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Agreement

between

South China University of Technology, Guangzhou, China

and

Delft University of Technology, Delft, the Netherlands

on

The SCUT-TU Delft Joint Research Centre on Urban Systems &
Environment (USE)



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Background

Since June 2010, South China University of Technology and Delft University of Technology have developed a firm relationship of collaboration, which includes various delegations travelling back and forth to deepen research collaboration and establish student exchange for various schools.

Its most important step thus far is to establish a joint research centre on Urban Systems & Environment. Both universities recognize the importance of generating common knowledge on smart and sustainable urban systems and infrastructure development. This area of research is both important and topical now that globally, and especially in China, eco-cities, low carbon cities, knowledge cities and smart cities are of growing importance and attract a high level of interest among policy makers and developers.

South China University of Technology, hereafter referred to as SCUT, is a public institution of scientific research and undergraduate and graduate studies under the direct leadership of the Ministry of Education of P.R. China, with a legal address in Wushan RD., Tianhe District, Guangzhou, 510641, People's Republic of China, represented by its President, prof. Wang Yingjun.

Delft University of Technology, hereafter referred to as TU Delft, is a public institution of scientific research and undergraduate and graduate students funded by the Dutch Ministry of Education, Culture and Science, with a legal address in Delft, Postbus 5, 2600 AA, Delft, the Netherlands, represented by its President, drs Dirk-Jan van den Berg.

The societal relevance of this Sino-Dutch research centre is geared towards the support of Chinese and Dutch decision makers on the creation of a high quality living environment for knowledge workers, the creation of successful regional innovation systems supporting the transition towards a high value added knowledge economy, and the reduction of natural resource consumption and harmful emissions, including greenhouse gases.



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In due consideration of the above, both parties agree that:

Purpose and nature of the centre

1. The establishment of the centre will be an important component of the international strategies of both parties as well as a representation of both parties' intention to deepen the international cooperation between them. The centre will be the platform where both parties can conduct various types of academic exchange, joint research studies, joint education programs, and joint application for projects by integrating their academic and research resources to build complementary advantages. It is also the operational entity, which coordinates and implements the existing and future activities of international cooperation between the two parties. The international research centre Urban Systems & Environment will have as its mission to conduct world-class research and education in the field of sustainable spatial planning and intelligent infrastructure and architecture. It will seek application of its innovative concepts and gather relevant empirical evidence in the Pearl River Delta. USE will be an academic outpost of the Netherlands in China and the other way around. And therefore function as the central point in a network of companies, governments and knowledge institutions related to following research areas in article 2. For SCUT this is a way to reinforce their international position and profile.

Research Areas and main objectives of the centre

2. The centre will be the entity, which organizes and implements the activities of international cooperation between SCUT and TU Delft. There will be a strong focus on smart and sustainable metropolitan development and architecture, delta development and building and recycling technology, which comprises the following research areas:
 - Smart and sustainable infrastructures (energy, transport, telecom, water, waste; interactions and interdependencies between infrastructures; industrial ecology; strategic infrastructure asset management; smart grids; low carbon logistics; new business models and governance mechanisms for smart and sustainable infrastructures and infrastructure bound services)
 - Smart and sustainable architecture/urbanism (eco-cities, green buildings, smart buildings, livability of neighborhoods, integrated resource management, urban metabolism)



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- Recycling of concrete structures and sustainable construction materials
 - Governance and planning of metropolitan deltas and the implementation of eco-cities, low carbon cities, smart cities, knowledge cities and eco-industrial parks
 - Advanced computer-aided modeling & simulation (incl. agent-based modeling, serious gaming, and advanced visualization tools)
 - Efficient utilization of resources
3. The main objectives of the centre will be to organize and implement various types of research, education and valorization activities within these areas. These activities include- but are not be limited to- the following:
- Joint research studies, in which both parties jointly form research teams to conduct fundamental or applied research studies whose tasks and goals are well defined. Existing and new PhD students will have an active role in the research activities. Joint application for projects is crucial, in which both parties jointly form project teams to apply for domestic and international research or development projects.
 - Training and education in joint design and research studios. These will offer a unique combination of the 'normal' architecture design studios with urbanism and more policy and management oriented subjects mentioned in the research areas in article 2. Guest lecturing by architects and other business and governmental practitioners will make this more than just an academic research center.
These studios can include training and/or education for faculty and students of both parties and training and/or education jointly offered by SCUT and TU Delft for a third party or the society at large.
 - Converting new knowledge into new professional practices. Knowledge dissemination: Advice, consultancy and applied in-company research projects on social, economic, technological and ecological development in the region and post-graduate education, training and coaching of local government and business officials. This last valorization goal is often combined with educational or research activities, or is derived from it.



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Academic exchange, including regular visits, information exchange, and cooperation to hold bilateral or multilateral seminars, workshops, and international conferences is important to help achieve these three goals of collective Sino-Dutch research, education and valorization.

The research centre will schedule two special workshops each year, one of which has a more internal and the other a more external (client-oriented) orientation. These can take place in either Guangzhou or Delft or yet another relevant location of the centres Council's choosing. For reasons of cost efficiency, dynamics and fun in the USE community these will be combined with the start or ending of the design and research studios.

If both universities see a reason in doing so they can, in addition to already running student exchange programs, (1) examine the possibility to establish a joint PhD program in the theme area which can be incorporated within the centre and for which funding can be acquired from inside (university) and outside (CSC and other sources), and (2) explore the possibility for a double degree Master program on Urban Systems & Environment, where students obtain degrees from both universities. The talents emerging in that case from the shared Master and PhD programs will, to the extent possible, be mainstreamed for research participation in the centre.

The first years of the centre there will be a focus on acquisition and dissemination. The goal is to bring in external funding for research and education. SCUT and TU Delft will jointly work in building up consortia in order to be successful in achieving this goal.

Organizational structure; operational and administrative issues of the centre

4. Flexibility and cost-efficiency are key factors with regard to the organization and operation of the centre. Hence a "Semi-Virtual" mode is proposed as follows:
 - The centre will have its physical bases in Guangzhou and Delft, where the various participating schools will make space available for its projects and the hosting of visiting scholars from the partner institution.
 - From within TU Delft the Faculties of Architecture (Arch), Technology, Policy & Management (TPM), including the TPM coordinated Next Generation Infrastructures research center (NG-Infra) are the main carriers of this centre. Parts of Civil Engineering



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will also participate. It will remain open to other segments of that latter school to join in at a later stage, provided their activities fit clearly within the theme of Urban Systems and Environment, as described above.

- On the SCUT side, the schools of Architecture, Materials Science, Civil Engineering, Business Administration and Public Administration are the main carriers of this centre.
- All the aforementioned schools are committed to contributing a number of highly qualified researchers to begin the research activities of the centre in January 2013.
- SCUT and TU Delft each designate a “Coordinator”, both for at least 0.3 FTE, responsible for coordination, communication, administrative issues, support of the Council of Directors and all the other daily work. When a specific activity should be organized or implemented, the Coordinators will jointly develop a “Task Team” to carry out the specific activity.
- A Council of Directors will be appointed, in which SCUT and TU Delft scholars will be represented on the basis of parity. It will consist of four SCUT and four TU Delft professors with a leading role in the centre and relevant know-how in the field. They will be appointed by their respective university boards for a period of three years with a possibility of one extension for another three years.
- On the SCUT side three council members will represent the School of Architecture, the Administration Schools (Business and Public Administration rotating on this seat) and the Engineering Schools (Civil Engineering and Materials Science rotating on this seat) respectively. One member will represent the International Office. The School of Architecture will hold the Chair and provide the Research Director, while the Coordinator will operate under the International Office member.
- On the TU Delft side, three council members will represent the Faculties of Architecture, Technology, Policy & Management and Civil Engineering, respectively. One member will represent the Strategy & Development division of the university. The School of Architecture will hold the Chair and provide the Research Director, while the Coordinator will operate under the member representing the Strategy & Development division, who will act as Vice-Director.



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- This council will draft the annual work plan and report, evaluate the research deliverables, promote the centre to the outside world (both government and industry), administer the research fund at their disposal and assess project proposals which are submitted by joint SCUT-TU Delft research groups, preferably of interdisciplinary composition to promote innovation, to strengthen collaboration between partners within the centre and to stimulate research and education initiatives in order to acquire external projects and funds. In these activities they are supported by the two coordinators.
 - Both on the TU Delft and SCUT side one of the council members will act as Chair and be responsible for the supervision of the coordinator and the daily issues of the centre.
 - The Presidents of SCUT and TU Delft will act as the “Supervisors” of the centre and will approve its annual work plan and possible special reports, which will have management summaries of no longer than one page.
 - For its activities the centre will pool academic resources from various colleges, depending on the nature of the projects under consideration. If the occasion or need arises, other universities or research centres will be asked to team up.
 - All activities of the centre should be discussed and approved by both universities through the Board of Directors before they can be organized or implemented. The party who conducts any activity without the approval of the other will take full responsibility for that activity. When urgent action is required, the Chairs can undertake action and account for their decisions to the full Council at a later stage.
 - SCUT and TU Delft will make independent decisions regarding human resources issues of their respective staff of the Centre.
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- Interested research groups then have until January 1st 2013 to submit bids and proposals to the centre which will be assessed by the Council within two months. The Council will also draft and approve the work plan for 2013 before January 1st of that year.
 - Should members of the Council be involved in a research bid or proposal, then they will refrain from participation in the discussions on it nor take part in the vote.
 - After the signing of this agreement, the centre can commence its activities and the council will be appointed.



Financial issues

5. Finance

- The USE fund will initially be filled with university donations from the two universities. Both the TU Delft and SCUT will financially contribute to the USE through different funding opportunities and the USE fund will be managed separately by each party. Both the TU Delft and SCUT will invest €125,000 yearly for the first three years (approximately RMB 1 million), but subsequently funds from government and industry have to be added to this fund. Both universities and faculties involved will make serious attempts to multiply this initial amount. As part of the 2013 annual work-plan, both universities agree to compile a list of relevant funding opportunities for their joint research projects within the Centre.
- Apart from this total amount of €250,000 per year, both universities also invest in-kind by supervising PhD students going on an exchange to Guangzhou or Delft. As many existing PhD's as possible will be linked to the centre. Each member of the board will seek possibilities to contribute to this goal.
- The out of pocket budget of €250,000 will be initially spent for 50% on operational and 50% on research programming costs.

The following activities are part of the operations budget:

- Travel and accommodation. The board and coordinators will meet each other twice a year, for these travel and accommodation expenses there is a budget of €15,000.
- These meetings will be combined with two yearly workshops/conferences and guest lecturing. A total amount of €20,000 will be used as startup budget for the organization cost of these events. The rest of the budget will have to come from sponsors.
- Compensation for the time spent by the directors and coordinators. The two coordinators will spend 0.3 FTE on the research centre. Both parties will make compensation for the work undertaken by the Directors and Coordinators and the amount of money will be decided by each party independently.



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The following activities are part of the program budget:

- Research, education and valorization activities in the form of expenses which cannot be covered by the time compensation for the board of directors (for instance expenses to organize the studios).

Because the budget is limited the research projects will have a strong acquisition character. They will be precursors or 'seed activities' for larger projects. Possibilities are prototype development or feasibility studies. The board will work out a detailed list of project topics and activities. Each party will work out their own budget review which will be established in due course as supplementary content.

- The initial division of the budget will be changed if the 2013 plan gives more insight in the proposed activities.
- Benefits from a joint collaboration project will be divided by both parties related to the agreement of the particular research proposal.
- At the end of the first phase of 3 years the council will consider the possibility of a follow up fund in case several projects are successful in acquiring sufficient funding.
- For the budget the council of directors will work out a detailed set of assessment criteria for the selection of project proposals concerning content, quality and other preconditions. Researchers are welcome to send in a project proposal, which will be judged by the Council. There will be a yearly call for proposals.
- Every member of a project team funded or partly funded by the centre is required to mention the centre in scientific publications and external communication to companies and the media.
- Every member of the project teams funded by the centre is strongly urged to participate in its events and required to operate as an expert in case of professional and business contacts with government and industry.
- Every member of the Council has a moral and professional duty to seek additional funding for extra projects or for extra activities of the centre wherever the opportunity emerges.



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6. The activities conducted under the auspices of the centre shall abide by relevant laws and regulations of China and the Netherlands, depending on where the activity takes place. Independent contracts or agreements shall be drafted to define and regulate respective rights and liabilities of both parties in specific activities or projects.
7. Subject to provisions for amendment, withdrawal and termination, this Agreement shall remain in force for a period of three (3) years from the date of last signature of the authorized signatories. It can subsequently be extended or adjusted and then reaffirmed from a period of another three years or more.
8. The Agreement may be renewed or extended by mutual consent in writing by the participating parties. Such amendments, once signed by authorized signatories, will become an integral part of this Agreement.
9. The Agreement may be terminated without penalty by mutual agreement in writing by both parties. Termination by one party is only allowed in case of serious failing of the other party and only after declaring in default after a permitted period to recover of at least thirty (30) days.

Signed:

On behalf of South China University of Technology:

Prof. Wang Yingjun
President

Date: 12/11/2012

On behalf of Delft University of Technology:

Drs. Dirk Jan van den Berg
President

Date: