

# NiCE project report on EU-China cooperation

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# 1 Introduction

## 1.1 Vision

After the end of the NiCE - Networking intelligent Cities for Energy Efficiency project, the Green Digital Charter is a widely recognised initiative with its own momentum all over Europe.

Adding to this, the NiCE project has envisioned to develop a similar initiative that would twin the Green Digital Charter in China. The project has aimed at establishing a collaborative network of Chinese cities and their partners that would enable exchanges of experiences and knowledge transfer between Europe and China and vice versa.

This vision is especially relevant in the current climate of EU cooperation, as it complements the primary objectives of the EU-China Urbanisation Partnership, which include:

- To engage China further, both bilaterally and on the world stage, through an upgraded political dialogue
- To support China's transition to an open society based upon the rule of law and respect for human rights
- To encourage the integration of China in the world economy through bringing it fully into the world trading system, and supporting the process of economic and social reform that is continuing in China
- To raise the EU's profile in China
- To let both EU and China benefit from an exchange of knowledge and practices in the urbanisation agenda
- To help EU and Chinese business stakeholders develop efficient collaborations with cities in the two areas

In addition, the adaptation of the Green Digital Charter to a Chinese context falls in line with the EU's growing cooperation with China particularly in the area of environment and innovation.

## 1.2 Goal

In order to achieve our vision above, it was necessary to:

- Engage in a fruitful dialogue with at least one Chinese city that would be committed to the statements of the Green Digital Charter and would act as Charter 'ambassador' in China
- Ensure the Green Digital Charter could be self-sufficient and that this model could be replicated and adapted in China
- Ensure cooperation between actual and potential signatories in Europe and cities in China under the NiCE and beyond the project duration
- Ensure that European cities would agree to the usefulness of engaging with their Chinese counterparts, and vice versa
- Facilitate exchanges between European and Chinese cities to accomplish the previous point

### ***1.3 About this document***

The objective of this document is to report on the progress and accomplishments achieved during the lifetime of NiCE project and the prospects for the time after the end of the project.

Milestone 28 of the project was the development of a roadmap to EU-China cities cooperation in context of the Green Digital Charter and in the field of ICT for energy efficiency.

In that document, the context within which it is appropriate and desirable to cooperate with China was set. Past and ongoing activities between both sides as well as established links between Europe and China in the fields of innovation, the environment, and urban matters were investigated.

The roadmap laid out NiCE project objectives and work planning to illustrate how the project was well-placed and well-equipped to undertake a cooperation activity with Chinese cities. Planned activities of the project, including cities of interest and a final vision, complete with an appraisal of options and suggested timeline had been included.

After the end of the project, the accomplished objectives as well as the pending ones can form the basis for creating prospects for the Chinese network of cities and identifying the potential for further cooperation. In addition the experience gained to date will be useful for informing future work, especially in terms of risks and challenges.

## 2 Background

### 2.1 EU - China Partnership

Formal cooperation between the EU and China dates back to 1975, and this relationship has grown substantially particularly over the past years as exemplified through the annual EU-China summits. The latest two summits took place on 20 September 2012 in Brussels and on 21 November 2013 in Beijing with the attendance of highest level representatives from both EU and China in both events.

Discussions during these summits touch all aspects of cooperation between the EU and China, as well as common obligations to international treaties and matters of international importance. Additionally, new collaborative initiatives are launched and renewed pledges to existing commitments take place on these occasions.

There are three main sets of key actors at the heart of EU-China developments:

- Firstly, the **institutional actors** including the European Union institutions and the Chinese Government
- Secondly, the **partnership organisations and networks intending to be directly engaged in supporting the development of this cooperation** including the Covenant of Mayors, the China Association of Mayors, Friends of Europe, etc
- Thirdly, the **organisations developing projects and networking activities** which aim to facilitate greater co-operation between the EU and China, especially in those fields which are most relevant to the Green Digital Agenda, including EURO CITIES, the Climate Group, the Austrian Institute of Technology, etc

European cooperation with China<sup>1</sup> is divided into five areas of actions, as classified by the Commission:

1. Shared responsibilities in promoting global governance
2. Supporting China's transition to an open society based upon the rule of law and the respect for human rights
3. Promoting China's economic opening at home and abroad
4. EU-China Co-operation Programme - a mutually beneficial partnership underpinning EU objectives and
5. Increased EU visibility in China

The 16th and latest EU-China Summit was held on Thursday 21 November 2013. The two major highlights in the field of Energy and Urbanisation were:

1. The "EU-China Urbanisation Forum" was held at the highest level

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<sup>1</sup> For a brief overview of EU-China relations, please see EU-China Summit factsheets:  
[http://eeas.europa.eu/china/previous\\_summits\\_en.htm](http://eeas.europa.eu/china/previous_summits_en.htm)

After two flagship events held in Europe in 2012 (one half-day in May 2012 with NDRC for the visit of LI Keqiang, and the two-day "EU-China Mayors Forum" with MoHURD in September 2012), this "EU-China Urbanisation Forum" was the first to be organised in Beijing. Plenary session, and the events received the highest degree of political endorsement and recognition, with speeches at the closing ceremony delivered by Premier LI Keqiang, President Van Rompuy, and President Barroso.

Overall, urbanisation is a core priority of the new Chinese leaders, and the Forum took Europe and China to an unprecedented level of engagement on this strategic topic. The arrangements for the EU-China Urbanisation Forum included:

- the personal participation of the Chinese Premier
- mobilisation of five Chinese Ministries (minimum Vice-Minister level) : NDRC, MoHURD, MIIT, supported by Ministry of Environmental Protection MEP and Ministry of Culture MoC
- more than a dozen of Chinese Mayors
- carefully selected Chinese experts and businessmen having a stake in sustainable urbanisation (more than 500 Chinese delegates)
- a comprehensive spectrum of issues were discussed, from urban mobility to smart cities to protection of cultural heritage

## 2. Twelve new pairings were signed by city representatives and witnessed by the Leaders

The pairing of cities is one of the main delivery mechanisms for the Partnership, to achieve concrete and tangible results on the ground. For this edition, a first batch of 12 pairings did receive the dual clearance from the NDRC and from the EU side.

### 2.1.1 Key policies

Cooperation in the fields of environment and ICT fall mostly under the fourth and fifth areas of action listed above.

The fourth area is the **EU-China Co-operation Programme - a mutually beneficial partnership underpinning EU objectives**. China is part of many Union-financed programmes in the Asian region (the Asia Information Technology and Communication Programme, Asia-Invest, Asia-Link, etc.), which has improved its cooperation with the Union. What does this mean for us?

The fifth and final area aims at **increased EU visibility in China**. Extending the model of the Green Digital Charter to Chinese cities would complement this area of activity because it would promote measures that European cities are taking in the area of ICT for energy efficiency, and use these to support reforms underway in China. Additionally, Chinese cities would be able to benefit from a working framework for monitoring and sharing activities, as well as other tools developed under the NiCE project.

## EU-China Science & Technology Cooperation Agreement

The EU-China Cooperation Agreement<sup>2</sup> was signed in 1998, and signalled a move towards a strategic partnership between the European Union and China in the field of science and technology. This partnership was deepened in 2006 with the Joint Declaration EU-China Science & Technology Cooperation<sup>3</sup> and the declaration of the China-EU Science and Technology Year in 2006-2007. The 12<sup>th</sup> EU-China Summit<sup>4</sup> in 2009 endorsed the renewal of the EU-China Cooperation Agreement for another five years<sup>5</sup>.

The Science and Technology Partnership Scheme between the Chinese Ministry of Science and Technology and the European Commission was established in 2009 in occasion of the 11<sup>th</sup> EU-China Summit<sup>6</sup>. It is intended to facilitate the launching of joint projects by planning coordinated calls on topics of common interest. Additionally, DG Research and the National Natural Science Foundation of China signed the 'administrative arrangement on joint projects' in 2010. This agreement states that both sides will launch joint projects in fields of mutual interest, which will also be jointly funded.

Since the conclusion of the Science & Technology Cooperation Agreement we have seen a rise in Chinese participation in European-funded proposals; with 76 projects under FP5, nearly 200 projects under FP6 which included cooperation with China, and having submitted approximately 500 applications that included cooperation with China during the first year of FP7 alone.<sup>7</sup>

## EU and China Partnership on Climate Change

The EU and China established a Partnership on Climate Change<sup>8</sup> at the 8<sup>th</sup> EU-China Summit in 2005<sup>9</sup>, which was confirmed through a Joint Declaration on Climate Change between China and the EU<sup>10</sup>. Both sides are determined to tackle the challenges of climate change through practical cooperation which focuses on the development and deployment of clean energy technology.

A major objective is 'zero emissions' coal technology focussing on CO<sub>2</sub> capture and geological storage. However areas of cooperation include the development, deployment of low carbon technologies in general to promote energy efficiency and a low carbon economy.

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<sup>2</sup> EU-China Science & Technology Cooperation Agreement:

[http://eeas.europa.eu/delegations/china/documents/eu\\_china/science\\_tech\\_environment/coop\\_agreement\\_en.pdf](http://eeas.europa.eu/delegations/china/documents/eu_china/science_tech_environment/coop_agreement_en.pdf)

<sup>3</sup> <http://ec.europa.eu/research/iscp/pdf/eu-china-statement-2006.pdf>

<sup>4</sup> Joint Statement of 12th EU-China Summit: [http://ec.europa.eu/clima/events/0022/joint\\_statement\\_en.pdf](http://ec.europa.eu/clima/events/0022/joint_statement_en.pdf)

<sup>5</sup> News Alert - EU-CHINA: Leaders sign second renewal for Science and Technology Cooperation Agreement

<http://ec.europa.eu/research/index.cfm?pg=newsalert&lg=en&year=2009&na=na-091209>

<sup>6</sup> <http://www.eu2009.cz/en/news-and-documents/press-releases/joint-press-communique-of-the-11th-eu-china-summit-23664/>

<sup>7</sup> This accounted for nearly 10% of all the applications from non-EU countries. Data from:

[http://www.psa.ac.uk/journals/pdf/5/2010/1622\\_1476.pdf](http://www.psa.ac.uk/journals/pdf/5/2010/1622_1476.pdf)

<sup>8</sup> Press release EU-China Partnership on Sustainable Urbanisation: [http://europa.eu/rapid/press-release\\_MEMO-05-298\\_en.htm](http://europa.eu/rapid/press-release_MEMO-05-298_en.htm)

<sup>9</sup> Joint statement of the 8<sup>th</sup> EU-China Summit: [http://europa.eu/rapid/press-release\\_IP-05-1091\\_en.htm?locale=en](http://europa.eu/rapid/press-release_IP-05-1091_en.htm?locale=en)

<sup>10</sup> Joint Declaration on Climate Change between China and the EU

<http://register.consilium.europa.eu/pdf/en/05/st12/st12009.en05.pdf>



The 15<sup>th</sup> EU-China Summit in 2012 expressed that this partnership be framed within the context of the EU's 2020 goals for the environment and China's 12<sup>th</sup> Five Year Plan, with the specific cooperation goals to be achieved by 2020:

- To develop and demonstrate in China and the EU advanced, near-zero emissions coal technology through carbon capture and storage;
- To reduce significantly the cost of key energy technologies and promote their deployment and dissemination.

This partnership includes a recognition to enhance existing cooperation in relevant fields such as the China-EU Action Plan on Industrial Cooperation on Energy Efficiency and Renewable Energies.

### **EU-China Partnership on Sustainable Urbanisation<sup>11</sup>**

The Joint Declaration on the EU-China Partnership on Urbanisation<sup>12</sup> was published in May 2012. It promotes exchanges and cooperation in a range of areas for sustainable urban development. The partnership also highlights the need to support cooperation through bodies such as the specifically created EU-China Mayors' Forum (annual event) and the EC-Link Project (officially launched during the EU-China Urbanisation Forum on 21st November 2013).

Further specific areas addressed by the partnership include the following:

- Sustainable development of urban industrial economy;
- Urban energy supply and demand management;
- Urban mobility, public transport and smart transport;
- Water and air quality, waste management;
- Urban green buildings.

It is also intended to strengthen practical cooperation on the development and transfer of low carbon technologies and to enhance energy efficiency of cities.

### **EU-China Mayors' Forum<sup>13</sup>**

Created as part of the EU-China Partnership on Sustainable Urbanisation, European and Chinese mayors signed the EU-China Mayors Charter<sup>14</sup> which commits them to share experience and know-how on sustainable urbanisation issues. The EU-China Mayors' Forum was co-organised by the Covenant of Mayors Office and the Chinese Association of Mayors, supported by DG Energy and the Chinese Ministry of Housing and Urban-Rural Development.

This platform facilitates cooperation efforts at all levels of government, from local to national and highlights the need to take all of these levels into account in the creation of a sustainable

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<sup>11</sup> [http://eeas.europa.eu/delegations/china/eu\\_china/sustainable\\_urbanisation/sustainable\\_urbanisation.htm](http://eeas.europa.eu/delegations/china/eu_china/sustainable_urbanisation/sustainable_urbanisation.htm)

<sup>12</sup> EU-China Partnership on Urbanisation  
[http://ec.europa.eu/energy/international/bilateral\\_cooperation/china/doc/20120503\\_eu\\_china\\_joint\\_declaration\\_urbanisation\\_en.pdf](http://ec.europa.eu/energy/international/bilateral_cooperation/china/doc/20120503_eu_china_joint_declaration_urbanisation_en.pdf)

<sup>13</sup> <http://www.euchinamayorsforum.eu/home.html>

<sup>14</sup> <http://www.eurocities.eu/eurocities/publications/EU-China-Urbanisation-Charter-WSP0-8YGCB5>

future. The forum also provides an important channel to strengthen ties, share knowledge and cooperate on different projects between local representatives from both continents.

The first EU-China Mayors' Forum was held in September 2012, and brought together more than 600 representatives, including city mayors and vice mayors.

### EU-China Innovation Cooperation Dialogue

A Joint Declaration on an EU-China Innovation Cooperation Dialogue<sup>15</sup> was signed during the 15<sup>th</sup> EU-China Summit in 2012. This dialogue is supported by DG Research and the Chinese Ministry of Science and Technology.

The EU-China Innovation Cooperation Dialogue creates the means through which to exchange best practices and ideas for innovation strategies, and support research and innovation activities. The dialogue will involve a range of stakeholders including industry, universities and research institutions and cover topics as diverse as human resources, technology, research infrastructures, funding, and exploitation of research findings.

Milestones for environment and technology cooperation	
1998	Signing of EU-China Science & Technology Agreement
2005	EU-China Partnership on Climate Change
2009	Renewal of EU-China Science & Technology Agreement for another five years
2010	Joint Statement on Energy Cooperation
14/02/2012	Beijing: President Barroso and Premier Wen Jiabao launched the 'EU-China Partnership on Urbanisation'
03/05/2012	Brussels: President Barroso and Vice-PM KI Keqiang signed a joint declaration defining the details of an annual 'EU-China Urbanisation Forum'
19-20/09/2012	First meeting of the EU-China Mayors' Forum
21/11/2013	Beijing: EU-China Urbanisation Forum
04/2014	Brussels: President Xi meets and reaffirms, with EU Presidents Barroso and Van Rompuy, the importance of climate change and sustainable development for both regions

<sup>15</sup> <http://ec.europa.eu/research/iscp/pdf/joint-declaration-english.pdf>

## 2.2 Relevant actions in China

China is experiencing an unprecedented rate of urbanisation, which makes heavy demands on urban infrastructures such as water management facilities, sewage treatment facilities, gas supply and electricity grids, roads and public transport, and sanitation and waste management, to name a few. Under China's 12<sup>th</sup> Five Year Plan, sustainable urbanisation is currently a priority goal. With energy and resources posing the most serious obstacles for China's development, ensuring that these facilities and others operate as efficiently as possible is not only desirable, it is necessary.

Over the years the Chinese government has published several policies and regulations directed at facilitating energy efficiency and emissions reduction in urban areas. It is projected that China's CO<sub>2</sub> emissions per unit GDP will be reduced by at least 40% by 2020, compared to 2005 levels, and that non-fossil fuels will account for 15% of total energy consumption. In achievement of these goals and more, China is and will continue to expand their engagement in international cooperation partnerships with organisations such as the United Nations, the European Union, World Bank, Asian Development Bank, and many countries.

### 2.2.1 China Association of Mayors

The China Association of Mayors<sup>16</sup> (CAM) is an initiative established in 1991 with the approval of the People's Republic of China's State Council. The organisation is composed of mayors and vice-mayors of all the cities of China, as well as chief and vice-chief executives of districts, all on a voluntary basis. Currently the CAM has approximately 6,000 members from 658 cities. Presidential and vice-presidential posts are held by mayors of large Chinese cities as well as cities with regional importance.

The purpose of the CAM is to serve the development of cities and the work of mayors in China. This includes engaging in exchanges and cooperating with cities and organisations internationally. The CAM has already established collaborative links with associations (of) local authorities in the United States, Germany, Sweden, the Philippines, France, Israel, Russia, and the European Union.

The association has four aims, which are to act as:

- A platform for cities to exchange management experience
- A bridge to city cooperation
- A forum for researching urban development issues
- A base for training mayors

Outputs of the CAM include the annual China Urban Development Report, of which nine volumes have been published so far, which have included themes such as 2006's 'Harmonious City, Innovative Development', 2007's 'Harmonious City: the scientific outlook on development, legal construction, harmonious city', 2008's 'Harmonious City: environment, livelihood, security' and 2010's 'Better City, Better Life'.

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<sup>16</sup> <http://www.citieschina.org/en/index.php/Index/index>

## 2.2.2 Cooperation with Europe in the field of energy and ICT

### Europe-China Clean Energy Centre (EC2)

The EC2<sup>17</sup> in Beijing is a cooperation between Europe and China, to support China in its efforts towards a more efficient energy sector. Over the course of five years (starting in 2010), the EU is contributing €10 million through Europe Aid.

Within a consortium of non-profit organisations, EC2 is an autonomous body set up to promote the use of cleaner energy technologies, energy conservation and energy efficiency, to support China on the road to a low-carbon economy. Areas of focus include the following: clean coal, bio fuels, renewable energy sources, energy efficiency, and sustainable distribution systems.

The project has four main aims:

- Technological cooperation through an Innovative Technology Platform, essentially a database on clean energy technologies with information about Chinese and EU actors in the field, and mapping the current state-of-affairs in China.
- Enhancing government capacity for the development of policies and regulations in favour of clean energy.
- Capacity building for Chinese institutions through trainings and knowledge exchanges.
- Increased awareness of clean energy and its environmental benefits amongst decision makers and the public.

### EU-China Institute for Clean and Renewable Energy (ICARE)

The China-EU Institute for Clean and Renewable Energy (ICARE)<sup>18</sup> project is also funded by Europe Aid and runs for five years until 2015. ICARE is established at the Huazhong University of Science and Technology in the city of Wuhan in central China.

Actions under the project must include the creation of a Master's programme in clean and renewable energy, and the development of a vocational training centre for energy professionals and research platform for scientific cooperation, which must cover at least the following areas: solar, wind, bio, and geothermic energies, and energy efficiency.

The main estimated results of the project include the increased cooperation between EU and China universities in the field of renewable energy and energy efficiency as well as the creation of a research support platform.

### EU-China Information Society

The EU-China Information Society project<sup>19</sup> co-funded with €15 million under Europe Aid, ran for four years from 2005-2009, and included six city partners in China: Baotou, Chengdu, Handan,

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<sup>17</sup> <http://www.ec2.org.cn/>

<sup>18</sup> <http://dev.paristech.org/>

<sup>19</sup> [http://eeas.europa.eu/delegations/china/eu\\_china/information\\_society\\_and\\_media/index\\_en.htm](http://eeas.europa.eu/delegations/china/eu_china/information_society_and_media/index_en.htm)

Yangquan, Yantai, and Xi'an. The primary aim of the project was to enhance regulatory dialogue between the EU and China, linking public and private sector organisations to establish long-lasting relations in Information Society.

Through EU-China collaboration, the project promoted economic and social reform in Chinese local governments through the use of ICT. These e-government demonstration projects were meant to improve government service delivery, and drew on good practice examples from Europe. In addition to six demonstration projects (one in each city), the project included components such as training and capacity building.

In addition to these projects financed under EU external aid, many China-EU cooperation projects are funded under FP7, as mentioned above in the section 'EU-China Science & Technology Cooperation Agreement'. The European Commission's main funding stream for research is the Framework Programme, currently in its seventh edition. Cooperation with China under these Framework Programmes falls under the category of participation with International Cooperation Partner Countries (ICPC), which can be a requirement for the project call.

## Other EU-China cooperation projects

Some other examples of projects that include cooperation with China are:

- General cooperation
  - PDSF II - EU-China Policy Dialogues Support Facility (PDSF) II<sup>20</sup>
  - EC-Link - Europe-China Eco-cities Link
  - URBACHINA - Sustainable Urbanisation in China, Historical and Comparative Perspectives, Mega-trends towards 2050<sup>21</sup>
- ICT
  - NiCE - Networking intelligent Cities for Energy efficiency<sup>22</sup>
  - OpenChina-ICT - Opening European Chinese Cooperation on ICT Research<sup>23</sup>
  - CHOICE - Strengthening Chinese collaboration on ICT research with Europe<sup>24</sup>
  - DRAGON STAR - Supporting the Chinese participation in Horizon 2020<sup>25</sup>
  - URGENCHE - Urban Reduction of GHG Emissions in China and Europe<sup>26</sup>
  - E-AGRI - Crop Monitoring as an E-agriculture tool in developing countries<sup>27</sup>
- Environment
  - PURGE - Public health impacts in URban environments of Greenhouse gas Emissions reduction strategies<sup>28</sup>
  - SPRING - Scoping China's Environmental Research Excellence and major Infrastructure: Foresight, Potentials, and Roadmaps<sup>29</sup>

<sup>20</sup> <http://www.eu-chinapdsf.org/EN/home.asp>

<sup>21</sup> <http://www.urbachina.eu/index.php/en/>

<sup>22</sup> <http://www.greendigitalcharter.eu/niceproject>

<sup>23</sup> <http://openchina-ict.eu/>

<sup>24</sup> <http://euchina-ict.eu/>

<sup>25</sup> <http://www.dragon-star.eu/>

<sup>26</sup> [http://cordis.europa.eu/projects/rcn/98726\\_en.html](http://cordis.europa.eu/projects/rcn/98726_en.html)

<sup>27</sup> [http://cordis.europa.eu/projects/rcn/97815\\_en.html](http://cordis.europa.eu/projects/rcn/97815_en.html)

<sup>28</sup> [http://cordis.europa.eu/projects/rcn/98685\\_en.html](http://cordis.europa.eu/projects/rcn/98685_en.html)

<sup>29</sup> [http://cordis.europa.eu/projects/rcn/94660\\_en.html](http://cordis.europa.eu/projects/rcn/94660_en.html)

## 3 NiCE project cooperation with China

### 3.1 *NiCE project objectives*

One of the NiCE project objectives, during the inception phase of the project, was to engage with the international smart cities community. In particular, NiCE had the objective of developing a new collaborative network of Chinese cities and their partners with the support of the City of Yantai.

As a proponent of the Covenant of Mayors and participant in the past EU-China Information Society project, Yantai was also invited to act as an associate member of the Reference Cities Group<sup>30</sup> and as a subcontractor in the project. Part of Yantai's duties as a subcontractor for the project was to help establish and coordinate a network of smart Chinese cities.

This network must be willing to cooperate - between Chinese cities and as a network with EU cities - in the field of green digital, taking the Charter as a starting point for working on a number of urban issues of common interest.

Other targets for NiCE's cooperation with China, at the same time, included the organisation of an international conference hosted by the city of Yantai with the participation of an EU delegation - including the NiCE project consortium and GDC signatories - and Chinese cities interested in the Green Digital Charter. The conference would be the occasion for Chinese cities to formally commit to cooperating with Charter signatories and exchanging best practices.

Likewise, the project would promote its international dimension during one of the project roadshows. Roadshows were networking events meant to increase the visibility of the Green Digital Charter and to enable the fostering of partnerships between signatory cities, European Institutions and other relevant stakeholders. In this case the roadshow would focus on networking and knowledge exchange between European and Chinese cities, where it aimed to be the operational counterpart of the EU-China Mayors Forum.

To document these objectives and the methodology to reach them, NiCE project prepared a roadmap for cooperation with China that was delivered at the second project review in month 15.

#### 3.1.1 Cities of interest

Another necessary task - mainly performed by Yantai with the support of the NiCE consortium - included identifying those Chinese cities willing to cooperate with Yantai and Green Digital Charter signatories.

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<sup>30</sup> <http://www.greendigitalcharter.eu/niceproject/project-activities/advisory-groups>

A growing number of Chinese cities are developing strategic agendas and policies around the concept of 'smart cities'. Parallel developments in European cities are illustrated not least in the Green Digital Charter signatory cities, but also many other cities that may be engaging in large-scale projects in cooperation with actors such as large industrial partners. Consequently there is a great potential to establish a collaborative network of Green Digital Chinese Cities and their partners, which will enable more exchanges of experiences and potential for collaboration between Europe and China.

Chinese target cities are for example those involved in the above-mentioned EU-China Information Society Project: Baotou, Chengdu, Handan, Shenzhen, and Wuhan. Chinese cities who presented during the Mayors' Forum have also shown an active interest in the GDC: Beijing, Chifeng, Chongqing, Qian'an, Tianjin<sup>31</sup>, Wuzhong, Wuhu, Yining, and Zhuzhou.

Other target cities are those with which Green Digital Charter signatory cities already have a strong working relationship, for example through twinning arrangements and/or existing or planned projects. We can hereby build an initial network of EU and Chinese cities through existing contacts between Charter signatories and Chinese cities. Twinning partnerships and other bilateral agreements between Charter signatories and Chinese cities include, but are not limited to:

- Amsterdam - Beijing
- Barcelona - Shanghai
- Bari - Guangzhou
- Belfast - Hefei
- Birmingham - Guangzhou, Changchun
- Bristol - Guangzhou
- Dublin - Beijing
- Edinburgh - Xi'an
- Eindhoven - Nanjing
- Gdynia - Haikou
- Genoa - Dalian
- Glasgow - Dalian
- Helsinki - Beijing
- Linköping - Guangzhou, Macau
- Lisbon - Beijing
- Malmö - Tangshan
- Manchester - Wuhan
- Nantes - Qingdao
- Naples - Zhengzhou
- Nice - Hangzhou
- Nuremberg - Shenzhen, Changping
- Oulu - Hangzhou, Hainan

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<sup>31</sup> The BBC wrote an article about Tianjin's eco-city development, reported to be the largest in the world:  
<http://www.bbc.com/future/story/20120503-sustainable-cities-on-the-rise>



- Padua - Handan
- Riga - Suzhou
- Rijeka - Qingdao
- Sunderland - Harbin
- Turin - Shenyang, Tai'an
- Venice - Suzhou, Qingdao
- Vienna - Shapingba
- Zagreb - Shanghai
- Zaragoza - Dalian, Yulin

Target cities (additional or the same) can be also identified among those that signed cooperation agreements during the EU-China Urbanisation Forum on 21 November 2013 to foster joint projects from low-energy buildings to clean mobility, integrated water and waste treatments to social inclusion and efficient public services. These cities are:

- Shenzhen
- Shenyang
- Xi'an
- Guangzhou
- Chengdu
- Changsha
- Changzhou
- Weifang
- Weihai
- Luoyang
- Hexi district of Tianjin

Finally, strong candidate cities can be found among the 15 Chinese cities that participate in the "Green Smart City" cooperation between DG CONNECT and the Chinese Ministry of Industry and Information Technology and have agreed to cooperate with 15 European cities on the topics of smart and sustainable development. These cities are:

- Beijing Haidian district
- Tianjin Binhai
- Shanghai Pudong
- Yangzhou
- Nantong
- Huai'an
- Ningbo
- Jiaxing



- Zhangzhou
- Yantai
- Guangzhou Nansha district
- Shenzhen
- Zhuhai Hengqin
- Chengdu
- Korla

Finally, the city of Zhenjiang<sup>32</sup> is not specifically engaged with the EU, but is showing an interest in smart, sustainable growth.

These activities also included following up on contacts made with cities involved in all the EU-China Mayors' Forum, the Friends of Europe's Understanding China programme<sup>33</sup>, the EU-China Urbanisation Partnership Forum, the EU-China Green Smart City Cooperation Pilot City Exchange Meeting and the UrbanTec Asia 2014 conference.

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<sup>32</sup> <http://www-03.ibm.com/press/us/en/pressrelease/36883.wss>

<sup>33</sup> <http://www.understandingchina.eu/Home/tabid/849/Default.aspx>

## 4 NiCE project results of cooperation with China

### *4.1 Work during the first half of the project (months 1 - 14)*

The starting point for the NiCE project partnership with China was to develop a close working relationship with the city of Yantai as a foundation for its work to engage Chinese cities in the Green Digital Agenda and key initiatives linked to this, starting with the Green Digital Charter.

Through the **Yantai Integrated Information Centre**, the city of Yantai agreed to coordinate liaison activities, feedbacks on project development and outputs from the perspective of current activities being developed by Chinese cities. Yantai was therefore asked to:

- Contribute to the work of the Expert Advisory Board and deliver comments on project outputs;
- Be an associated member of the Reference Group of cities, providing an international validation level to the framework and tools envisaged.

The first meeting with Yantai was held on 4 September 2012 during the East-Meets-West Congress on Innovation and Entrepreneurship held in Nicosia, Cyprus, during which NiCE hosted a session on the 'Green Digital Agenda in Smart Cities'. The session included speakers from European cities (Manchester and Amsterdam) and Yantai, and was structured around the theme of common approaches, cooperation strategies, and shared visions of green digital development. This meeting was also the occasion for drafting together the basis of the project roadmap to EU-China cooperation.

An earlier step was to establish regular contacts between the NiCE consortium (represented by Manchester City Council) and Yantai, aimed at exploring what the city of Yantai was already doing in the field of ICT and energy efficiency, in order to put together a city profile.

Furthermore with regards to Yantai's role as subcontractor in the project, the project consortium worked with the city to establish a China-based example of what is possible for Chinese cities engaging with the Green Digital Agenda and how the Green Digital Charter and the NiCE project could provide support in facilitating this engagement.

Finally, being responsible for organising a project meeting in China in the spring of 2013 (according to the October 2012 roadmap), Yantai worked on preparing a programme structure of such a meeting. At the same time one of the NiCE project roadshows in Europe was foreseen to focus on EU-China. The NiCE consortium explored which European city was best place to host such an event, taking into account not only the experience in the green digital area and in running similar events, but also the experience and interest in EU-China cooperation. Amsterdam was identified as a city covering all these aspects and willing to organise a roadshow. Thus, the 3<sup>rd</sup> roadshow - that included an EU-China cooperation session - was held in Amsterdam in November 2013.

Following the initial planning of the NiCE project, Yantai prepared a case study presentation of existing policies and practice relating to the Green Digital Agenda, which was presented at the East-Meets-West Congress on Innovation and Entrepreneurship in September 2012<sup>34</sup>.

Using this as a basis for gathering similar case studies from other Chinese cities, Yantai started contacting Chinese cities to ask them to provide information about their existing and planned activities relating to the Green Digital Agenda. Yantai would also act as the key contact point with existing Chinese networks such as the Chinese Association of Mayors.

Yantai also helped in the preparation of a first draft of the Chinese Green Digital Charter and a first promotion material that was used during the EU-China Urbanisation Partnership Forum and the EU-China Green Smart City Cooperation Pilot City Exchange Meeting.

#### ***4.2 Work during the second half of the project (months 15 - 30)***

The subcontract between Manchester City Council and the city of Yantai was first discussed in September 2012 and eventually signed in the second half of April 2013. The main reason for the delay has been the bureaucratic structure of decision-making in China that adds delays in decisions of this kind. In the subcontract, all points and decisions that are described in the previous paragraph were formally agreed. After April 2013 Yantai, with the help of NiCE consortium, started to prepare a Chinese GDC event to take place in Yantai or Beijing (end of spring 2013). Another option that was discussed at that time was the organisation of the Chinese GDC event in Foshan on 31 May, back to back with the *1st OpenChina-ICT Thematic Workshop*.

Regardless of the date and place, the aim of this event was for Chinese cities, NiCE partners and GDC signatories to discuss and formulate the content and operation of the Chinese GDC network as well as identify the first set of cities that would sign the Chinese GDC. During the preparation phase, and after discussing with DG CONNECT, it was decided to postpone what looked like a short-notice event and organise a 1 to 3-day conference in Yantai in September 2013.

Finally, after recurrent meetings with DG CONNECT, the Chinese Ministry for Industry and Information Technology (MIIT), European stakeholders in China and discussions with the project partners it was decided to bring all NiCE project activities in line with the wider and more important EU-China urbanisation partnership. Two important decisions followed that:

1. NiCE activities and the GDC event in China should take place in parallel to the EU-China Urbanisation Partnership Forum in November 2013 in Beijing.
2. Discussions for the creation of a Chinese Green Digital Charter network should continue, from that point on, with the participation of the MIIT, as part of the wider cooperation between European and Chinese cities for sustainable development. From the European side this cooperation is supported by the European Commission at its highest level and includes a number of DGs, DG CONNECT being one of them.

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<sup>34</sup> Presentation of Wang Shaoyu, Yantai [http://www.greendigitalcharter.eu/wp-content/uploads/2012/09/12.09.04\\_EastWest\\_Digital-Yantai\\_W.Shaoyu.pdf](http://www.greendigitalcharter.eu/wp-content/uploads/2012/09/12.09.04_EastWest_Digital-Yantai_W.Shaoyu.pdf)

#### 4.2.1 EU-China Urbanisation Partnership Forum, 21 November, 2013

Between 20 and 23 November 2013, in the Beijing Exhibition Centre, the EU-China Exhibition on Urban Development took place. The EU as a whole was promoted through a 600-sq.m pavilion that showcased the most important policies, projects and examples of sustainable urban development in EU. The Green Digital Charter and NiCE were promoted through:

1. An poster in English;
2. A poster in Chinese;
3. 500 copies of printed material in both Chinese and English that were translated, printed and distributed using Yantai resources, according to the subcontract:
  - a. Invitation for the GDC event in Beijing,
  - b. Chinese GDC poster in A4 size,
  - c. English text and Chinese translation of the original GDC.

In parallel, on 21 November 2013, the EU-China Urbanisation Partnership Forum was organised. The Great Hall of the People served as the venue for the afternoon plenary session, and the event received the highest degree of political endorsement and recognition, with speeches at the closing ceremony delivered by Premier Li Keqiang, President Van Rompuy, and President Barroso. In the morning, 5 parallel sub-forums tackled various aspects of the Urbanisation Partnership between EU and China.

On the main event of 21 November 2013, NiCE participated in the Smart City sub-forum, one of the five parallel morning events. The event was a high-level cooperation event, since the EU was represented by Gunther Oettinger, Commissioner for energy, and Zoran Stancic, Deputy Director General of DG CONNECT. China was represented by Yang Xueshan, Vice Minister of MIIT, and Qin Hai, Director General of the MIIT.

During the event, NiCE and GDC were presented. Firstly by Bernard Priest, Deputy Leader of the Manchester City Council, who made a specific reference to the GDC as an example of green digital action among European cities. Secondly by Nikolaos Kontinakis, NiCE project coordinator, who was invited to deliver a 10-min presentation on the GDC and how it can be replicated in China as an example of cities networking and cooperation with regard to green ICT projects. And third by the Vice Mayor of the Hague, Henk Kool, that specifically mentioned GDC as an example of action towards sustainable ICT.

After the event, the NiCE project continued working with the Chinese authorities (especially MIIT) and Yantai in order to compile the first version of a Chinese GDC that will lead to the creation of the Chinese network of cities. This text, under the name "EU-China Green Smart City Declaration" was used during the next high-level event that took place in Beijing in April 2014, with the participation of a large number of Chinese cities.

#### 4.2.2 EU-China Green Smart City Cooperation Pilot City Exchange Meeting, 28-30 April, 2014

The next high-level event connected to the EU-China cooperation on green ICT took place between 28 and 30 April 2014 in Beijing and was organised by DG CONNECT and the Chinese MIIT.

The EU level representation included among others, Colette Maloney and Thibault Kleiner, Heads of Units in DG CONNECT, and Frank Greco and Philippe Vialatte, Minister Counsellors of the EU Delegation in China.

NiCE and GDC were presented, first of all, by Steve Turner, Head of Future Cities in Manchester who made a specific reference to the GDC as an example of how to create commitment in the political agenda of a city.

It is important to underline that Manchester was selected as one of the 15 European cities to work with Chinese counterparts on this new initiative around collaboration on smart cities. The two key objectives are:

- for the European cities to disseminate their expertise in this area in order to accelerate Chinese cities' development;
- and for European businesses to be able to exploit market opportunities in the Chinese market.

The three-day workshop looked at a range of smart city themes including governance, transport and energy. Presentations were made by all the cities present following a high-level introductory session jointly led by the European Commission and Chinese ministries. A follow up white paper<sup>35</sup> has been produced concerning recommendations and next steps and Manchester will continue to work with EUROCITIES to ensure that the Green Digital Charter and the outcomes of the NiCE project are fully reflected in future work.

The important developments that were achieved during the last one year in the effort to create a Chinese network of cities were reflected in the last plenary session of the event, "Conclusion and next steps", that took place on 29 April. At this session:

1. Nikolaos Kontinakis, NiCE project coordinator, presented the Green Digital Charter and NiCE as well as the prospects that GDC cooperation between EU and China can have;
2. KANG Yanrong and CHEN Cai from the China Academy of Telecommunication Research (CATR) of MIIT presented to the Chinese smart cities' representatives (15 Chinese cities), the common statement "EU-China Green Smart City Declaration" that was drafted before the event;
3. A Q&A session followed where Chinese cities' representatives asked questions and made remarks about the EU-China cooperation and the Chinese GDC potential;
4. CATR officials announced that the next steps of the process would be:
  - a. CATR will circulate the common statement text to all smart cities asking for comments and their willingness to sign,
  - b. CATR will gather all replies and create a second draft of the common statement,
  - c. CATR will collaborate with high-level officials of MIIT for the creation of the Chinese network.

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<sup>35</sup> [http://s-12662.gotocdn.com:8080/PDSF/Internet/pub/A11/Smart\\_City\\_draft%20White%20Paper\\_May%202014.pdf](http://s-12662.gotocdn.com:8080/PDSF/Internet/pub/A11/Smart_City_draft%20White%20Paper_May%202014.pdf)

### 4.2.3 UrbanTec Asia Conference, 29-30 May, 2014

On 29-30 May 2014, the UrbanTec Asia Conference took place in Beijing, in the frame of the annual CIFTIS<sup>36</sup> fair. NiCE was invited to participate in the conference (costs covered by the conference organisers) and more specifically in the “Global Smart City Dialogue” session on 29 May.

Moreover, a one-page GDC promotional material was included in the conference guide and the poster section of the conference. Nikolaos Kontinakis, NiCE project coordinator, contributed in the session explaining how GDC has become a visible component of the European smart cities policies and how it is envisioned to extend the Charter to Chinese cities.

After the conference, in a meeting between NiCE and CATR of MIIT, it was confirmed that all 15 Chinese smart cities have expressed their agreement and willingness to sign the Chinese Common Statement that was presented in April 2014. The next step is expected to be the presentation of the Common Statement to the Minister of MIIT and the organisation of a ceremony for the signing of the Chinese GDC equivalent by the first 15 Chinese cities. CATR of MIIT hopes that this critical step could be completed during the summer of 2014.

## 4.3 Results of EU-China cooperation

The results of the EU-China cooperation within NiCE are considered as positive and important. Although there is still not a Chinese network in place, a number of other accomplishments have shown the efforts of the NiCE consortium had a real positive impact.

### 4.3.1 European and Chinese cities

Many European as well as Chinese cities, and especially the 15+15 ones participating in the EU-China smart city partnership, are now aware of the possibilities that a Chinese GDC network can offer:

1. All 15 Chinese cities have, according to the CATR, agreed on the signing of the Common Statement and the creation of the first Chinese GDC network;
2. Especially Yantai is constantly mentioning its participation in the NiCE project as an example of EU-China cooperation for the benefit of the city;
3. Many European cities that participate in the partnership or other bilateral EU-China agreements are referring explicitly to the GDC as a driver of their smart city policy: e.g.:
  - a. Manchester, Bristol and the Hague during the Smart City sub-forum in November 2013,
  - b. Manchester, Venice and Zagreb during the EU-China Green Smart City Cooperation Pilot City Exchange Meeting in April 2014,
  - c. Venice at the UrbanTec Conference on May 2014.

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<sup>36</sup> China Beijing International Fair for Trade in Services hosted by the Ministry of Commerce and the city of Beijing

### 4.3.2 Cooperation with European Commission

DG CONNECT, being the main supporter of GDC and NiCE project from the side of the European Commission, has always considered the creation of a network of Chinese cities as necessary for the success of the EU-China Partnership. Especially after April 2013 (signing of the NiCE-Yantai subcontract), DG CONNECT and especially its Smart Cities Unit and NiCE partners have intensified their collaboration in the effort of creating the Chinese GDC network. Thus:

1. DG CONNECT has included NiCE project partners (via EUROCITIES) in the preparation of both the EU-China Urbanisation Partnership Forum and the EU-China Green Smart City Cooperation Pilot City Exchange Meeting so that more and better synergies can be created,
2. DG CONNECT has introduced NiCE to the EU-China Policy Dialogues Support Facility (PDSF II)<sup>37</sup> and the OPENCHINA-ICT project<sup>38</sup> in the effort to create synergies in the collaboration of European and Chinese smart cities,
3. NiCE project partners (via EUROCITIES) have helped in the identification of the 15 European smart cities that participate in the EU-China smart city partnership,
4. DG CONNECT invited NiCE partners to promote GDC and NiCE in the ICT2013 conference in Vilnius on 6-8 November 2013,
5. NiCE project partners have helped in the identification of the 12 European cities that participated in the new pairings with Chinese cities during the EU-China Urbanisation Partnership Forum<sup>39</sup>,
6. DG CONNECT invited EUROCITIES to promote GDC and NiCE project in the “EIP smart cities launch conference” on 26 November 2013,
7. NiCE project partners (via EUROCITIES) have invited DG CONNECT in all NiCE events that have taken place in and near Brussels in order to promote the EU Digital Agenda.

DG ENERGY has long-standing cooperation with China and, among others, coordinates the annual Urbanisation Forum<sup>40</sup>. Officers of DG ENERGY have expressed their satisfaction, after the November 2013 Forum, with the efforts to create a network of GDC Chinese cities in line with the wider EU-China Urbanisation Partnership. Moreover, even before the results of the EU-China Green Smart City Cooperation Pilot City Exchange Meeting on April 2014, there is the assurance from DG ENERGY that after the first Chinese cities sign the Chinese Common Statement in China, a ceremonial signing will be included in the next Urbanisation Forum in order to promote the event at the highest possible level<sup>41</sup>.

The prospect of establishing a Chinese network of cities that will have a direct and focused collaboration with European cities is of great interest for the EU Delegation to China. Moreover, such cooperation is considered as beneficial for the opening up of the Chinese market to European firms. To this end, both Minister Counsellors of the EU Delegation in China mentioned during the EU-China Green Smart City Cooperation Pilot City Exchange Meeting (April 2014) that they welcome the efforts of the NiCE project to create a “Chinese GDC” as a means of

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<sup>37</sup> <http://www.eu-chinapdsf.org/EN/home.asp>

<sup>38</sup> <http://openchina-ict.eu/>

<sup>39</sup> [http://ec.europa.eu/energy/international/bilateral\\_cooperation/china/doc/12\\_cities.pdf](http://ec.europa.eu/energy/international/bilateral_cooperation/china/doc/12_cities.pdf)

<sup>40</sup> [http://ec.europa.eu/energy/international/bilateral\\_cooperation/china/china\\_en.htm](http://ec.europa.eu/energy/international/bilateral_cooperation/china/china_en.htm)

<sup>41</sup> Meeting of EUROCITIES with DG ENERGY on 07 April 2014



collaboration with the EU GDC cities. EEAS<sup>42</sup> has already included the GDC in its list of reference documents for the EU-China partnership on sustainable urbanisation<sup>4344</sup>.

#### 4.3.3 Cooperation with Chinese government

After June 2013, the NiCE partners have initiated a continuous collaboration with the China Academy of Telecommunication Research (CATR)<sup>45</sup> of the Ministry of Industry and Information Technology (MIIT)<sup>46</sup> in the effort to create the Chinese network of GDC cities.

Initially, NiCE project had foreseen to work only with the city of Yantai and a select set of cities that Yantai would indicate. Nevertheless, mid 2013 it became evident that any international cooperation at the desired level (an organised network of multiple cities) would have to be initiated under the auspices and agreement of the Chinese government. In this context, CATR was identified as the responsible body to handle the creation of such a network of cities.

One of the achievements of NiCE is the establishment of a good working relationship with CATR through regular email correspondence and meetings (whenever possible). This working relationship is considered as critical in the effort to establish a functional Chinese GDC network of cities.

#### 4.3.4 Cooperation with other projects and stakeholders

During the project, NiCE partners cooperated with a number of stakeholders in order to promote the creation of the Chinese GDC network and create momentum for the EU-China cooperation at city level:

- The EU-China Policy Dialogues Support Facility (PDSF) is a project co-funded by the European Union and China to facilitate and support current and future implementation of Policy Dialogues between the EU and China. NiCE has been in open communication with PDSF since June 2013 so as to create synergies and help each other for the accomplishment of their objectives;
- The "Europe-China Eco-Cities" EC-LINK project is recognised in the "Agenda 2020" as a major cooperation platform for the EU-China Urbanisation Partnership. Through EURO CITIES which participates in EC-LINK as a partner responsible for EU-China city networking, synergies have been created and more are explored for the future, e.g. the reuse of the NiCE toolkit for the EC-LINK project;
- OPENCHINA-ICT is a project supported by the European Commission under FP7 and aiming at contributing to the development of cooperation in ICT research between Europe and China. OPENCHINA-ICT and NiCE have been in contact in order to help each other with the communication activities or explore the possibilities of collaboration in events;

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<sup>42</sup> EEAS stands for European External Action Service. The network of EU delegations around the world (the one in China included) is part of the EEAS structure

<sup>43</sup> [http://eeas.europa.eu/delegations/china/eu\\_china/sustainable\\_urbanisation/sustainable\\_urbanisation.htm](http://eeas.europa.eu/delegations/china/eu_china/sustainable_urbanisation/sustainable_urbanisation.htm)

<sup>44</sup> [http://eeas.europa.eu/delegations/china/documents/eu\\_china/sustainable\\_urbanisation/green\\_digital\\_charter.pdf](http://eeas.europa.eu/delegations/china/documents/eu_china/sustainable_urbanisation/green_digital_charter.pdf)

<sup>45</sup> <http://english.catr.cn/>

<sup>46</sup> <http://www.miit.gov.cn/n11293472/index.html>



- After discussing the NiCE project and GDC with OECD, the Regional Development Policy Unit of the organisation has been in contact twice with EUROCITIES asking for help in identifying participants for international (East Asia) smart city events: “Mayors Forum: Urban Green Growth in Dynamic Asia”, 20 October 2013, Kitakyushu and “Policy Forum on Urban Green Growth in Dynamic Asia”, 10 June 2014, Paris;
- After discussing NiCE and GDC with the European Policy Centre (EPC), EUROCITIES has been invited twice to contribute in related events: the “Making sustainable cities work in Europe and Asia” workshop on September 2013 and the “Learning from each other: creating more sustainable and greener societies in China and the EU” workshop in June 2014
- After discussing the NiCE project and GDC with the DIGITALEUROPE association, EUROCITIES was invited to the “EU-China IST industry dialogue event” in April 2013
- Following the presentation of a Chinese GDC network during the EU-China Urbanisation Partnership Forum, EUROCITIES was invited to participate in the UrbanTec Asia Conference that took place in Beijing, in the frame of the annual CIFTIS fair, in May 2014 and more specifically in the “Global Smart City Dialogue” session.

#### 4.3.5 Cooperation between EU and China ‘sister cities’

Many member cities of EUROCITIES have a sister city in China, as Manchester has with Wuhan. These bilateral links are a good way of maintaining dialogue and introducing new strategic concepts as a basis for future work and cooperation. In November 2013, for example, Manchester made an official visit to Wuhan and was able to include the subject of cooperation on green digital issues on the agenda. Manchester has recently launched a Manchester China Business Forum to engage a wider set of stakeholders, especially businesses, in a new cooperation platform, which will also create enhanced links between the UK and Chinese governments. One example of this is the agreement between both governments to open a new UK Consulate in Wuhan and to provide funding for new cooperation projects. This is an example which could be shared with other EUROCITIES members with a view to including the green digital agenda, and the Charter, into the dialogue and cooperation with their sister cities.

#### 4.4 Challenges

In the initial roadmap that the NiCE project had delivered almost two years ago, the creation of a Chinese network was foreseen as a linear process that would be completed well within the lifetime of NiCE project.

Unfortunately, the differences in governance structures and ways of working between EU and China proved difficult to overcome and cannot be ignored. The initial approach was talking about cities that would create a network for international cooperation, independently of the central ministerial authorities. After extensive discussions with both the EU and Chinese institutions, the current approach calls for a careful and step-by-step approach of the responsible central ministerial authorities in order to give the green light and facilitate the creation of such a network of cities.

It has to be mentioned that although the process has been proved far slower than anticipated, it hasn’t stopped at any stage of the NiCE project. This fact is a positive sign that the Chinese GDC network will eventually be created as originally foreseen.

#### 4.5 Future work and opportunities

After the end of NiCE project, the creation of a Chinese GDC network will be the target of a “NiCE-2” follow-up project that will continue and complete this task. Moreover, more synergies with organisations that are involved in the wider EU-China urban agenda can and need to be created.

Given the importance that both EU and Chinese institutions are giving to the Urbanisation Partnership, a Green Digital Charter network of Chinese cities can become the vehicle of collaboration with EU cities in the sectors of Green ICT and ICT for Green.

Moreover, given, on one hand, the will of DG CONNECT to update the GDC text so that it matches new priorities and realities in the EU and, on the other hand, the Common Statement that the Chinese CATR/MIIT has compiled, a future task should be the rewriting of the GDC so that it brings closer the EU and Chinese aspirations for the future green and smart cities.

#### 4.6 Identified risks

After the end of NiCE project, future risks associated with the EU-China cooperation can be better identified:

Risk	Details	Degree of risk
DG CONNECT not supporting the GDC	DG CONNECT has supported the efforts of NiCE to create a Chinese network in all levels and is expected to intensify this support, especially after the creation of the Chinese network, thus, the creation of a cooperation channel between EU and China, specific to the Green ICT agenda	Minimal
Other EU institutions not supporting the GDC	All EU institutions (e.g. DG ENERGY and the EU delegation to China) that have interacted with NiCE project have expressed their support to the efforts of creating tangible ways of cooperation between EU and Chinese cities	Minimal
NiCE partners not supporting EU-China cooperation after the end of NiCE project	At least two NiCE partners (EUROCITIES and Manchester City Council) are very active in the EU-China cooperation and are going to keep the respective activities going after the end of NiCE project; More details can be found in the NiCE exploitation plan	Minimal

Risk	Details	Degree of risk
Chinese cities not joining the Chinese network	Throughout the Urbanisation Partnership process, Chinese cities have been very willing to cooperate with their EU counterparts in all fields of interest, green digital agenda included. Another positive development is that all 15 Chinese smart cities that participate in the Urbanisation Partnership have replied positively to the CATR/MIIT call for the signing of the first Common Statement of Chinese cities	Small
EU cities not using GDC for their EU-China cooperation activities	EU cities follow a different governance model and exhibit a strong trend to create rather bilateral cooperation schemes that suit their specific needs. Nevertheless, the willingness of EU cities to participate in all the EU-China events and projects during the last one year proves that EU cities understand and welcome the synergies and economies of scale that can be created through wider and EU-led initiatives.	Small
Chinese authorities not supporting the Chinese GDC	This is recognised as the most important risk, given the governance model of China. Nevertheless, the positive developments of the last months as well as the willingness of all 15 Chinese smart cities that participate in the Urbanisation Partnership to create a network mitigate this risk.	Medium

## 5 Annex I: GDC in Beijing - November 2013

### 5.1 GDC in the EU-China forum and the EU exhibition pavilion:



## 5.2 Invitation for the GDC event:

### Green Digital cooperation between European and Chinese cities

#### 绿色数字宪章中欧城市合作研讨会



北京展览馆 二楼 4 号会议室-北京市西城区西直门外大街 135 号

**NO.4 Conference Room, Beijing Exhibition Center**

**NO. 135 XIZHIMEN Outer Rd No.135, Xincheng District, Beijing**

**2013 November 22- 9:00 Am-11:00 Am**



会场路线：北京展览馆 12 号展厅内东北角，玻璃门上二层

**How to reach Conference: North-East Corner of NO.12 Exhibition Hall Beijing Exhibition Center, Trough the glass doors go to the second floor**



### 5.3 Photos from the GDC event:





## 6 Annex II: GDC leaflet in Chinese

# 绿色数字章程

### 介绍

绿色数字章程承诺让签署城市通过使用ICT技术减少碳排放，同时通过在城市中使用最新的数字技术来促进遏制全球气候变化的进程。



### 承诺

绿色数字章程签署城市承诺：

- 与共同签约伙伴城市在ICT与高效能源领域展开合作。
- 在五内部署实施5个大型ICT高效能源试点项目。
- 在10年内减少30%由ICT产业直接产生的碳排放。









### 签署章程能够带来的优势

- 绿色数字章程的目标与城市日常工作中与新ICT架构，高效能源和可持续发展相关的事项相符合。
- 绿色数字章程有助于提高城市形象及国际知名度。
- 绿色数字章程赋予签署城市了解整个欧洲最前沿项目和相关工具的机会。
- 绿色数字章程始终紧跟欧盟最新政策前沿，如智慧城市“20-20-20”目标以及市长宣言。
- 相关城市可以从中欧合作中受益。



### 绿色数字章程联络方式

网站: [www.greendigitalcharter.eu](http://www.greendigitalcharter.eu)  
 电子邮件: [info@greendigitalcharter.eu](mailto:info@greendigitalcharter.eu)  
 推特: @GDCharter



Supported by







## 7 Annex III: GDC presentation in China



**Green Digital Charter**  
Green Digital cooperation between  
European and Chinese cities

**绿色 数字 宪章**  
“绿色 ICT” & “ICT 为绿色服务”

EU-China Smart Cities sub-forum  
21 November 2013, Beijing, China



**Why do we need a Green Digital Charter?**  
**我们为何需要绿色数字宪章?**

- The Green Digital Charter aims to mobilise Information and Communications Technologies (ICT) for a low carbon economy
  - Exploit ICT as a technical solution and enabler of behavioural change to reduce emissions, including those from ICT themselves
  - Encourage leadership from public municipal authorities to deliver on climate change commitments
  - Share public and private sector experience and expertise in deploying ICT to address climate change, in cooperation with other national and international initiatives
- 绿色数字宪章旨在调动信息通讯技术（ICT）为低碳经济服务：
  - 探索ICT作为技术手段促进行为改变以减少排放，包括ICT自身排放
  - 鼓励市政当局领导履行气候改变承诺
  - 与国家及世界级倡导组织合作，就ICT应对气候变化与公共及私有部门分享经验及专家建议

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## Why are cities joining this initiative?

### 城市加入绿色数字宪章优势

- The Charter can improve a city's standing through:
  - Increased visibility through the GDC contact point
  - Interaction and collaboration with other signatories
- Green Digital Charter reflects current EU and international milestones:
  - Smart cities initiatives, EU "20-20-20" and Covenant of Mayors
  - International climate change abatement policies
  - EU-China cooperation
- The Green Digital Charter signatories are the beneficiaries of the EC funded project NiCE, which aim to support the implementation of the Charter

- 通过如下方式，该宪章可提升城市地位：
  - 与GDC沟通联系提高知名度
  - 与其他签约城市进行互动和项目合作
- 绿色城市宪章是欧盟和国际里程碑式项目，在智能城市融资竞争优势方面被寄予厚望：
  - 智能城市倡导者，欧盟 "20-20-20" 目标及市长盟约
  - 国际气候变化减排政策
  - 欧盟-中国合作
- 绿色数字宪章签约城市是欧盟注资NiCE项目受益人，该项目旨在支持宪章的执行




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**GREEN DIGITAL CHARTER**



Launched in 2009  
于 2009年启动

Mainstreamed in 2011  
2011年 大批签约城市

41 signatories  
41个签约城市

From 18 countries  
来自18个国家

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**GREEN DIGITAL CHARTER**

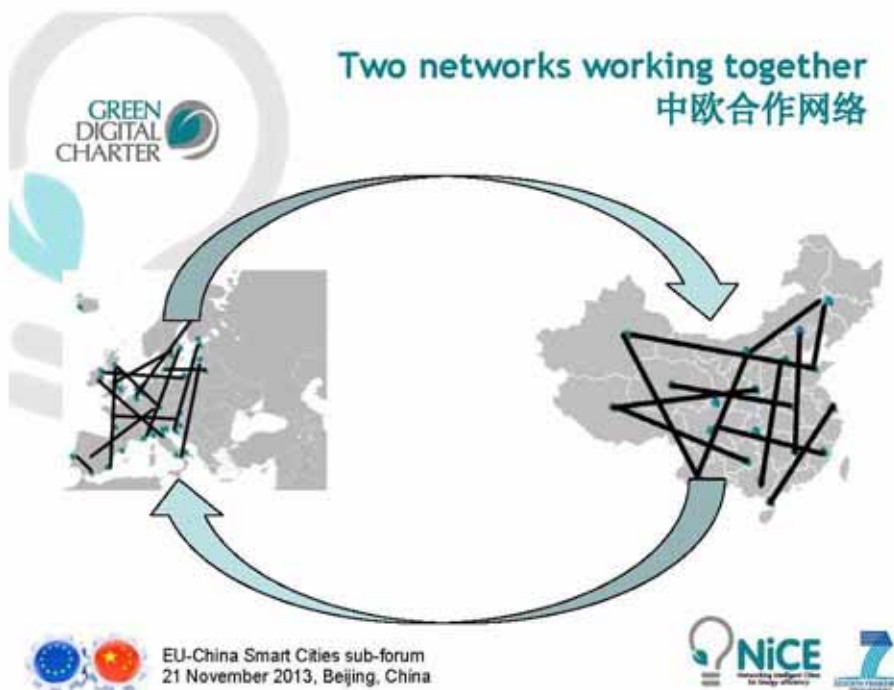
## GDC as a bridge between EU and China

### GDC 架起中国与欧盟沟通桥梁

- Green ICT and smart cities technologies are high in the agenda of cities in both EU and China →
  1. Green Digital Charter can efficiently network cities in both regions
  2. Then, it can bridge EU and China cities in a fruitful and efficient collaboration with regard to these technologies and how the citizens' lives can be improved
- 在欧盟和中国许多城市计划中，绿色ICT和智能城市技术占有重要地位→
  1. 绿色数字宪章可以为两地区城市提供高效网络沟通
  2. 继而，中国和欧盟可以就相关技术开展富有成果的高效合作

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**Chinese GDC**  
绿色数字宪章-中国

- Green Digital Charter needs to be revised to fit the Chinese cities':
  - Realities, needs and objectives
  - Governance and organisational schemes
  - Fast evolution and changing needs
- **The first meeting will take place on 22 November, 09:00 - 11:00**
- 我们会对绿色数字宪章进行修订从而使之复合中国国情:
  - 实际情况, 现实需求和目标
  - 管理和组织方案
  - 实时发展从而满足多变的需求
- **第一次相关会议将于11月22日上午9点至11点召开。**



## Chinese GDC 绿色数字宪章-中国

### Green Digital cooperation between European and Chinese cities

#### 绿色数字宪章中欧城市合作研讨会



北京展览馆 二楼 4 号会议室-北京市西城区西直门外大街 135 号

NO.4 Conference Room, Beijing Exhibition Center

NO. 135 XIZHIMEN Outer Rd No.135, Xincheng District, Beijing



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## Chinese GDC 绿色数字宪章-中国

2013 November 22- 9:00 Am-11:00 Am



会场路线: 北京展览馆 12 号展厅内东北角, 玻璃门上二楼

How to reach Conference: North-East Corner of NO.12 Exhibition Hall Beijing Exhibition Center, Trough the glass doors go to the second floor



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**Thank you!**  
**感谢您的倾听!**

- GDC contact point in EU / GDC 欧盟联系方式

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[www.greendigitalcharter.eu](http://www.greendigitalcharter.eu)

 @GDCharter

- GDC contact point in China / GDC 中国联系方式

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## 8 Annex IV: “Declaration of EU-China Green Smart City”

### 中欧绿色智慧城市宣言

智慧城市是当今世界城市发展的新理念和新模式。随着人口膨胀与城市化快速发展，城市在经济发展方式、管理和服务水平、生态环境保护等各方面面临日益严峻的发展难题，而新一代信息通信技术的创新应用和发展为城市绿色、低碳、可持续发展提供了新的思路。

中欧绿色智慧城市宣言是在中欧绿色智慧城市合作框架下发起的。中国和欧盟成员国中各有15个试点城市先行开展智慧城市合作，已在城市运行管理、为民服务、信息资源管理等方面做出有益探索。各个城市已充分认识到绿色、低碳、可持续发展理念的重要性，以及信息技术能够发挥的重要作用。各个城市将致力于通过信息通信技术，提高能源使用效率，减少污染物排放，应对全球性气候变化，积极探索创新型解决方案。

我们认为：

- **信息通信技术是破解城市可持续性发展面临问题的关键手段。**智慧城市通过利用新一代信息通信技术在城市经济、社会、文化活动中的深度开发和广泛应用，实现城市运行管理的智能化和精细化，提高能源使用效率、减少污染物排放，支撑城市的绿色发展、循环发展和低碳发展，形成资源节约型、环境友好型的城市可持续发展新格局。
- **智慧城市要坚持以人为本。**智慧城市要把人的感受和需求放在首位，提升社会保障、医疗卫生和文化教育等民生领域的服务质量和水平，促进公众服务的均等化、便捷化，实现饮食更健康、出行更便捷、就医更方便、受教更轻松。
- **智慧城市要坚持开放共享、合作共赢。**智慧城市建设要注重资源整合共享、系统互通协同和信息资源的开发开放，注重分享信息化应用的创新解决方案、推广节能减排方面的最佳

实践和经验，推动中欧智慧城市互促共进、合作共赢。

- **智慧城市要坚持包容性发展。**智慧城市建设要注重区域协同、城乡统筹，通过信息技术技能的普惠教育，为城市所有群体提供创新性的教育、培训和就业机会，加强区域凝聚力，确保城市所有人能充分享受智慧城市带来的物质成果。

### 我们承诺：

- 坚持绿色、低碳、可持续发展的理念，构建资源节约、环境友好、循环高效的经济形态，提升交通、环境和公共安全等城市运行管理领域的智能化、精细化水平，降低城市能源消耗和污染排放，实现城市与生态环境和谐统一。
- 健全城市基本公共服务体系，在社会保障、医疗卫生、文化教育等方面实现保基本和全覆盖；鼓励社会化力量提供差异化、多层次、高质量的新型社会服务，满足城市公众多样化需求，提高生活的便捷性和舒适性。
- 发展城市集约共享、高效安全的基础设施，在社会管理、公共服务、公共信息资源管理等领域率先使用信息通信技术，并探索建立资源共享、协同联动的智慧城市体系，提升城市运行管理效率，更好的为城市居民提供服务。
- 提供开放的创新技术和应用实践平台，鼓励用户驱动的低碳绿色产品和应用研发，汇聚全社会力量进行智慧城市领域的ICT技术创新和应用。

### 为实现以上承诺，我们计划采取以下举措：

- **推广绿色低碳、以人为本发展理念，制定智慧城市战略规划。**政府充分协调企业、市民等社会各方力量，制定符合本地经济社会发展水平和城市特色的绿色智慧城市战略规划，实现智慧城市的资源集约、功能复合、高效安全、便民惠民。
- **政府部门率先使用绿色低碳节能的解决方案。**以智能交通、智慧电网、智能水务等重点领域为试点，提升能源使用效率和再生资源循环利用水平，增强资源环境智能化监控能力，在此基础上将绿色低碳理念和方案进一步扩展到企业和个人。
- **促进重点领域绿色信息技术深度融合应用。**以经济社会可持续



发展、人和自然协调发展和人类生活质量改善为目标，充分应用物联网、移动互联网、云计算、地理信息系统等新一代信息通信技术，重点推进能源、水资源、大气环境、建筑、交通等领域智能化、低碳化发展。

- **提高ICT领域能源使用效率。**在大型数据中心建设等ICT领域，积极采用可再生资源、低碳排放设备和绿色ICT技术，最大限度地降低ICT产生碳排放。
- **搭建开放式技术创新平台。**支持低碳技术创新，支撑低碳解决方案的应用和推广。

**我们希望：**

与中欧绿色智慧城市宣言签署成员国共同致力于智慧城市建设，推广优秀试点项目经验，每年发布智慧城市发展的阶段性报告，接受由中欧绿色智慧城市专家团的监督和评估。

## **Declaration of EU-China Green Smart City**

Nowadays, Smart City is a new concept and a new model of urban development. Along with the population expansion and rapid development of urbanization cities face up to more and more problems in all aspects of economic development mode, management and service quality, ecological environmental protection domains. The development and application of next generation ICTs have provided a green, low-carbon and sustainable development mode to cities.

EU-China Green Smart City Declaration is set up under the framework of EU-China Green Smart City Cooperation. There are fifteen pilot cities each in China and EU have already agreed to conduct cooperation on Smart City Cooperation. The cooperation domains include urban operation management, public services and information resources management etc. Some sound explorations in these areas have already been conducted. All pilot cities have already realized the importance of Green, Low-Carbon and sustainable concepts. The important role of ICT in this process is also valued. All cities will devote themselves to use ICT to increase energy efficiency, decrease pollution discharge, slow down climate changing and explore new creative solutions.

We believed:

- **ICT is the key method to solve the problem in City's sustainable development domain.** ICT is used as a main tool by a smart city in its economic, social and culture domains widely and deeply. Smart city should set up a smart and refine city operation management mode which could increase energy efficiency and decrease pollution emission. It also could provide a green, virtuous cycle and low-carbon development

mode to the city and form a sustainable, resource-saving and environment friendly city development pattern.

- **‘People oriented’ should be a core concept for a Smart City.** A smart city should put citizens’ feeling and demands above everything first and foremost. It should increase service quality and level in people’s livelihood domains, for instance social security, medical, culture and education etc. Provide a more equal, convenient and better services to citizens in diet, transportation, education and public health domains.
- **Smart City should be ‘open’ and ‘win-win cooperation’.** Resource integration and share, system interflow and cooperation, information resources development and opening up are three very important key points for smart city’s construction. During the construction process of smart city, relevant stakeholders should also pay attention to share new ICT application solutions, popularize newest and best energy saving practices and promote the EU-China cooperation in Smart City domain.
- **Smart City should insist containment development.** The construction of Smart city should be careful with regional collaboration and urban and rural overall development. It should provide creative education, training and employment to all groups within the city through ICT training. This will enhance the regional cohesion and make sure all citizens could share the benefits of Smart City.

We Promised:

- Uphold the idea of Green, Low-Carbon and sustainable development. Construct a resources saving, environment friendly and cycle-high efficiency economic mode. Upgrade the smart and refine level in transportation, environment and public security domains. Decrease city’s energy consumption and pollution emission. Reach the goal of construct a harmonious city.
- Improve basic public service systems which cover social security, medical, education and culture domains. Encourage specialization enterprises to provide differentiation, multi-level and high-quality social services. To satisfy publics’ diversification demands.
- Develop a intensive-share, efficient and secure infrastructure. Implement ICT in social management, public service, public information resources management domains. Discover and establish a resources share cooperative smart city system. Increase city management efficiency. Provide better services to citizens.’
- Provide an open creative application practice platform. Encourage the research and development of user-drive low carbon applications and products. Gather social forces to promote the application and research of ICT in Smart City domain.

**To achieve the above commitment, we plan to take the following initiatives:**

- **Popularize ‘Green’ ‘Low Carbon’ and ‘people oriented’ development concept. Formulate Smart City Strategic Plan.** Government plays the role as a facilitator to coordinate the forces from enterprises, citizens and other stakeholders. Facilitator formulates the Green Smart City Strategic plan according to local real situation. Under the framework of Smart City to construct a resources intensive, multi-function, efficient and secure city.
- **Government departments take the lead in using low-carbon energy efficient solution.** Adopt smart transportation, smart power grid, smart water affairs as pilots, to increase the energy efficiency and renewable resources circular using level. Enhance resources and environment intelligent monitor ability. On this basis, expand green low-

- carbon concept and relevant projects to privates and enterprises.
- **Promote the deep integration and application of Green ICT in key fields.** Take harmonious society as the target. Use internet of things, mobile internet, cloud computing, GIS to promote the low-carbon and intelligentise in energy, water resources, atmospheric environment, building and transportation domains.
  - **Increase energy using efficiency in ICT domains.** Use renewable resources, low-carbon emission devices and Green ICT in ICT construction domains. Decrease the Carbon emission in ICT domain furthest.
  - **Establish an open creative technology platform.** To support the technical innovation of low-carbon technology. To support the popularisation and application of low-carbon solutions.

**We hope:**

**We could devote ourselves with EU-China Smart City Declaration member cities to construct Smart Cities, promote good pilot projects and experiences, and publish smart city development annual stage periodic reports, accept the assessment by EU-China green smart city expert panel.**

## 9 Annex V: “EU-China Green Smart City Cooperation Pilot City Exchange Meeting”



中欧绿色智慧城市合作试点城市交流会  
EU-China Green Smart City Cooperation- Exchange Forum  
2014年4月28-30日 28-30 April 2014





## 10 Annex VI: “UrbanTec Asia conference”

