

THE 14th NATIONAL CHALLENGE CUP
THEME-BASED COMPETITION ON “SMART GREEN CITIES”
第十四届 “挑战杯” 全国大学生课外学术科技作品竞赛 - 智慧城市专项赛

Urbanization in Asia is occurring at the highest rate than ever in our modern history. Consequently, to varying degrees, cities are facing mounting pressure and increasing challenges from population density, traffic congestion, air and water pollution, energy consumption, etc. At the same time advances in a wide range of technologies are allowing us to push the frontiers of our creativity and innovativeness. This brings about the question: *‘How can we harness the wave of technological developments, apply our knowledge in science, technology, social-economics, urban planning, public administration, etc. to address the challenges of urbanization to transform our city to one that is more efficient, sustainable, attractive and competitive’.*

About the Theme-based Competition

This Theme-based Competition seeks creative ideas and innovative solutions to transform cities to **“Smart Green Cities”**. Contestants are invited to select a city or part of a city in your home country, then based on this selected location [hereafter referred to as YOUR CITY], propose your ideas on how you can transform YOUR CITY to make it greener and smarter.

In developing your “Smart Green City” proposal, you may consider aspects in energy, transport, buildings, air, water, waste, education, healthcare, public policies, etc. Your proposal should describe:

- (i) Your overall vision then explain how you would transform YOUR CITY into a “Smart Green City” and the benefits YOUR CITY and its inhabitants would enjoy as a result of your transformation plans. [weightage 30%]
- (ii) In addition, you need to select 1 -2 aspects, e.g. in energy, transport, or others, and describe in detail how you would implement this, be it in strategy, technology, or policy or a combination of these, and its benefits to YOUR CITY. [weightage 70%]

Your plan must reflect the local characteristics of YOUR CITY, including geography, environment, culture, social-economic conditions, resources, etc. It should be environmentally sustainable, socially inclusive, economically competitive, culturally relevant and technically feasible.

Your Proposal

Your proposal should be an original work by you and your team members, submitted in English, in the form of a report, A4 sized, not exceeding 20 pages, in PDF format. You may supplement your report with a PPT and/or other materials. To give the judges an understanding and appreciation of the current status of YOUR CITY as required under (i) and (ii) above, please provide a description as well as visuals e.g. photos, aerial photos, map, video, etc. This would form your proposal’s baseline scenario.

The following is a guideline on how you may structure your report.

Report Headings	Suggested Contents
Title	<ul style="list-style-type: none"> To suitably reflect your proposal
Executive Summary	<ul style="list-style-type: none"> 1-2 pages, to include vision, baseline situation, key aspects of transformation proposal, impact to the city and society
Introduction	<ul style="list-style-type: none"> Introduce your vision, objectives, key challenges, and transformation plan
Baseline Scenario	<ul style="list-style-type: none"> Describe the City/part of the City you have selected (hereafter referred to as YOUR CITY). Include information e.g. geographical location, terrain, environment, culture, social-economic conditions, resources, constraints, etc. Use maps, photos, etc. to aid your description as required under (i) and (ii), Identify opportunities, key considerations for your Transformation Plan.
Your Proposal	<ul style="list-style-type: none"> Describe your overall vision and explain your proposal to transform YOUR CITY to a SMART GREEN CITY. Choose 1-2 aspects, e.g. Energy, Transport, or others, then describe in detail its implementation in YOUR CITY. You may highlight strategies, technologies, or policies, etc. or a combination of these. Use PPT, visuals and/or other materials to support your proposal, as appropriate. Describe the impact of your Plan and its benefits to YOUR CITY and society.
Conclusion	<ul style="list-style-type: none"> Summarize your Transformation Plan and its impact, reflecting these against your initial project objectives

Eligibility

The competition is opened to full-time undergraduate students studying at universities in the Mainland, Hong Kong and by special invitation universities in the region. Each team should comprise 2-3 members from the same institution, of whom one member should be the Team Leader. Each university may send more than one team, however, each student may participate only in one team.

Registration

Please register your interest to participate at [Challenge Cup](#) or www.ust.hk/challenge_cup, by **10 May 2015**.

Submission

All submissions must be sent to challengecup@ust.hk on or before **31 May 2015**, together with a "Team Information Form", duly completed. This form can be downloaded from www.ust.hk/challenge_cup.

Timeline

Contestants will first compete in the *Preliminary Round* in their respective groupings. Results of the *Preliminary Round* will be announced by **20 June 2015**. Shortlisted Teams will be invited to the *FINALS* in Hong Kong on **28 July 2015**. All Finalists will also be invited to tour the Hong Kong Zero Carbon Building and the Smart Green City Facilities in the Hong Kong Science Park, and thereafter to participate in the HKUST Challenge Cup Camp.

ABOUT THE NATIONAL CHALLENGE CUP
“挑战杯” 全国大学生课外学术科技作品竞赛

The ***National Challenge Cup*** is China’s foremost innovation and technology competition for university students to present their scientific and technological inventions. Each year, more than 2.5 million students from over 3,000 institutions nationwide compete in qualifying rounds first at the municipal-level, then at the provincial-level, for a coveted position in the Grand Finals. Of these, about 6,000-7,000 students representing 400 institutions will eventually compete in the Grand Finals. Held biennially, this rigorous COMPETITION is often called the ‘Olympiad of University Students’.

The National Challenge Cup COMPETITION was first hosted by Tsinghua University in 1989. Since then this tradition has continued over the next 25 years, with subsequent finals hosted by Zhejiang University, Shanghai Jiaotong University, Wuhan University, Nanjing Polytechnic University, Chongqing University, Xian Jiaotong University, South China University of Technology, Fudan University, Nankai University, Beihang University, Dalian University of Technology, and Soochow University.

Now, in its 14th session, the 14th National Challenge Cup is co-hosted by the Guangdong University of Technology (GDUT) and the Hong Kong University of Science and Technology (HKUST). The Grand Finals for the different events will be held between July and November, 2015, and HKUST is pleased to host the finals of the newly-introduced ‘*Theme-based Competition*’ event.

The National Challenge Cup COMPETITION is supported by the China Ministry of Education, China Communist Youth League, China Association for Science and Technology, and All-China Students Federation.

For more information on the Challenge Cup, please visit www.ust.hk/challenge_cup.

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