

Application Scenarios of China's Carbon Neutrality Pilot Project

(Challenge 2)

Background and working mechanism

The International Business Hub (IBH) under Sino-Nordic Promotion Association for Green Sustainable Development (SNPA), in partnership with the Center for International Economic and Technological Cooperation (CIETC) of Chinese Ministry of Industry and Information Technology (MIIT), have jointly established the China-EU Carbon Neutrality Cooperation Office (CECCO) and initiated the China's carbon neutral initiative (*SNPARK initiative*), to organize a group of pilot projects by cities and industrial sectors. The first batch of pilot projects will focus on Yangtze River Delta, the Greater Bay Area, Yangtze River Economic Belt and other regions, and will gradually expand to the whole country. Pilot projects and participating companies will receive all-around support including policy, funding, taxation, international cooperation and supply chains.

Typical pilot projects and application scenarios

Under the framework of *SNPARK Initiative*, taking China's key cities striving to achieve carbon neutral and sustainable development as the application scenario, two projects - among the first batch of pilot projects - have been selected, to collect global digital and carbon neutral solutions. After completion, it will set an example for other urban renewal projects, as a pilot under *SNPARK Initiative* and a test bed for the renewal of cities towards sustainable development.

Challenge 2: Digital solutions to develop an online-merge-offline education platform on sustainable development

Education for Sustainable Development (ESD) has been included in the national education development plan under China's "Action Plan towards Carbon Peaking by 2030". There are 240 million K12-students in China, and 130 million in higher education and vocational education, making an overall education market of 2 trillion RMB (270billion EUR). At present, Chinese young people still lack understanding of sustainable development and carbon neutrality, due to the gap of easily accessible ESD content and resources. With travel limits under the Covid-19 epidemic, the gap is bigger, therefore China needs more digital education content, to promote popularization of ESD-related knowledge and skills.

The application scenario for Challenge 2 is China's off-campus education space - such as science museums, zoos, libraries, etc.- which are facing challenges of digitalized transition to education for sustainable development, for example:

1. Insufficient online learning resources

insufficient digital literacy, lack of educational content and resources related to

climate change and biodiversity, and lack of high-quality online platforms.

2. Insufficient application of digital technology

lack of educational technology, digital teaching equipment and resources, etc., low interactivity, and not enough practical activities.

3. Lack of online-merge-offline approach

a gap of coordination between online and offline education, without an online community for long-term learning based on the venues (e.g. zoos, museums).

Digital solutions are needed to build an “online-merge-offline” education platform to provide young people with knowledge and skills education on sustainable development. After completion, it will set an example for youth learning platform development in the cities under China’s carbon neutral pilot projects. Potential solutions we are looking for may include:

1. ESD education content design

to develop interdisciplinary and cross-cultural education content on sustainable development & digital literacy curriculum system;

2. Education resources related to climate change, biodiversity and carbon neutrality

to raise awareness among young people about the importance and know-how of addressing climate change, biodiversity, and carbon neutrality;

3. Digitalization and Edu-tech application

to effectively combine learning inside and outside the classroom through educational technology, digital teaching equipment and resources, AI, etc.;

4. Integrated operation of education space (OMO):

to improve operation efficiency of offline education space via digital high-tech tools, and establish an OMO education platform that could deliver education services without being affected by the Covid-19 epidemic;

5. Operation plan of lifelong learning community

to integrate learning resources via digital online platforms, so that people can learn anytime, anywhere, and build a sustainable lifelong learning community.

Frequently Asked Questions

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1. What is the current situation of China’s science museums and zoos?

The exhibition area of the Science and Technology Museum is about 10,000 square meters, mainly offline exhibitions of multi-disciplinary science content. Zoos generally have 100-300 species of animals, which integrate wildlife protection, exhibition, breeding, and science education. There are more than 500,000 tourists annually.

2. What is the service gap to young people in Chinese zoos and science museums?

The venues hold offline thematic activities for teenagers, but most of the venues do not provide supporting learning resources for students of different ages, there was insufficient coordination with school education (teachers, etc.) and families, the online and offline integration solutions were not mature, and the learning content related to sustainable development and climate change was insufficient.

3. How mature do you require for the digital solutions?

The solution should be highly innovative and feasible in terms of technology and mode. Please introduce the application in related fields in the solution.

4. Does it have to be a comprehensive solution?

Comprehensive solutions and solutions to one or several specific problems are acceptable, as well as separate online solutions or digital solutions for offline scenarios.

5. What is the target age group for such solutions?

3-18 years old

6. Do you need solutions suitable for other cultural venues and schools?

This challenge is mainly for zoos/science museums, but you are welcome to participate if you have good ideas for public libraries, cultural centers, art galleries, museums and other cultural venues or OMO education platforms of schools.

7. What is the basic evaluation criteria of the solution?

The solution must be clear, complete and practical. Participants should guarantee the originality and do not infringe any third-party intellectual property rights.

8. What's the piloting opportunity for winners?

The winning solutions will first be piloted in a zoo/science museum in a Chinese mega city, with participation of schools and family/community users. The winning solutions will be promoted to a wider range.

9. Is there any special focus of digital education resources you are expecting?

- 1) knowledge and skills on sustainable development, focusing on biodiversity, STEAM, climate change, etc
- 2) highlight the cultivation of interdisciplinary and cross-cultural comprehensive ability
- 3) construct vivid and intuitive educational resources/forms that can better support the educational scenes of schools and families

10. What kind of digital education infrastructure you are looking for?

- 1) Online + offline interactive learning platform, providing digital learning experience, improving the efficiency and effectiveness of knowledge dissemination and skill learning;

2) Design a resource sharing and interconnection plan between the learning platform and school and family education;

3) Design digital solutions to improve the efficiency of operation and management of cultural/science popularization institutions, such as digital management of SAAS, smart devices, immersive experience facilities, etc.