness of sustainable development and energy efficiency;
- Attend or contribute to the Covenant of Mayors annual ceremony, thematic workshops and discussion group meetings;
- Spread the message of the Covenant in the appropriate fora and, in particular, encourage other mayors to join the Covenant

The 20:20 vision also contributes to the UK Carbon budgets/targets to 2050:

- Reduce the UK's greenhouse gas emissions by at least 80% (from the 1990 baseline) by 2050.
- Achieve this reduction through action at home and abroad. Moving to a more energy efficient, low-carbon economy will help us meet this target. It will also help the UK become less reliant on imported fossil fuels and less exposed to higher energy prices in the future.

DECC strategies, including; carbon plan, smart meter rollout plans, heat strategy, etc

DCLG plans, including; the NPPF, housing standards review proposals, Building Regs – zero carbon home/allowable solutions proposals, CIL arrangements, etc

WoE shared plans; joint local transport and waste plans and the WoE Planning Toolkit

Have been these objectives defined on the basis of an analysis of the local potential?

Yes. There are a number of documents and data collection exercises that inform/have informed the objectives set out in the strategic planning documents. In terms of energy management specifically, the city authority commissioned a local non-profit organisation 'Centre for Sustainable Energy' to conduct research into the potential for sustainable

energy measures in the city. The following information provides a brief précis of the report and its recommendations:

Bristol Citywide Sustainable Energy Study

This report presents the results of the Bristol Citywide Sustainable Energy Study and has been produced by the Centre for Sustainable Energy and Adrian Smith, Independent Planning Consultant.

The underlying aim of this study is to assist Bristol City Council in developing LDF policies which positively encourage reduced energy consumption and carbon emissions from buildings and greater sustainable energy generation.

The Government is committed to a set of challenging sustainable energy policies including a significant tightening of Building Regulations. There is increasing evidence to suggest that progressive policies at the local level are now being successfully implemented in response to these proposals. Bristol therefore now has an opportunity to build on this evidence and identify where it can formulate policies that go beyond prevailing Building Regulation standards and encourage sustainable energy generation across the city

As part of the Bristol Citywide Sustainable Energy Study, the following recommendations were made regarding the development of Bristol's LDF Core Strategy policies on sustainable energy:

I. Stepped targets should be set for non-residential development, but in terms of BREEAM standards. These targets should be equally challenging, but should be subject to review once the outcomes from the Government's consultation on the Code for Sustainable Buildings are known.
II. Experience from London strongly suggests that policies should include: (1) an explicit energy hierarchy; (2) a requirement for a Site Energy Strategy/Sustainability Statement to accompany development proposals; (3) an on-site renewable energy target (set in the context of the energy hierarchy); (4) a heating and cooling hierarchy, and (5) explicit clauses to address feasibility and viability issues.
III. Consistent with the above recommendation, an on-site renewables policy for new developments should be included which is set in the context of the energy hierarchy. The findings of this study suggest that an on-site renewables policy requiring 20% CO2 emissions applied to total residual emissions after the inclusion of energy efficiency, CHP and communal heating measures is appropriate.
IV. Further consideration should be given to material to be included within Development Control DPDs, such as detailed criteria-based policies, additional details on the required structure and content of Site Energy Strategies submitted

as part of a Sustainability Statement accompanying planning applications, and details on any 'allowable solutions' offered to developers. These should include increased flexibility to encourage the development of district heating in the Heat Priority Areas.

V. All targets and standards should be revised and updated periodically as national policy, sustainability best practice and low and zero carbon technologies develop.

Sustainable energy projects

There is a case for a policy setting out the council's vision for a low-carbon Bristol, and including key specific projects – heat networks, larger scale renewables, new build applications and retro-fitting. To support this, site and area specific proposals for sustainable energy should be added to the proposed policies and supporting text. These should include reference to identification of 'Heat Priority Areas' as described in this report, where district heating using CHP/CCHP as part of a citywide network is likely to offer opportunities to set higher standards in earlier phases and so should be encouraged/required.

Sustainable design and construction

Although the focus of this study is sustainable energy, the broader scope of environmental benefits resulting from sustainable design and construction also needs to be considered. Areas such as water use, the life cycle of materials, biodiversity, waste recycling and sustainable drainage systems are covered within the Code for Sustainable Homes and BREEAM, so unless otherwise specified, the use of these standards to express CO2 emissions targets will also imply certain standards for other aspects of sustainable design and construction. It is recommended that a policy on sustainable design and construction is expressed using these standards alongside a general checklist to highlight the main areas of focus. The viability of Code level 6 should be reviewed following the Government's consultation on the definition of zero carbon homes.

General recommendations:

Energy strategy priorities

Bristol City Council should focus the supply side of its energy strategy on developing the key resources of waste and biomass (woodfuel) to supply larger scale heat or CHP/CCHP plants serving what should ultimately be a citywide district heat network in the city's Heat Priority Areas. These resources, along with gas-fired CHP, have the potential to play a key

role in meeting the challenging targets up to and beyond 2016, and could be instrumental in achieving substantial citywide emissions reduction targets in line with those recommended above. As an urban area, Bristol's woodfuel resource is constrained and it should therefore build on existing experience in sourcing woodfuel and encourage the development of local fuel supply chains from outside the city.

The strategic position within the community held by Bristol City Council provides an opportunity to facilitate multi-sector partnerships – especially for large scale mixed-use developments, where renewable energy infrastructure may be shared, or where Energy Service Companies (ESCos) may be involved to potentially reduce the additional capital cost burden.

Bristol City Council forms part of the West of England group of local authorities and hence should consider working alongside North Somerset Council, South Gloucestershire Council and Bath and North East Somerset Council in regard of opportunities for sustainable energy. This is already occurring with waste management through the identification of sites incorporating energy recovery from waste but could also include assessing the opportunities for biomass supply chains and sustainable energy supply strategies for cross-boundary urban extensions.

Avonmouth

Due to its predominantly industrial land use and excellent transport connections, the Avonmouth area has significant potential for large scale low or zero carbon energy generation such as wind and biomass plant. A more detailed local study on building energy use in the area and local heat and power demands is suggested to evaluate the potential for CHP/CCHP plant, possibly powered by biomass. It is unlikely that connection to City Centre heat loads would be economic in the short term, although this could emerge in the longer term as a citywide heat network develops. Avonmouth's wind power resource should also continue to be developed as far as possible, as it represents the vast majority of Bristol's potential for wind power.

District Heating

A strategic planning study on a citywide heat distribution network should be undertaken as soon as possible.

The initial phase of a network is likely to be kick-started by a major new development with opportunities for a CHP/CCHP plant site – such as the proposed redevelopment of Southmead Hospital – and should also involve the provision of heat to nearby existing development, most likely within the Heat Priority Area. The study should also assess operational and delivery issues and the potential for ESCo partnerships, learning lessons

from recent experience and current practice in London, where the London Development Agency is setting an ambitious agenda for the development of 'Energy Masterplans' for all London boroughs.

Temple Quarter Enterprise Zone:

In terms of the Temple Quarter enterprise zone (Bristol's identified district as part of STEEP), a study into three key aspects of energy master planning has been commissioned by Bristol City Council and the work – undertaken by CSE – is currently on-going. The study aims to gather information regarding:

1. the spatial configuration of energy needs and
2. generation opportunities, and
3. how the development of low carbon infrastructure should be phased.

This will be based on 10 key objectives:

Objective 1: evidence framework

Provide a coherent framework of evidence to enable the delivery of decentralised, renewable and low carbon energy and zero carbon buildings in the Temple Quarter Enterprise Zone.

Provide a projection and timeline for future heat, power and cooling demand and associated CO2 emissions for new and existing buildings. It should also take account of future regulatory requirements for carbon reduction (including compliance with BCC planning targets) and the potential to go further than minimum compliance.

The consultants should interview stakeholders associated with each location/building in order to understand the timeline for decision making in relation to factors influencing energy use, including building specifications and the lifespan of energy equipment.

Objective 2: baseline and context appraisal

Conduct an assessment of the opportunities and constraints created by existing energy networks in the Temple Quarter Enterprise Zone area including gas, electricity and district heating. To include an exploration of potentially innovative solutions that could manage/reduce the costs of connecting decentralised energy infrastructure. This should include dialogue with the DNO.

Identify any sub-regional physical or regulatory constraints (physical e.g. supply of biomass, wind speeds, regulatory e.g. Conservation Areas, flood risk, Air Quality Management Areas) for delivering the energy targets for the Temple Quarter Enterprise Zone.

Objective 3: projected infrastructure and investment requirements

Identify the infrastructure and investment requirements necessary to realise Bristol City Council's long-term carbon reduction targets across the Temple Quarter Enterprise Zone. Please note the detailing of these requirements, including a timeline, will require the appointed consultants to work closely with Bristol City Council.

Objective 5: identify energy generation potential

Identify appropriate targets for renewable and low carbon energy technologies and energy outputs necessary to support zero carbon development. These should be broken down by development type (residential / commercial) and size (number of units and floor space) and outline the incremental increase in energy required ensuring that the development is zero carbon by 2019. Identify potential locations and sizing for energy centres.

Identify which generation technologies are not viable within the study area.

Objective 6: scenario modelling

Explore, through a combination of technically robust case studies (e.g. assessment of 2/3 recent developments within the area or equivalent areas) and computer modelling (to be agreed between the successful bidder and Bristol City Council), possible scenarios for meeting and exceeding Building Regulations. For example, all new development in the Enterprise Zone must meet BREEAM Excellent. This should:

a) highlight the key factors to be taken into account in order to support implementation e.g. financing, technical compatibility, capital costs and whether the targets can be achieved through a range of technologies that maximise the potential for emissions reduction over time and
b) provide an understanding of the viability and indicative costs (both current and likely future costs) of meeting renewable / low carbon energy targets and achievement of low and zero carbon buildings in the Temple Quarter Enterprise Zone.

Objective 7: land-use planning

With regard to the technology portfolios, identify the potential land take and site characteristics that would be required to achieve the proposed targets within the Enterprise Zone, including any areas or routes which may need to be protected and allocated to safeguard the future provision of renewable / low carbon energy, and the potential impact on areas of existing buildings and the extent to which planning, working with Building Control, can be used to support greater deployment of technologies.

Explore the potential impact of current land-ownership issues in the Enterprise Zone on the delivery of viable decentralised energy solutions.

Objective 8: role of ESCos

Identify and outline the potential role of Energy Service Companies (ESCos) and the Community Infrastructure Levy for delivering on /near and off site energy technologies. This should clearly relate to Output 2 above and outline the scale and mass and conditions relating to new development and energy requirements necessary for making ESCOs economically viable within the Enterprise Zone area.

Objective 9: business planning

Identify two business plans, one based on a network approach and another on microgeneration. This should include interviewing significant land or property owners in the Enterprise Zone to understand timescales for new development, retrofitting of new energy efficiency measures in existing buildings, and any other factors with a significant impact on energy density within the Enterprise Zone.

The business models should focus on reducing the upfront capital investment required by property developers to deliver low carbon infrastructure. The role of the City Council and other partners such as the HCA in enabling different business models should also be considered. The costs, benefits and risk to all partners should be evaluated and considered for each delivery option.

The role of developer contributions, network connection charges and roof space rental agreements should be incorporated into the plan. Sensitivities relating to future revenue streams such as the FIT and the RHI should be considered.

The exercise should focus on financial models that could be replicated on similar sites elsewhere in the city. Options could include the innovative use of public subsidy as an equity investment to leverage the infrastructure and the potential to establish an arm's-length energy company or ESCo with the ability to raise debt finance.

Objective 10: opportunity identification methodology

Provide a framework and methodology / criteria for identifying site and area specific opportunities for achieving a greater use of decentralised and renewable or low carbon energy. This framework should identify how targets should be used to inform detailed site / specific energy studies.

Tools for the objectives concretization

The Bristol 20:20 Plan

As previously stated, the 20:20 plan has been formally adopted by the city council, and is supported by a number of other plans to enable its delivery. With regards energy efficiency and carbon reduction measures, the following documents have been developed to allow realisation of Bristol's ambition to have cut carbon emissions by 40% before 2020:

1) **Bristol Development Framework/ Core Strategy**
2) **Bristol City Council Climate Change and Energy Security Framework**
3) **Bristol City Council Corporate Strategy**

The Joint Transport delivery Plan has been developed in partnership with other authorities and as such is supported by other tools as follows:

The Delivery Plan will look to maximise funding from as wide a range of sources as possible including:

- Department for Transport (DfT) simplified funding streams;
- Local Sustainable Transport Fund;
- Regional Growth Fund;
- Tax Increment Financing;
- Council funding (into areas such as maintenance and revenue support);
- Developer contributions;
- Other funding sources.

The intention is, through a series of Memoranda of Understanding and Action Plans, to expand the scope of the Delivery Plan to include scheme programmes from partners at the Highways Agency, rail industry and health sector. This will increase opportunities to co-ordinate and

integrate schemes and demonstrate how the JLTP3 fits into the wider delivery picture.

ELENA

The council has recently been awarded a £2.5 million technical assistance grant under the European Investment Bank's European Local Energy Assistance (ELENA) programme to develop investment programmes in energy efficiency and renewable energy projects in Bristol and the wider sub-region – with an estimated potential investment of up to £140 million.

The key objectives of the programme are to:

- Reduce the cost and level of energy consumption for the council and other public sector organisations
- Improve energy security and reduce fuel poverty
- Maximise job creation and investment in Bristol and the wider region
- Maximise profits that can be reinvested into new energy efficiency and renewable energy projects across the city and West of England region
- Reduce Carbon (CO2) emissions

There are four strands under which investments will be made as part of the ELENA programme:

District heating – the council has developed a plan for investment into district heating at the city level, identifying an initial 10 sites where this might be feasible. The ELENA programme will enable detailed feasibility studies of at least three of these sites with a view to installation of the first within the next 18 months.

Public buildings retrofit – aims to deliver low carbon refurbishment measures across public sector organisations including the council's own building stock.

Domestic retrofitting – has two strands, energy efficiency and renewable energy measures across social and private housing in the city. The Strategic Energy Unit has already started delivery of its domestic energy saving strand with the Bristol Home Energy Upgrade Scheme, which also trialled the Government's flagship energy efficiency programme – the Green Deal.

External cladding and heating upgrade project aims to deliver external wall insulation to high and low rise council-owned flats across the city, and upgrade gas boilers in council-owned properties

Is the strategy already reflected in any local planning documentation?

Yes, the 20:20 plan is referenced and reflected in both the core strategy and energy security framework documents. Bristol also has a 'Climate change and sustainability practice note' which

consolidates all planning documentation regarding sustainability:

Climate Change and Sustainability Practice Note

This practice note offers advice on the implementation of policies BCS13-16 of the Bristol Development Framework Core Strategy. Collectively, these form a suite of planning policies relating to climate change and sustainability:

BCS13

Climate Change

Requires development to
both mitigate and adapt to climate change.

BCS14

Sustainable Energy

Provides criteria for assessing new renewable energy schemes, with a presumption in favour of large-scale renewable energy installations. Requires new development to minimise its energy requirements and then incorporate an element of renewable energy to reduce its CO_2 emissions by a further 20%. Supports the delivery of a district heat
ng network in Bristol.

BCS15

Sustainable Design and Construction

Requires all development to engage with issues around sustainable design and construction. Requires larger developments to be assessed against BREEAM and/or the Code for Sustainable Homes, and super major developments to be assessed using BREEAM Communities. Contains additional policy content relating to refuse storage and broadband provision.

BCS16

Flood Risk and Water Management

Principally addresses the issues around development in flood risk areas but also requires all development to include water management measures to reduce surface water run-off, including sustainable drainage systems (SUDS).

Which stakeholders do you think will be necessary to reach the objectives

<u>The Bristol 20:20 Plan</u>

As a citywide strategy, the 20:20 plan encompasses all stakeholders within the city, as well as key external stakeholders (such as central government and external business investments). The following list of organisations has been identified within the 20:20 plan as being 'key' stakeholders:

Avon & Somerset Constabulary – we work together to make communities in Avon and Somerset safe places to live.

Avon Fire & Rescue – we are committed to keep the Bristol area a safe place to live, work and visit.

Bevan Brittan – we are a national law firm with offices in Bristol which is focused on Major Corporates, Health and Communities and Local Government.

Black Development Agency – we empower Black and Minority Ethnic communities by building up the skills, ability and capacity to enable a sustainable Black Voluntary Community and Social Enterprise sector.

Bristol Cultural Development Partnership – Bristol Cultural Development Partnership promotes new artistic and cultural developments of national significance in Bristol and across the West of England.

Bristol City Council – we are the local authority for Bristol.

Business West – We provide business leadership, challenging local and national policy to ensure that the voice of local business is represented and heard by key decision makers in Government.

City of Bristol College – as the largest further education college in the South West, we are one of the region's leading education providers.

Destination Bristol – we work with local business and strategic partners with the aim of increasing business competitiveness within the city centre, support employment and economic growth, and to

raise the Bristol City Region's profile as a European-class place to visit, study and live

eckhoBristol – A comprehensive and feel-good one-stop shop offering you information, news and events to help ensure that you're always up to date and never miss out.

NHS Bristol – we are responsible for local NHS health services in Bristol – we work with patients, carers, local people and clinical experts to decide what services are needed in Bristol and then design services that best meet the needs of local people.

The Care Forum –we are an independent voluntary and community sector infrastructure organisation in the care sector.

University of Bristol – our mission is to pursue and share knowledge and understanding, both for their own sake and to help individuals and society fulfil their potential.

University of the West of England (UWE) – Our mission is to make a positive difference to our students, business and society. Our ethos of genuine partnership working enables U+WE to successfully promote and drive opportunity, social justice, creativity and innovation.

Volunteering Bristol – we are Bristol's Volunteer Development Agency, we promote, support and develop opportunities for people to become involved in voluntary work.

VOSCUR – we are a Council for Voluntary Services, an infrastructure, local support organisation and a development agency for the voluntary, community and social enterprise sector in Bristol.

The Watershed – we are a media centre at the heart of Bristol, promoting creativity, innovation and talent.

West of England Partnership – we bring together the four unitary authorities – Bath & North East Somerset Council, Bristol City Council, North Somerset Council and South Gloucestershire Council – and a range of social, economic and environmental partners. We co-ordinate high level planning to improve the quality of life of residents and provide for a growing population.

Neighbouring Authorities

Bristol works with neighbouring authorities to both promote and collaborate on a number of issues affecting our region. From transport and economic growth to larger intiatives, we regularly work together to share knowledge, experience, and resources:

Bath & North East Somerset

North Somerset Council

South Gloucestershire Council

Bristol is one of 8 cities which make up England's Core Cities. Core Cities are a unique and united local authority voice to promote the role of our cities in driving economic growth. The combined group represents the councils of England's eight largest city economies outside London.

Be Birmingham

The Manchester Partnership

The Leeds Initiative

Sheffield First Partnership

Liverpool First

Newcastle Partnership

One Nottingham

The strategies have been communicated within the administration and to the stakeholders? In which phase (definition, adoption, implementation)?

Is there a communication plan?

The 20:20 plan was formally adopted by the authority in 2010, has been in implementation since then and is communicated/disseminated via the work of the Bristol Partnership (see link at end of document).

Main obstacles/barriers foreseen

There are a number of potential barriers to implementation of the 20:20 plan, as articulated in the 'Core Strategy' document:

Bristol's people

If recent trends continue, Bristol's population is projected to grow by 26% between 2006 and 2026 to 519,800. Compared to the rest of the region, the population profile of Bristol is relatively young, with more children aged under 16 than people of pensionable age. At an estimated 49,700 (11.9%)

Bristol has the largest black and minority ethnic population of all local authorities in the South West. This population is not evenly distributed; the inner city wards of Lawrence Hill, Ashley and Easton have the highest percentage residents from those groups.

The total number of students at Bristol's two main universities – University of Bristol and University of the West of England – has risen substantially since 2001 from 45,600 to 52,400 students. 34.5% of working age people in Bristol are educated to degree level compared with the national average of 29%. However, there are some parts of Bristol which are in the most deprived 10% nationally for education, skills and training deprivation, with particular concentrations in South Bristol wards.

Overall recorded crime levels have been falling in recent years and, as of March 2009, the crime rate in Bristol was at a ten year low. Bristol contains some areas of socioeconomic deprivation which are amongst some of the most deprived areas in the country yet are adjacent to some of the least deprived. Levels of educational attainment in Bristol's schools are generally lower than comparable cities. However, recent results show continuing sustained improvement on the majority of indicators across all key stages.

Bristol's places

The city is set within a distinctive landscape defined by the valleys of the Rivers Avon, Frome, Trym and Malago, the flood plain of the Severn Estuary, the Dundry slopes and areas of countryside surrounding the city. Bristol's rich heritage includes the city centre's medieval core and Georgian parts of Clifton, Hotwells, Kingsdown and St Paul's. The historic Floating Harbour, along with the Avon New Cut and the Feeder Canal, is a unique feature which has defined the development of the city centre and will continue to shape this part of the city.

There are high-density Victorian neighbourhoods adjacent to the city centre such as Bedminster, Easton and Southville. Places such as Bishopsworth, Brislington, Henbury, Stapleton and Westbury-on- Trym – once outlying villages which have been subsumed by the city – also have their own identity, with some retaining important historic and village like character. Large, mostly low density inter-war and post-war housing estates are also found in outer parts of the city such as Hartcliffe, Inns Court, Knowle, Southmead and Withywood.

The city has numerous parks and open spaces, ranging from large multi-functional areas like Durdham and Clifton Downs to historic squares and local parks and playgrounds. Bristol has a diverse network of centres providing shopping, services and employment of varying sizes. These include the city centre which provides regional-scale shopping facilities and many cultural, arts and leisure amenities.

Bristol's transport

Although below the South West average (65%), the majority of employed people in Bristol (57%) travel to work by car. Traffic congestion and journey time unreliability make Bristol one of the most congested cities in Britain. However, 28.8% of households in Bristol have

no access to a car, a figure similar to national levels but lower than the other core cities. There has been a significant increase in walking and cycling trips in Bristol in recent years and it is estimated that they now account for over 25% of all commuter journeys. Greater Bristol was awarded Cycle City status in

2008.

The city's major mainline railway station is Temple Meads supported by several suburban railway stations located on the main routes and on the Severn Beach line. Inter-city coach services also serve Bristol from a central bus station at Marlborough Street. Bristol has an extensive bus network serving the city and its surrounding areas. Ferry services provide connections across and along the Floating Harbour. Large numbers of taxis also operate in the city contributing to tourism and business as well as residents' transport options.

Bristol Airport is located about 10 miles to the south of Bristol in North Somerset. It is the United Kingdom's ninth busiest airport and provides scheduled and chartered services to domestic and international destinations.

Bristol's homes

The affordability of home ownership has decreased in Bristol over the last ten years. In 2008 the average property price in the city was more than seven times that of annual gross average earnings. The Strategic Housing Market Assessment estimates a net annual requirement for approximately 1,500 new affordable homes to be provided in Bristol over the next 12 years to address demand and affordability issues.

Owner occupation in Bristol is lower than the South West and national averages whereas renting from the local authority and privately is higher. Local authority housing is mainly focused in inner city areas and on the outlying housing estates such as Hartcliffe, Withywood, Knowle West, Southmead, Lockleaze, Lawrence Weston and Henbury. Private renting is concentrated in the central and central west wards of Clifton, Clifton East, Cabot, Cotham and Redland.

The proportion of detached housing in the city (found particularly in Stoke Bishop and Henleaze wards) is much lower than the South West average. The proportion of terraced housing (found particularly in the inner suburbs) and flats or converted houses (found particularly in the city centre and in Clifton and Cotham wards) is much higher than the South West average.

Bristol's economy

Bristol's economy has performed well in the last ten to fifteen years. In 2006 its Gross Value Added (GVA) per head was some 30% above the national average. The city has a varied economic base. The city centre is the largest employment area in the sub-region providing approximately 109,500 jobs (2007). It is the South West's office capital and a

nationally important location for banking, insurance and professional services. Significant public sector employment is provided by employers such as the NHS, Bristol's university and government agencies.

The city's industrial areas also contribute to Bristol's economic diversity. The two largest industrial locations are found in St Philips Marsh area to the east of the city centre and Avonmouth, where Bristol Port has also experienced recent significant growth. Bristol's unemployment rate of 5.3% in 2009 was lower than the national rate (6.2%). Nevertheless relatively high levels of economic exclusion persist particularly in certain parts of South Bristol, the Inner East and the Northern Arc.

Bristol's environment

The city has a fine built environment heritage including 33 conservation areas, 73 historic parks and gardens, numerous archaeological remains and over 4,000 listed buildings. Bristol has more green spaces than any other British city and a wealth of urban wildlife. It has over 80 designated wildlife sites in the city ranging from the nature park on Brandon Hill to the internationally important Avon Gorge.

Bristol collects around 180,000 tonnes of municipal waste each year. Between 2006 and 2009 the amount of household rubbish recycled has increased from 18.5% to 37%. Air Quality Management Areas have been established covering central Bristol and major arterial roads to monitor air quality in these locations where air quality objectives are not consistently met.

Bristol and its neighbours

Bristol is situated at the heart of the West of England sub-region and has close links with its neighbouring unitary authorities: Bath and North East Somerset, North Somerset and South Gloucestershire Councils. One of the key interrelationships is the strong transport and economic linkages between Bristol and South Gloucestershire. For example, the "North Fringe" experienced rapid employment and retail growth in the 1990s and is now one of the largest employment areas in the sub-region. However, a lack of public transport infrastructure has resulted in significant road traffic congestion problems. Furthermore, it is also evident that a number of relatively deprived north Bristol communities have not benefited from this growth in employment opportunities.

National Context

The Core Strategy has been prepared having regard to national planning policy set out in planning policy guidance notes and planning policy statements. The Core Strategy policies do not repeat national policies, but reflect their objectives.

The unique characteristics of Bristol create specific issues, opportunities and problems for the future, which are addressed by the Core Strategy and BDF.

The understanding of the city, on which the Core Strategy is based, is informed by the Bristol Development Framework's evidence base. This includes a considerable amount of census and statistical information as well as a wide range of reports, plans and studies which have been undertaken.

Strength and weaknesses of your strategies

Strengths

- Able to draw on a large number and variety of 'green' organisations/activities in the city – voluntary groups and established organisations (such as CSE) i.e. better support in strategy delivery
- Broad strategies and vision to address the wider sustainability issues
- Overarching emissions target
- Robust evidence base of resources, constraints and opportunities to draw on

Weaknesses

- Strategies often get out of date with relevant national policy changes and other activites – difficult to update certain strategies & documents due to change process
- Possibly too much reliance on the timely roll-out of central government initiatives, which may delay implementation of schemes e.g. Building Regulations review, Green Deal
- Ownership of most strategies is under the council, so doesn't always get sufficient wider buy-in from other stakeholders.
- Sometimes a disconnect between high expectations or assumptions in policies/strategies and what the decision makers actually allow or prevent. Ambition vs practical delivery.
- A lack of clear integration of strategies and policies

Performance review: are the overall achievements monitored? How and with which frequency?

<u>The Bristol 20:20 Plan</u>

As a city-wide strategy, the implementation of the various actions is varied. For full information please refer to the Bristol Partnership website at:

http://bristolpartnership.org/partnership

Bristol Development Framework/ Core Strategy

Bristol's Annual Monitoring Report (AMR) is part of the Bristol Development Framework. This report monitors the period 1st April 2010 to 31st March 2011. The primary purpose of the report is to share the performance and achievement of the planning service with the local community.

The report shows:

- How the Local Development Framework (LDF) is progressing,
- The extent to which the strategic objectives and policies of the adopted Core Strategy, are being achieved; and
- Progress against targets and indicators.

Bristol City Council Climate Change and Energy Security Framework

The various different strategic actions contained within the framework have differing monitoring processes and timescales involved in their implementations. For full details refer to the following document:

http://www.bristol.gov.uk/sites/default/files/documents/environment/climate_change/CC%26ESF%202012-15%20FINAL.pdf

Joint Local Transport Plan

The JLTP states that:

It is important to have a robust, reliable and affordable method of monitoring progress against all indicators. This helps to ensure transparency and comparability at a cost that local authorities can sustain.

Robust monitoring procedures will be put in place using established baseline data. We will publish an annual monitoring report. A mid-term review will inform the Delivery Plan. Targets will be fully reviewed and updated for the following two five year periods of the plan.

Other issues not covered by this survey that you think could be useful
N/A

Any relevant doc link	http://www.covenantofmayors.eu/about/covenant-of-mayors_en.html http://bristolpartnership.org/partnership/reduce-inequality/ http://www.bristol.gov.uk/page/transport-and-streets/local-transport-plans#jump-link-0 http://www.bristol.gov.uk/sites/default/files/documents/planning_and_building_regulations/planning_policy/local_development_framework/Bristol%20Development%20Framework%20Core%20Strategy%20June%202011.pdf http://www.travelplus.org.uk/our-vision/joint-local-transport-plan-3/read-the-final-jltp3-strategy http://www.bristol.gov.uk/sites/default/files/documents/environment/climate_change/CC%26ESF%202012-15%20FINAL.pdf http://www.bristol.gov.uk/page/mayor/vision-bristol http://bristolenergynetwork.org/content/bristol-community-strategy-energy ELENA: http://www.bristol.gov.uk/page/environment/strategic-energy-unit Bristol Energy and Carbon Initiatives: http://www.bristol.gov.uk/sites/default/files/documents/environment/environmental_policy_and_performance/energy_management/Bristol%20Energy%20and%20Carbon%20Initiatives%20booklet.pdf

7.2 Annex 2 – Florence questionnaire

Submission date	22/11/2013

Participant name	MUNICIPALITY OF FLORENCE

E-mail	alessandra.barbieri@comune.fi.it

Describe your strategy and the objectives your municipality intends to achieve

By joining the Covenant of Mayors (by unanimous approval of City Council resolution no. 2010/C/0008), the City of Florence has joined in the fight and is working to reach the declared goal of reducing CO2 emissions in its own territory by at least 20% by the year 2020. A policy choice of this nature has a direct and pervasive impact on operational and administrative decision-making, guiding the territory towards sustainable development and the pursuit of energy savings and the reduction of CO2 emissions. If it is true that "no man is an island" and that "cities are not a problem; cities are the solution," then the only way to systematize a public action, to make it proactively sustainable and to involve the entire population, including associations and professional organizations, is by means of a comprehensive plan for publicity and communication.

The concept underpinning the recent Structural Plan – to free up greater potential through physical, environmental and socio-economic regeneration – manifests itself in a series of actions designed to make Florence more attractive, more open and more liveable so as to add sustainable or green to this cities description and transform Florence into an ecocity.

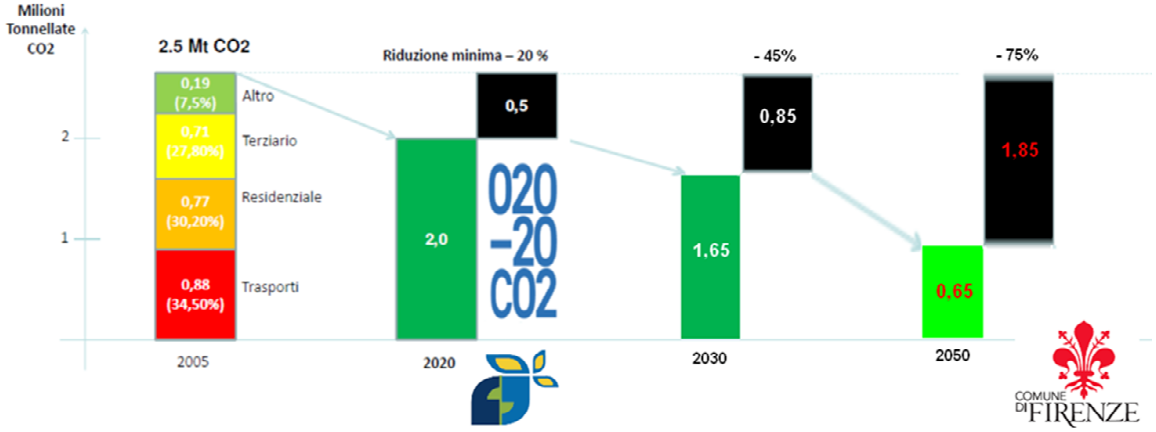
The 'Florence of the future' strategy began with an administrative programming document (For a more courageous, simpler and more beautiful Florence, October 2009) and moved forward through plans that have recently been approved (Structural Plan, June 2011 – SEAP, july 2011).

This scenario, which is rightfully and necessarily founded on the principle of public/private subsidiarity, is where the political commitment to reduce territorial CO2 emissions by at least 20% (the forecast is for 20.2%) enters in. Although this step itself is both meaningful and highly demanding (emissions would have to be reduced by over 500,000 t. by 2020), it is in fact only the first of many steps down the road to year 2050.

While it is true that nothing can be achieved which is simultaneously good, fast and cheap (we can have only 2 of the 3), this does not mean that all 3 results cannot be achieved over the medium-to-long term.

It can be said that our Action Plan is fast (just 9 years since its approval) and cheap: to optimize results we must in fact have a broader aim in mind. While with 2020 we might

reasonably think that we can reduce CO2 emissions by 20.2%, joining the Energy Roadmap 2050 may allow us to consider also achieving the third objective, i.e. "optimization", or a prosperous Europe with low carbon emissions. A new perspective on the future of the European energy system shows that reducing greenhouse gas emissions by between 80 and 95% at the European level is technically feasible within 2050, as well as being economically and environmentally sustainable. The intermediate stage on this European roadmap, scheduled for 2030, aims to reduce greenhouse gas emissions by 45%;Florence, with the approval of the Sustainable Energy Action Plan, can say that it has set out on this path and that it has set 2020 as the first meaningful, relevant result stage, the first on a path that we have set ourselves today through to 2050.



Pilot area:

Florence's Cascine Park represents a multi-purpose ecosystem in the city centre composed by seven main ambiances, with mixed use of land (green, sports and leisure, events, information point for sustainable tourism, buildings, river, bike paths and tracks), public and private property (including old decommissioned industrial sites, public administration offices and dwellings). It is thus an area of great interest and attention at the city and national and international level, considering his reputation. The park is therefore the experimental bench for testing an integrated system of actions (mobility, attention of the building rehabilitation, info-information, attention to green, sustainable accessibility) that departing from its typicality – a park in the city centre, the largest in Europe considering its total extent about 340 ha – can be the start-up of a city where the well-being is together the point of departure and arrival.

The first objective is mobility to extend and connect these park to the city with a quality soft mobility. The idea is to regulate access to the park via LTZ, improve the accessibility of public transport and parking areas adjacent to the Park. We also intend to encourage its discovery by guidance systems <Walking Florence> (centrum-park-centrum) and connected pedestrian paths.

A second priority is buildings and lighting to complete the work on the historic areas. It's is essential to ensure, for security reasons, a lighting system such as to experience the park in all seasons and at all hours. For this, there is a pilot project aim to test a system

of adaptive lighting that should respond to the needs in a sustainable manner.

The third step involved WIFI and ICT to enable a combination of smart mobility, buildings and lighting measures.

The park seems to play an exemplar role to be extended to the rest of the city to reach the 2020 targets implementing all the possible integrate actions to exploit the sustainability potential.

The municipality has defined priorities in the implementation of the objectives?

Several actions have already been put into practice as they are currently in the implementation phase or included in the short-term program.

In particular with regard to mobility, an area which is problematic and difficult to tackle for all municipalities as a result of the economic situation, several actions have already been implemented with results that exceed the stated forecasts.

Another priority has been set on public properties consumption because the PA ought to play an exemplar role. The communication and the urban planning are the other priorities which could improve the savings in short term in the building sector.

These priorities include statements on (please classify the priorities with numbers starting from 1 – higher to 6 – lower)

3 buildings	1 Mobility	6 Energy production
5 services	6 industry	☐ other:2 public buildings
4 dissemination and communication		

Timeline to achieve these objectives: starting year, duration, milestones,…

Each of the 27 actions included in the SEAP is defined in terms of duration and targets at 2020.

At 2030 the overall target is -45% of CO2 emissions.

A monitoring analysis has been done at 2010 to state the achievements: the 2010 emission inventory shows a decrease of the 8.9% pro capite which means that the municipality is in line with its objectives (-20.2% at 2020).

In particular the public sector is under strict monitoring and at 2012 it has reached the 21,8% of consumption decrease.

Are your objectives linked to strategies or plans those at upper level (Province, Region, Nation, EU,…)?

The sustainability path began in 1998 with the signing of the Aalborg Charter (City Council motion no. 24 of 26.01.1998) and was reinforced in 2005 with the signing of the Aalborg commitments (City Executive resolution no. 2005/G/00399 of 14.06.2005), which committed the Administration to more incisive actions by identifying specific objectives through a process of participation and sharing with its own citizens. This joint approach is ensured by the Agenda 21 forum, a participation process that lies at the base of all paths of development and debate about the city's own strategic options.

Florence adopted the EU policies signing the CoM and setting long term targets in line with the EU set plan.

At national level the city has been sustained by the campaign Sustainable Energy for Europe (SEE) coordinated by the environmental ministry.

Both the Tuscany region as well as Florence province have joined the CoM as supporting structures and their policies (energy plans) are in line with the city's SEAP (same baseline year and inventory)

Have been these objectives defined on the basis of an analysis of the local potential?

The work started from the emission inventory in the baseline year, then the RES&RUE possibilities in every sector, starting from the higher consumptions, have been scanned in detail. After that technical phase the achievable targets have been set but also other measures (not quantified or presenting concrete obstacles) have been included in the plan to have a complete landscape of the savings exploitation.

Tools for the objectives concretization

Policy support for the achievement of the objectives (Plans and master plans, regulations, projects, project finance,…)

The realisation of each action included in the SEAP strategy has been traced in detail: mainly the plan involves statements for other planning tools (structural plan, buildings regulation, traffic plan,…) and it needs a wide consensus based on the communication strategies.

The shortly adopted measures needing a quick implementation have been concretised trough council decisions or Mayor decisions.

Agreements with financial institutions and stakeholders association (as for done for the

minimum boilers efficiency measures which has been stated in a Mayor decision with the support of the installers and a bank) are foreseen to facilitate the implementation of several actions.

Is the strategy already reflected in any local planning documentation?

The strategy adopted with the SEAP has not been subjected to the environmental assessment procedure or other mandatory procedures for normal planning, because it has been created as a Master Plan guiding the choices in the other planning tools of the city.

Actually the already recalled structural plan reflects the indications of the strategy but also the traffic plan (including the electric mobility master plan, the pedestrian zones activation, the tram lines and the parking policies or the bicycle paths) and the building regulation are under development.

Which stakeholders do you think will be necessary to reach the objectives

Citizens are the main stakeholders we refer to: they could be reached by wide communication activities (spread meetings, social networks,...) or through their associations representatives.
Also builders associations, professionals as well as designers will be important.
Installers and energy providers has been already involved.
Industrial sector could be interesting but the main interest is in the tourism and in the neighbouring municipalities involvement (metropolitan area which manage several services like waste and water management as well as mobility).

The strategies have been communicated within the administration and to the stakeholders? In which phase (definition, adoption, implementation)?

Is there a communication plan?

The repercussions of the development processes hypothesized in the structural plan, also known as "zero volumes," were analysed in relation to the above principle in order to fine-tune the analysis of the different environmental components that we can affect by finding ways to mitigate their potential negative impact. This path of analysis was subject to European Community guidelines and the Region of Tuscany's law on popular participation in urban planning, but it was also subject to public participation processes that involved the citizens themselves in city development issues through the 'Florentines

change the City' event. 100 meetings in 100 places, on 28th September 2010. The analysis led to a series of conclusions for each of the environmental components that were raised.

To achieve the predefined objectives of the Plan, it is extremely critical, in practical terms, to be an active part of the Plan itself, to foster the active involvement of every level of local stakeholder and the population at large (an essential component for achieving reductions in CO2 emissions) and to stimulate research and raise the awareness of participating enterprises and other units in the territory so that they can cooperate harmoniously to achieve this fundamental goal for the city.

From the perspective of active implementation, which describes how the current administration adopts all of its Plans (beginning with the Structural Plan, which used the Town Meeting instrument to ensure maximum transparency and active citizen participation), the communication plan was created on the basis of two primary tools:

non-stop institutional communication: a dedicated space was opened on the public municipal network (located under Administration - Plans and projects) where all information and updates can be accessed at any time (the SEAP page)

direct participation: via scheduled meetings aimed at specific actors and opened to the entire population.

The reduction of CO2 emissions needs to be a common, shared goal that extends across the entire territory and involves every sector - this is the assumption underlying the communications plan, which is pervaded by the notion that the process must take place before, during and after the SEAP itself is approved.

Participation is an indispensable condition for the city's sustainable development, which means that sufficient communication of the SEAP objectives is as fundamental as the sharing of the city's future with other institutions, local actors and the citizens. The Administration, therefore, has opened a dialog with different subjects in the worlds of business, scientific research, labor unions, associations, representatives of production categories and the world of associationism more generally in order to cultivate these themes with a variety of different means and methods.

The basic structure of communication and involvement, as a result, has been organized into three main phases:

pre: presentation of the draft Action Plan for Sustainable Energy and opening of a discussion designed to gather suggestions and proposals for initiating collaboration improving on operational aspects of existing collaborations

post: presentation of the Sustainable Energy Action Plan, as approved by the City Executive and the City Council

on-going: periodical meetings for updates in correspondence with monitoring sessions

The Communication Plan, therefore, forms an integral part of the Sustainable Energy Action Plan, which accompanies every moment of its formation and every single phase that cyclically reproposes and reexamines ongoing results and updated forecasts that

serve to recalibrate, when necessary, the planned actions.

Main obstacles/barriers foreseen

Policy, public acceptance, financial, technological,…

At 2020 the main problem could be represented by the financial crisis which make the public sector less efficient and not charming for investors.
Another issue could be linked to the national politics which could influence in many ways the municipal future.
The cultural heritage of the city entails, expecially in the historical centre, direct constraints and landscape that could become operational barriers.

The land area still restrict the testing of shares whose profit depends on the breadth of application.
The objectives are the result of a long-term strategy that goes beyond the remit of the political administration. The elections could lead to subsequent choices different from those currently used.

Strength and weaknesses of your strategies

The main strength lies in the citizens involvement through the communication strategy and in the concrete actions selected to reach the first step target at 2020.
The major weakness is the ambitious target to 2030 and 2050 which could be obstacled by the structural characteristics of the city:
-too many boundaries, the old part of the city will be difficult to be refurbished with RES & RUE principles
-too many users, the commuters and the turists could slightly influence the energy demand without being “part of it”
- too many employees, the “system thinking” approach used could be stopped by a change in the personnel involved
- too many interests in common with the neighbourhoods (mobility, waste and water management).

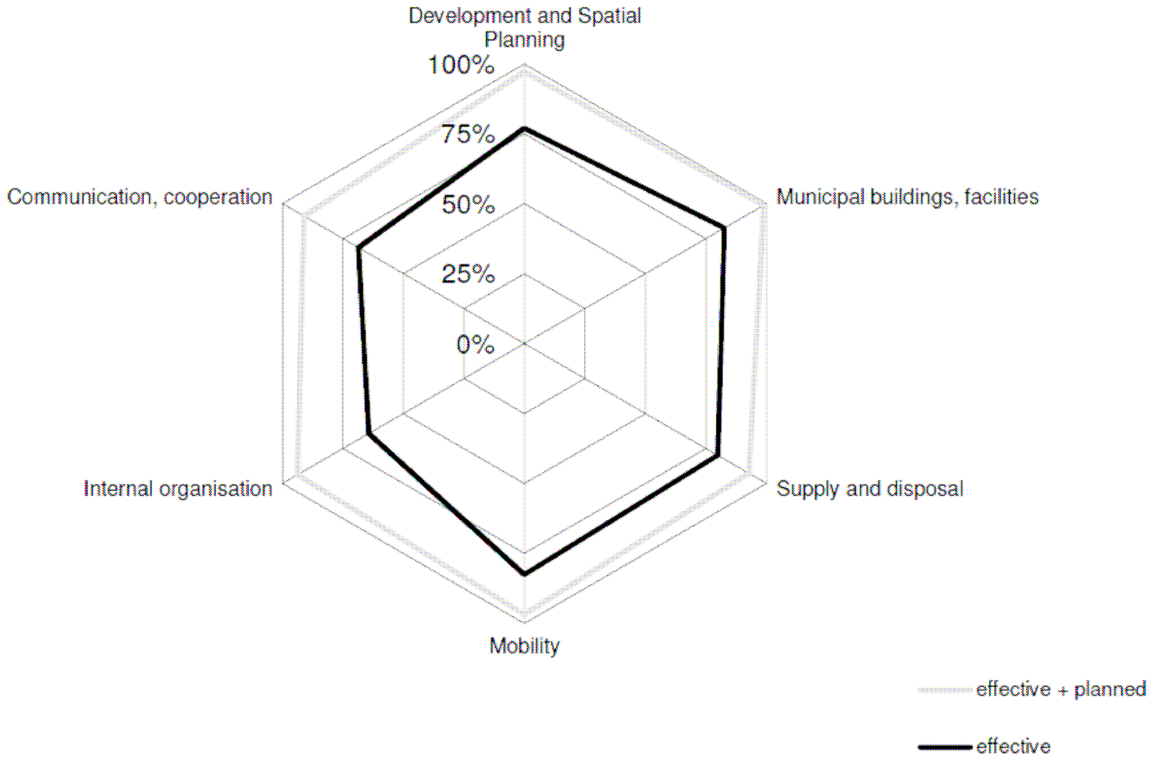
Performance review: are the overall achievements monitored? How and with which frequency?

The baseline has been set at 2005. The first monitoring has been calculated at 2010 (the nearest year with a complete set of data available) but from now on a 2 year monitoring

procedure will be performed.

The PA consumptions are available with yearly detail.

The energy management system engaged is very helpful in controlling the achievements and including other new improvement chances.



Other issues not covered by this survey that you think could be useful

Any relevant doc link	http://www.comune.fi.it/export/sites/retecivica/comune_firenze/piani_progetti/patto_sindaci.htm

7.3 Annex 3 – San Sebastián questionnaire

Submission date	26/11/2013

Participant name	San Sebastián

E-mail	ana_juaristi@donostia.org jon_gastanares@donostia.org asier_manuel@donostia.org

Describe your strategy and the objectives your municipality intends to achieve

– Smart city plan.

General Objective:

"The development of a local strategic sustainable smart city plan which address the efficiency of energy flows across all the key sectors on the energy value chain in an integrated manner"

– SEAP (Covenant of Mayors)

Commitments:

- To go beyond the the objectives set by the EU for 2020, reducing the CO2 emissions in our respective territories by at least 20%; reducing the energy demand by 20% and increase the use of renewable energy sources by 20%
- To submit a Sustainable Energy Action Plan including a baseline emission inventory which outlines how the objectives will be reached,
- To submit an implementation report at least every second year following the submission of the Action Plan for evaluation, monitoring and verification purposes.

In San Sebastián, the baseline year is 2007, the SEAP's been approved in 2013.

The SEAP includes a reduction of 40% of the city council energy consumption.

- ICTs

To boost the e-administration, optic fibre network implementation to bring service to the city council departments and any telecommunication operator.

Also, a Free WIFI access has been implemented in the city to provide connectivity to the

citizens.

- Mobility:
The Donostia 2008-2024 mobility plan, with a baseline on 2007 has those objectives.

Promotion of the non motorized mobility.
Promotion of public transportation confronted to private motor vehicles usage.
Achieve a better use (social and environmental) of the urban public space.
Have an impact on the mobility behaviour of the citizens of San Sebastián
Contribute to the sustainable urban planning and development.

Pilot area: Urumea Riverside District

This is a residential, old light industrial and green zone district. The envisioned scenario for this zone is a symbiosis of this three different uses of the territory. To reach a sustainable interaction of this uses, due to its limited spatial growth, one of the objectives is to rebuild and retrofit when possible the residential buildings.

Others are bring to this buildings thermal energy by a new biomass based district heating system and provide ICT solutions to citizens and small enterprises. The implementation of renewable sources of energy within the buildings will be also considered within the frame of an smart energy master plan.

The introduction of new industrial sectors Ie. ITC firms.
Also a quality urban development with a retrofit of the degraded landscape which avoids the urban pressure are envisioned for this area.

The municipality has defined priorities in the implementation of the objectives?

There's no prioritisation in the implementation of the objectives. We should have it though. For instance, an action in the mobility sector (40% of the CO2 emissions of the city) hasn't the same impact compared with an action on municipal buildings (3% of the total CO2 emissions).

These priorities include statements on (please classify the priorities with numbers starting from 1 – higher to 6 – lower)

☐ buildings ☐ Mobility ☐ Energy production

☐ services ☐ industry ☐ other:_____

Timeline to achieve these objectives: starting year, duration, milestones,…
Baseline year is 2007. The duration is till 2020-2024 in the mobility sector, some goals are established for 2016.

Are your objectives linked to strategies or plans those at upper level (Province, Region, Nation, EU,…)?
They are linked to the Energy National Plan, The Basque Energy Plan and at EU level, with the Covenant of Mayors' 20-20-20 objectives.

Have been these objectives defined on the basis of an analysis of the local potential?
Please describe how did you set the objectives. *Have you evaluated the total potential that could be exploited?* The objectives have been defined in accordance of the Covenat of Mayors commitments. This has been due to the fact that this commitments could be reasonably achievable, or at lest desirable for the city.

Local potential's been roughly analysed, but for instance, the potential of renewable energy and the realistic figures that arises from the fact of national policies regarding this topic, makes us think that the potentials won't be reached by far.

Tools for the objectives concretization

Policy support for the achievement of the objectives (Plans and master plans, regulations, projects, project finance,...)

The plans have been mentioned before.

Policies:

- Local policy on construction under Energy Efficiency criteria.
- Tax reduction policies on (efficient vehicles, construction)
- Local subsidies for building retrofitting actions.
- There are also specific regulations an subsidies from EU, Spanish Government, Basque Government and Provincial administrations

Is the strategy already reflected in any local planning documentation?

Yes, in the Local agenda 21, the SEAP and the Sustainable Mobility Plan.

Which stakeholders do you think will be necessary to reach the objectives

The main stakeholders are:

City council departments, local councillors and politicians, which make policies to boost the necessary changes, the banks and other financial stakeholders to help with the funds needed, utilities which provide the energy for consumption.

The strategies have been communicated within the administration and to the stakeholders? In which phase (definition, adoption, implementation)? Is there a communication plan?
There's no integrated communication plan which includes the different activities made. Each department periodically informs about the development of the projects, but this information is not viewed from an integrated point of view and a common communication objective. Only the Local Agenda 21 has been well communicated and periodically the main stakeholders meet together to carry on the planning of the agenda. The local agenda 21 has been a participating process within the adoption and implementation phases.

Main obstacles/barriers foreseen
Policy, public acceptance, financial, technological,… The main barriers are economical (financing), state policies that make restrictions on local policies, and finally the citizens. There's a rejection feeling towards new and therefore unknown technologies. The citizens don't perceive the strategic actions involving a long time period, they want to see the changes occur in the short term.

Strength and weaknesses of your strategies
1.- Strengths: San Sebastián started three decades ago transforming the city towards sustainable mobility, that's one of the reasons why the mobility model can be considered as consolidated among all the stakeholders in the city. Public transport, conversions from roads to pedestrian walkways, exclusive and inclusive bicycle paths and other actions, are taken with the compliance of the citizens. There's a strong political and social support for all this issues.

ICTs are well introduced among citizens. The number of internet users increases every year.

Energy efficiency actions are strongly supported by the local council and there's an increasing awareness rising on this topic.

On the other hand.

2.-Weaknesses:

Integration lack among the diverse actions and objectives. Lack of common planning and internal communication. Also lack of communication towards the citizens. City goals are set up but there is not a real implementation plan that integrates initiatives and avoids duplicity.
No priorization of the actions undertaken.
Economical crisis context. Probably many of the actions will face difficulties to be implemented

Performance review: are the overall achievements monitored? How and with which frequency?
Every two years a greenhouse gas inventory is made to monitor the progress made. Besides this, the SEAP is also reviewed every two years. Besides this, In mobility plans the different revisions will be made by 2016.

Other issues not covered by this survey that you think could be useful

Any relevant doc link	