



Introduction to the IUC Asia Programme

Focus on EU China City-to-City Cooperation

Pablo Gándara, Team Leader, IUC ASIA
EU-China Regional and Urban Cooperation Online Seminar 2020
18th November 2020

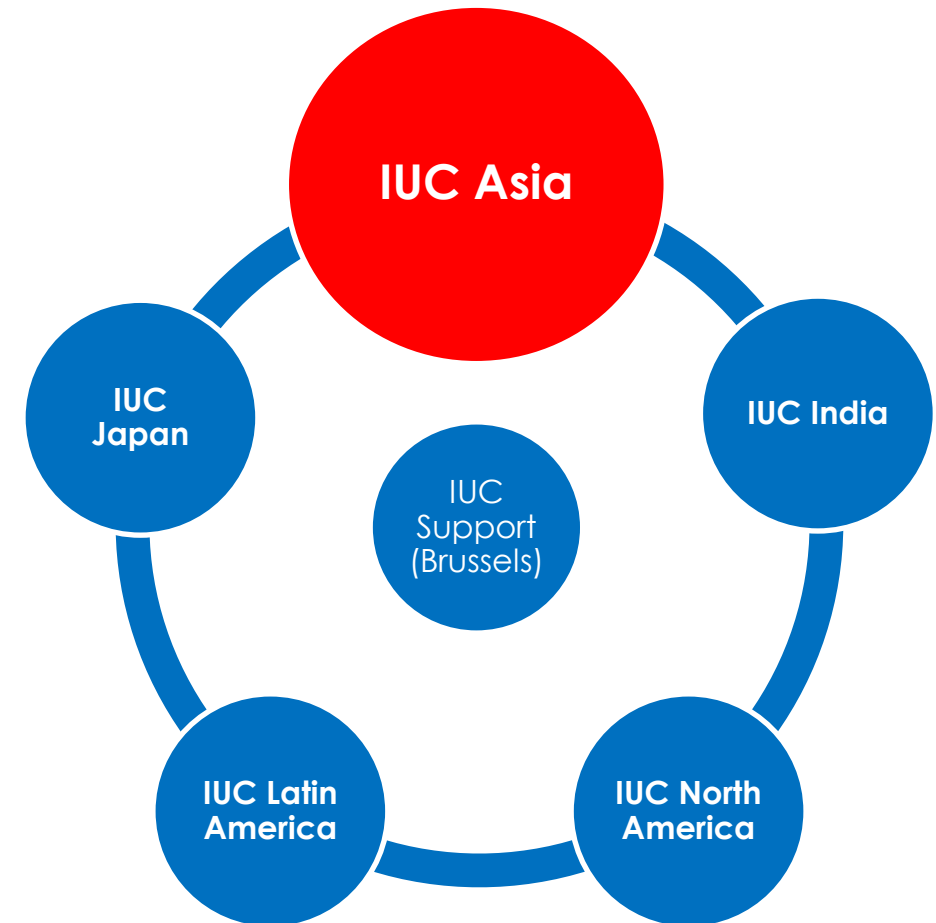
The EU's IUC Programme at a Glance – Focus C1 EU-China

Global EU Programme launched 2017 managed by the **Foreign Policy Instrument (FPI)**. Aims to support:

- Bilateral EU policy objectives;
- Implementation of UN Urban Agenda, the UN Sustainable Development Goals, and the Paris Climate Change Agreement

In Asia, the IUC is working in two main areas:

1. **Component 1: Multi-City Cooperation on Sustainable Urban Development**
 2. **Component 2: Support Cities in Asia on Climate Change** Mitigation, Adaptation and Clean Energy Access (especially within the Global Covenant of Mayors - GCoM)
- Timeline: 2017 – 2020 (1st Phase)
 - Team based in Beijing and Indonesia



EUs IUC Multi-city Engagement: Global Networks



Over **150** cities already involved

- From the **European Union:**
 - **75** cities from 21 Member States
- **18 Chinese** cities

Urban Agenda of the EU – Connecting the UN' s SDGs to Cities

EU's 14 partnership areas



Culture/Cultural Heritage



Security in Public Spaces

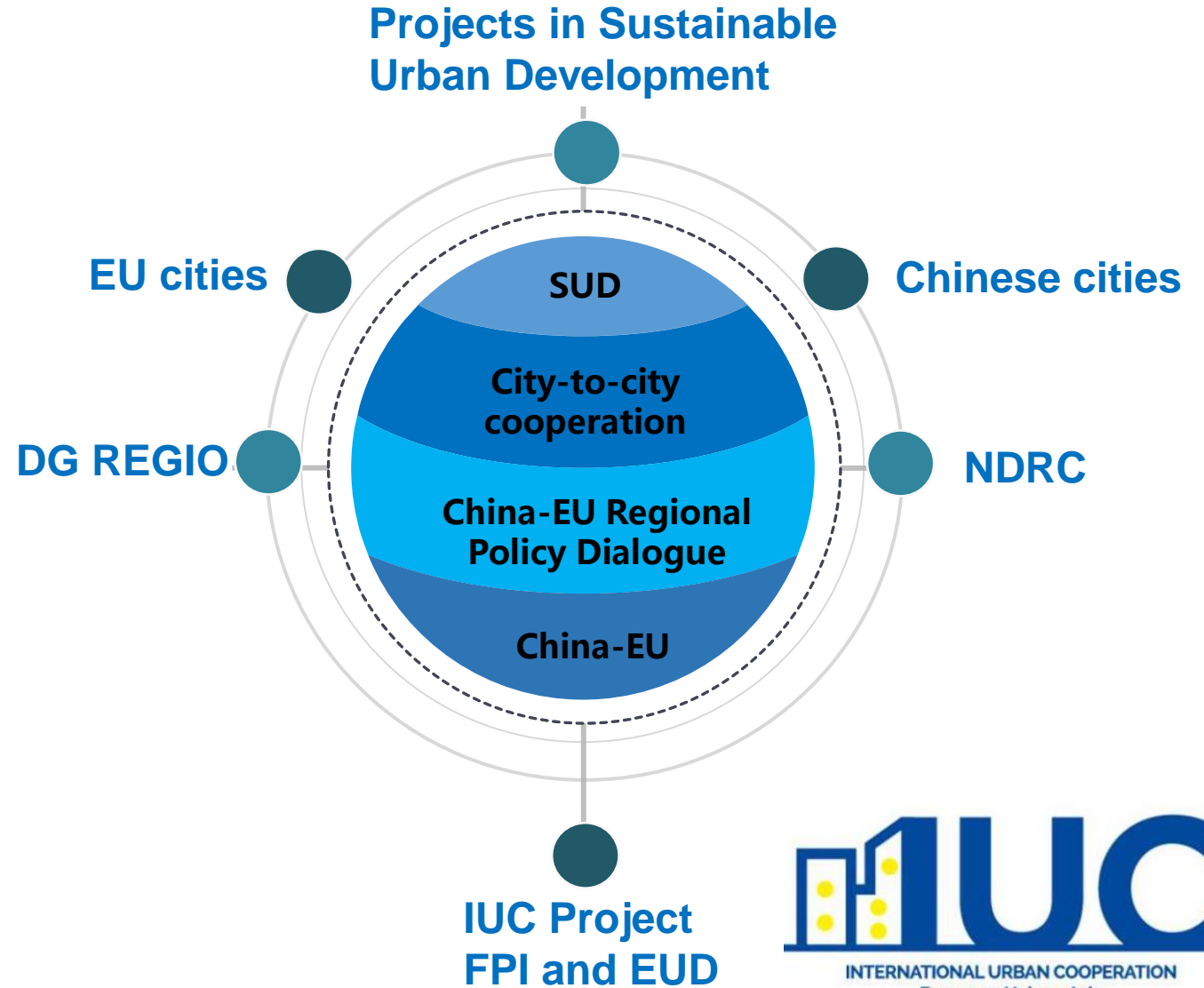
United Nations 17 Sustainable Development Goals (SDGs)



IUC Project Introduction

Component 1:

Promote city-to-city cooperation in sustainable urban development within the *EU-China Regional Policy Dialogue (DG REGIO-NDRC)*



13th EU-China High Level Seminar – Zhengzhou, July 2018

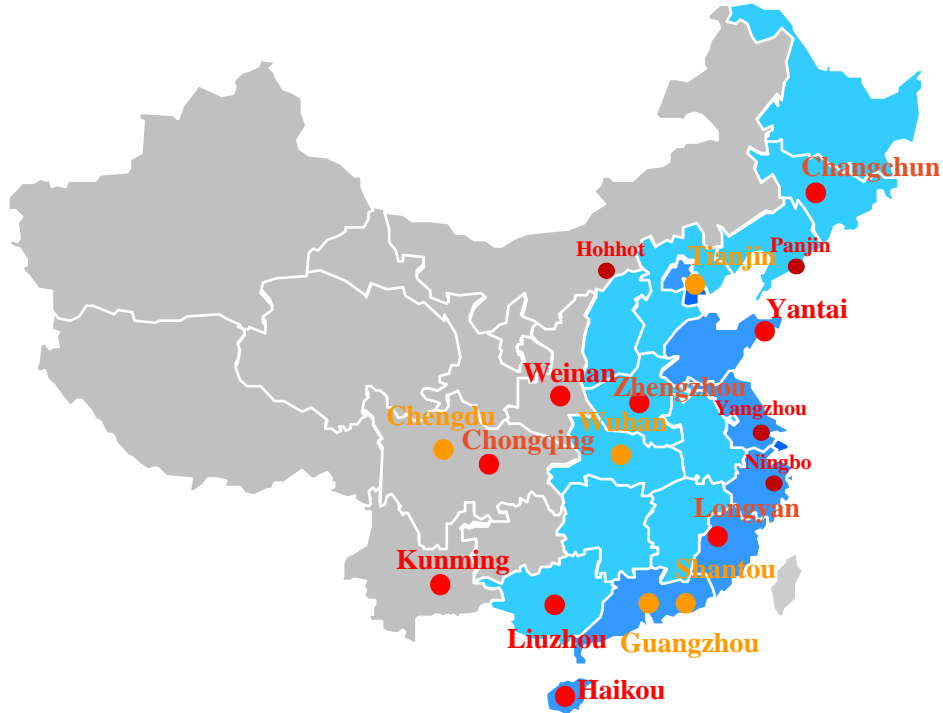


14th EU-China High Level Seminar – Brussels, April 2019



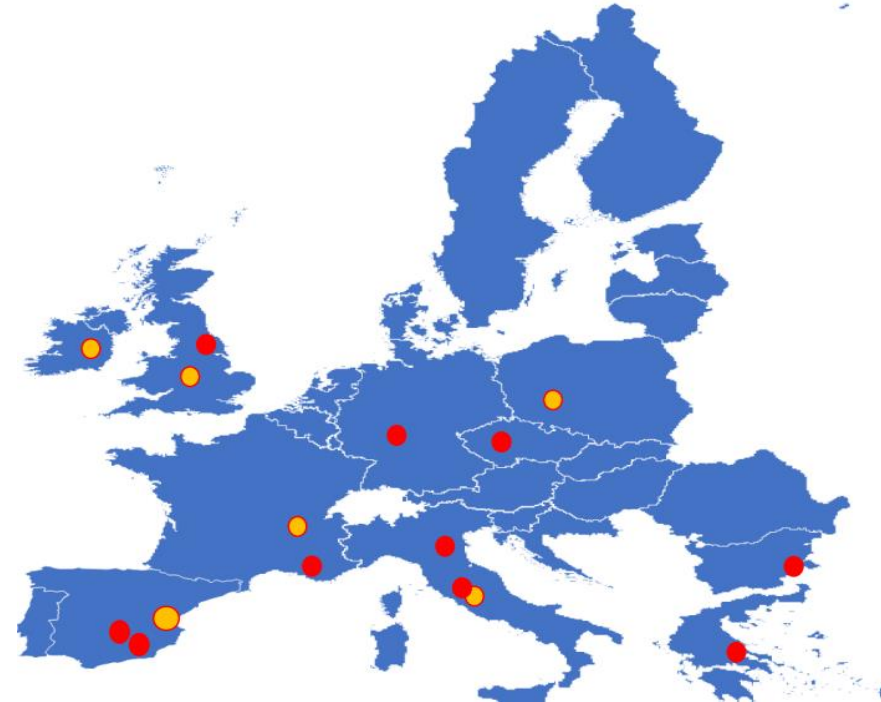
Pilot Cities for Cooperation between the EU and China

Chinese Pilot Cities 2014-20



Chongqing, Longyan, Zhengzhou, Shantou, Haikou,
Changchun, Kunming, Liuzhou, Yantai, Weinan, Tianjin,
Chengdu, Wuhan, Guangzhou, Hohhot, Panjin, Ningbo,
Yangzhou

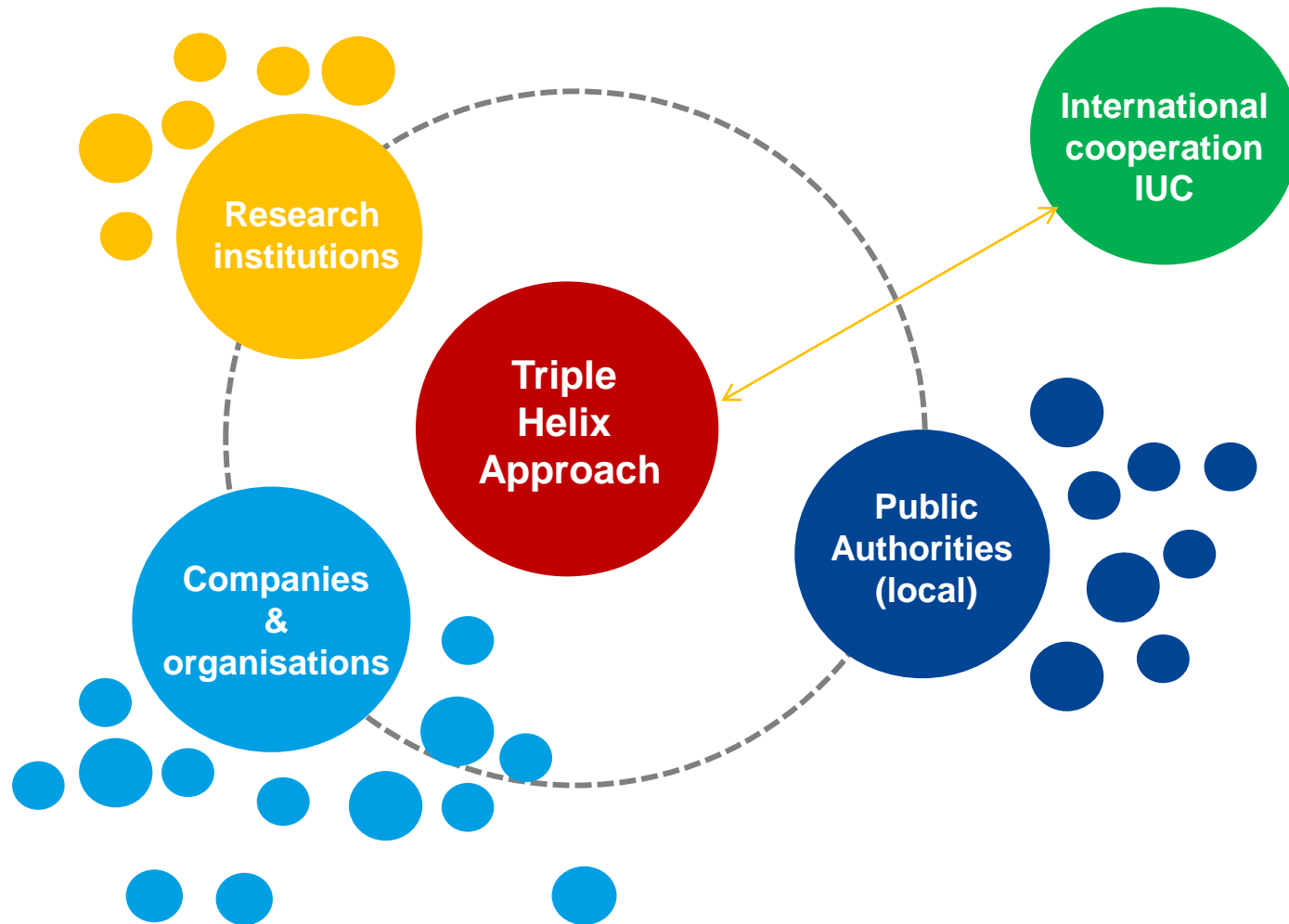
Selected EU Pilot Cities 2017-2020 (IUC)



Málaga (Spain), Rome (Italy), Granada (Spain)
Nice (France), Barnsley (UK), Reggio Emilia (Italy), Stuttgart Region
(Germany), Mannheim (Germany), AAK (Greece), Málaga (Spain)
Burgas (Bulgaria), Bologna (Italy), Barcelona (Spain)
Greater Manchester (UK)

Approach for Cooperation

Triple-Helix Methodology



Cooperative Action Plan

- Identify key projects
- Identify key institutions/stakeholders
- Define decision-making mechanism
- Streamline communication
- Develop implementation roadmap
- Project-oriented work
- Self-initiatives

Pilot Example 1: Mannheim – Chongqing Cargo Railway

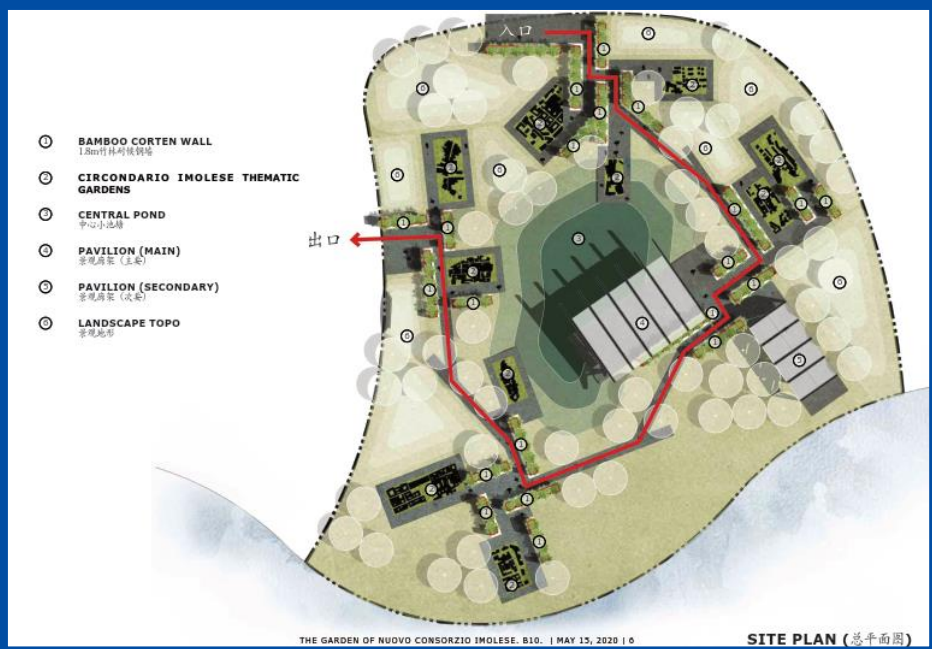
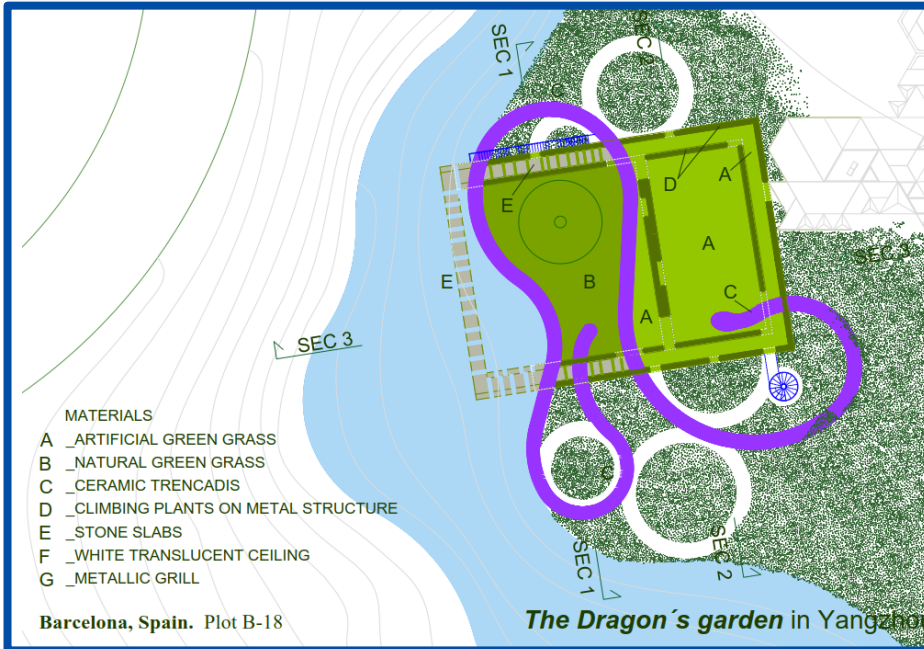
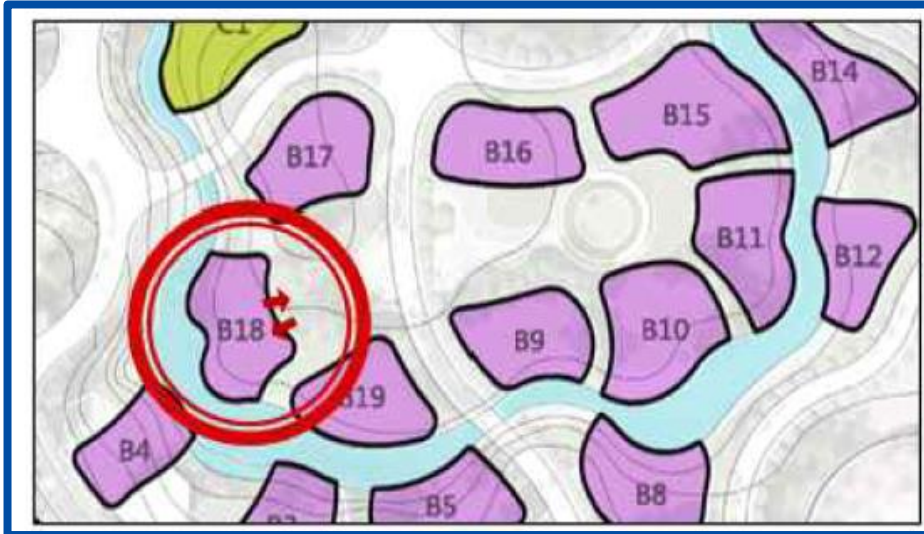


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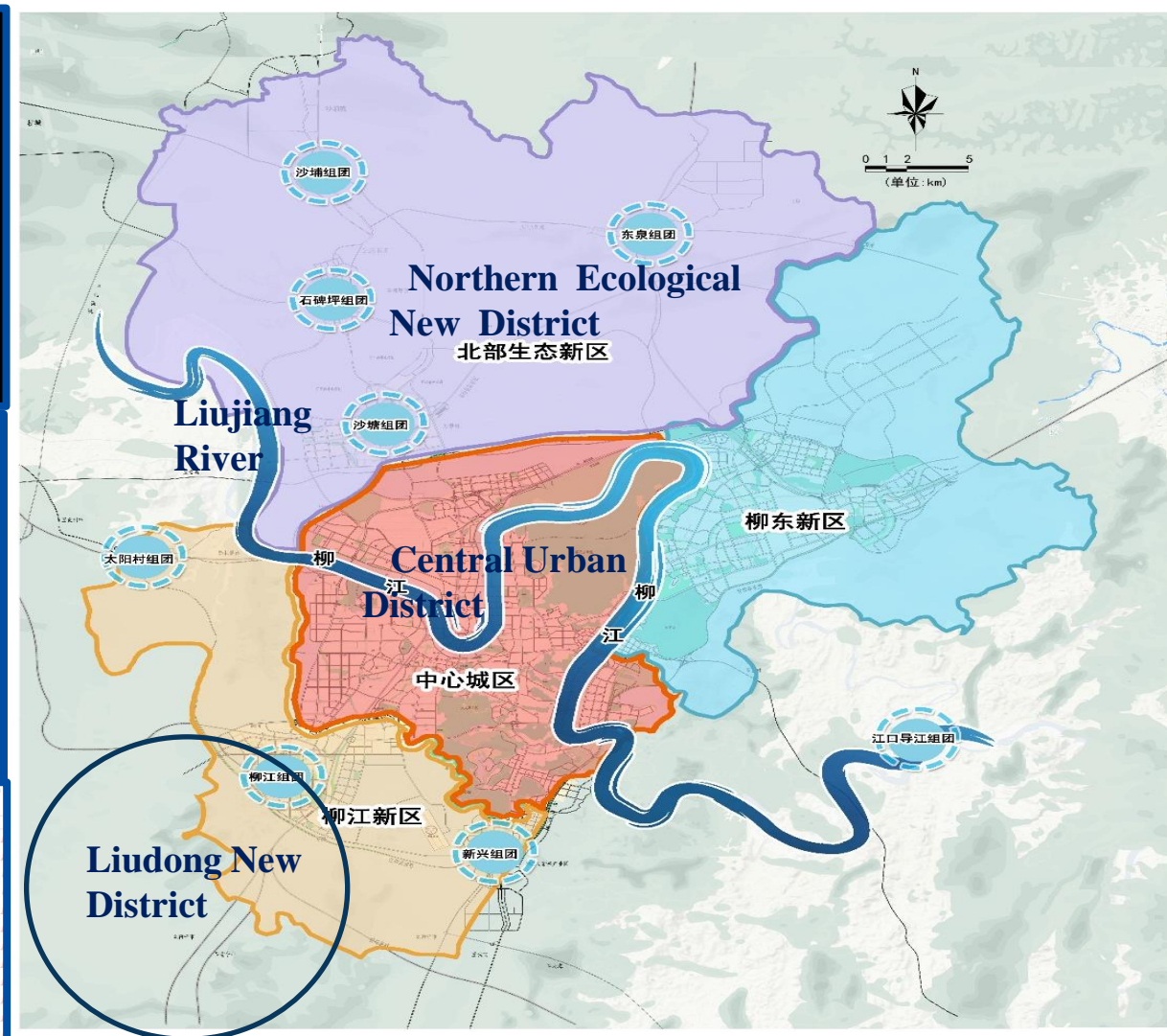
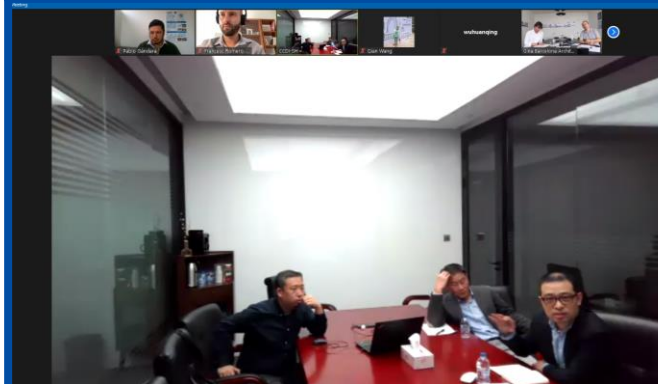
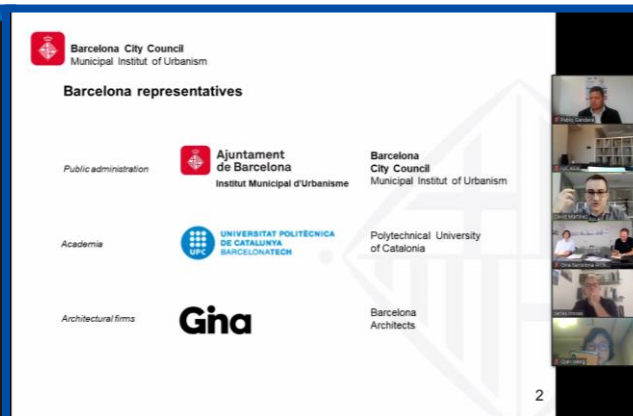
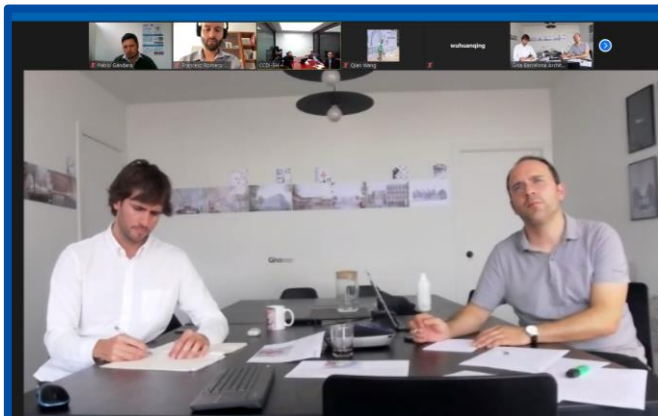
EU's IUC Pilot Project Started: Cargo Railway Connection between Mannheim and Chongqing



Pilot Example 2 – Barcelona, Bologna & Rome in Yangzhou



Pilot Example 3: Barcelona, Rome and Liuzhou – S&T Park



Example 4: Rome Summer School on Digital Tools Urban Planning

Training objectives of the Course

The Course provides the ability to operate within an integrated BIM & GIS process, approaching critically to the multidisciplinary process, with a good capacity to read BIM models and interacting with GIS in the construction environment. It provides the acquisition of modeling skills, as well as principles and application methods of integrated management and project development with an age-friendly, energy-friendly and protection cultural heritage approach.

Course type

The Summer School aims to create a training course focused on the acquisition of knowledge about the opportunities, principles and advantages related to the management and organization of workflows based on ICT, with specific focus on BIM & GIS integrated methodologies and tools, allowing the process development in digital scenarios.

Methodological solutions for energy-friendly, age-friendly and cultural heritage restoration approaches related to the built environment will be explored.

In charge department

The DPDTA Department of Planning, Design, and Technology of SAPIENZA Faculty of Architecture was created by merging three interest areas: design and innovation of processes and products relating to industrial artefacts; research in technological innovation in the construction processes; data associated with studies regarding the transformation of territories typical of mature industrial societies for the environmental balance restoring.

Admission requirements

First level degree or equivalent

Minimum number of participants to activate course: 20

Assigned ECTS CFV: 6

Registration fee: 300 € + 16 € taxes

Rome on-line International Summer School GISBIM

for digital integrated design

Rome

Faculty of Architecture Valle Giulia

31 august – 11 september 2020

SAPIENZA UNIVERSITÀ DI ROMA

Dipartimento di Pianificazione, Design e Tecnologia dell'Architettura

Rome on-line International Summer School

Faculty of Architecture

Via A. Gramsci, 53

00197 Rome, Italy

+39 06 49919172

www.architettura.uniroma1.it

intsummerschoolgis-bim.dpdtat@uniroma1.it

International Partner

CAUP

College of Architecture & Urban Planning (CAUP)

Shanghai China

Yantai University

China

Cooperation with

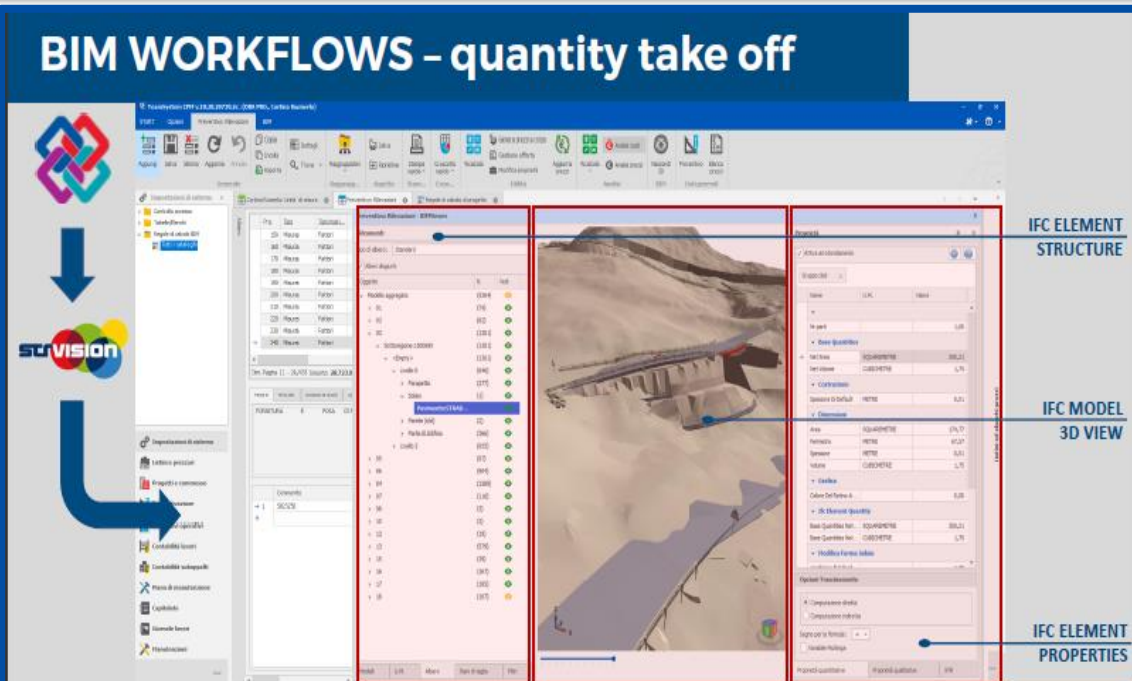
IUC

International Urbanism Centre

European Union



BIM WORKFLOWS – quantity take off

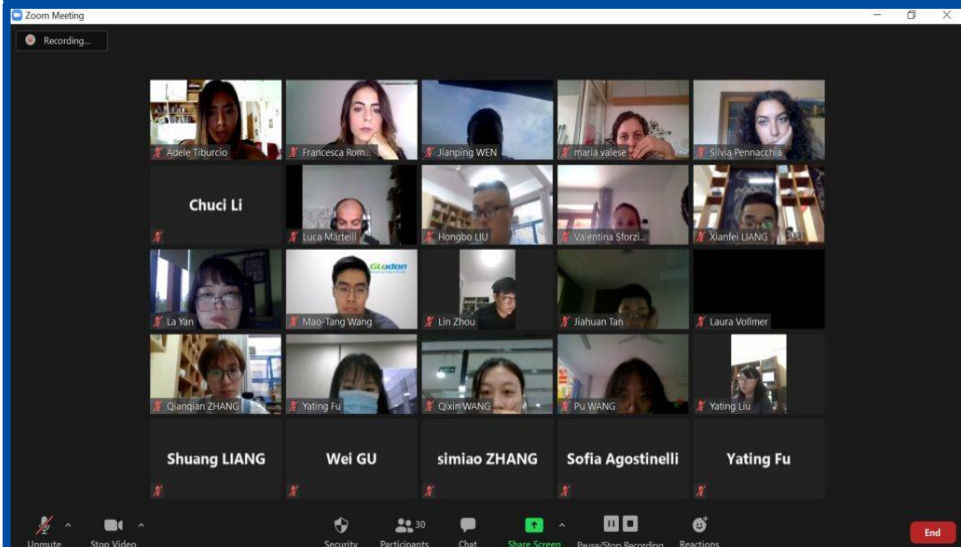


The screenshot shows a BIM software interface with a 3D model of a building and a table of quantities. The table lists various elements and their quantities, such as 'Concrete' (1000), 'Steel' (500), and 'Glass' (200). The interface also includes a 'Properties' panel on the right, showing details for the selected element.

Element	Quantity
Concrete	1000
Steel	500
Glass	200

Zoom Meeting

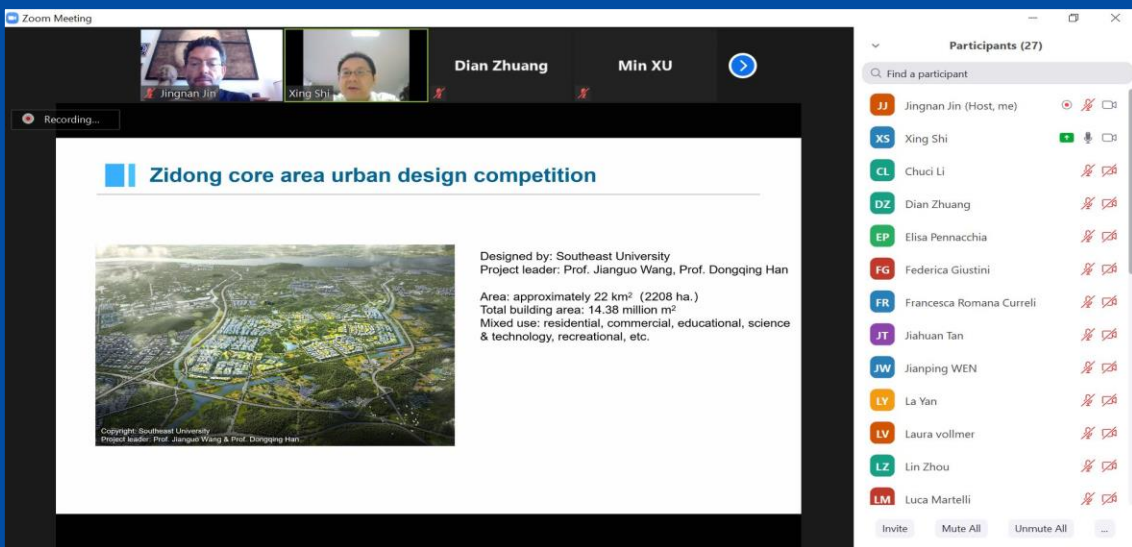
Recording...



The Zoom meeting grid shows 20 participants in a 4x5 layout. The participants are: Chuci Li, Luca Martelli, Hongbo LIU, Valentina Storti, Xianfei LIANG, La Yan, Mao Tang Wang, Lin Zhou, Jiahuan Tan, Laura Vollmer, Qianqian ZHANG, Yating Fu, QIXI WANG, Pu WANG, Yating Liu, Shuang LIANG, Wei GU, simiao ZHANG, Sofia Agostinelli, and Yating Fu.

Zoom Meeting

Recording...



The Zoom meeting slide shows a presentation about the Zidong core area urban design competition. The slide includes a title, a description of the project, and a list of participants.

Zidong core area urban design competition

Designed by: Southeast University
Project leader: Prof. Jianguo Wang, Prof. Dongqing Han

Area: approximately 22 km² (2208 ha.)
Total building area: 14.38 million m²
Mixed use: residential, commercial, educational, science & technology, recreational, etc.

Copyright: Southeast University
Project leader: Prof. Jianguo Wang & Prof. Dongqing Han

Participants (27)

Participant	Status
JJ Jingnan Jin (Host, me)	Active
XS Xing Shi	Active
CL Chuci Li	Active
DZ Dian Zhuang	Active
EP Elisa Pennacchia	Active
FG Federica Giustini	Active
FR Francesca Romana Curreli	Active
JT Jiahuan Tan	Active
JW Jianping WEN	Active
LY La Yan	Active
LV Laura vollmer	Active
LZ Lin Zhou	Active
LM Luca Martelli	Active

Pilot Example 5: University Cooperation - Manchester, Rome and Chengdu



V2G/ VPP (cArbitrage)

- Tesla S85 (90kWh,225m) (~ consumption of 10 UK households; see links 1&2 below)
- The key to realising the economic values of V2X is EV control to dispatch energy according to the grid conditions.

The diagram illustrates a V2G/VPP system. It shows a car connected to a charging station, which is linked to a power grid. The grid includes wind turbines, solar panels, and a power plant. The car is shown with a battery icon and a charging cable. The diagram is labeled 'V2G/ VPP (cArbitrage)'.

1. https://www.ukpower.co.uk/home_energy/average-household-gas-and-electricity-usage
2. https://batteryuniversity.com/learn/article/electric_vehicle_ev

• M. Rozman, in B Adebisi (2019). *Smart Wireless Power Transmission System for Autonomous EV Charging*, IEEE Access, 7, pp.112240-112248
• Y. Sha'aban, A. Ilpehai, B. Adebisi, K. Rabie (2017). *Bi-Directional Coordination of Plug-In Electric Vehicles with Economic Model Predictive Control*, Energies, 10(10), pp.1507-1507

MUC Energy Transition is Undergoing Here

Sustainable City Development-A China Practice

Common Feature

- 1. All time clean energy supply, energy efficiency reaches the international advanced level, and resource consumption is fully controlled.
- 2. Carry out multi-dimensional water system management, build a solid ecological foundation, and make new technologies and products of soft water ecology.
- 3. Energy data-driven urban brain, and smart energy efficiency monitoring and evaluation leads to high-quality industrial development.
- 4. Use passive buildings, hydrogen energy conversion, and integrated energy to create a new type of urban energy system that combines active and passive energy.

Park City Innovation Scenarios (City Opportunity List)

Goals

- the first Park City in the World**
- Clean and Zero Carbon City**
Energy consumption per unit of GDP is reduced by 20% compared to 2005. Electric energy accounts for the proportion of terminal energy consumption >30%.
- Smart Digital City**
Industrial smart intelligence level >90%. Intelligent transportation level >95%.
- Ecologically resilient city**
The greening target reaches the urban area >35%. The proportion of blue green space >75%.

Green Deal

- Circular Economy Action Plan
- Ecosystem Protection Plan
- Green Building Energy Saving Plan
- Zero Emission Plan in Transportation



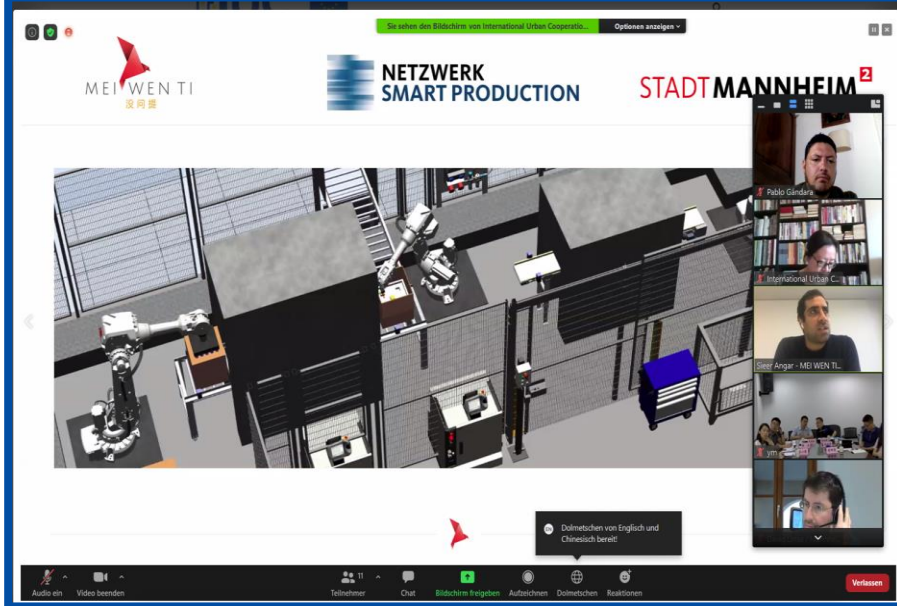
3 Key Topics

- Urban Agriculture and Collective Gardens
- Smart Energy Districts
- Circular Economy of Buildings


The image shows an aerial view of a city area with several zones highlighted in yellow and green. The zones are labeled 'extended' and 'PEB'. The image is part of a presentation from SAPIENZA UNIVERSITÀ DI ROMA.

SAPIENZA UNIVERSITÀ DI ROMA

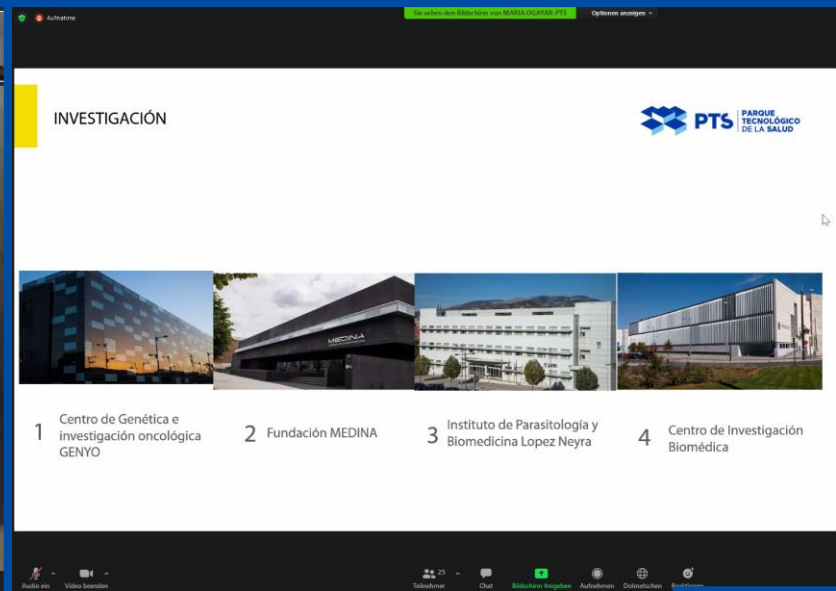
Pilot Example 6: Mannheim – Chongqing Innovation Centre



Pilot Example 7: Granada Blockchain Webinar Series



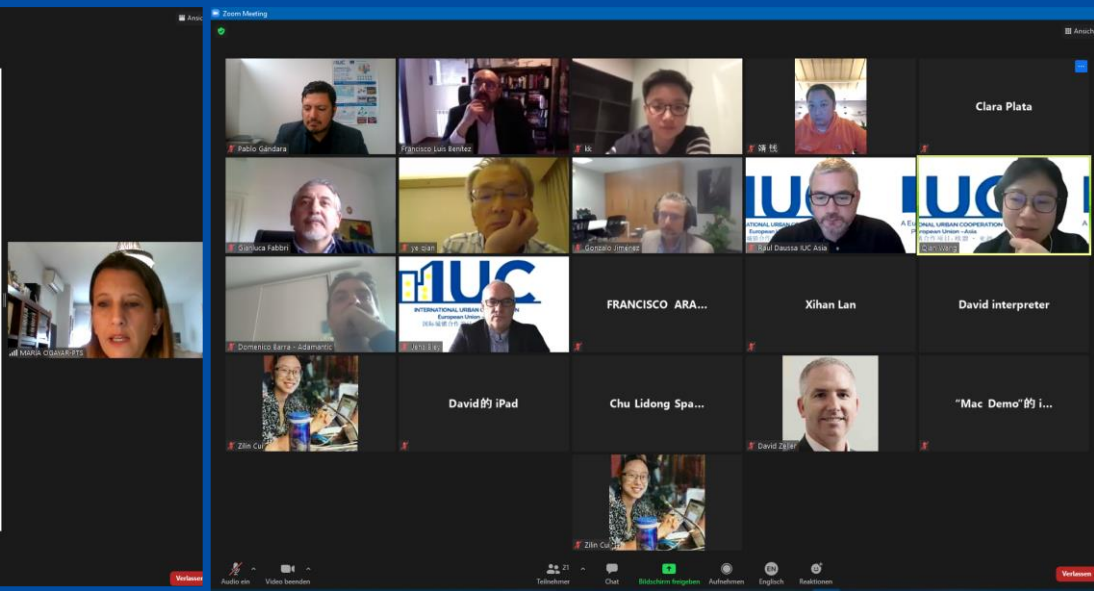
Zoom Meeting interface showing a large video of a man in a suit and a grid of smaller participant windows.




INVESTIGACIÓN

PTS PARQUE TECNOLÓGICO DE LA SALUD

- 1 Centro de Genética e investigación oncológica GENYO
- 2 Fundación MEDINA
- 3 Instituto de Parasitología y Biomedicina Lopez Neyra
- 4 Centro de Investigación Biomédica



Zoom Meeting interface showing a large video of a man in a suit and a grid of smaller participant windows.



A leading provider of integrated blockchain solutions

Core Technologies

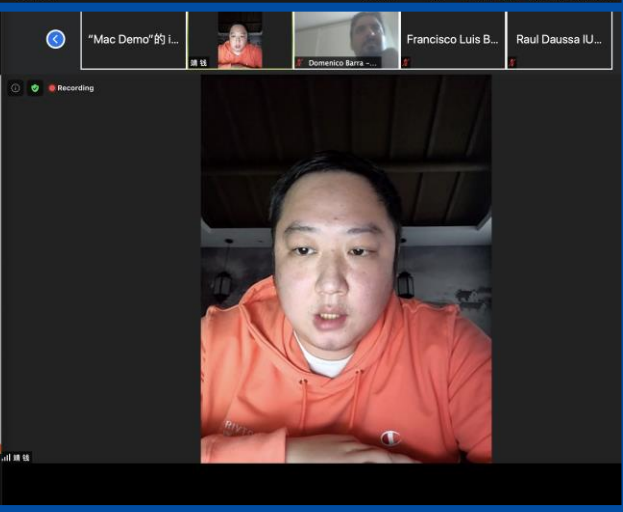
1. First microservice architecture blockchain
2. CITA: First Chinese open-source underlying blockchain
3. First adoption of Chinese national cryptographic algorithm
4. First implement mainstream privacy algorithms

100+ Patents for Invention


1ST Open-source community

100+ Partners


5 Domestic standards



Zoom Meeting interface showing a large video of a man in an orange hoodie and a grid of smaller participant windows.



We build VIRTUAL POWER PLANTS.



Zoom Meeting interface showing a large video of a man in a dark shirt and a grid of smaller participant windows.

Systematize Cooperation through UCAPs



City:	Chengdu, Guangzhou, Haikou, Weinan, Liuzhou, Yangzhou	Metro Bologna (IT), Greater Manchester (UK), Barcelona (ES), Reggio Emilia (IT), Rome (IT)
Province, State, Department...:	N/A	N/A
Country:	China	Italy, UK, Spain,
Population:	N/A	N/A
Size (km²)	N/A	N/A
Period of cooperation	July 2018 to November 2020	
Cooperation Themes:	Circular Economy and Energy Transition	
Related SDGs and Urban Agenda topics:	Circular Economy: SDG 12, EU Urban Partnership (UP) circular Economy. Energy Transition: SDG 7 EU Urban Partnership (UP) Energy Transition.	
Key focus of cooperation themes:	Circular Economy: Decoupling economic growth from resource use achieving a profound transformation of business practices along global value chains Energy Transition: Creating a more integrated and smarter energy system that is better able to manage and balance dynamic patterns of supply and demand at national and local level	
Key challenges of cooperation theme:	Circular Economy: Sharing best practices and exchange of information, following the EU-China Circular economy MoU. Energy Transition: Exploring joint opportunities between Chinese and EU cities.	
Main objectives of cooperation as described in the U-CAP:	Facilitate the coordination of the concrete cooperation projects for each thematic cluster	
Short description of main activities and key outputs (e.g. pilot projects):	→ 1 st meeting April 2019 (Brussels) The circular economy and energy transition cluster explored possible cooperation projects on sustainable production, renewable energy and the food industry. → 2 nd meeting June 2019 (Liuzhou): Barcelona and Rome initiated concrete plans to support a smart district with smart grid energy systems. → 3 rd meeting June 2019 (Nanjing) Bologna, Rome and Emilia Reggio showcased their technology solutions at the	



Cities	Liuzhou	Barcelona, Granada, Rome, Stuttgart Regio (incl. Ludwigsburg), Mannheim
State/Country	Guangxi, China	Spain, Italy, Germany
Population	4 million	N/A
Size in km²	18,600 km²	N/A
Pairing agreement signing date (joint declaration)	June 2019	June 2019
Date of city visit to counterpart city	Liuzhou in EU cities in April and November 2019	EU cities in Liuzhou in June and September 2019
Themes of cooperation	Smart Energy District: Support to Liudong New District (SDG 7, EU Urban Partnership (UP) Energy Transition) Smart City / Mobility: Digitalisation & visualisation tools for urban planning. Infrastructure for hydrogen vehicles (SDG 9&11, EU UP Urban Mobility) (SDG 11, EU UP Digital Transition) Start-Ups: EU cities - Liuzhou Technology Innovation Center / Open Incubator (SDG 9, EU UP Jobs & Skills in Local Economy) Education and Training: Joint research and vocational training courses (SDG 4, EU UP Jobs & Skills in Local Economy) Cultural Heritage: Sharing methodologies and techniques through pilot actions (SDG11, EU UP Culture / Cultural Heritage) Silver Economy: Implementing Rome developed standards for districts (SDG 11, EU UP Housing) Biotechnology & Life Sciences: Cluster-to-cluster cooperation on health services (SDG3, EU Housing)	
Key challenges of cooperation theme	Internationalisation of EU cities towards China and vice-versa, support to EU business for market entry in China in areas relevant to sustainable urban development, mobilization of stakeholders from research, public authorities and business (triple-helix).	
Main Objective of UCAP	Launch concrete cooperation projects in the above-mentioned fields and advance to thematic networking through cluster UCAPs	
Short description of main activities and key outputs	→ 1 st meeting April 2019 (Brussels and Rome): Liuzhou delegation visits EU for project initiation and information exchange about potential projects in Rome. Business round table on smart city (over 50 participants). → 2 nd meeting June 2019 (Liuzhou): Information exchange about potential projects in Liuzhou. Liuzhou-EU Business Cooperation Forum (over 100 participants) → 3 rd meeting September 2019 (Liuzhou): Definition of pilot projects, stakeholders and responsibilities (road map). → 4 th meeting November 2019 (Barcelona, Stuttgart and Brussels): Endorsement of pilot projects by EU Commission (REGIO). → 5 th meeting April 2020 (online): Topics: o Response from urban & regional managers to the effects of the COVID-19 o Consolidation of pilot projects → Liuzhou entities (City Council, districts, research, business associations) have signed 10 <i>Memorandum of Understanding</i>	


With support of the IUC Asia team, cities and regions from Europe and China have entered into **34 Urban Cooperation Action Plans (UCAPs)**, entailing partnerships on sustainable development, comprised of:

- 13 European pilot cities 2017-2020
- 18 Chinese pilot cities 2017-2020
- 5 thematic clusters

International Events: APUF, October 2019



← → ↺

 iuc-asia.eu



A European Union
Programme

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 IUC-Asia Community Join the Community



The IUC Asia project held today a three-hour workshop on the transition from EU and Chinese cities towards low carbon development. The meeting involved nearly 40 participants – partly onsite in Beijing and partly online (via video conferencing). The event was a follow-up activity to the online exchange session on the EU-China Low Carbon Cities [...]

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The Closing Ceremony for the annual EU Climate Diplomacy Week Indonesia (24 October – 6 November 2020) was held today, in a festive atmosphere with remarks by high-level officials, program partners and a fun lineup of entertainment acts. The online event involved over 250 participants. Opening words were delivered by H.E. Vincent Piket, Ambassador of [...]

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Today, the City of Granada held its second of three webinars on Circular Economy and Blockchain Innovations with more than 25 experts from Europe and China, as part of its pilot project within the IUC Competitive Fund, awarded to Granada. Today's webinar was opened with words from Luis Gonzalez Ruiz, First Deputy Mayor of Granada responsible [...]

[READ MORE >](#)



Where can I obtain more information on EU China Regional and Urban Cooperation?

IUC ASIA Project Website: www.iuc-asia.eu

EU Foreign Policy Instruments https://ec.europa.eu/fpi/home_en

EU Commission DG Regional and Urban Policy http://ec.europa.eu/regional_policy/cooperate/international/index_en.cfm

IUC Global Website: www.iuc.eu