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## ROADMAP FOR POST-CARBON CITIES IN EUROPE: TRANSITION TO SUSTAINABLE AND RESILIENT URBAN LIVING

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## TABLE OF CONTENTS

SUMMARY	1
1 INTRODUCTION	2
2 CHALLENGES AND OPPORTUNITIES	2
3 HOW TO INVOLVE STAKEHOLDERS?	3
4 WHAT LESSONS ARE LEARNED FROM STAKEHOLDER CONSULTATION?	5
5 POLICY RECOMMENDATIONS	6

## LIST OF BOXES, FIGURES AND TABLES

<i>Table 1: Key specific challenges of POCACITO case study cities</i>	9
<i>Figure 1: Case study posters at the Final Conference</i>	10

## LIST OF ABBREVIATIONS

<b>CO<sub>2</sub></b>	Carbon dioxide
<b>CoM</b>	Covenant of Mayors
<b>CoR</b>	Committee of the Regions
<b>EDGAR</b>	Emissions Database for Global Atmospheric Research
<b>ICT</b>	Information and Communication Technology
<b>KPI</b>	Key Performance Indicators
<b>NAZCA</b>	Non-state Actor Zone for Climate Action
<b>NUTS</b>	Nomenclature of territorial units for statistics
<b>PCI</b>	Post-carbon City Index
<b>SEAP</b>	Sustainable Energy and climate Action Plan
<b>UN</b>	United Nations
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change



## SUMMARY

A number of city-led initiatives have gained momentum in international cooperative action in 2016; for example, the Global Covenant of Mayors initiative, the entry into force of the Paris Agreement, and the Habitat III UN Conference on Housing and Sustainable Urban Development. Yet, despite increasing awareness of these developments and an expectation that cities will play a key role in the transition to a post-carbon future, citizens, or more broadly stakeholders, have so far not fully participated in the decision-making process.

This paper presents lessons from the POCACITO stakeholder consultation process, which is characterised by visioning, backcasting and quantification, and recommends that the EU, member states and cities focus on adapting governance models, increase support for capacity building, and establish a monitoring and evaluation system to help cities to meet voluntary commitments.



## 1 INTRODUCTION

Two pioneering, city-led initiatives, the EU's *Covenant of Mayors* (CoM) and the international US-based *Compact of Mayors*, announced their merger into one *Global Covenant of Mayors for Climate and Energy* in June 2016, thereby establishing the first truly global platform for cities and local governments to cooperate on climate and energy policies and measures.<sup>1</sup> This announcement came six months after the adoption of the *Paris Agreement*, a new global agreement that provides a framework for countries to determine and implement their own contributions in 2021-30 to the goal of limiting the global average temperature to well below 2°C above pre-industrial levels. In addition to the Agreement, the Parties decided to continue supporting and promoting the United Nations (UN) online portal to register all the contributions of cities and regions.<sup>2</sup> As the agreement entered into force in October 2016, the scaling-up of city-led initiatives could enhance the implementation of climate and energy actions in cities all over the world, up to 2020 and beyond.

At the same time, this year saw further momentum in the scaling up of city actions, which was generated by the United Nations Conference on Housing and Sustainable Urban Development (Habitat III), the first global summit on urbanisation held after the adoption of the 2030 Sustainable Development agenda. The UN identified "making cities inclusive, safe, resilient and sustainable" as one of the 17 Sustainable Development Goals, and this goal is supported by 11 targets related to different aspects of urbanisation by 2030.<sup>3</sup>

Against this background, it is timely and relevant to turn our attention to European cities, which are on a journey towards beyond carbon by 2050, and to

how the EU and member states could support their initiatives for climate and energy actions in the coming decades.

## 2 CHALLENGES AND OPPORTUNITIES

Cities across the world face unprecedented challenges in the next 15 years. Today, half of the world's population, 3.5 billion people, lives in cities, and it is estimated that by 2030 this share will rise to 60%. These cities occupy only 3% of the earth's land but account for 60-80% of energy consumption and 75% of carbon emissions.<sup>4</sup> Rapid urbanisation is creating pressures on fresh water supplies, sewage, the living environment and public health,<sup>5</sup> all of which are essential for quality of life. On the other hand, the high density of cities could generate new opportunities, such as efficiency gains and technological innovation, while reducing resource and energy consumption.<sup>6</sup> Energy transition towards 2030 could induce and drive social innovation, behavioural change and a shift to sustainable living. Cities can catalyse the transformation process of the current environmental, economic and social systems towards 2030 by creating both challenges and opportunities. The view of cities as catalysts for systemic transformation requires the following assumptions:

First, there should be a clear recognition that cities must become cleaner, greener and more resilient. Air quality, water supply, sewage and traffic congestion need urgent solutions, as envisaged in the 2030 Sustainable Development Agenda. Cities are responsible for mitigation as a major source of greenhouse gas emissions, vulnerable to impacts of climate change, and prone to risks of natural hazards

<sup>1</sup>See <http://www.un.org/sustainabledevelopment/blog/2016/06/eu-covenant-of-mayors-and-compact-of-mayors-launch-largest-global-coalition-of-cities-committed-to-fighting-climate-change/>; [http://www.covenantofmayors.eu/index\\_en.html](http://www.covenantofmayors.eu/index_en.html)

<sup>2</sup> Non-state Actor Zone for Climate Action (NAZCA), see <http://climateaction.unfccc.int>

<sup>3</sup> See Goal 11, Sustainable cities and communities. <http://www.un.org/sustainabledevelopment/cities/>

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.



such as heat waves, storm surges and floods.<sup>7</sup> Post-carbon city transitions should improve urban resilience to fluctuating environmental and socio-economic pressure.<sup>8</sup> The transition should therefore go beyond carbon. Most sectoral assessments identify energy, industry, buildings, transport, forestry and agriculture as part of the challenge, but the list should be extended to potential solution providers, such as finance and Information and Communications Technology (ICT). Diversification of the economy would help cities reduce their vulnerability and make them more resilient to external shocks and pressures. A *holistic and integrated approach*, which underpins a circular economy, is equally important for cities in terms of urban planning, e.g. infrastructure and land use. Innovation in ICT makes it feasible to adopt the integrated approach.

Second, it should also be recognised that these challenges must be approached in a differentiated way, with tailor-made solutions that take account of specific city circumstances. Instead of a common scenario or 'one-size-fits-all' approach to go beyond carbon, different scenarios will need to be built and developed for different cities. Despite each city's uniqueness, they could benefit from sharing their scenarios and plans based on similarities in size, demography, economic structure, ecosystem or other parameters.

On the third and last key point, it is stakeholders who can drive the transition process. The key to exploit the potential of economic and social opportunities and restore the ecosystem is to fully engage stakeholders, ranging from city decision-makers, businesses and civil society organisations in drawing up pathways for post-carbon cities. Stakeholder participation can benefit from a common understanding about the vision and scenarios of a city and a strong commitment to the

process of designing and implementing actions. This implies that stakeholder participation could be best guided by *an inclusive and participatory approach*.

### 3 HOW TO INVOLVE STAKEHOLDERS?

It is important that cities take a *participatory engagement approach* to mitigate economic and environmental risks and social inequality. A solid social approach would need to integrate diverse demographic and cultural groups of citizens. Through a *participatory approach*, stakeholders can experience and develop a sense of ownership of the process.

In a recent European survey, 16% of respondents said that regional and local authorities are responsible for tackling climate change,<sup>9</sup> although European citizens warmly welcome international treaties such as the Paris Agreement, and generally support the EU legislative frameworks for climate and energy. For the latter, the *Committee of the Regions* (CoR) represents the perspectives of regions and cities and encourages city-led initiatives such as the CoM. Nevertheless, from a citizen's viewpoint, such treaties and frameworks remain rather abstract and remote, without opportunities for direct participation in the process of formulating strategies and designing actions. By contrast, technical solutions developed by a small number of specialists may fail to factor in citizens' views towards new infrastructures or their suboptimal use due to a lack of awareness. When city decision-makers invite them to meetings, it is important that not only can they express their wishes and concerns but that they should understand the reality and constraints of the decision-making process. In this way they can become more aware of the roles they play and the needs at stake and ahead.

<sup>7</sup> The European Commission established the Mayors Adapt programme, which was later merged with the COM in October 2015. <http://climate-adapt.eea.europa.eu/mayors-adapt>

<sup>8</sup> Pressure in this context includes long-term changes in urban resident demographics, city and rural migration

patterns, and potential city health concerns.

[http://cordis.europa.eu/project/rcn/111399\\_en.html](http://cordis.europa.eu/project/rcn/111399_en.html)

<sup>9</sup> This question allows multiple answers, e.g. EU 35%, member states 42%, and business 35%. The survey was conducted in 28 member states in May-June 2015 (TNS Political & Social 2015).



This observation highlights the importance of three aspects of a participatory approach: to provide citizens with the opportunities and space to realise the agreed values (a workable platform); to encourage them to be open-minded about different ideas and come up with counter-proposals (constructive attitudes); and to facilitate and integrate their interaction in the decision-making process (dynamics). Addressing these aspects, the POCACITO methodology lays out step-by-step guidelines for citizen engagement in city-based workshops. The POCACITO project selected case study cities across Europe:<sup>10</sup> Barcelona, Istanbul, Lisbon, Litoměřice (Czech Republic), Malmö, Milan/Turin, Rostock, and Zagreb. The selected cities varied in size and location so that the project could cover a wide range of the challenges and opportunities facing European cities.

**1. Initial assessment:** First, by applying the common indicators reflecting environmental, economic, and social dimensions, i.e. the Key Performance Indicators (KPIs)(INTELI 2014),<sup>11</sup> a case study city develops an initial assessment of a city. The assessment is sector-based: not only energy and transport but also broader sectors such as green infrastructure, waste and water.

**2. Visioning and scenario-building:** Second, a case study city identifies key stakeholders and engages them in consultation at a series of workshops. The results of the visioning exercise can represent the citizens only if workshop participants have diverse backgrounds and cover the interests of a majority of citizens. Otherwise, there is a risk that the vision will be framed by and biased towards specific interest groups.

Stakeholders are asked to develop a common post-carbon vision for the year 2050 and imagine how the city looks and what it should be like in 2050,

according to the vision. This exercise presses stakeholders to be creative and think outside the box. The vision is classified into 12 main sectors.<sup>12</sup> Stakeholder consultation workshops are an effective tool to validate the initial assessment and receive feedback on visioning and scenario-building results (Breil 2016).

In addition to the common sectors and urban issues, stakeholders identify challenges that are specific to their contexts. Table 1 shows the diversity of these city-specific challenges (CEPS 2016a). It explains why one-size-fits-all does not work and a tailor-made self-driven approach is important.

**3. Backcasting and quantification:** Third, a case study city consults with stakeholders to define a strategy for achieving the vision in the context of each city. In doing so, stakeholders can be motivated to follow a path that is aligned with wider social and economic goals and identify their own roles in laying foundations for the future.

The approach applies backcasting, i.e. identifies what is needed between now and the future (the target year) to make the vision reality by setting milestones and proposing actions. Once the milestones are determined, backcasting encourages stakeholders to look at specific barriers and solutions in further detail. A quantitative analysis enables a reality check: stakeholders can assess whether the proposed milestones and actions specified in the model are sufficient to reach the long-term objectives. By confronting stakeholders with data that do not necessarily support their views, a quantitative analysis can help stakeholders sharpen their understanding about difficulties with the proposed actions and spur their interest to find other solutions.

<sup>10</sup> Although Copenhagen is also included, the project team did not hold workshops (<http://pocacito.eu/case-studies>).

<sup>11</sup> The Post-carbon City Index (PCI) is a mechanism to assess and monitor the post-carbon city transition process. The KPIs that compose the PCI aim to evaluate

the performance of cities during the transition process (INTELI 2014).

<sup>12</sup> The 12 sectors are: energy, transport and mobility, land use and infrastructure, social issues, economy, biodiversity and conservation, technology and innovation, education, tourism, governance, food production and consumption, and waste.



**4. Identification of cities' actions and external support:** Fourth, a case study city identifies actions to keep to the post-carbon pathways and any needs for external support from higher levels of governance, such as the EU and member states. The list of actions and availability of support completes the roadmap for European post-carbon cities.

While the sequence of steps is not to be missed, the backcasting exercise can be regarded as the backbone of the approach. This exercise allows participants to bring the distant future – the year 2050 – into the present and to develop a pathway to a desired future state. In doing so the urgent and immediate needs for action become clearer to stakeholders.

## 4 WHAT LESSONS FROM STAKEHOLDER CONSULTATION?

POCACITO stakeholder consultation is a continuous learning process for all participants. Lessons are shared among peers and disseminated widely (CEPS 2016b). Figure 1 shows how results of eight city case studies are presented to European stakeholders. Some lessons are presented here as examples of good practices for possible replication to other European cities with similar ambitions for a post-carbon future.

### ***Visioning and backcasting***

#### *Acceptance of diversity and heterogeneity*

*Visioning and backcasting can increase stakeholders' understanding of diverging long-term views of other stakeholder groups, which helps a city build consensus on long-term objectives. Stakeholders participating in the consultation process need to represent the heterogeneity of views of all social groups and socio-economic actors in the city. Through the existing connections and networks of participants, POCACITO workshops bring together stakeholders from different backgrounds and provide participants with opportunities to understand the perspectives of other stakeholder groups. The diversity of their expertise and*

*representation, ranging from city decision-makers, urban planners, architects, to financial specialists, is reflected in the variety of visions, strategies and solutions they propose.*

#### *Bringing the distant future into the present*

*Visioning and backcasting are highly successful in raising stakeholders' awareness about the need to act today for a desired future. Backcasting can increase stakeholders' awareness of the difficulties ahead and of their own roles in shaping the path to the future. By identifying milestones and necessary actions aligned with the long-term goals, POCACITO backcasting workshops have aimed to make stakeholders aware of the difficulties ahead, the potential solutions and the extent of their involvement.*

#### *Needs for external support*

*Visioning and backcasting allow stakeholders to identify the regulatory and financial conditions that would enable the city to make necessary changes. POCACITO workshops can reveal the degree of cities' dependence on the enabling framework of the jurisdiction (country or region) in which they are located and subordinated. Conditions that constitute the framework may be legal, regulatory, financial, or economic.*

### ***Quantification to complement backcasting***

*Good analytical support and modelling can help the stakeholders see how their ideas would impact the future, and test them. A quantitative analysis can assist in checking the impact of stakeholders' decisions for actions towards long-term goals. If the actions are too weak, the quantitative analysis can be used to encourage stakeholders to take further action. POCACITO workshops can benefit from an analysis of stakeholders' perspectives and their impacts by sector in each case study city.*

At the same time, the POCACITO methodology showed signs of weakness and limitations, for example, in the following manner:

### ***Representativeness***



To ensure diversity and heterogeneity of stakeholders' representation, visioning and backcasting need support from local authorities and city associations. Without a balanced mix of stakeholder backgrounds, specific interest groups would have framed and shaped the outcomes of the POCACITO workshops. Even though this was not the case, support from local authorities and city associations for workshop organisers to invite minority groups would improve the composition of participants, and make the outcomes of the workshops more relevant to the actual decision-making process.

#### ***Bias towards immediate needs***

*Organisers should be aware of a strong bias towards immediate future and associated needs versus distant future.* Results of stakeholder consultation on the EU roadmap, and local strategies, showed that a bias towards day-to-day problems and the need for immediate or short-term actions tended to occupy city decision-makers' agendas. Moderators of an online meeting and group discussion attempted to keep stakeholders focused on the desirable future. Once they found a visionary to lead the discussion, it was easier to motivate other participants to adjust their scope and timeframe.

#### ***Scale***

*Visioning and backcasting exercises require considerable investment in terms of lead time and resources available today.* POCACITO case studies were limited to eight, with three to four workshops on the average, over a period of two years (2014-16) per city. This is not considered to be sufficient in scale to develop the kind of roadmap or strategies that could have an impact on the actual decision-making process of a city. Visioning, backcasting and quantification for this purpose need more intensive interaction with a larger number of stakeholders over a longer period of time. This requires cities to consider up-front investment in the future, planning a long lead time and setting aside human and monetary resources. Yet many cities and municipalities, notably in Greece, remain constrained by austerity measures.

## **5 POLICY RECOMMENDATIONS**

To increase stakeholders' acceptance of necessary changes, local authorities should ensure that stakeholders are the drivers of visioning, backcasting and designing long-term strategies, and that resulting solutions are open, inclusive and affordable for citizens. The EU and member states could support cities to develop strategies by creating an enabling framework (CEPS 2016b). The enabling framework has the following three pillars:

#### ***Adapt governance models***

Changes to existing governance models at local, national and European levels are essential because the administrative structures and procedures in place today are unfit to make the decisions needed to bring about a post-carbon future. Without adapting governance models to their needs, cities cannot overcome the existing barriers or exploit the full untapped potential.

#### ***Cross-sectoral integration and holistic assessment***

A new governance model should facilitate the integration of management and approaches: so that administrators from different sections work together and involve relevant actors at the different stages of decision-making and implementation. Local authorities and service providers are encouraged to work together and operate across sectoral issues associated with a post-carbon vision. For example, a lifecycle analysis factoring in environmental and social externalities, both positive and negative, would be a useful tool to motivate decision-makers to make sustainable investment decisions. Another useful approach would be to include co-benefits in a cost-benefit analysis. One of the best-known examples of co-benefits are environmental and health benefits, which could be expected from setting restrictions on the use of diesel-powered vehicles in the city centre.

#### ***Representation of cities in EU and member states decision-making***

Equally important: governance models should be updated to make cities fully represented and



engaged in EU and member states' discussions, such as those regarding the Energy Union. EU and member state initiatives on energy transition would not only have an impact on cities' strategies but also require their contributions. Cities and regions should be involved much earlier in the decision-making process, e.g. in developing their commitments and defining policies required. Therefore, EU and member states' strategies need to be drafted together with city representatives.

#### Allocation of competences

The structure of governance is central to the potential of developing post-carbon cities. The ability of cities to do this depends on how regulatory and fiscal competences are allocated at different levels of governance, in view of the subsidiarity principle.<sup>13</sup> There is a need to review the allocation of competences at different governance levels to ensure that cities have appropriate responsibilities for regulatory enforcement and revenues.

#### **Increase support for capacity building**

Local authorities are conscious of what they can do by themselves and what they cannot do without higher authorities. Small cities have difficulties in gaining access to funding from different types of EU projects due to the complexity of rules and criteria. There is a need to enhance the local capacity to develop long-term strategies for post-carbon cities. As the existing instruments are very demanding for small municipalities, CoR (2015) recommends the EU to provide support for SEAPs of various sizes.

Global city associations such as the ICLEI (Local Governments for Sustainability) developed common tools and methodologies that are applied throughout the local governments worldwide.<sup>14</sup> Partnerships between cities or agreements for

twinning cities could facilitate the knowledge transfer and the exchange of city administrators in the form of bilateral programmes.

The EU needs to present clearer guidance for the implementation of Directives such as the revision of the Directive for Energy Efficiency and clearer and more specific guidelines, with concrete examples, to support cities. The EU should also promote the implementation of a circular economy that could help cities in the post-carbon transition process (see Pettersson and Harris, forthcoming).

#### **Establish a monitoring and evaluation system**

In addition to databases for non-state actors such as cities and regions,<sup>15</sup> numerous online registries compiling information about data and/or good practices of cities are up and running at the EU level and on a global scale.<sup>16</sup> The European Commission should provide an EU-wide database of best practices of urban post-carbon transition to disseminate knowledge and exchange good practices.

Once such a database is set up, the European Commission, in consultation with the CoR, should consider tabling a legislative proposal for a monitoring and evaluation system to track cities' progress against their respective visions towards 2050 and strategies towards 2030. The main aim of the system would be to help the cities to meet voluntary commitments by identifying obstacles to them. Data availability and the choice of indicators are inter-related and together would determine the effectiveness of the monitoring and evaluation system. This requires more consistency in the application of the NUTS classification levels, as well as categorisation adopted by the Eurostat.<sup>17</sup>

<sup>13</sup> The powers of decision-making have to be given to the most appropriate level of governance.

<sup>14</sup> See a list of available tools. <http://www.iclei.org/activities/resources/tools.html>

<sup>15</sup> For example, see the NAZCA under the United Nations Framework Convention on Climate Change (UNFCCC) and the CDP

<sup>16</sup> For example, see the Carbon Climate Registry (<http://carbonn.org/home/>), and the Global Cities Registry™ operated by the World Council on City Data (<http://www.dataforcities.org/global-cities-registry/>).

<sup>17</sup> Eurostat- database by themes - general and regional statistics, see <http://ec.europa.eu/eurostat/data/database>; The NUTS classification (Nomenclature of territorial units



The European Commission (Joint Research Centre) established a database under the Covenant of Mayors to help cities develop the Sustainable Energy and climate Action Plan (SEAP) and identify actions required to achieve the plan.<sup>18</sup> The CoR proposes to simplify the implementation of the SEAPs, the reporting process and the monitoring system, and to shorten the time required for evaluating the SEAPs (CoR 2015). A methodology for post-carbon cities should go beyond the scope of SEAP.

Finally, long-term strategies for post-carbon cities should engage a wider base of citizens than today, particularly the next generations. Increasing citizens' awareness will take time and should start early with the school curriculum, reaching higher education. As above, the educational programme should encompass all the themes connected to post-carbon futures and transitions: climate change, energy, the environment, circular economy, recycling, resource efficiency, social inclusion and equity.

To support the long-term transition process, adapting existing governance models, increasing support for capacity building, and establishing a monitoring and evaluation system should move forward at the same time, influencing each other. For example, regular updating and sharing of data would help cities to check their progress in the transition process and receive the type of support suitable for the implementation of the actions they identify. More fundamental challenges, beyond the implementation of individual actions, might require re-thinking governance models, including the roles of responsible institutions.

These three pillars, with a special emphasis on education, are essential to the foundation of an urban life in which citizens have access to a workable platform for their participation, to develop constructive attitudes towards policy assessments and engage themselves in policy dynamics. In doing so, citizens could have the opportunity to enjoy sustainable and resilient urban living.

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for statistics) is a hierarchical system for dividing up the economic territory of the EU, see <http://ec.europa.eu/eurostat/web/nuts/overview>

<sup>18</sup> The Emissions Database for Global Atmospheric Research (EDGAR) See <http://edgar.jrc.ec.europa.eu/>

[covenant\\_of\\_mayors.php](#); the SEAP requires cities to commit themselves to carbon dioxide (CO<sub>2</sub>) emission reduction targets, a 20% cut by 2020 or a 40% cut by 2030), *ibid.*



Table 1: Key Specific Challenges of POCACITO case study cities

CITY	KEY SPECIFIC CHALLENGES
Litoměřice	<ul style="list-style-type: none"> <li>- Air pollution from nearby chemical factory placed in another town</li> <li>- Financing of geothermal plant</li> </ul>
Barcelona	<ul style="list-style-type: none"> <li>- Developing real mobility, not only modes of transport</li> <li>- Preserving the local authenticity of the city (too much emphasis on tourism)</li> <li>- Social integration</li> <li>- Effective reduction of emissions, including those outside the city area but affected by it: Airport (outside the city], Port (city)</li> </ul>
Milan/Turin	<ul style="list-style-type: none"> <li>- Economic development (specialisation)</li> <li>- Soil consultation</li> <li>- Accessible and compact city</li> </ul>
Rostock	<ul style="list-style-type: none"> <li>- Networking with regions</li> <li>- Quality of life</li> </ul>
Istanbul	<ul style="list-style-type: none"> <li>- Ineffective and untimely usage of public resources</li> <li>- Conflicts in the region/terrorism/security problems</li> <li>- Migration/population growth</li> <li>- Lack of institutional coordination &amp; cooperation</li> </ul>
Lisbon	<ul style="list-style-type: none"> <li>- Natural disaster (floods, earthquakes)</li> <li>- Mobility (private car is the main transport mode used by population)</li> <li>- Social inclusion (poverty, unemployment, ageing etc.)</li> </ul>
Malmö	<ul style="list-style-type: none"> <li>- Integration (housing segregation)</li> <li>- Social sustainability</li> </ul>
Zagreb	<ul style="list-style-type: none"> <li>- Management issues (urban strategies, programs and plans; lack of long-term urban planning and strategy)</li> <li>- Non-active citizens (lack of awareness, non-proactive, lack of education on sustainable development)</li> </ul>
Copenhagen	<ul style="list-style-type: none"> <li>- Rising social inequality</li> <li>- Affordable housing</li> <li>- Private transportation locked into fossil fuels (limited introduction of alternative fuels)</li> </ul>

Source: POCACITO D7.2 (CEPS 2016a).

Figure 1: Case study cities posters at the Final Conference



Source: CEPS (2016c)<sup>19</sup>

## FURTHER READING

Breil, M. (2016), "Visions for post-carbon urban futures: Why they are useful and how to create them", POCACITO Policy Brief No. 2, November.

CoR (2015), "Opinion: The future of the Covenant of Mayors", 115th plenary session, 3-4 December 2015, ENVE-VI/006.

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CEPS (2016b), "POCACITO roadmap draft: a policy framework for post-carbon cities", POCACITO Deliverable 7.3, as of 21 October.

CEPS (2016c), "Proceedings of the conference", POCACITO Deliverable 8.3.

INTELI (2014), "Report on Key Performance Indicators", POCACITO Deliverable 1.2 (<http://pocacito.eu/content/report-key-performance-indicators>).

Pettersson, A. and S. Harris (forthcoming), "Reducing Consumption impacts: Opportunities to support a Circular Economy in Cities", POCACITO Policy Brief.

TNS Political and Social (2015), "Climate Change: summary", *Special Eurobarometer* 435, November.

<sup>19</sup> Posters can be downloaded from <http://pocacito.eu/case-studies>



## PROJECT

This Policy Brief was written as part of the POCACITO project (Post-Carbon Cities of Tomorrow – foresight for sustainable pathways towards liveable, affordable and prospering cities in a world context), coordinated by Ecologic Institute.

More specifically, this Policy Brief is produced as a document to disseminate the key findings and recommendations of CEPS (2016b) quoted above for a wider readership in a shorter and concise style.

More info:

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## ACKNOWLEDGEMENTS & DISCLAIMER

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