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**A multidisciplinary approach to water resiliency and regenerative urban design**

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# **ISD TURENSCAPE**

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TEAM PRESENTATION, JOINT CAPABILITIES AND PROJECTS SELECTION

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team presentation and professional expertise regarding water resiliency solutions,  
regenerative urban design, financial management and construction

## ISD Turenscape is a collaborative and multidisciplinary team with proven expertise in water resiliency solutions development, regenerative urban design, financial management and construction

### Team presentation

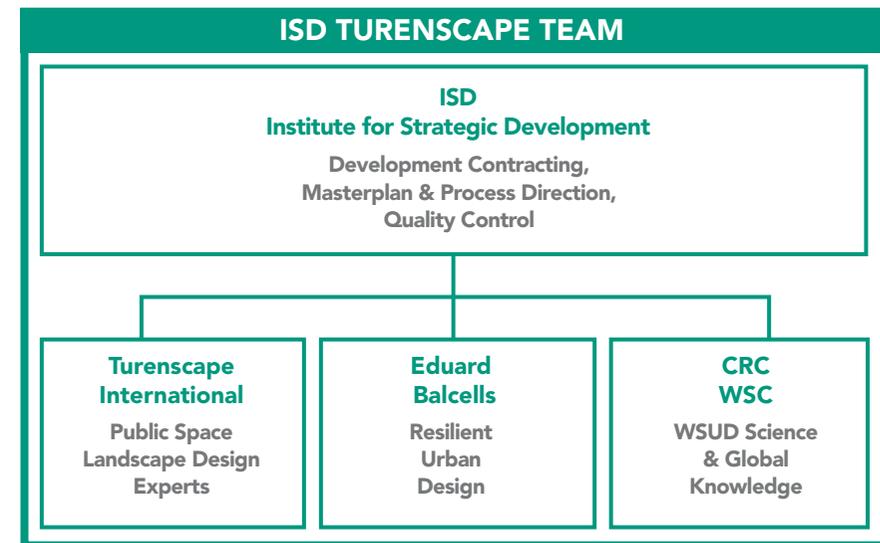
ISD Turenscape is a multidisciplinary team formed by the **Liechtenstein Institute for Strategic Development (ISD)**, as Contracting, Masterplan, Process Direction and Quality Control management provider, **Turenscape International** as Landscape Design Experts, the **Cooperative Research Centre for Water Sensitive Cities (CRC WSC)**, as Water Sensitive Urban Design (WSUD) Science and Global Knowledge and **Eduard Balcells Architecture+Urbanism+Landscape** as Resilient Urban Design Expert.

The Institute for Strategic Development (ISD) is supported by a core group of key international experts who have worked with and for cities, regional and national governments, the World Bank, the IEA, UNFCCC, UNDP, Habitat and a number of other international organisations. ISD recognises that isolated sustainable approaches are prone to slow uptake, errors and even failure. Therefore, ISD pursues Rapid Regenerative Infrastructure Deployment (RRID) by integrating science, engineering, economics, social innovation and finance with city, regional and infrastructure design and community planning and development with the mission of assisting public and private entities to become more resilient to climatic, energetic and economic changes. ISD is a registered company in Berlin, Vaduz and Sydney.

ISD is directed by **Professor Peter Droege**, an international expert on waterfront development, advanced urban design, planning and renewable infrastructure and climate adaptation development. Professor Droege holds the Chair for Sustainable Spatial Development at the University of Liechtenstein, and a Conjoint Professorship at the University of Newcastle's School of Architecture and Built Environment, Australia. Professor Droege has produced many leading reference books, like the outstanding "The Renewable City: A Comprehensive Guide to an Urban Revolution" (Wiley). He is President of the European Association for Renewable Energy (EUROSOLAR) since 2011 and served as Asia Pacific Chair and General Chairman of the World Council for Renewable Energy. A Board Member of the United Nations Habitat Global Research Network on Human Settlements until 2012, Professor Droege served as expert review-

er for the Intergovernmental Panel on Climate Change's Working Group (IPCC). He has designed, directed and built many outstanding urban design projects and masterplans where leading sustainability and water resilience (incorporating stormwater ecological management) have been implemented in Europe, Asia and the US.

**Turenscape International** is a leading, internationally acclaimed and award-winning multidisciplinary design office, pioneer in the ecological approach to landscape design. Nature and Man as One is the philosophy underlying all of Turenscape's projects. Tu-Ren is two characters in Chinese. Tu means dirt, earth, or the land while Ren means people, the man or human being. Once these two characters come together, Turen, it means earth man, a relationship between land and people. The firm's philosophy is to



ISD Turenscape team structure

## team presentation and professional expertise regarding water resiliency solutions, regenerative urban design, financial management and construction

create the harmony between land and people and to create sustainable environments for the future. **Professor Kongjian Yu** is President and Principal of Turenscape International, Changjiang Chair Professor, Peking University and Dean and Professor of Urban Planning and Landscape Architecture, College of Architecture, Peking University, China. He holds a PhD Design by the Harvard Graduate School of Design (GSD), USA, and is Visiting Professor at the same institution since 2004. In the past 16 years, Turenscape has planned and designed over 300 Ecological Cities and 1500 Landscape Projects, located in over 200 cities and with more than 600 projects built. Turenscape's projects have earned great international reputation for innovative and environmentally sound designs and have won American Society of Landscape Architects (ASLA) Awards and World's Best Landscape Awards in the World Architecture Festival.

ISD expert **Professor Tony Wong** is Chief Executive Officer of the **Cooperative Research Centre for Water Sensitive Cities (CRC WSC)**, an Australian Government interdisciplinary research centre with research hubs in Brisbane, Melbourne, Perth and Singapore and he will provide CRC and International Cities links, scientific references and oversight to the team. Professor Wong is internationally recognised for his research and practice in sustainable urban water management, particularly in Water Sensitive Urban Design. He has authored numerous publications on the subject and was presented with the John Holland Award as Australia's 2010 Civil Engineer of the Year, and described as "a visionary, who throughout his career, has been an effective thought leader who continues to encourage his colleagues and clients through his passion and dedication to building sustainable environments".

ISD expert in Resilient Urban Design, architect and urban designer Eduard Balcells, is the director of **Eduard Balcells Architecture+Urbanism+Landscape**. His young practice has received many awards and prizes in competitions including 1st Prize in EURO-PAN 12 in Barcelona with a project for a new water-resilient neighborhood.

### Water resiliency solutions design and construction experience

Turenscape is a pioneering and internationally acknowledged specialist in developing low cost, low maintenance and sustainable green technology, water collection and purification, productive landscapes and agricultural urbanism, and has completed some of the most exemplary projects worldwide integrating ecological water management with cultural inclusion and identity creation. Examples worth mentioning are Shenyang Architectural University Campus, Shenyang, Liaoning Province, China (2008), Qiaoyuan Bridge Garden City Park in Tianjin, China (2008), Shanghai Houtan 2010 World Expo Park, Shanghai, China (2009), Yanweizhou Park in Jinhua City, Jinhua, Zhejiang Province, China (2014) and Hing Hay Park, Seattle, USA, now under construction.

ISD expert Professor Tony Wong has over 30 years experience in Water Sensitive Urban Design. His expertise has been gained through national and international consulting, research, and academia. The Cooperative Research Centre for Water Sensitive Cities (CRC WSC), which he leads, delivers the socio-technical urban water management solutions, education and training programs and industry engagement required to make towns and cities water sensitive, in collaboration with over 80 research, industry and government partners.



A monsoon-flood resilient park linking two parts of the city and creating a new cultural identity  
Yanweizhou Park in Jinhua City, China  
Turenscape International



Purifying stormwater using plants, PH value and chemical reaction as part of the design process  
Qiaoyuan Bridge Garden City Park in Tianjin, China  
Turenscape International



Stormwater ecological management & Water Sensitive Urban Design  
Research and publications

ISD expert Prof. Tony Wong & Cooperative Research Centre for Water Sensitive Cities (CRC WSC)

## team presentation and professional expertise regarding water resiliency solutions, regenerative urban design, financial management and construction

### Regenerative Urban design

Regenerative urban design is the necessary next step of sustainable urbanism, working towards the overly more ambitious goals of fully carbon-negative, energy autonomous, 100% renewable-energy powered territories, resulting in substantial added value and economic benefits. ISD director Professor Peter Droege, has extensive experience in sustainable and regenerative urban design and masterplanning. He was principal urban design advisor for the Ijburg New Island City in Amsterdam, The Netherlands (1991-2015) and played a central role in advising on renewable energy and efficiency aspects of the Renewable Wilhelmsburg neighborhood within IBA-Hamburg, Germany (2007-today). He also had a key role as design and development advisor in the urban design of Melbourne's new water front, Melbourne Docklands (1995-2004-today). Among many other engagements and urban design projects, he led international teams that won first prizes for two projects in Chongqing (2004), first prize and the main commission in the 550 hectares Ningbo-Cicheng new town development (2003), one of the largest water-sensitive urban design projects under way in China, now under construction, and directed the second-prize winning entry in the 1.200 hectare Beijing 2008 Olympic Master Plan Competition (2002).

Turenscape integrates in its practice ecological urban design, has designed over 300 Ecological Cities and has extensive experience in Masterplanning (Ecological Infrastruc-



Ijburg New Island City  
Amsterdam, The Netherlands

Renewable Wilhelmsburg  
IBA Hamburg, Germany

Victoria Park Masterplan  
Sydney, Australia



Melbourne Docklands Waterfront  
Melbourne, Australia

Ultimo Pyrmont Regeneration  
Sydney, Australia

Regenerative urban design  
ISD director and expert Prof. Peter Droege

ture, Land use, Tourism, City, Rural Planning), and Urban Design (New Town, Village, District, Rural, Historical, Industrial Heritage, Natural Sensitive).

ISD expert Professor Tony Wong has led a large number of award-winning urban design projects in Australia and overseas and has been commended for having defined "a new paradigm for design of urban environments that blends creativity with technical and scientific rigour".

ISD expert Eduard Balcells has recently authored a pioneering urban design study commissioned by the Municipality of Barcelona: "The New Urban Fabrik - Torrent Estadella Eco-Industrial Park", examining how urban manufacturing can regenerate decaying central industrial areas by introducing a cluster of clean, sustainable Green Economy-based industries that increase the economic, social and environmental resilience of the city.



Regeneration of a decaying industrial area by transforming it into a Green Economy-dedicated Industrial Eco-Park  
Torrent Estadella Eco-Industrial Park, Barcelona, Spain  
ISD Expert Eduard Balcells Architecture+Urbanism+Landscape

### Financial management and construction experience

ISD director Professor Peter Droege has successfully directed and managed the content, finance and delivery of a number of large research and development projects such as the Lake Constance Alpine-Rhine Energy Region INTERREG research project, and projects in China including Jinfeng Road, Ningbo; Old and New Cicheng; Beijing Media Boulevard; Beijing Olympic Masterplan; Chongqing Future Plan and Shanghai island masterplan.

Turenscape has successfully built more than 600 projects in over 200 cities. Some of their most significant built water-resilient landscapes and public space designs are Shanghai Houtan 2010 World Expo Park in Shanghai, China (2009), Liupanshui River Masterplan & Wetland Park, China (2013), and Hing Hay Park (Seattle, USA), now under construction.

ISD expert Professor Tony Wong leads the CRC WSC, which, with a research budget in excess of AUD \$100 million, is guiding capital investments of more than AUD \$100 billion by the Australian water sector and more than AUD \$550 billion of private sector investment in urban development.

## A team with extensive competencies in innovation, livability, smart solutions, sustainability, urban gardening and farming, and active use of public space for all

### Innovation

The team is at the forefront of innovation and research in all the fields that necessarily inform the design of contemporary cities.

ISD director Professor Peter Droege is an internationally recognized innovator and researcher in the fields of sustainability, climate adaptation, regenerative urban design and renewable energy. Among other pioneering works, he has recently directed the project "Regenerative Region - Lake Constance Alpine-Rhine Energy Region" (2012-14). This is a six-dimensional project for the International Lake Constance Region. This large urban and rural area of more than four million inhabitants is shared by the four European countries of Austria, Germany, Liechtenstein and Switzerland. Regenerative Region spatially models and maps regional resilience, renewable energy sufficiency and carbon sequestration potentials, energy efficiency in the building stock, urban settlement integration, regenerative mobility and the response by the community to the potentials and processes of renewable energy deployment. The results have been published as a book: "Regenerative Region – Energy and Climate Atlas", by Oekom Publishers in 2014. Professor Droege also initiated, designed, directed and published the project "Renewable Liechtenstein" (2011-2013) for the Government and University of Liechtenstein, demonstrating how the country can reduce and eliminate its 91% energy import dependency, basing its economy entirely on local renewable energy resources by 2060-70.

Professor Peter Droege has also demonstrated his relevant research knowledge as member of the Steering Committee of the Urban Climate Change Research Network, Columbia University / Goddard Center and City University New York (CUNY).

ISD expert Professor Tony Wong is also an internationally acclaimed innovator in sustainable urban water management. He has over 150 publications, notably "Australian Runoff Quality: A Guide to Water Sensitive Urban Design", and has presented over 40 keynote and invited lectures. In 2001, Professor Wong co-founded the innovative and esteemed consulting firm Ecological Engineering and in 2007 the firm joined the glob-

al design firm EDAW (now AECOM), where he was Principal and Director of AECOM Design + Planning until December 2010.

Professor Wong and the Cooperative Research Centre for Water Sensitive Cities (CRC WSC) also conduct leading-edge research and implementation of smart solutions in Water Sensitive Urban Design. The CRC WSC has four research programs: Society, Water Sensitive Urbanism, Future Technologies and Adoption Pathways. These programs search for the best possible ways in which an ecological management of the urban water cycle can be successfully implemented in the contemporary city.

The CRC WSC is developing strategies for Australian cities with the objectives of building flood resilience by improving water quality; transforming cities into water supply catchments; creating green and blue corridors for flood conveyance and fostering biodiversity; buffering aquatic ecosystems from the effects of catchment urbanisation and climate change and influencing urban micro climates by promoting climate responsive design in urban environments.



Innovation, Research & Development of Water Sensitive Urban Design (WSUD)  
Examples of publications of research results issued from the CRC WSC Research Programs  
ISD expert Prof. Tony Wong & Cooperative Research Centre for Water Sensitive Cities (CRC WSC)

## professional competencies regarding innovation, livability, smart solutions, sustainability, urban agriculture and active use of public space for all

Turenscape is a leading innovator and pioneer in Ecological Approaches to Landscape Architecture and Urban Design, and also a research-driven design practice, with a dedicated Research Team on Ecology, Politics, Economy, Culture and Heritage, fusing history and evolving culture to create iconic designs for the future.

### Livability

Livability is central in the work of the team members, and we believe that it is the consequence of achieving sustainability in social, environmental and economic terms.

The following projects, among others, by Professor Peter Droege, have been very successfully appropriated by residents: Renewable Wilhelmsburg, Hamburg, Germany (2007-13), Melbourne Docklands, Melbourne, Australia, (1995-today) and Victoria Park Masterplan, Sydney, Australia (1995-today). A fundamental focus in Professor Droege's work is researching what are the best pathways for public appropriation of renewable technologies that can make environments more livable.

Livability is at the core of Turenscape's design philosophy, as it strives to re-unite Tu (Nature) and Ren (Man). Turenscape reintroduces nature within the city in order to provide citizens with a more livable environment. Turenscape also conducts extensive dialogues with the local population throughout the design phases. Some of the most successful executed projects by Turenscape in terms of popular appreciation and community integration are Yanweizhou Park in Jinhua City, Jinhua, Zhejiang Province, China (2014), and Chengdu Dujiangyan Square, Chengdu, Sichuan Province, China, (2004).

### Smart Solutions

We understand smart solutions as intelligent strategies that aim to reach sustainability and livability.

ISD director Professor Peter Droege has designed or importantly contributed to the building of many masterplans that incorporate smart solutions such as implementing large pedestrian-friendly areas so that they can become real social foci, encouraging soft and regenerative mobility, implementing high-standard renewable energy production and energy efficiency in the building stock, and introducing pioneer ecological management of the urban water cycle. Projects that include these measures are, among others, Renewable Wilhelmsburg, Hamburg, Germany (2007-2013-today), Melbourne Docklands, Melbourne, Australia, (1995-today), and Victoria Park Masterplan, Sydney, Australia (1995-today).

ISD expert Professor Tony Wong's research in smart solutions within the field of water

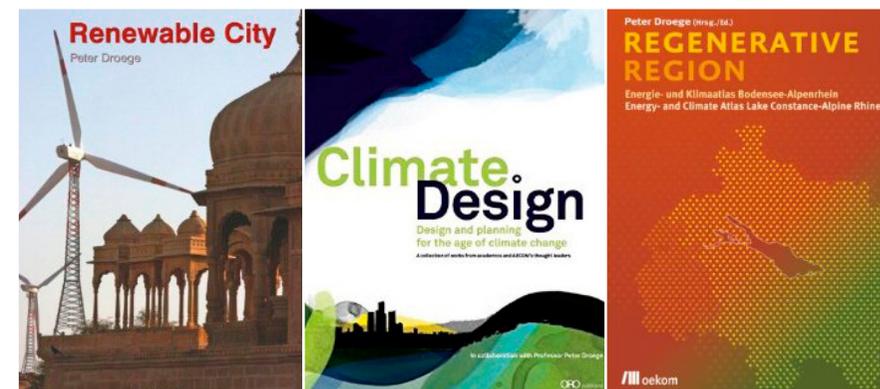
sensitive urban design include innovations in gross pollutant traps, constructed wetland technologies and bioretention systems for improving urban stormwater quality, which now form the basis of contemporary industry standards and have led to state and national water management guidelines for advancing the contemporary practice of Water Sensitive Urban Design (WSUD) in Australia.

Turenscape has successfully developed and implemented smart solutions in their projects regarding Stormwater Ecological Management, Eco-Infrastructure, Ecological Security Patterns and Slow Movement Infrastructure.

### Sustainability

All team members have sustainability as fundamental element of their design approach.

ISD's core mission is to advance sustainability by developing Rapid Regenerative Infrastructure Deployment (RRID), which integrates science, engineering, economics, social innovation and finance with city, regional and infrastructure design, community planning and development. ISD director Professor Peter Droege is an internationally recognised sustainability expert. As an outcome of his research, Professor Droege has published seminal books on renewable and regenerative urbanism, like the leading reference "The Renewable City: A Comprehensive Guide to an Urban Revolution" (Wiley), "Urban Energy Transition - From Fossil Fuels to Renewable Power" (Elsevier) and "Regenerative Region – Energy and Climate Atlas" (Oekom). He has also edited "100 Percent Renewable - Energy Autonomy in Action" (Routledge) and "Climate De-



Sustainability Expertise: Innovation, Research & Publications with a focus on Renewable and Regenerative Urbanism & Climate Stability  
ISD director and expert Prof. Peter Droege

**professional competencies regarding innovation, livability, smart solutions, sustainability, urban agriculture and active use of public space for all**

sign" (ORO). He has also produced the seminal scholarly volume "Intelligent Environments - Spatial Aspects of the Information Revolution" (Elsevier).

Professor Droege is President of the European Association for Renewable Energy (EU-ROSOLAR) since 2011, served as Asia Pacific Chair and General Chairman of the World Council for Renewable Energy since its inception in 2000/2011, has been a Board Member, United Nations Habitat Global Research Network on Human Settlements until 2012, served as expert reviewer for the Intergovernmental Panel on Climate Change's Working Group (WG) III contribution to the IPCC Fifth Assessment Report and as Recipient of the 2007 European Solar Prize, he was the inaugural Selection Committee Member, Zayed Future Energy Prize, United Arab Emirates, 2007-2013.

ISD expert Professor Tony Wong and his Cooperative Research Centre for Water Sensitive Cities are internationally recognized for their research and implementation of sustainability applied to the ecological management of urban water. Professor Wong provides strategic advice to state and local governments and to the land development industry on sustainable urban water management and has led the development of many state and corporate policies on Water Sensitive Urban Design. Since 2006, he has an ongoing commission to provide strategic advice to the Public Utilities Board of Singapore on institutionalising Water Sensitive Urban Design in Singapore.

Turenscape International has sustainability at its core since its inception. It has extensively applied its knowledge and research in a large number of ecological landscape and public space projects, many of which have received international awards like the World's Best Landscape in the World Architecture Festival.

ISD expert Eduard Balcells is thoroughly committed to sustainability and urban resilience and has demonstrated so in Eduard Balcells Architecture+Urbanism+Landscape's winning entries in different competitions and in the urban design commissions he has realised.

### Urban gardening and farming

Team member Turenscape has extensive experience in the integration of agriculture in cities. Among many other built projects, the Shenyang Architectural University Campus (Shenyang, Liaoning Province, China, 2008) demonstrates how the agricultural landscape can become part of the urbanized environment and how cultural identity can be created through an agricultural landscape. The design uses rice, wheat, and other crops, as well as native plants, to keep the landscape productive while fulfilling its new roles of providing an environment for learning and usable outdoor space.



Urban gardening and farming  
The Rice Campus - Shenyang University Campus, Shenyang, China  
Turenscape International

### Active use of urban space for all

ISD director Professor Peter Droege has designed public spaces and masterplans including an emphasis on selecting and commissioning interactive and playful public art in Docklands, or artful playscapes and waterfront parks in Ultimo Pyrmont, Sydney that have widely succeeded in attracting active use. Some other successful examples in this direction include Post Office Square, Boston, USA (1984) and Church St Marketplace, Burlington, Vermont, USA, (1980-now).

Turenscape has always included in their landscape and public spaces projects carefully designed places that engage citizens of all ages in active enjoyment, contemplation and play. Among many others, prime examples include Chengdu Dujiangyan Square (Chengdu, Sichuan Province, China, 2004), Qunli Stormwater Park: a green sponge for water-resilient city, Qunli, Haerbin, Heilongjiang Province, China (2011) and Seattle International District Hing Hay Park (Seattle, USA, under construction, 2017).



Active urban spaces for all ages  
Ultimo Pyrmont Regeneration, Sydney, Australia  
ISD director and expert Prof. Peter Droege

Active urban spaces for all ages  
Yanweizhou Park in Jinhua, Zhejiang Province, China  
Turenscape International

## Our approach to challenges regarding water resiliency, livability, innovation and research is uniquely imaginative and yet profoundly practical

### Approach to water resiliency challenges

We do not think of “rain water” as simply rain or storm water but as one element in the urban water system and cycles, encompassing flood management, water resilience planning, waste recycling and the multitude of delights that derive from publicly engaging the essential world of water practically, aesthetically and culturally. We view the city as a sponge, soaking up, collecting, holding, storing and dispensing with precious water also hopes and ideas, a feeling of togetherness, conviviality, generosity, shelter, home and belonging. All members of the team use in their designs water as a creative link reaching out to energy sufficiency and community building.



Water resiliency strategy: urban stormwater ecological management  
A green sponge for a water-resilient city: Qunli Stormwater Park in Haerbin, China  
Turenscape International

### Approach to livability challenges

Livability and quality of life is created every day – in the very process of neighbourhood coherence and interaction. Once all the issues of subsistence have been addressed through water security, attention turns to other aspects that address microclimate, amenity, sense of place, community building and accessibility and usability of public space by all ages. Great public space design assists, facilitates, embraces, celebrates life through the public domain of a community: enhances, heightens, expresses it. Critical to all this is a sense of concrete and colourful connectedness: openness to the fabric and larger community of the surrounding city, where green spaces contributing as a living, breathing and productive part of the wider city networks.

We believe that this is reinforced by engaging our own colourfully multicultural yet highly professional team in an inclusive design development process of embracing ideas from all citizens of the neighbourhood, of all ages. To ensure the design process itself becomes a valuable feature of community building we will establish a citizen design team, build on school based idea generation programs, run innovative charrette workshops, and work with public communication media that form ownership and belonging in the building of public space – as a resource for all.



Livability and water resilience: proposal for the first water-sensitive neighborhood in Barcelona  
Green Ramblas new neighborhood project. 1st Prize European 12  
ISD Expert Eduard Balcells Architecture+Urbanism+Landscape

## multidisciplinary approach to challenges related to water resiliency, livability, innovation and research

### Approach to innovation and research

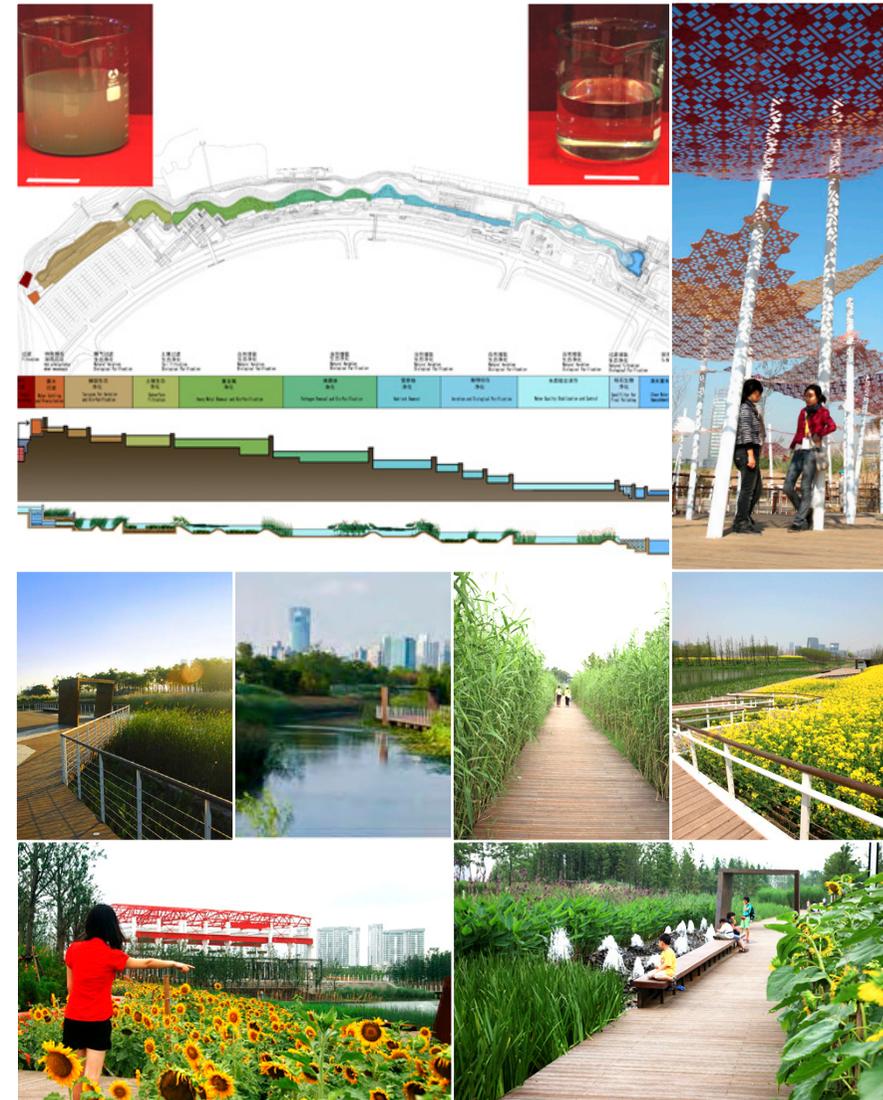
Panta rei: all is changing. Climate, environmental responses, demography, the very demands placed on cities and communities as shelters, prosperity sources and havens of ecological healing and systemic resilience: for this we need innovative design solutions and organisational approaches. We too need an urban design that has an integrated performance, which we define as the one that can achieve water security in a broadest sense that looks beyond water supply security to include flood, environmental and governance issues that are vital to the future of cities. Also essential to this integrated performance is the necessary low, very low or negative carbon living: considering the water-energy nexus upfront in planning and highlighting the significance of design guidelines for individual buildings in transforming precinct wide water and energy performance. And also very relevant are productivity and economic efficiency: adopting a no-regrets approach to infrastructure planning and expenditure to ensure the community achieves the best possible return on its investment in the precinct over the long term.

With this purpose of achieving an integrated performance, the team's members usually propose collaborative conceptual designs first, that can then provoke further analysis and design, in successive iterations and interactions with the client and the community. Within this urban design framework we will be able to co-create places that are malleable, multi-purpose and can change over time, as tangible resources in water management, biodiversity enhancement, food source, climate management and communal anchor.

The members of the ISD Turenscape team have successfully conducted research for public and private clients, produced innovative winning entries in international competitions and built outstanding masterplans.



Research and innovation in water and energy resilient urban design  
Concept design for Fishermans Bend brownfield redevelopment in inner Melbourne, Victoria, Australia  
ISD Expert Tony Wong & CRC WSC



Landscape as an innovative living system that cleans polluted river water, an active social focus and an iconic park  
Shanghai Houtan 2010 World Expo Park  
Turenscape International



Image by Landcom and Hassell

## Victoria Park Masterplan

**Sydney, Australia, 1995-2004-today** - ISD Expert Prof. Peter Droege  
ISD Expert Prof. Tony Wong

**Size** 27 Hectares

**Client** Landcom

**Budget** One billion AUD total capital investment

## A holistic water-resilient urban design project

The project involved the conversion of a former racetrack-turned-car factory into a new inner-urban medium-density neighbourhood for 4,500 apartments, offices, shopping centers and major public streets and parks. Professor Droege's role was to guide and structure master plan,

landscape and leading-edge water sensitive planning, urban design and architectural development. Professor Tony Wong was responsible for the water sensitive urban design for this project.



Image by Hill Thalys, Adrian Boddy, Architectus, Renny Toh and Philip Cox

## Ultimo Pyrmont Masterplan

**Sydney, Australia, 1993-2016** - ISD Expert Prof. Peter Droege

**Size** 1.6 km<sup>2</sup>

**Client** Department of Planning and Sydney Harbour Foreshore Authority

**Budget** 2 billion Australian Dollars leveraged

## A paradigmatic regenerative urban design project

Professor Peter Droege chaired Sydney's Ultimo Pyrmont Development Advisory Committee during his time, actively guiding the development and design approval process for this important peninsula. Peter Droege was also a member of the Prime Minister's Urban Design

Committee during this time, writing highly influential national urban design guidelines and principles. The area is still completing redevelopment, although the vast majority of major improvements are completed.



## Shanghai Houtan 2010 World Expo Park

Shanghai, China, 2007-09 - Turenscape International

Size 14 Hectares  
 Client Shanghai Expo Land  
 Budget 40.000.000 USD

### The landscape as a living system that filters river and storm water

Significance: demonstration park for 2010 World Expo; Objective: restored degraded environment; Approach: low-tech method by using gravity and stepping terraces for water cleaning; Features: plumping Lower Grade 5 unsafe and highly contaminated water from

river and clean to Grade 3; Sustainability: using plants to remediate contaminated brown-field, vegetation to treat pollution river water for reuse, and flood protection; Relevance: linear constructed wetland can collect and clean polluted surface run-off and rainwater.



Image by Turenscape International

## The Rice Campus - Shenyang University Campus

Shenyang, China, 2008 - Turenscape International

Size 80 Hectares

Client Shenyang Jianzhu University

Budget 31.330.000 USD

## An agricultural landscape as cultural identity and open-air learning space

This project demonstrates how agricultural landscape can become part of the urbanized environment and how cultural identity can be created through an ordinary agricultural landscape. The design uses rice, wheat, and other crops, as well as native plants, to keep the land-

scape productive while fulfilling its new roles of providing an environment for learning and usable outdoor space. The rice paddy spans the landscape, has small open sitting platforms, and is completely functional with its own irrigation system. Native plants line pathways.



## Chengdu Dujiangyan Square

Chengdu, Sichuan Province, China, 2004 - Turenscape International

Size 11 Hectares

Client Sichuan Municipality Government

Budget 12.530.000 USD

## Integrating residents' culture, experiences and daily life in a water square

Dujiangyan Square is located in the middle of Dujiangyan City. The city was historically named as the Irrigation County after the famous ancient irrigation works, the Dujiangyan Weir, a world cultural heritage, built more than two thousand years ago, and still in use. The design strategy was based

on careful site analysis and understanding of the local and regional landscape. Listening to the residents' experiences also helped to understand daily life and create social context and sensitivity to the design approach. This approach helped the designers understand the spirit of the place.



Image by Turenscape International

## Qunli Stormwater Park

Qunli, Haerbin, China, 2004 -Turenscape International

Size 34.2 hectare

Client The Municipal Government of Haerbin City

Budget 8,630,000 USD

## A green sponge for water-resilient city that cleans storm water

One of the strategies was to create a necklace of ponds and mounds surrounding the preserved central wetland using simple cut-and-fill technique. This pond and mound peripheral ring creates a stormwater filtering and cleansing buffer zone for the core wetland, and a welcoming land-

scape filter between nature and city. Stormwater from the newly built urban area is collected into a pipe around the circumference of the wetland, and then released evenly into the wetland after being filtrated and deposited through the ponds.