



01 HafenCity: KCAP & ASTOC Architects & Planners

Ya-Hsin Chen: "Coexisting with nature can't just be an intention, it's a necessity"

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KCAP's designers believe that conservation and development don't contradict each other at all. The fast urban development just caused us to slowly lose the ability to live with nature.

PART 3

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As an architecture and urban design firm hailing from the Netherlands, KCAP possesses a distinctly Dutch style. Almost a third of the land in the Netherlands sits below sea level, which is why Dutch architects and urban designers need to address water management concerns. The KCAP staff are experts in this matter.

Most of KCAP's design projects are linked to water somehow. They even introduced water into some spaces. Hydrology is an environmental building block for KCAP designers – a way to expand the local water network. By making use of rivers and the local topography, they create a new aquatic environment. Not only does this provide a larger water storage cache, it can also be used to contain the threat of heavy rains or flooding.

Because flooding is unavoidable in the German city of Hamburg, KCAP adopted a "controlled flooding" strategy for the HafenCity masterplan, allowing water to slowly enter the city. All new buildings and roads are built on the port's elevated foundation, while the city's waterfront and constructional foundations can be flooded.

According to traditional methodology, when confronting the threat of urban flooding, designers would first raise the dikes or expand the water distribution network. However, KCAP Associate Partner Ya-Hsin Chen views these methods as not only incredibly costly, but also believes they just treat the symptoms and do not tackle the root cause. "A fundamental solution requires taking a holistic approach and considering dimensions such as time and space, as well as their impacts," Ya-Hsin said in *Yicai Global Magazine*, "Only then can you produce solid design solutions."

01 In the design process of HafenCity, the sidewalks, flood barriers, stairs and other public spaces used a 'wet and dry' dual design. On sunny days you can have stroll, when it floods, you can dip your toes in the water.

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02 KCAP Associate Partner Ya-Hsin Chen.

KCAP's designs take cities as entities within a larger ecosystem. The impact of human social and economic activities must be considered within their larger environment. "Our rivers, climate and water should not be limited by administrative borders," said Ya-Hsin.

Setting itself apart from other well-known architecture firms, KCAP emphasizes the ordinary in design, focusing on practical and universal public facilities. As KCAP's design team sees it, trendy and eye-popping designs may get 95% of the public's attention, but they may only be 5% relevant or important.

The HafenCity project timeline spans across two decades. Compared to projects in China, it's a luxury to have so much time. When drawing up the plan for the Jinan Southern Mountains project, although the team spent six months defining and mapping the conservation zones, Ya-Hsin thinks this is still not enough time. Besides having to collect and analyze background information, there's the challenge of collaborating across multiple government agencies, figuring out how to connect and coordinate all the variable aspects of the masterplan with different departments at different phases.

An important factor behind HafenCity's success was the high level of coordination maintained by KCAP's client. Hafencity Hamburg GmbH is a wholly owned subsidiary of the Hamburg government that oversaw conceptualization, investment, and operations for the entire project. In addition, there was a system for long-term supervision, allowing regular assessment and management of site quality and diversity. Ya-Hsin considers projects successful if there's good awareness of its direction and developments, and if it takes into account changes that may happen over time.

"The truly daunting challenge is climate change. Amongst all this change, can the plan we develop today still be used tomorrow? If not, it will need to be changed, but who will do this? These are all things to take into consideration," said Ya-Hsin. "This is a highly adaptable planning methodology."

YiMagazine interview with Ya-Hsin Chen

Looking at KCAP projects in China - Shenzhen East Dike, Jinan Southern Mountains, and Huangshan's Daye Lake, for example - what were some of the bigger challenges you faced when restoring the local ecosystem? There are some similarities in the difficulties we encountered in these projects. I can summarize them into three main points. The first difficulty was establishing a new value system. Most planning in China is centered on development, but we proposed to protect by developing the area, or development through ecological restoration.

This was a new concept, a very real test and transformation to traditional design projects and thinking. And it involved cooperation across many different bureaus and departments.

For example with Shenzhen East Dike, we had to tackle the challenge of global climate change. Whether it's a once in a half-century, or once in a century flood, a dike alone is no longer enough to answer to future changes. Speaking from a designer's perspective, you must take global trends as your standards and to make certain projections.

The second point, is that an eco-masterplan must be comprehensive and based on scientific analysis. Traditional design prioritizes the engineer's or designer's thought process. The design is produced inside a bubble. Ecological development and planning is different, it must be supported by geographic data. Although in the end, the red line for ecological protections may just be a simple line, the choice and position must reflect geographic and environmental criteria. Like the Jinan Southern Mountains project, which covered an area equal to 580 square kilometers, just data collection took a very long time. Let alone the process of data analysis and decision-making.

The third and more intimidating obstacle, was the necessary collaboration across several different specialized departments. Taking the Jinan Southern Mountains project as an example again, we wanted to give a direction and framework for environmental protection of the Southern Mountains. Next, based on this foundation we would further determine what to protect and how to strategize. In the end we had to mark the boundaries of its ecological zones and redlines, as well as the development zones. The masterplan involved several different government departments. In total, we linked up with ten different bureaus, including the Office of Ecology and Environment, the Planning Bureau, the Bureau of Urban and Rural Water Management, the Bureau of Land and Resources, Forestry Bureau, Bureau of Agriculture, and many more. During the project implementation, initiating the collaboration across these different bureaus was incredibly time consuming.

The Southern Mountains masterplan includes ways to encourage developing premium-grade agricultural products, and transitioning to eco-farming. What was the thinking process behind this?

Tourism in the Southern Mountains was based on 'the rural lifestyle', but local agriculture was fragmented, yields were in decline, and quality was lagging behind. Through ecological conservation, we wanted to expand the local agriculture sector development. Our strategy involved a top-down integration of necessary resources and services for the farming industry, all centered on major town hubs. We then encouraged differentiation in the development of agricultural products and services.

There were already five well-established villages in the Southern Mountains, with some already looking like towns. We wanted to protect these as much as possible, while transforming the local industry, so that it would not only be based on the original 'rural lifestyle' tourism.



01-02 The Shenzhen East Dike only had a sea barrier, it was unable to meet future changes. After KCAP's development, it employed a triple dike strategy.

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Because we steered development toward differentiation based on value-added production and eco-tourism, promoting development through conservation, the region's overall competitive strength became much stronger than during the single-track, one-way development that existed before.

Don't economic development and environmental protection contradict each other? You just mentioned that while protecting the ecosystem, you also hope to support local economic development. But generally speaking, environmental protection often means you have to give up on economic development.

For us, there's no contradiction at all. The human environment has always been a part of the natural world. We always lived in a natural environment, so we not only should coexist, we need to. The reason this contradiction still exists in our collective minds is because, we gradually lost the ability to coexist with nature amongst rapid urban growth. Urban growth caused uncontrolled development and environmental damage. This is the price we paid. When we talk about conservation, we need to return to the natural way of thinking. We're simply telling everyone, from a designer's and planner's perspective, how development and conservation can coexist.

This brings me back to the Jinan Southern Mountains project. A certain way of life and economic activity already existed in the five farming villages. When we devised a masterplan based on conservation practices, it didn't mean that this way of life had to be abandoned.

By defining three spaces - town, farm, and ecosystem - with three control lines - marking the boundary of development, the protected permanent farming zones, and the ecological redlines - we were able to move human activity from ecologically sensitive areas and re-establish it in low-impact areas.

Areas with little impact on alluvial plains or freshwater springs, for example. In other words, we were able to protect the Southern Mountains ecosystem while improving economic and social benefits. This led to a common understanding of environmental protection, and people began to respect local regulations banning unlicensed development and wastewater dumping. The real test is establishing a new value system. This takes time. It also requires the designer and planner to be specialized in multiple disciplines, and have a strong sense of social responsibility.

In another lecture you said that many ecological restoration projects fail because they're only treating the symptoms. What kind of masterplan do you consider to be truly holistic?

I believe we can approach this topic from two different angles, considering time and the system. Time involves tracing the history of a certain place. Areas that have fallen victim to disaster-level flooding in the past are very likely situated near or by a river. They have always been in an alluvial plain or a basin prone to flooding. In this case, we might use the farming of wetlands as a way to restore the ecosystem. As cities became more sprawling, its inhabitants insist on living in places unsuitable for humans.

By pouring concrete, we forced these places to become habitable. This stubbornness actually leads to very environmental unfriendly decision making. Considering time, could we not return the land to its original, historical state?

In terms of systems, the ecosystem is closely linked to socio-economic factors. A healthy ecosystem can act as a solid foundation for the long-term development of a city. So when we are planning, we need to look at the big picture, and consider the connections between all these systems. Thinking of the ecosystem, biosphere and the larger socio-economic perspective, these need to fit in the context of physical boundaries, ultimately creating a kind of multidimensional solution.

HafenCity in Hamburg is one KCAP's most well-known urban design projects. The project's timeline is extensive. When drawing up their own urban renewal proposals, what can other cities learn from your hands-on approach?

An important factor behind HafenCity's success was the management team. Our client - Hafencity Hamburg GmbH, is a wholly owned subsidiary of the Hamburg government - oversaw investment and operations for the entire public works project. All the public facility improvements - roads, bridges, plazas, parks, etc. - in the urban design project were funded and managed by this company, which also supervised the bidding for, and awarding of, design and construction projects.

In addition to financial responsibilities, the company was also tasked with maintaining public relations throughout the project. It was able to guarantee a high degree of coordination both in management and implementation.



02 East Dike: KCAP & Felixx Landscape Architects

Furthermore, the project required a long-term supervision system, which we lack in China. A design project isn't finished when plans are fully actualized, it's just beginning. When change comes into play, whether it's capital or market change, zoning adjustments, or the bigger challenges brought on by climate change, can the plan we develop today still be used tomorrow? If not, who will make the changes?

In addition to drawing up the HafenCity masterplan, KCAP also took on the role of design project overseer, for a 25-year term. Every year, we hold quarterly meetings to review and discuss whether the public works projects are still consistent with the original design, including how each parcel of land is being used. To determine the diversity among those using public works in HafenCity, we run a comprehensive assessment based on a public poll. The work that we do provides a quality assurance framework that reinforces our role as overseer. This way, we encourage innovation while ensuring a firm grip on the guidance of the project. The ability to accommodate changes that happen over time, makes for highly resilient and adaptable planning.

How does KCAP define or brand itself in comparison to similar design firms? For example, do you focus on one trend or type of design more than another?

We tend to focus more on the ordinary, universal design. We then look for a "sparkle" among the ordinary, which we use to create the most added value. Only five percent of all designs enjoy widespread visibility and exposure. KCAP is interested in the other 95%, because it's this percentage that decides 95% of a city's quality of life.

In terms of global trends, I believe our industry has reached a consensus on how to improve a city's adaptability and strengthen its disaster response and preparedness. Cities around the world are now rising to the challenge of climate change. The key when addressing these core issues is how to lead the industry by example? How do you guide or maximize the value of each design project? Each design firm has a different approach to this.

Within the current wave of urban park development, how do you avoid over-designing, or producing a design that is entirely for our own benefit? How do you realize a place where we actually coexist in harmony with the natural world?

In my opinion, originally there was a good concept behind this development wave, but that it has now become a trend. We need to take a step back, because trends lead to "fast fashion" designs that are put up without much thought, with no real impact. I believe the starting point for any urban park should always pair the design and management thought processes. This way, the park aligns with the general public's needs and has the desired ecological effect. It's also important that the design team is specialized in all relevant fields and respects the natural world. Highly sensitive areas should be returned to the wild. Required urban activities should be limited to areas that are less eco-sensitive, it can't turn into a theme park. We should always respect the local ecosystem and maintain a respectful attitude toward Mother Nature. An urban park is still a public park, in the sense that it's a place where everything coexists. A space reserved for all living things. This should be the goal for an urban park or green city.

In the Guangming Reservoir project in Shenzhen, KCAP cancelled the proposal for a running track around the reservoir. Did you do this for the same reasons?

Yes, that's right. We did a few background surveys on the Guangming Reservoir ecosystem and discovered that the mountain forest along the eastern shore was a natural habitat for wild boars. In the previous iteration, the running track circled the reservoir. This would have an irreversible impact on the environment. So we spent more time researching and deliberating how and where to lay the track, and what impact it might have on the local ecosystem. This is what I meant with the other 95% decides 95% of a city's quality of life.

Of course we could have gone the other route, and devoted all our time and effort to designing the track: deciding the cross-section materials and surface textures, rendering a pleasing visual, ensuring physical comfort when running on the track, and so on. But for us, compared with the 5%, it's much more important to fully convey the other 95% in the design visuals. Our client, the Water Authority of the Shenzhen Municipality, was very supportive of our recommendations. In the end, we placed the track in a less eco-sensitive area. We essentially reached a compromise with the original proposal that centered on the human experience, attaining the important goal of restoring and protecting the ecosystem.

This brings us back to the importance of cooperation among different government agencies. This type of interdepartmental collaboration tests the planner's ability to diagnose and communicate pertinent issues. The crucial thing in the projects we have undertaken is not the design itself but rather avoiding or precluding errors in the design process. Sometimes the key to successful planning is subtraction. Addition isn't the only option. Many planners may only be interested in the 5%, as the design is more likely to be seen. But for KCAP, this has never been our focus. We are much more concerned about preventing mistakes. Cancelling the proposal for a track around the reservoir is a good example of subtraction at work.