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# *URBAN GREEN DEVELOPMENT IN CHINA*

**CCICED Roundtable  
Shanghai, March 25, 2010**

**Corrado Clini**



*director general  
Ministry for the Environment,  
Land and Sea of Italy*

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## Background

- The speed of the urbanization in China is largely higher than any of the countries in the history. However, as the biggest developing country, the rate of the urbanization in China is still low, and the energy consumption per capita is greatly lower than the current status of OECD countries. Therefore, the driving force of the energy consumption increase in the urban development is still very strong, and the total energy consumption in the residential consumption sector will exceed that in the industrial sector and dominate in the total energy consumption in the coming future.
  - It is impossible that China continues the old way of the developed country over the past decades, which was at the high cost of high energy consumption and pollution. Or the conflict between the enormous population from the rural area to the urban area and the very limited resources, energy and environment will become the bottleneck to restrict the sustainable urban development in China.
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## Background

- Therefore, in the coming ten to twenty years, the energy, environment and the adoption to the climate change in the urbanization of China will become the momentous issues and challenges to the social and economical development of China.
- Especially, the current pattern of China's urbanization shows the super-fast energy consumption increase and the damage to the environment which affects the life quality.
- Thus the transformation to the low carbon and sustainable pattern from energy-intensive, pollution-intensive and carbon emission-intensive pattern.
- Sino-Italian cooperation program aims to contribute the successful demonstrations to the principles of ecologically and environmentally sustainable development in China and the popularity of the environmental-friendly technologies.

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## Sino Italian Environmental Cooperation – Urban Actions

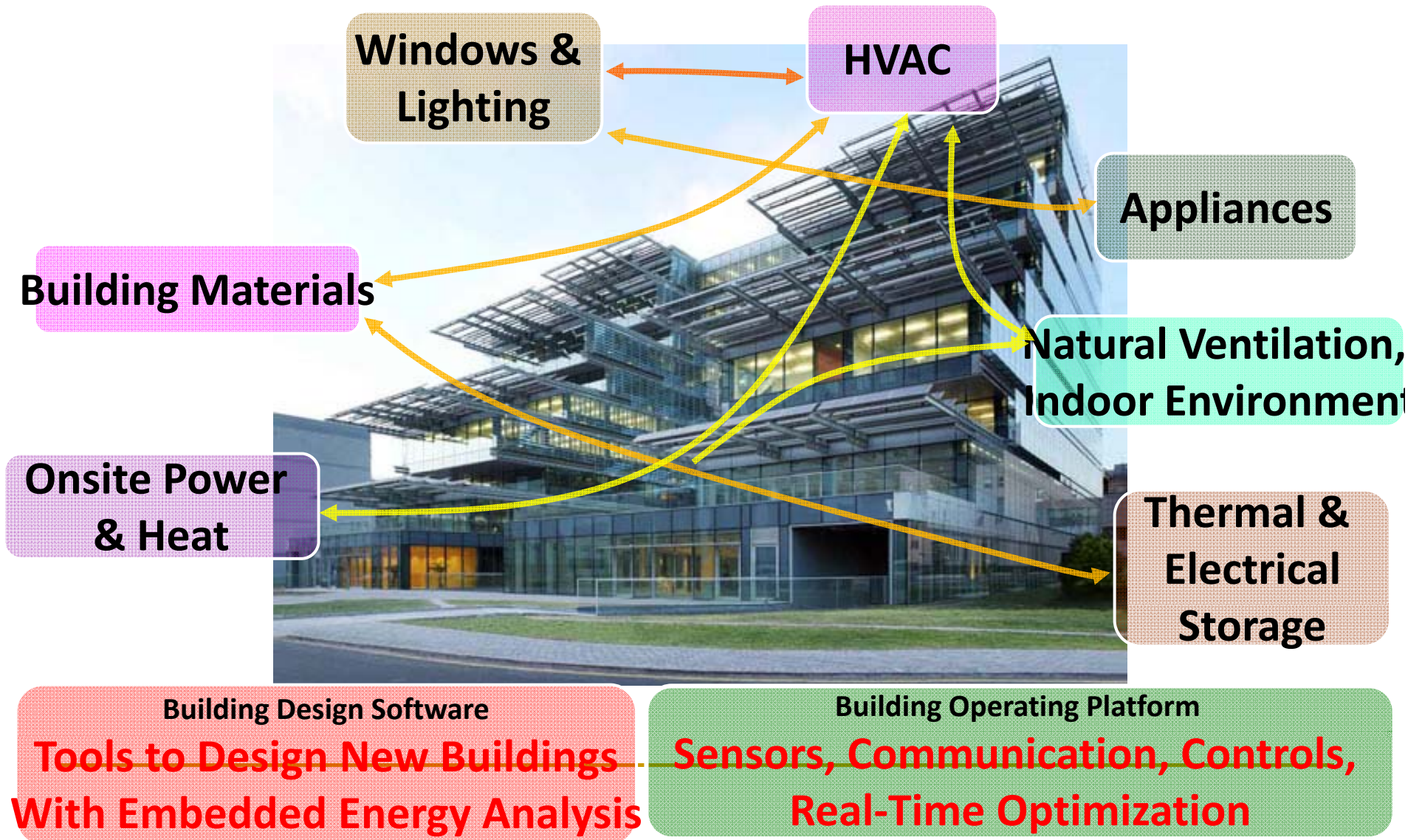
- Sustainable Mobility:
    - Promotion of low-emission solutions in vehicles (deployment of low-emission engines for Beijing bus fleet),
    - Development of hybrid prototypes in Shanghai together with Tongji University (electric-endothermic engines, in view of Expo 2010),
    - Development of a particulate filter technology to reduce by 95% emissions from diesel engines;
    - Development of Intelligent Transport System solutions for Beijing public transport, coupled with Air Quality Monitoring Systems;
  - Deployment of low-emission, high efficient technologies in heating equipment (boilers replacement in Taiyuan and gas-heated systems in Beijing hutong area);
  - Demonstration projects for sustainable urban planning: integrated master plan of Huai Rou new town in Beijing, and re-development of a former 9 km<sup>2</sup> industrial site in central Tianjin;
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## Sino Italian Environmental Cooperation – Urban Actions

- Design and construction of eco-energy-efficient buildings:
    - SIEEB in Tsinghua University
    - MEP 4C building (40% reduction in emissions)
    - Two eco-pavilions within the Shanghai Expo 2010 Urban Best Practice Area
    - A new laboratory for testing innovative materials and equipments will be built at Jiaotong University of Shanghai in year 2010.
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# The SIEEB Building – Tsinghua University – Beijing





# Environmental Conventions Building (4C Building)



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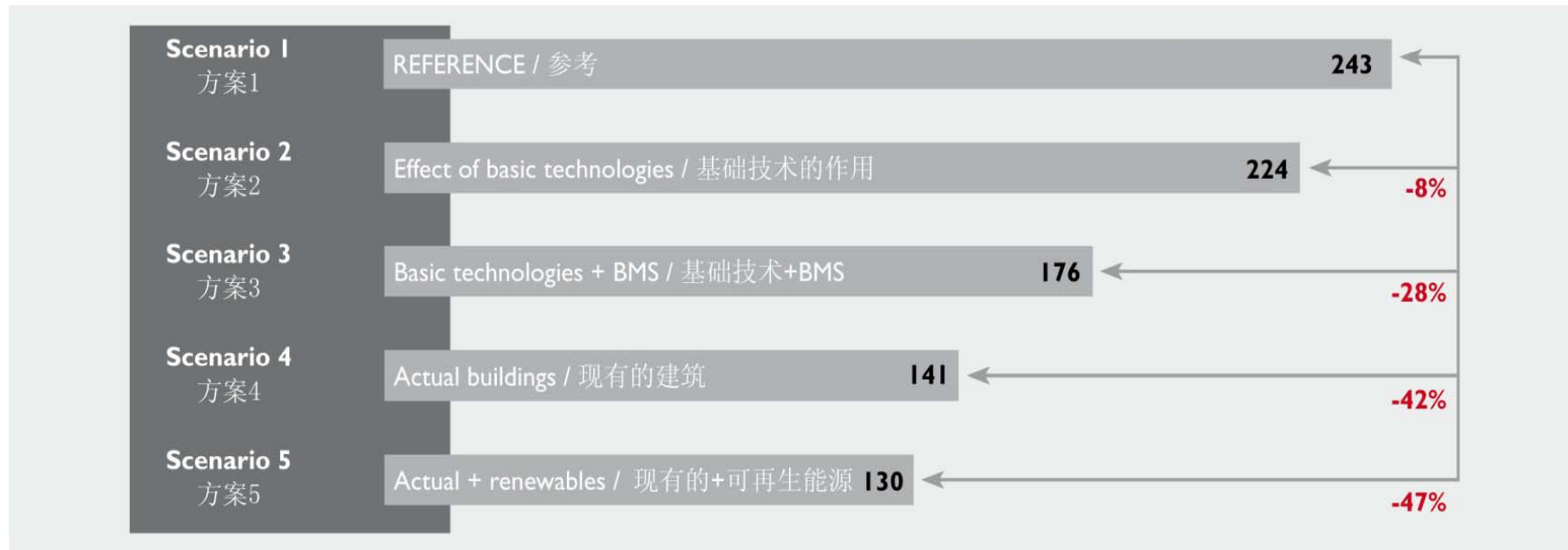


# Environmental Conventions Building (4C Building)

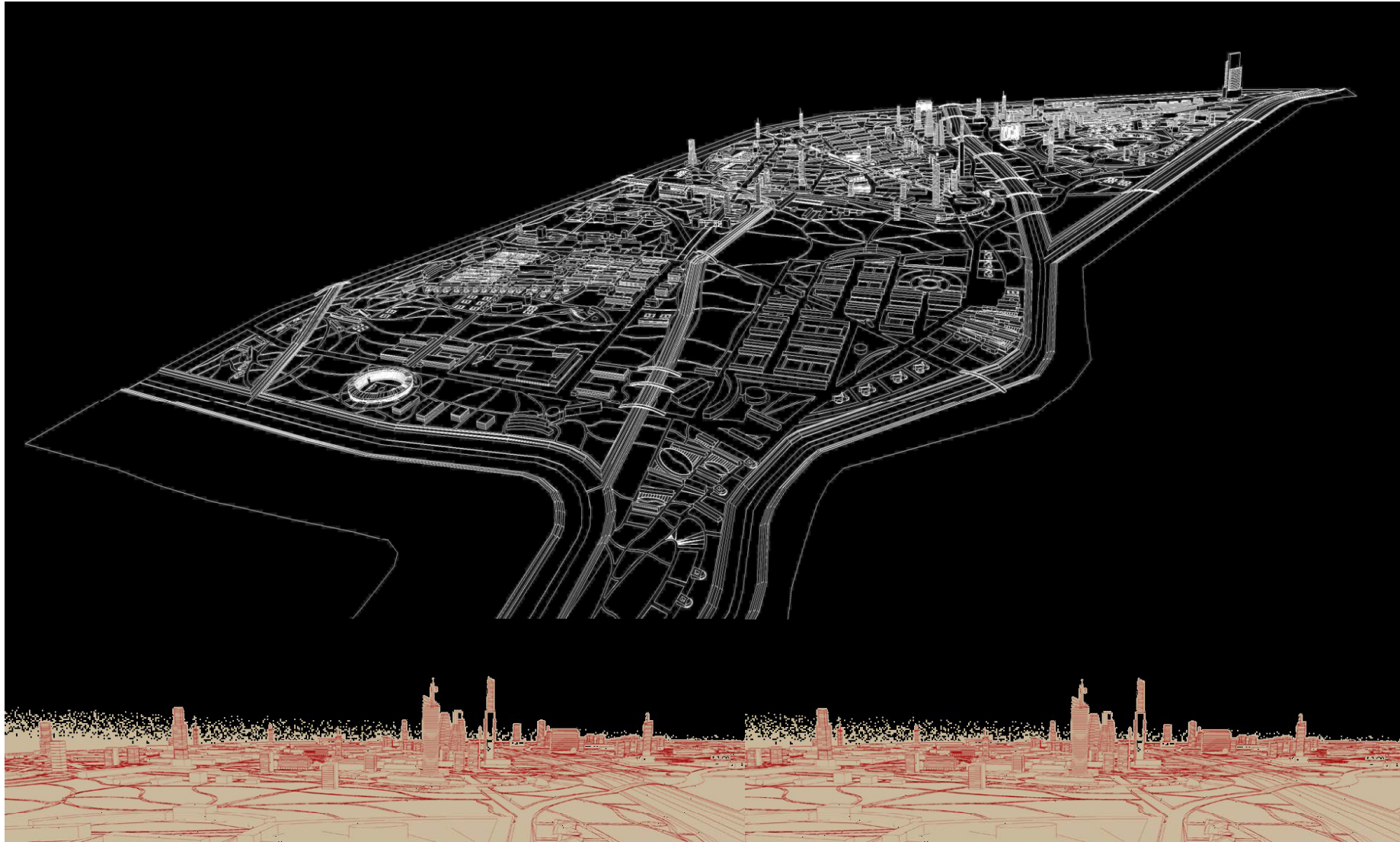


# Environmental Conventions Building (4C Building) - Performances

## SUMMARY RESULTS



# Huairou New Town masterplan





# Shanghai Expo 2010 - UBPA Area

## “Sino-Italian” Pavillions



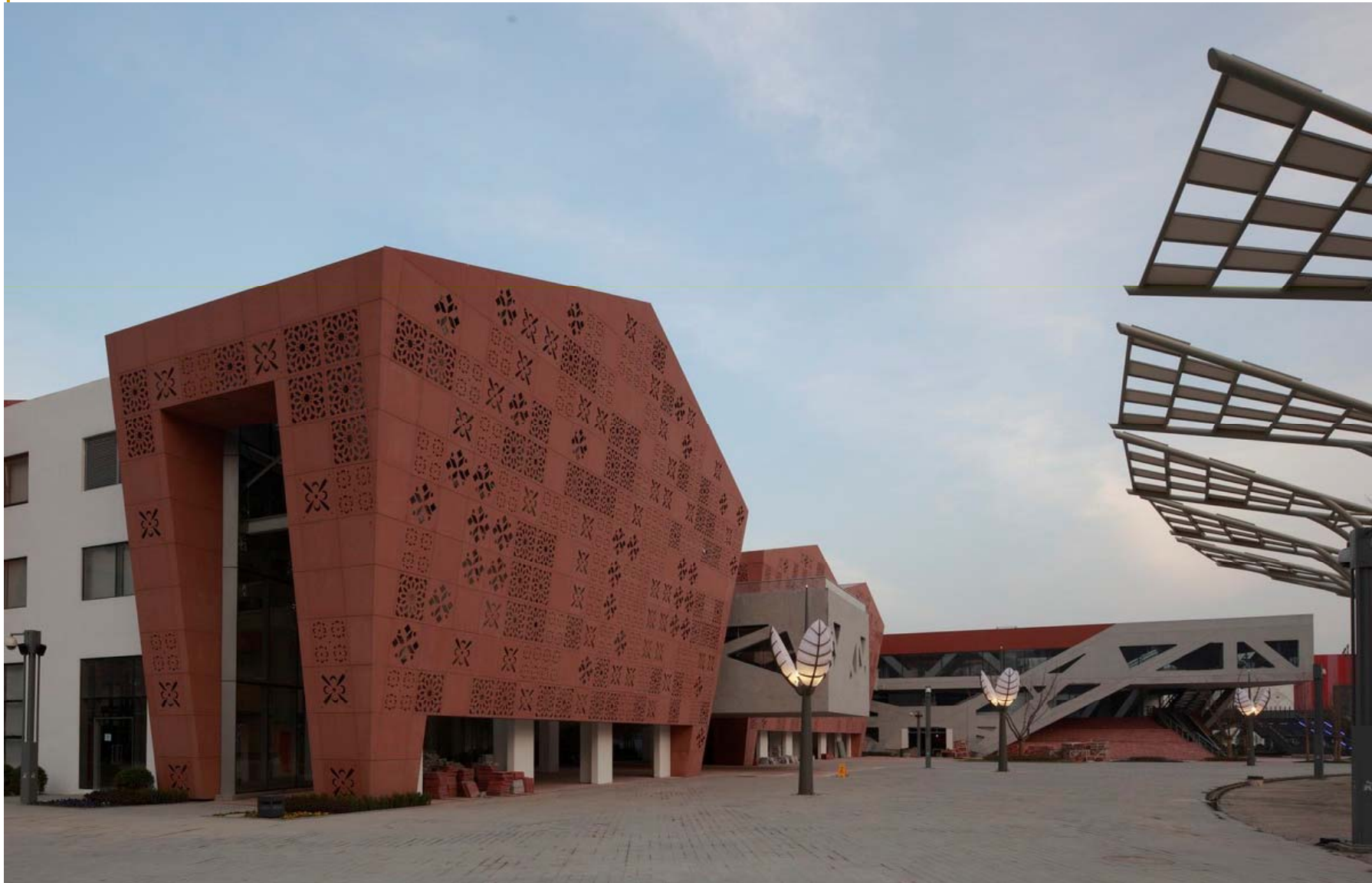


# Shanghai Expo 2010 - UBPA Area

## B2 Pavilion restoration



## Shanghai Expo 2010 – UBPA Area - B2





## Shanghai Expo 2010 – UBPA Area – C1 & B2



# Shanghai Expo 2010 – UBPA Area – B3-2 new Pavilion

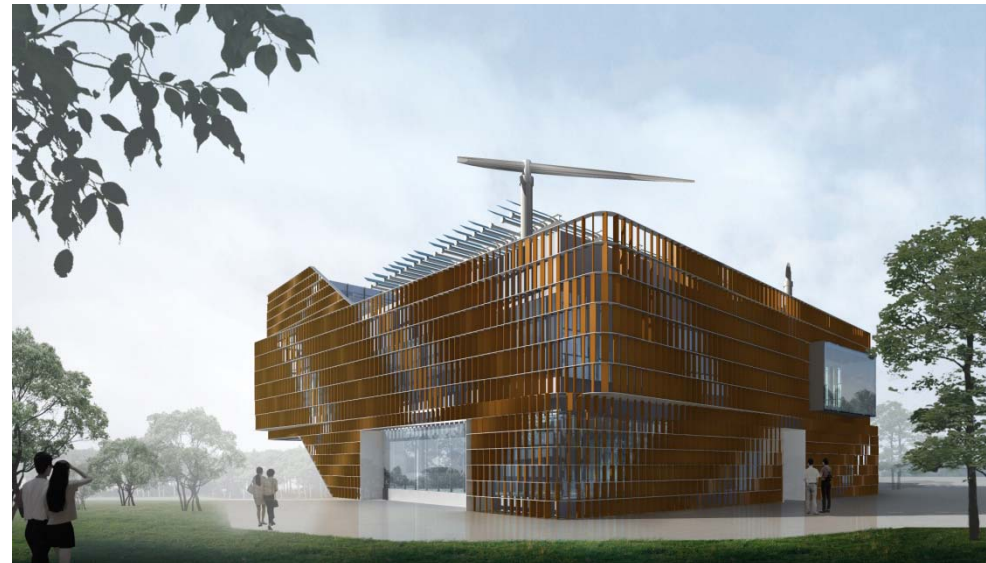
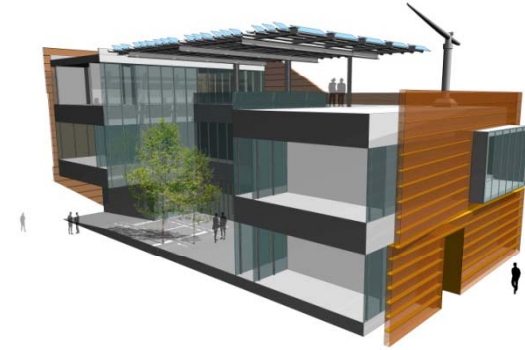
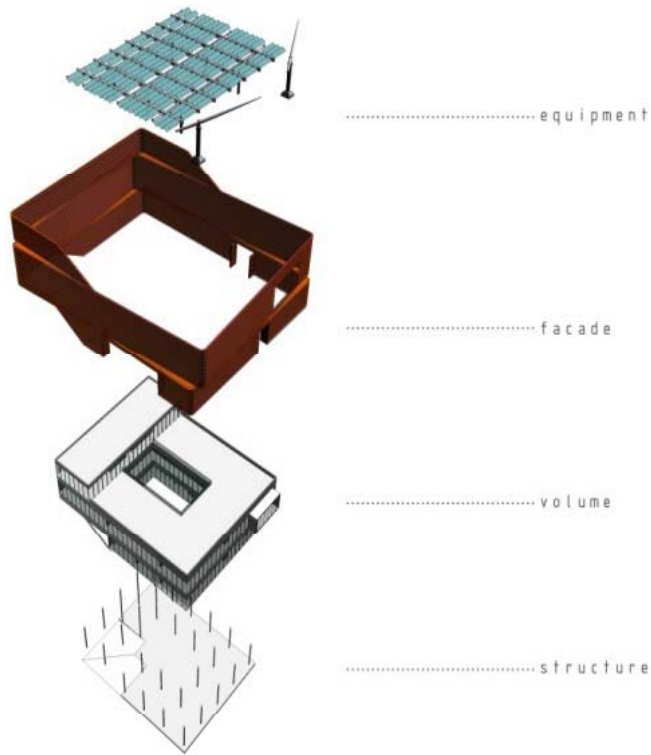




# Shanghai Expo 2010 – UBPA Area – B3-2 new Pavilion



# Green Energy Laboratory @ Jiaotong University - Shanghai





# Green Energy Laboratory @ Jiaotong University - Shanghai



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## Sino Italian Environmental Cooperation – Urban Actions

- Program for energy efficiency and green house gases reduction in the Chinese housing sector.

The Program is formed by three strongly interconnected projects, which are:

- the development of **new standards and guidelines** for energy–efficiency and environmental protection in the **residential sector**;
  - the study of **GHG reduction potential in the Chinese housing sector**, with specific reference to the development of ***Clean Development Mechanism Program of Activity***, coherently with the advancement of the practical implementation of the Kyoto Protocol;
  - as a demonstration activity, the **design and construction** in Beijing of a 170 thousand sqm wide residential area (Energy Efficient Ecological Village – **3E Village**) that will host families of State Council officers. The design will be based on the use of eco-compatibility principles and on the use of Italian sector-technologies.
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