**Sustainable Cities
and Communities
可持续城市与社区**

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Cover Sponge Three Strategies to Build Sponge Citiesfeatured at pages 90-93 of this journal, Photo courtesy of Yu Kongjian
封面 构建海绵城市的三大策略(见本刊第90-93页)
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C2030 #4
Sustainable Cities and Communities
可持续城市与社区

Preface
卷首语

by **Sarah Orlando**
萨拉·奥兰多

By 2030, 60% of the world's population will be living in urban areas, and cities are uniquely positioned to tackle the Sustainable Development Goal focus of this issue of the Creativity 2030 Journal: Make cities and human settlements inclusive, safe, resilient and sustainable (Goal 11).

According to The Sustainable Development Goals Report 2019 released by the United Nations, cities and metropolitan areas are powerhouses of economic growth — contributing about 60% of global GDP. However, they also account for about 70% of global carbon emissions and over 60% of resource use. Rapid urbanization and population growth are outpacing the construction of adequate and affordable housing: it is estimated that by 2030 more than 3 billion people will be living in slums or informal settlements, and will thus require adequate and affordable housing, a fundamental human right.

Another key area to be tackled by cities is public transport, an essential service for urban residents, a catalyst for economic growth and social inclusion and — with ever-increasing numbers of people moving to urban areas — an important help to mitigate air pollution and climate change.

Despite the implemented measures, stronger efforts are needed from cities to ensure that sustainable transport is available to all, particularly vulnerable populations such as women, children, seniors and people with disabilities. Municipal waste is one of growing cities' harder challenges. According to data collected between 2010 and 2018, two billion people were without waste collection services, and 3 billion people lacked access to controlled waste disposal facilities.

预计到2030年，全球60%的人口将生活在城市中。在本期《创意2030》里，城市也占据了极其特殊的地位，因为本期围绕的可持续发展目标是：打造具备包容性、安全性、弹性和可持续性的城市及人类居所（目标11）。根据联合国发布的《2019年可持续发展目标报告》，城市和大都市地区的GDP占全球总数的60%，是经济增长的动力源。与此同时，它们也占用了60%以上的资源，并造成了全球70%的碳排放量。快速的城市化及人口增长速度已远超过保障性住房的建造速度。据估计，到2030年，将有30多亿人生活在贫民窟或非正规住区，因此保障性住房这一基本人权需求已刻不容缓。城市里另一个需解决的关键问题是公共交通，它不仅是一项提供给城市居民的基本服务，也是缓解空气污染和气候变化的重要帮助。在越来越多的人迁往城区的大环境下，公共交通也是促进经济增长和社会包容的催化剂。尽管已经采取了一些措施，但城市仍需做出更大努力，来确保所有人，尤其是妇女、儿童、老年人和残疾人等弱势群体，能获得可持续性交通。
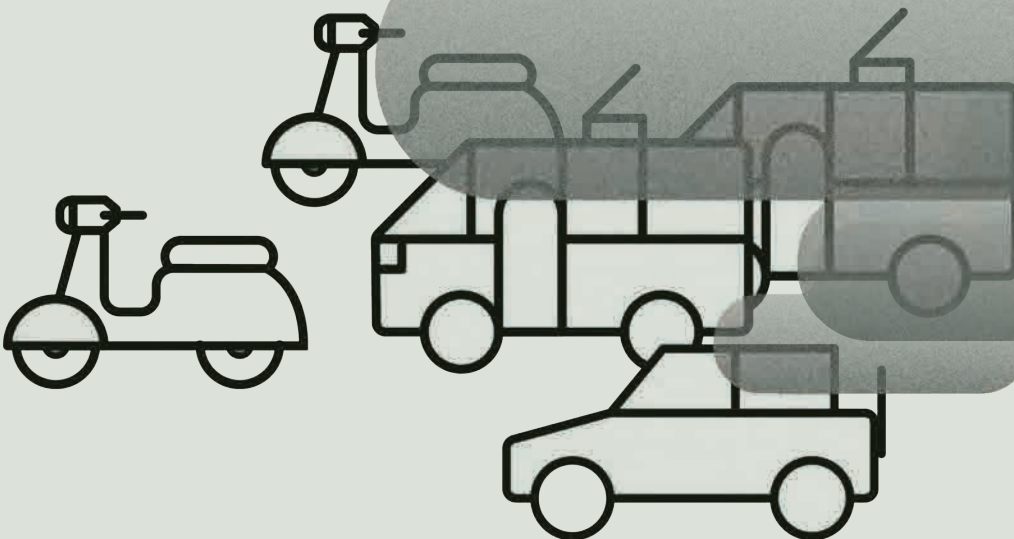
Illustration by LAVA BEIJING

GLOBAL EMISSIONS OF CO$_2$

other 其他

building operations

transportation 交通

建筑施工

6%

28%

23%

32%

11%

BY SECTOR

industry 工业

building materials & construction (core & shell) 建材 建造
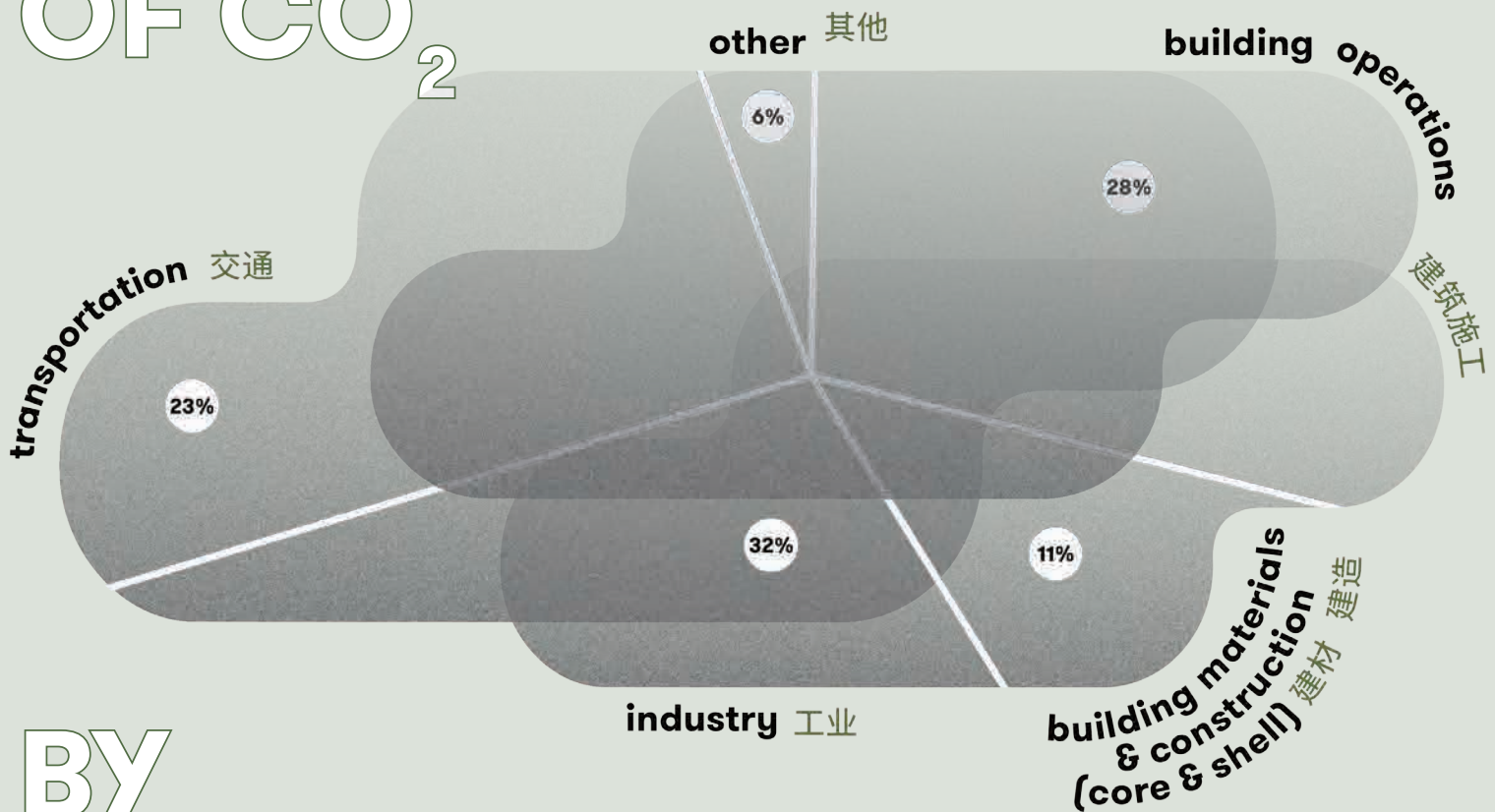
全球二氧化碳
排放分类

城市垃圾是日益增长的城市面临的严峻挑战之一：根据2010年至2018年数据，20亿城市居民无法享受到垃圾收集服务，30亿人无法使用受管制的垃圾处理设施。随着城市化进程的加快，这一情况只会更糟，特别是在中低收入国家，那里许多城市固体废物处理都是使用的露天垃圾场，塑料废物污染以及甲烷等温室气体的排放等会造成空气、水和土壤污染。

随着收入水平的提高和经济越来越以消费为导向，这个问题只会变得更加严重。最后一个要点，《2019年可持续发展目标报告》指出了在许多城市空气污染是如何不可避免地危害着健康，尤其是亚洲和非洲。对于许多建筑协会和机构来说，气候变化和紧急行动是2019年9月的一个重要议题。工业全球二氧化碳排放分类其他建筑施工建材&建造交通9月19日，美国建筑师协会发表声明，强烈主张采取气候行动。

This problem is only expected to worsen as urbanization increases, especially in low — and middle — income countries, where many municipal solid waste disposal facilities are open dumpsites that contribute to air, water and soil pollution, including by plastic waste, as well as emissions of greenhouse gases such as methane. With income levels rising and economies becoming more consumer-oriented, this problem will only become more critical. Last but not least, The SDG Report 2019 shows how in too many cities air pollution has become an unavoidable health hazard, especially in Asia and Africa. Climate action and emergency has been a crucial topic this September 2019 for many architecture associations and institutions.

On September 19, the American Institute of Architects (AIA) published a statement strongly advocating climate action. "Climate change is everyone's crisis, and architects are uniquely positioned to help solve it," states AIA's website. AIA together with Architecture 2030 — a non-profit organization established in 2002 — are grasping responsibility to prioritizing and supporting effective action to exponentially decelerate the production of greenhouse gases contributing to climate change in the building sector.The Chicago-based Architects Advocate association claims that the architecture community is on the front line of addressing climate change in a meaningful way, and they believe it to be the challenge and opportunity of our time.

September 19 was also the day of "The Architecture of Emergency" summit at the Barbican Theatre, London (UK), on how architecture and urban practice should change in the face of a climate and ecological emergency. "Architecture's potentialto lead the fight against global warming is matched only by its failure to do so," states the event's website, and it calls upon urban practitioners of all backgrounds to come together to urgently discuss radical proposals to reform the construction and design of buildings in the face of climate change.

With such premises in mind we focused on tackling concrete cases and precise analysis of the creative economy and the specifics of creative cities. As C2030 is not about the latest or the newest, but aims to showcase the best examples, we chose to portray important contemporary actions and old case studies alike.

Utopia, Abandoned is an insightful analysis we syndicated from The New York Times Magazine on Ivrea under Adriano Olivetti's vision. A "progressive and successful company town [...] existing not for the sake of control or convenience but rather representing a new and short-lived kind of corporate idealism, in which business, politics, architecture and the daily life of the company's employees all informed one another," wrote Nikil Saval. We believe this article is a fundamental case study that can intellectually and practically benefit the discourse on converting industrial cities into contemporary innovative cities: the societal aspect of a city.

And what about the role of technology and the maybe already passeé nomenclature of smart city? The technology aspect is well tackled by Ms Mardashahi in her interview for this issue, in which she says that, "the rapid spread of the Internet is radically changing people's lives across the globe. How we live, work, play, and learn in various countries, regions, and cities is all impacted by the transformative power of networking. Unfortunately, the increasing gap between rich and poor has given rise to global inequality.
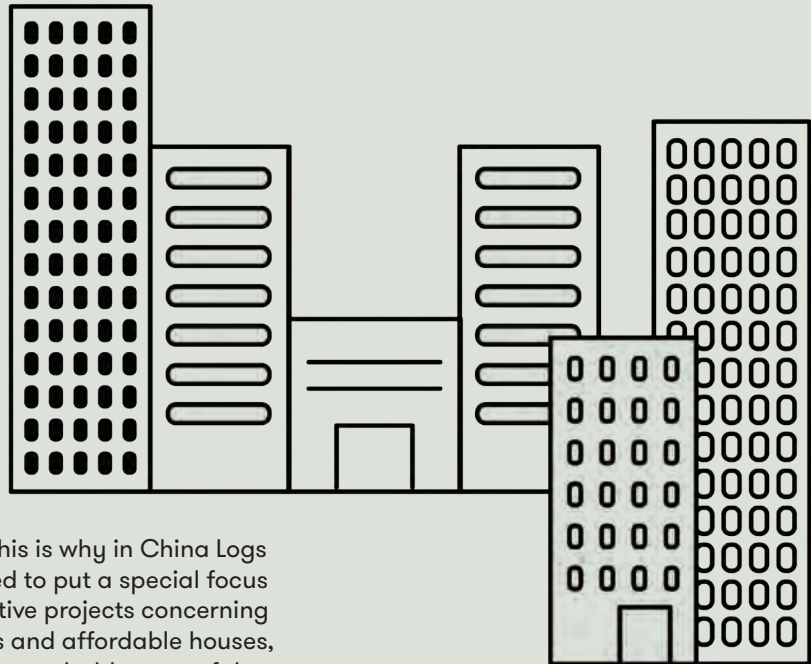
"And this is why in China Logs we decided to put a special focus on innovative projects concerning eco-toilets and affordable houses, these being probably someof the biggest challenges for urban equitable living in the future, especially in the most expanding metropolises of the world.

In our Visualize Me section, a project that combines both rural and urban worlds: Taobao Village · Smallacre City — a project by Drawing Architecture Studio, "combining the status quo of the very Chinese countryside and classic American avant-garde architectural design, mixing underlying folk wisdom with top elite thinking."

At last, throughout the issue, even if not always directly, we have tried to put the human back into the city, especially the creative city. After all, the "Open City" is a place in which people can "experiment and expand their experience", according to sociology professor Richard Sennett. ∎

协会网站上写道："气候变化是每个人的危机，建筑师具有先天优势，可以为解决这一危机出份力。"美国建筑师协会与早在2002年就成立的非盈利机构"建筑2030"一起，正积极承担责任，并采取有效行动，加倍减缓来源于建筑业的气候变化元凶——温室气体的产生。总部位于芝加哥的建筑师协会声称，建筑界正用有实际意义的方式战斗在应对气候变化的第一线，他们相信这是我们这个时代的挑战和机遇。同样在9月19日，英国伦敦巴比肯剧院举行了"建筑危机"峰会，其主题是在气候和生态危机的情况下建筑和城市实践应如何改变。该活动的网站上说："建筑界领导对抗全球变暖的潜力只能通过它的失败来体现。"

它呼吁不同背景的城市从业者聚集在一起，紧急讨论针对气候变化改革建筑物建设和设计的根本建议。基于这样的前提，我们专注于处理具体案例，并就创意经济和创意城市的具体情况进行精确分析。本刊的重点不在于提供最新案例，我们选择着重于当代重要行动和旧案例的对比研究。

《被遗弃的乌托邦》是我们转载自《纽约时报》T杂志的一篇深刻分析文章。尼基·萨瓦尔写道："一个进步而成功的公司城镇......其存在不是为了控制或方便，而是代表了一种崭新且短暂的企业理想主义，在这种理想主义中，企业、政治、建筑和公司员工的日常生活彼此交融。"我们相信这篇文章可以成为一个基本案例研究，从智力上和实践上有益于将工业城市转变为当代创新型城市的讨论：城市的社会层面。那么技术的作用和可能已经过时的术语"智慧城市"呢？马达沙希女士在接受本期采访时很好地回应了技术方面的问题，她说："互联网的快速传播正在从根本上改变全球人民的生活。我们在不同国家、地区和城市的生活、工作、娱乐和学习方式都受到网络变革力量的影响。但不幸的是，日益扩大的贫富差距导致了全球不平等。"

这就是为什么在"中国日志"板块中，我们决定把重点放在生态厕所和经济适用房的创新项目上。它们可能是未来城市，尤其是在不断扩大的大都市里公平生活的最大挑战。在"文化视觉"栏目中，我们呈现了一个融合了世界、乡村和城市的项目：由绘造社创作的"淘宝村·半亩城"，"把极具中国特色的乡村现状与美国经典的建筑先锋设计相结合，让底层民间智慧和顶层精英思想混搭"。最后，在整本期刊内，即使不是以最直接的方式，我们还是希望将人归于城市，尤其是创意城市之中。毕竟，理查德·森内特曾说过，"开放城市"是一个人们"可以实验并拓宽经历"的地方。∎

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The Big Picture

大背景

The Challenges and Promises of Sustainable Cities

可持续城市的 挑战与承诺

By **Jean-Louis Turlin**
让-路易·特林

Anne Hidalgo, the Mayor of Paris, is gearing up for the municipal elections in France next March. She will proudly defend her record as an environmentalist champion dedicated to improving quality of life – including air quality – in the French capital, for its 2.14 million inhabitants and for millions more of tourists every year.

Hundreds of miles of bike lanes along the banks of the Seine and across the city have reduced the number of cars. The right bank highway has been converted into a park. And yet, there were more days with high ozone levels in 2018 than when Ms. Hidalgo was elected four years earlier. "There are fewer cars, but there is more congestion, and that can affect pollution levels," according to Paul Lecroart, an urban planning expert at the Paris regional planning agency who was quoted in a recent New York Times article.

What could be seen as a no-win situation is in fact a confirmation of what needs to be done, which means redoubling efforts to alter collective behavior. "We can't live as before", declared Ms. Hidalgo in the same article. "There's been an acceleration in climate change".

It is therefore "important that efficient urban planning and management practices are in place to deal with the challenges brought by urbanization", as stated in the preamble to the United Nations goal on Sustainable Cities. Congestion and air pollution are just two of those challenges, which also include a shortage of affordable or adequate housing (883 million people live in slums, most of them to be found in Eastern and South-Eastern Asia), and a lack of funds to provide basic services for a fast-growing urban population of 3.5 billion people today (half of mankind) projected to rise to 5 billion by 2030.
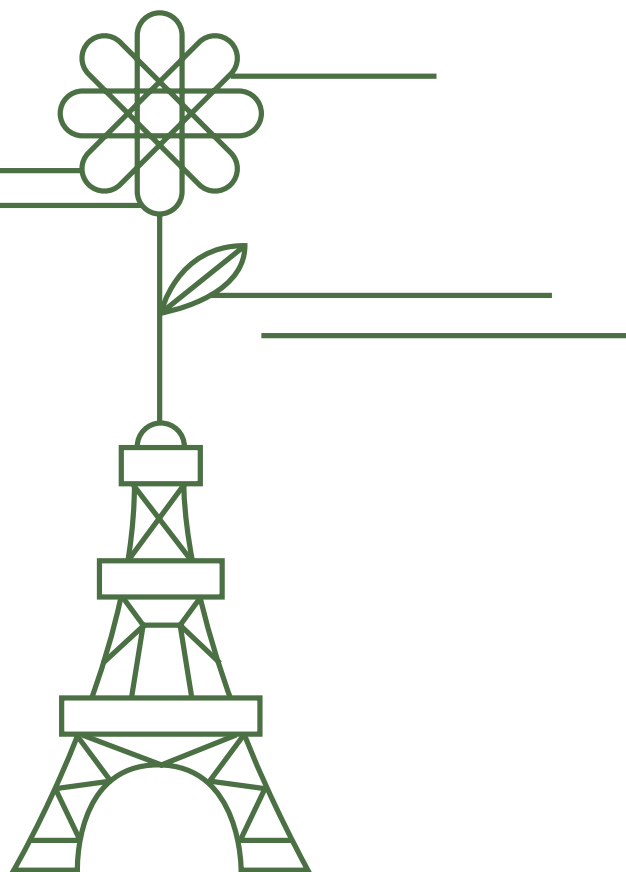
巴黎市长安娜·伊达尔戈正在为明年3月法国的市政选举做准备。作为一名环保斗士,她将自豪地捍卫这一成果,努力改善法国首都的生活质量——包括空气质量,为214万居民和每年数百万甚至更多的游客服务。

塞纳河沿岸和全市数百英里的自行车道,帮助减少了汽车数量。右岸公路已改建成公园。然而,2018年臭氧浓度较高的天数多于伊达尔戈四年前当选时的天数。《纽约时报》在最近的一篇文章中引用了巴黎区域规划机构城市规划专家保罗·勒克罗阿尔的话:"汽车数量减少,但拥堵情况增加,这可能会影响污染程度。"

这种未获成功的情况,实际上正确认了我们需要做什么,这意味着需要加倍努力改变集体行为。"我们不能像以前那样生活了,"伊达尔戈女士在同一篇文章中称,"气候变化已然加速。"

The challenges are both internal and external. With oceans heating up 40% faster than previously thought, as revealed in a recent issue of the journal Science, hurricanes will become more severe while coastlines around the world will flood more frequently. After Hurricane Sandy wreaked havoc in 2012, New York City is taking seriously the threat of ending up under water.

"Sponge cities" offer a promising solution. The concept, as defined by the Chinese landscape architect Yu Kongjian of Turenscape, offers new strategies "for the adaptation of the city's architecture and infrastructure construction to floods (…) Compared with conventional water conservancy and rainwater management, it advocates the action of 'slowing down' instead of 'speeding up', favoring reservoir detention over flood discharge". Three projects on which Mr. Yu and Turenscape have been working in China have demonstrated the effectiveness of flood adaptation strategy.

Chinese cities are also having to cope with daunting internal challenges, considering that the urban share of the nation's population is expected to rise from nearly 60% at present to 80% by 2050. Some of China's efforts aimed at a "new eco-city urban model" are listed by Professor Stephen S. Roach in an article titled "Sustainability with Chinese Characteristics": "Low-energy construction materials, light mass transportation, and 'green space' urban pockets". Seven of the 12 longest subway networks are in China, which also registers sales of electric vehicles that are almost three times the numbers for the United States and Europe. The country has plans to construct 250 eco-cities.

The ingredients needed to shape the future of sustainable cities are well known: creativity, smart solutions and citizens' participation. It is not just about money, although public and private funding is key. Modern technology provides important tools to achieve the goal of making urban living safer, wiser in the use of resources and socially responsible.

The efficiency of those tools relies on a participatory approach. Farhaan Ladhani and Sean Willett of Digital Public Square write that "the long-term success of a neighborhood is predicated on its community members feeling a sense of ownership and belonging".

They cite experiments being conducted in the Spanish town of Barcelona, which has created an open-source digital tool ("Decidim") to keep residents informed and to receive their input about city planning, and in Bologna (Italy), which has launched an "Office of "Civic Imagination" and engagement labs throughout the city. They also mention "Neighborland", a customizable platform for engagement between city planners and communities.

We are all in this together. Such is the message that Professor Mariana Mazzucato is delivering when she writes: "In a society wracked by populist discontent, it is critical that all citizens participate in transforming our society for the better. Making our towns, cities, and streets healthy and sustainable will require inspired action from everyone". ■

MAKING OUR TOWNS, CITIES, AND STREETS HEALTHY AND SUSTAINABLE WILL REQUIRE INSPIRED ACTION FROM EVERYONE

因此，正如《联合国可持续城市目标》序言中所指出的，"必须建立有效的城市规划和管理办法，以应对城市化带来的挑战"。拥堵和空气污染只是其中两个挑战，此外还包括廉价或可提供住房的短缺（8.83亿人生活在贫民窟，其中大部分处于东亚和东南亚），以及缺乏资金为快速增长的城市人口提供基本服务，目前城市人口为35亿（占全球人口总量的一半），预计到2030年将增至50亿。

这些挑战既有内部的也有外部的。正如最近一期《科学》杂志所揭示的那样，随着海洋升温速度比之前想象中的快了40%，飓风将变得更加严重，而世界各地的海岸线将频繁遭受洪灾。2012年飓风桑迪肆虐后，纽约开始认真对待被水淹没的威胁。

"海绵城市"提供了一个可靠的解决方案。中国景观设计师、土人设计的创始人俞孔坚提出了"城市建筑和基础设施建设适应洪水……与传统水利和雨水管理相比，提倡'减速'而不是'加速'，更倾向于水库蓄水而不是泄洪"的新战略。俞先生和土人设计在中国开展的项目证明了洪水适应策略的有效性。

考虑到中国城市人口在人口中所占的比例预计将从目前的近60%升至2050年的80%，中国城市还必须应对严峻的内部挑战。斯蒂芬·S.罗奇教授在《中国特色的可持续性发展》一文中列举了中国为"新生态城市模式"所做的一些努力，其中包括低能耗建筑和材料、轻量化交通运输、城市绿色空间。全球12条最长的地铁网中，有7条在中国，中国的电动汽车销量几乎是美国和欧洲的3倍。中国还在计划建设250座生态城市。塑造可持续城市未来所需的要素众所周知，即：创造性、智能解决方案和公民参与。这不仅仅是钱的问题，但公共和私人资金确实很关键。现代技术提供了重要工具，能够帮助城市生活更安全、更智慧地利用资源和实现社会责任。

这些工具的效率依赖于参与方法。"数字公共广场"的法汉·拉哈尼和肖·威利特写道："一个社区的长远成功，建立在社区成员有主人翁意识和归属感的基础上。"他们引用了西班牙巴塞罗那和意大利博洛尼亚正在进行的实验。巴塞罗那创建了开源数字工具"Decidim"，让居民了解城市规划，并收集他们对城市规划的意见。博洛尼亚在全市各地设立了"公民想象力办公室"和参与实验室。他们还提到了"邻地"，这是一个让城市规划者和社区彼此接触的定制平台。

所有人都涉身其中。玛丽安娜·马祖卡托教授在文章中传达了这样的信息："在饱受民粹主义困扰的社会中，所有公民参与建设更美好的未来社会，这一点至关重要。让我们的村镇、城市和街道变得健康和可持续，需要来自每个人的创意行动。"■

The Role of Technology, Creativity and Cities in Our Way to Approach SDGs

科技、创意、城市与更可持续的未来

A Conversation with **Mehri Madarshahi** by ICCSD
ICCSD对话**梅里·马达沙希**

Mehri Madarshahi: Vice-Chair of the Asia Pacific Exchange and Cooperation Foundation, Former Senior Economist of the United Nations, Member of the Advisory Committee of the International Center for Creativity and Sustainable Development under the Auspices of UNESCO (Category 2)

梅里·马达沙希：亚太交流合作基金会副主席，曾任纽约联合国秘书处高级经济官员，联合国教科文组织国际创意与可持续发展中心咨询委员会委员

You worked at the UN as an economist for 26 years. How did your interest shift from the economy to cross-cultural communication, and then to environmental problems?

After I finished my studies of international affairs and cooperation, I was hired by the United Nations. At the beginning, I worked as a management analyst reviewing system-wide managerial issues. Working in that capacity provided me with an opportunity to have an overview of UN work. I travelled all over the world, reviewing with our team the bottlenecks we encountered, and made recommendations on how to overcome them.

Then I moved to the economic and social sectors and worked as an economist in the Africa Bureau, Western Africa in particular. Through my Office we dealt with new economic initiatives put forward by African countries under the auspices of New Partnerships for Africa's Development (NEPAD).

I was also the President of the UN Staff globally and dealt with issues of staff welfare and services. In early 2000, the General Assembly was seized with a new peace initiative by the Iranian Government under the title of "dialogue among civilisations." For a number of sessions, member states of the United Nations debated the meaning and spread of the word "civilisation" and how this "dialogue" should be handled.

These arguments led to almost no conclusions when I left the United Nations after 26 years of services. Upon arriving in Paris and dealing with UNESCO which was mainly engaged in culture, education and science, I continued thinking about how to find a medium for "dialogue among civilizations" and I found out that there are — according to UNESCO — over 70 thousand spoken languages around the world. It was a difficult task to pick one as a means of global dialogue.

That was when I decided to use the language of music as a catalyst for communication. After a brief experiment with seven musicians from seven different countries, the first program I organized at UNESCO was on its 60th anniversary. We had 285 musicians on stage. 90 of them come from 75 countries at one of UNESCO's regional meetings. I decided to go global and organized a major concert for the 60th anniversary of this organization with nearly 140 musicians from 75 countries. We had 75 traditional instruments playing with a Parisian classical orchestra, after almost no practice and very few rehearsals. The performance mesmerized the audience and expressed the words, "music is a universal language understood by all."

At the completion of the concert, we received a number of invitations from various countries (including five invitations from China) to spread our message around the world and experiment with this new idea of how to achieve peace and harmony in the world.

But again, this undertaking did not quite satisfy me and I could see more need in and around me for further initiatives. I was always in search of something new. I could see that the immediate challenge facing the world was to find ways to mitigate our imminent environmental crisis.

In 2009 we adopted the topic of "climate change and water awareness" and our music programs devoted five consecutive concerts to this important issue. Maestro Tan Dun conducted our last concert in this series in Hangzhou. Then came the more fundamental issue of how to create sustainable infrastructures in urban centres for water sanitation, transport and energy conservation. In September 2013, I visited Masdar city in Abu Dhabi. This is an experimental model for future cities which presents in a practical way theories that create completely self sufficient and sustainable environments. Masdar was built for 250 thousand people at the beginning. The whole city is based on the new scientific idea of how to regenerate energy, to recycle, how to bring about a sustainable model of transportation that meets major environmental requirements. This is why I felt at that point that my paradigm and value system regarding the parameters of sustainability must expand. I become much more involved with mordent technology and the challenges of emerging technological development. I found however, the Internet of things, AI, industrial robotics and all other technologies unfolding on a daily basis before our eyes, while fascinating, could also completely change our way of living. For humanity's sake, it is certain that these technologies should not run the human mind and behavior.

Robots should not replace humans, the global order should not be placed under the rule of machines. So how to keep control of our own destiny and how to train technology as a service to mankind I guess is in the hand of the UN and a few other intergovernmental organizations to come up with policies, rules and regulations applicable to all concerned. Is this a way out? Only time can tell.

Let me go back to sustainable development again. As we all witness and the UN latest report on climate change has warned us, the environment is getting more polluted, CO_2 in the atmosphere is increasing and the planet is almost 2 degrees Celsius hotter than before. One of the contributing factors is electronic waste. Until a few months ago, the US shipped its electronic waste to Hong Kong, allowing China to be the one recycling it. But now recycling rules are changing and the world may run soon out of options. Plastic has become part of our life. But the dangers of using plastic were not known until recently. The discovery of a huge island of plastic waste - as big as France - in the middle of the Pacific Ocean, and another in the Atlantic Ocean points to imminent danger in our food chain and mammal survival. This requires our urgent attention and we must think about it seriously.

Since you are interested about technology, how do you see technology? What kind of a role does technology have in solving present problems in society?

The rapid spread of the Internet is radically changing people's lives across the globe. How we live, work, play, and learn in various countries, regions, and cities is all impacted by the transformative powerwv of networking. Unfortunately, the increasing gap between rich and poor has given rise to global inequality. This has resulted in popular uprisings in Europe and in the United States in recent times. There are people who feel very insecure. They have lost their faith, have no family support and have lost their jobs to uncontrolled emerging technologies requiring special and high skills to be operated.

They see these technologies and international corporations as a major threat to their wellbeing. I believe governments and international organizations have now a major responsibility to rein in these technologies through new policies and procedures. They should ensure that major stakeholders are in agreement with their approach and assist in their implementation, the labor market should be also prepared to train and absorb unskilled workers. I must say that China has set an example which should be followed by other developing countries.

AS EINSTEIN ONCE SAID, "WE CAN'T SOLVE PROBLEMS WITH THE TYPE OF THINKING WE USED TO CREATE THEM." THIS MEANS THAT WE MUST CHALLENGE THE FAMILIAR BELIEF SYSTEMS THAT BOTH DESIGN AND SOCIETY CURRENTLY HOLD.

Through new training and managed migration from the rural to urban centers within a short time, it has managed to reduce poverty levels to an unprecedented level and alleviate poverty for 700 million people. How did China do this? Through education. So, education is one of the important issues in dealing with human welfare and the wellbeing of societies.

Do you think creativity can do something better to solve our problems today?

As a matter of fact, I think it's hard to define creativity. Is creativity innovation? Is creativity something that we do differently than normal, or…? I personally cannot precisely define creativity. But if we want to make try to explain it, I believe creativity in economic terms, can refer to the creative and cultural industries.

Creative industries matter increasingly in an economy where human creativity is predicted to become the most critical resource. This does not mean that traditional industries disappear, but that knowledge through research & development and innovation takes centre stage and become the prime driver of the economy and industry. Creativity is thus a major player in emerging knowledge economies and the growth they generate.

As for cultural issues, I think creativity could start from a blank background which with human ingenuity can take a form that has never existed before. Let us put it this way. In Barcelona, approximately 200-300 designers are engaged in paper dress design and creation. The art of paper-cutting in China goes back centuries, but the Spanish advanced this art to a level unheard of before.

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Illustration by LAVA BEIJING

These paper dresses are designed and made life size by artists using cutting and twisting. Their expertise – second to none – is demonstrated by the masses of twisted paper threads. Over some 500 dresses representing various periods in history are now on display in the Mollerussa museum in Barcelona. I am planning to bring these to China, to be displayed at the Himalaya Museum in Shanghai next year. This is really called creativity, something nobody has so far thought about. In addition, this art is environmentally sustainable since it uses recycled paper.

How about the role of cities in sustainable development? How do you view cities playing a role in this very urbanized world to fulfill the SDGs?

According to some estimates, by 2050 a total of 70% of the world's population will live in cities. Cities are centers of activity, cultural exchange, innovation, creativity, historic evolution as well as revolution. Cities are increasingly finding themselves at the center of societal challenges, as people all around the world flock there in the hope of a better life. These growing migrations simultaneously create major problems for urban administrators. Today, we are facing huge challenges spanning from traffic jams to inefficient infrastructure to social inequality to housing and energy inefficiencies. If the consumption habits of today stay the same, increases in CO_2 and other environmental hazards will cripple our quest for the continuation of life.

To reduce poverty, one Chinese policy is to shift rural dwellers to urban areas. Apart from the requirements for retraining these internal migrants, housing and health centers, transportation, water and sanitation facilities are issues, and productivity on the farms will drop due to mechanization. Soon, problems with increases in food consumption, energy use and other commodities as well as socio-economic difficulties emerging from this decision will lead to a slowdown in the application of these policies to most urban centers.

These problems are complex and hard to tackle — but not insurmountable. A wide range of policies can respond to multiple environmental risks in the cities. Reducing carbon emissions and energy use, reducing city smog and helping protect or manage water and food systems and natural habitats are among some of the preferred measures. Some cities are forging ahead with the use of innovative urban planning technological and governance models, showing that with the right focus and resources, they can become smart or more sustainable.

The role of design in all its diverse forms connected to the shaping of urban areas but most important of all is a paradigm shift among people.

As Einstein once said, "We can't solve problems with the type of thinking we used to create them." This means that we must challenge the familiar belief systems that both design and society currently hold.∎

您在联合国做了26年的经济学家,后来是怎么从关注经济转向跨文化交流,然后又转向环境问题的?

在我完成国际事务、国际合作方面的学习后,我被联合国聘用。起初,我担任管理分析师,负责审查整个系统的管理问题。这个工作岗位给我提供了一个全面了解联合国工作的机会。我走遍了世界各地,和我们的团队一起审查瓶颈问题,并提出克服它们的建议。然后我转到经济和社会部门,在西非局担任经济学家。在那里,我们处理在"非洲发展新伙伴关系"(NEPAD)计划名义下提出的新经济倡议。当时,我也是联合国全球工作人员主席,负责处理工作人员福利和服务方面的问题。在2000年初,联合国大会重点关注了伊朗政府提出的以"文明间对话"为题的新和平倡议,各成员国通过若干次会议就"文明"一词的含义和传播,以及如何进行这种"对话"做了讨论。

等我在联合国工作了26年后离开时,这些争论依然几乎没有得出任何结论。之后我搬到法国巴黎,开始与主要从事文化、教育和科学的教科文组织打交道,也在继续思考如何找到不同文明之间对话的媒介。据教科文组织数据,全世界有超过7万种口语。显然很难从中选择某一种来进行全球对话,所以我决定用音乐语言作为交流的催化剂。在与来自7个国家的7位音乐家进行了简单的实验后,我在联合国教科文组织成立60周年纪念活动中举办了第一个项目。

当时我们在舞台上聚集了285位音乐家。他们中有90位(来自75个国家)出席了教科文组织的一次区域会议,也就是那时我决定把范畴扩展到全球,为教科文组织成立60周年纪念组织一场大型音乐会,请来了来自75个国家的近140位音乐家。75种传统乐器与一个巴黎古典乐团共同演奏。我们事先没有练习,也只做了几次排练。观众们非常欣赏这次演出,深深感到"音乐是所有人都能理解的通用语言"。音乐会结束后,我们收到了来自各国的邀请,其中包括5次来自中国的邀请,希望向全世界传播我们的信息,尝试用这一新的理念来帮助实现世界和平。

但这项工作同样并没有让我感到意得志满,我发现身边还有更多需要采取主动行动的事情。比如环境危机,世界面临的直接挑战就是找到方案,缓解这一迫在眉睫的危机。2009年,我们围绕"气候变化和水意识"主题,连续举办了五场音乐会,来讨论这个议题。这一系列音乐会的最后一场,是由谭盾大师在杭州指挥的。然后是关于如何在城市中心建立可持续的基础设施,以解决水源卫生、交通和能源保护问题。2013年9月,我参观了阿布扎比的马斯达尔市。这是一个未来城市的实验模型,以实例展示了如何将理论付诸实践,创造一个完全自给自足的可持续的环境。这座城市的首批居民预计为25万人,整个城市基于新的科学理念,思考如

何通过再生能源、回收、可持续的交通模式来满足环境要求。我相信是在那个时间点,我关于可持续性的范式与价值体系拓宽了。我越来越关注现代技术和新兴技术的发展。但我也发现,物联网、人工智能、工业机器人以及其他所有每天在我们眼前展开的技术,尽管令人着迷,但它们同时也会完全改变我们的生活方式。为了人类考虑,这些技术肯定不应该影响人类的思想和行为。机器人不应该取代人类,全球秩序也不应该被置于机器的规则之下。那么如何控制我们身为人类的命运,如何让技术为人类服务?我想,那就需要联合国和其他几个政府间机构组织制定出相关的政策、规则和条例。这是出路吗?只有未来才能给出明确答案。

回到可持续发展问题。正如我们所看到的,而且联合国关于气候变化的最新报告也在警示我们,环境污染越来越严重,大气中的二氧化碳正在增加,导致气温升高程度正接近2 摄氏度。原因之一是电子垃圾。直到几个月前,美国还在将其电子垃圾运往中国香港,回收主要由中国进行。但现在回收规则发生了变化,我们可能很快就没有选择了。塑料是我们生活中常见的一部分,但直到最近人们才意识到使用塑料的危险。太平洋中间有一个几乎和法国面积一样大的塑料垃圾岛,大西洋也有同样的问题,给人类食物链和哺乳动物生存带来的威胁迫在眉睫。这些都需要我们密切关注并严肃对待。

既然您对技术感兴趣,您如何看待技术?在解决我们社会中存在的问题方面,技术发挥了什么样的作用?

互联网的迅速普及彻底改变了人们的生活,不同国家、地区和城市的生活、工作、娱乐和学习方式都受到了网络变革力量的影响。不幸的是,贫富差距的扩大导致了全球的不平等。这就是为什么近年欧洲和美国有那么多不安定事件。有些人感到不安,他们失去了信心,没有家人支持,工作被那些他们无法控制的、具备特殊和高超技能的新兴技术所取代。因此他们把技术和国际公司看作对自身利益的威胁。我认为政府和国际组织有责任通过新的政策和程序,来控制快速发展、不受控制的技术。他们应该确保主要利益相关者同意他们的举措并能够协助实施,劳动力市场也应该准备培训并吸收非技术工人。中国在这方面为其他发展中国家树立了榜样。通过培训和在短期内让大量务工人员从农村进入城市,中国成功地将贫困水平降低到历史最低,贫困人口减少了7亿。这是如何做到的呢?通过教育。所以说,教育是确保人类福祉和社会福利的重要课题之一。

您认为创意对解决我们的问题有什么益处吗?

事实上,很难定义创意。创意就是创新吗?是指我们采取不同于常规的做法吗?还是别的什么?我个人无法对它作出准确定义。一定要试图解释的话,我认为用经济学术语来讲,创意可以指创意和文化产业。在人类创造力被预测成为关键资源的经济中,创意产业越来越重要。这并不意味着传统产业将就此消失,而是说,通过研发和创新的知识将占据中心舞台,成为经济和产业的原动力。因此,创意是新兴知识经济及其增长的主要驱动力。

文化方面,我觉得可以这么说:创意是指从一张白纸开始,通过人类的聪明才智,创造出前所未有的东西来。巴塞罗那有两三百名设计师从事纸服装的设计和创作。中国的剪纸艺术可以追溯到几百年前,但西班牙人把这项艺术提高到了前所未有的水平。

这些纸服装是按照真人大小设计和制作的,由艺术家通过剪纸制作而成,再由技术一流的专业人士用纸扭带装饰。代表历史不同时期的约500件礼服在西班牙巴塞罗那的莫列鲁萨博物馆展出。我打算把这些带到中国来,上海喜马拉雅博物馆已经同意于明年展出。这就是创意,迄今还没有人想到过的事。而且,因为使用的是再生纸,所以这种艺术从环境角度来说是可持续的。

在城市化程度极高的当今,您认为城市在我们完成可持续发展目标的过程中,能发挥什么作用呢?

据估计,到2050年,世界70%的人口都居住在城市里。城市是活动中心、文化交流中心、创新中心、创意中心、历史演变和革命中心。城市将越来越处于社会挑战的中心,因为世界各地的人们都在纷纷涌向城市,以期过上更好的生活。不断增加的进城人口也给城市管理者带来了巨大的难题。今天,我们面临着交通堵塞、基础设施不敷使用、社会不平等、住房和能源效率低下等严峻挑战。如果今天的消费习惯保持不变,那么二氧化碳和其他环境危害的增加将成为生命延续的致命威胁。

为了减少贫困,中国的一项政策是将农村居民迁移到城市。除了对新进城居民进行再培训的要求之外,它还伴随着其他事项,比如需要提供住房和医疗中心、交通、供水和卫生设施,农地的生产效率降低,要求实现农业机械化等。很快,粮食消费、能源使用和其他商品方面的问题将会增加,还有这一政策所产生的社会经济问题,它们将导致这些政策在大多数城市中心的实施速度放慢。

这些问题很棘手,但并非无法克服。可以通过一系列政策来应对城市中的多种环境风险。减少碳排放和能源使用,减少城市烟雾,帮助保护或管理水和食品系统以及自然栖息地,这些都是一些首选措施。一些城市正在利用创新的城市规划技术和治理模式向前迈进,这表明只要有正确的措施和资源,城市可以变得更加智慧或更具可持续性。城市的塑造离不开各种形式的设计,但最重要的是人与人之间的范式转换。

爱因斯坦曾经说过:"我们不能用创造问题的思维方式来解决问题。"这意味着,我们必须对设计和社会现有的信仰体系提出挑战。■

Creative Economy, Creative Cities and Sustainable Urban Development

By **Yi Na**
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Since the 1990s, an ongoing process to define cultural creative industries and the creative economy has been taking place. This "ongoing" state implies that the definitions of these two concepts, and their related and similar concepts, are somewhat different, and even controversial and divergent in the context of different policies and academics around the world. One reason is that the creative economy is quite different from earlier cultural and economic concepts (although the concept of "culture" is itself difficult to define). In fact it is an emerging empirical concept that has never appeared in the field of analysis before (Pratt, & Hutton 2013). At present, the term "creative economy" has been widely accepted at international level with UNCTAD having published two issues of the Creative Economy Report in 2008 and 2010. After that, the term began to be widely used, for example in UNESCO.

As far as the concept itself is concerned, the creative economy has a larger extension than creative industries we are familiar with. In short, creative industries are various industries that can create intellectual property, while the creative economy includes activities and services that are profit and non-profit, formal and informal, private and public, as well as the production systems and value chains necessary to maintain them. This distinction can also be seen in the definitions and classifications established by UNESCO Institute for Statistics (Pratt, & Hutton 2013).

Six categories are included: cultural and natural heritage, performance and celebration, visual arts and crafts, books and press, audio-visual and interactive media, and design and creative services, and they are connected horizontally with intangible cultural heritage (UIS 2009).

Two problems with this categorization exist. First, the creative economy is economically important, but there is no truth-like standard definition for it as its concept and connotation are actively selected according to the applied policy formulated in various countries. Second, as a new concept, its classification is tied to an industrial classification system formed in the middle of the last century, and it is scattered into the statistical categories of various subdivisions of the original system.

The UIS' classification attempt is a useful but limited exploration, but the creative economy has not yet shaken the industrial classification system at international level and in various countries. As a result, it is difficult to establish a set of evaluation criteria that can be compared horizontally on a global scale. The observational indicators of trade in cultural goods and services established by UNCTAD are the most accepted evaluation criteria. According to this indicator system, the global creative product market doubled from USD 208 billion in 2002 to USD 509 billion in 2015, achieving an average annual growth rate of 7% despite the impact of the financial crisis.

Among the seven categories of creative products identified by UNCTAD (i.e. design, crafts, audio-visual, new media, performing arts, publishing, and visual arts), design products account for more than half. Limited statistics exist on the export of creative services in various countries, but UNCTAD is optimistic that with the development of the digital and sharing economy, creative services which are closely tied to e-commerce will have great potential for development in the future (UNCTAD 2018).

Although rarely deliberately mentioned, the creative economy has always been closely related to cities. Creativity mainly lies in design, media, and arts which clearly point to urban physical spaces.

Although creative practices are now applied to the countryside, they are always based on social interaction, knowledge and capital accumulation which is easier to obtain in cities. This has gradually been recognized in many international reports. The creative economy has shown a distinct urban focus in Europe, and rural physical spaces are the "silent majority of non-creative places" (Rantisi, Leslie & Christopherson 2006).

The creative economy is the third largest sector of the economy in a benchmark city like London. A five-year collaborative project in Canada named "Innovation and Creativity" also demonstrates that a high level of cultural development requires agglomeration. Toronto, Montreal and Vancouver are therefore not only the most populous and fully employed cities in Canada, but also the absolute mainstay of the country's creative industries, focusing on film, video and television production, computer graphics and new media, music, architecture and advertising.

In Asia, it is not difficult to see that big cities like Beijing, Shanghai, Hong Kong, Taipei, Tokyo, Seoul, Bangkok, as well as Singapore, have become centers of creative economic development in Asia. The cities' advantages in transportation and communication, universities and educational institutions, and the integration of related departments has fostered the creative economy and pegged it to the city.
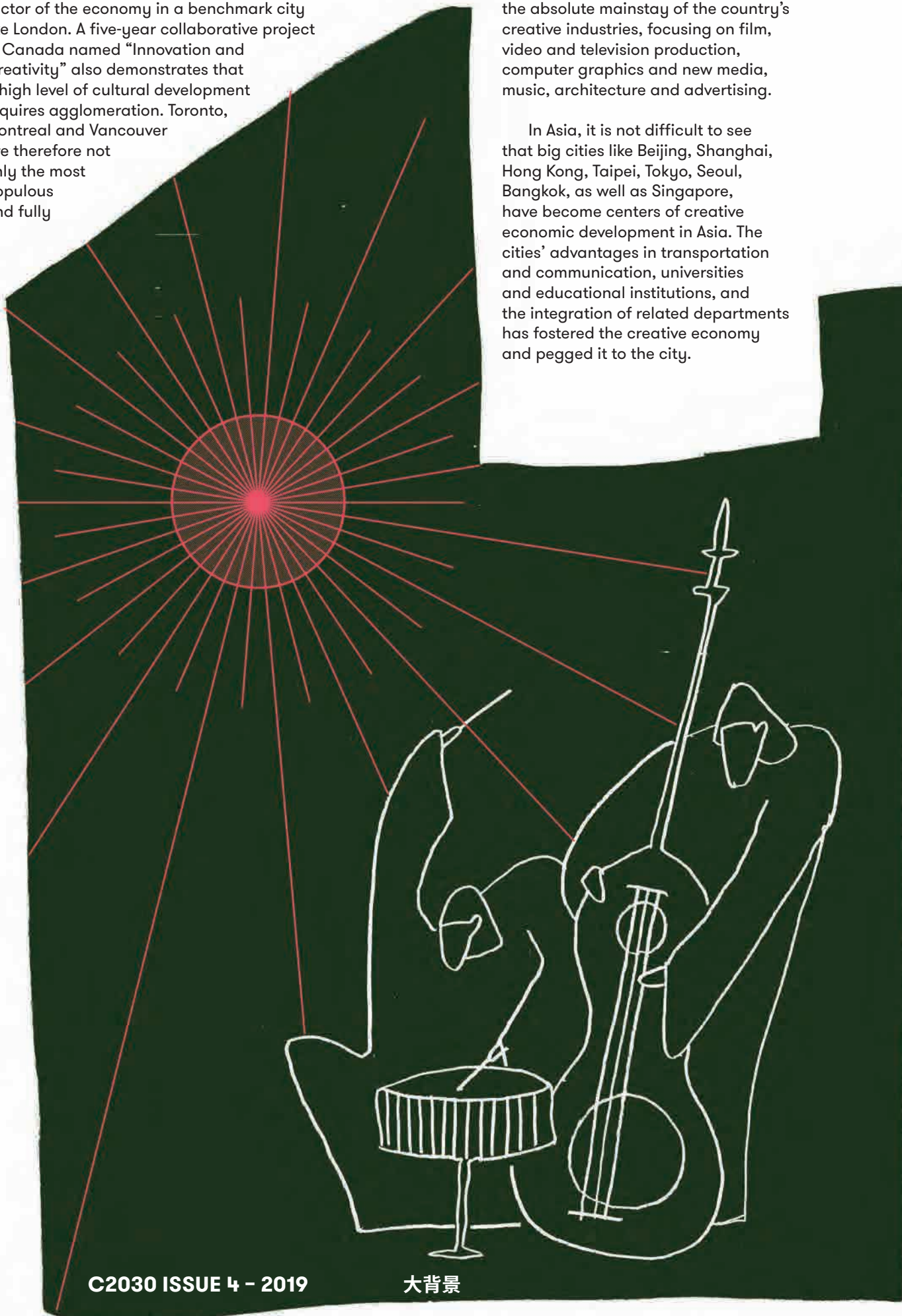
Among the many advocates, Richard Florida's 3T theory (i.e. technology, talent, tolerance) and creative class definition, Charles Landry's emphasis on creative governance practices, and the relevant studies carried out by other scholars have shaped, enriched and revised the concept of the "Creative City". Like the creative economy, the concept of "Creative City" has also been adopted and promoted by the United Nations system and has become a globally agreed term. At this time, this term has changed from a practical concept of promotion and revival to a policy concept, which is different from the connotation and extension of the term used by the scholars mentioned above. For UNESCO, creativity and culture are essential to sustainable development. That is why they are included in the 17 goals of the UN 2030 Agenda for Sustainable Development. According to UN forecasts, the global urban population will soon rise from 52% to 75% of the world's total population (United Nations 2012: 120). We therefore need initiatives to "make cities and human settlements inclusive, safe, resilient and sustainable" (UN, 2015).

In the context of UNESCO, creative cities are an initiative to integrate culture into urban development planning, referring to cities that view creativity as a strategic factor for sustainable development at economic, social, cultural and environmental levels. In order to promote partnerships between cultural and creative industries, strengthen participation in cultural life, and share best practices, UNESCO established the UNESCO Creative Cities Network (UCCN) in 2004 to promote cooperation with and among these cities. UCCN covers seven creative fields: crafts and folk art, media arts, film, design, gastronomy, literature and music. As of 2017, 180 cities in 72 countries have joined, including 12 Chinese cities. Many more apply to be UCCN member cities each year.

UCCN has set six objectives and actions will be taken to implement them:
— strengthen international cooperation between cities that have recognized creativity as a strategic factor

of their sustainable development;
— stimulate and enhance initiatives led by member cities to make creativity an essential component of urban development, notably through partnerships involving the public and private sectors and civil society.
— strengthen the creation, production, distribution and dissemination of cultural activities, goods and services;
— develop hubs of creativity and innovation and broaden opportunities for creators and professionals in the cultural sector;
— improve access to and participation in cultural life as well as the enjoyment of cultural goods and services, notably for marginalized or vulnerable groups and individuals;
— fully integrate culture and creativity into local development strategies and plans.

It is easy to see that the establishment of UCCN links a number of nodes while highlighting the key points in a fragmented way and provides a branding dissemination and communication platform. Cities that join UCCN become part of a highly recognizable overall platform with their unique features, enjoying the benefits of branding and sharing.
In general, there is a close, open and mutually supportive relationship between cities and the creative economy, rather than one-way dependence. Cities' physical capacity to gather talents, capital and materials guarantees the most basic elements for creative production. Cities with rich cultural heritage have the capacity to increase their income and enhance their environment by developing culture-based tourism. As various cities and regions are attracting foreign investment, the city brand and promotion effects brought on by the cultural and creative industries, as well as the lifestyles that keep talents there, will help cities win. Creative cities tend to be more tolerant of different forms of cultural expression which makes the living environment more colorful.

As an emerging industry, the creative economy can directly contribute to the economic growth of the city. Vivid examples include London where the cultural sector is the third largest in the economy,

and Los Angeles, New York, Toronto, Melbourne and many other cities where the creative economy occupies the dominant position in the urban economy.

In Asian cities with rich cultural heritage, such as Beijing, Tokyo and Seoul, when we talk about cultural creativity, it is no longer a discussion of traditional art, literature, music and dance, but about contemporary cultural forms of expression.
For instance, Beijing joined UCCN as a capital of design. Seoul and Tokyo are more reminiscent of industries such as film, games and the internet. In developing countries, due to the weak industrial base, the creative economy may not occupy such a large share as in major developed cities, but with the transfer of capital and industrial restructuring, the prospect of the new cultural economy occupying a larger share in economies in major cities and regions of developing countries is foreseeable.
Nevertheless, with the rise of the digital economy, "new" developments known for technology-intensive websites and multimedia in cities such as New York, London and San Francisco in the past have been replaced by newer media, design and new digital economies (Foord, & Evans 2010). Despite the financial crisis and widespread economic recession in recent years, the continued development of the creative economy proves that it is not just a product of economic boom ("a 'good time' candy-floss", Pratt, & Hutton 2013), but also needs continuous research on the relationship between the creative economy and cities in the future.

Regrettably, in this field, no established research conclusion can become a "standard answer", and no policy "template" can be referenced. The experience and cases of other cities and regions can never be directly copied and made to succeed again.
We should shift from "fast policy" thinking to "patient policy" thinking. Just as we expect the creative economy to promote sustainable urban and regional development, creative cities and the creative economy require long-term continuous observation vand research. ■

创意经济、创意城市与城市可持续发展

作者：**意娜**

从20世纪90年代开始，对文化创意产业和创意经济的定义就一直在进行。这种"进行时"状态暗示了在全球范围内的不同政策和学术语境中，对这两个概念，及其相关、相似概念的定义各有所侧重，甚至颇多争议和分歧。原因之一是创意经济不同于以往的诸多文化、经济概念（尽管"文化"概念本身就已难以定义）有可追溯的学理传承，而是在过去的分析视野中不曾出现过的新兴经验性概念。目前"创意经济"这一术语在国际层面被广泛接受，是经由联合国贸发会议（UNCTAD）在其主编的2008年和2010年两册《创意经济报告》来确立的，后续联合国教科文组织等机构也沿用了这一术语。

就概念本身而言，创意经济比我们熟知的创意产业外延要大。创意产业简言之是能够创造知识产权的各种产业。而创意经济包括了营利与非营利、正规与非正规、私营和公共服务部门的活动，以及维持此类产品所必需的生产系统和价值链。在联合国教科文统计所的定义和分类统计指标设定中，也能看出这种区别。教科文统计所核定的文化领域包括六种：文化和自然遗产、表演和庆祝活动、视觉艺术和手工艺、书籍和报刊、音像和交互媒体、设计和创意服务。这六类又横向地与非物质文化遗产相连接。这一分类体系说明了两个问题：首先，创意经济在经济上有重要意义，但概念和内涵是根据各国实际政策制定来主动选择的，还没有形成"真理"式的标准定义；其次，创意经济作为一种新兴理念，其分类仍然局限于成型于20世纪中期的工业分类体系，被分散到原有体系的各个细分的统计类别中，教科文的分类尝试是一种有益却有限的探索，创意经济尚未撼动国际层面和各个国家的工业分类系统。也正因为如此，全球范围内很难建立一套可兹横向比较的评价标准。由联合国贸发会议确立的文化产品与服务贸易观测指标是被接受程度最高的一种评价标准。根据这一指标体系，全球创意产品市场从2002年的2080亿美元翻番到2015年的5090亿美元，尽管受到金融危机影响，也实现了年均7%的增长率。在联合国贸发会议认定的创意产品的七个大类（设计、手工艺、视听、新媒体、表演艺术、出版、视觉艺术）中，设计产品最多，超过所有创意产品的一半。

各国创意服务出口的数据仍然缺乏有效统计，但联合国贸发会议乐观认为，随着数字和共享经济的发展，与电子商务密切绑定的创意服务在未来会有很大发展潜力。

尽管很少被有意提到，但创意经济从一开始就与城市密切相关。因为"创意"主要发力的设计、传媒、艺术等行业，都明显指向城市物理空间。创造性的实践尽管如今也被应用到乡村，但始终是基于社交和知识、资本积累的，这些都更容易在城市获得。这在许多国际报告中都逐渐得到承认，创意经济在欧洲呈现出明显的城市聚焦特征，乡村物理空间是"非创意之地'沉默的大多数'"，在伦敦这样的标杆性城市更是稳坐经济的第三大部门位置。加拿大的一项五年期的合作项目"创新与创意"也证明文化的高度发展需要集聚。多伦多、蒙特利尔和温哥华因此不仅成为加拿大居住和就业人口最多的城市，也成为加拿大文化创意产业发展的绝对主体，主要集中于电影、视频和电视制作、计算机图形和新媒体、音乐、建筑和广告业等。在亚洲，我们也不难观察到，像北京、上海、香港、台北、东京、首尔、新加坡和曼谷等大城市成为亚洲创意经济发展的重镇。城市所具有的交通和通讯优势、大学和教育机构的集聚以及创意经济相关部门集聚的优势孕育了创意经济，并给创意经济打上了城市的标签。

创意城市是在21世纪创意经济发展到一定阶段后提出的另一个重要理念。在诸多倡导者中，理查德·佛罗里达的3T理论（技术、人才和包容度）及创意阶层的界分，查尔斯·兰德里所侧重的创意治理实践，以及其他诸多学者展开过的相关研究，都塑造、丰富、修正了创意城市的理念。与创意经济一样，创意城市概念也经由联合国系统的采用和推动，成为一种具有全球共识的术语。此时这一术语已经与前述学者所用术语的内涵与外延有所不同，从一个提升和复兴性的实践概念转变为政策性概念。

在联合国教科文组织看来，可持续发展中一个重要的面向是创意与文化，这也已写入联合国《2030可持续发展议程》的17大目标中。这种战略和政策的路径都旨在促进发展、激励创新、提高社会凝聚力和公民的幸福感，而城市则是这一系列新战略、政策和举措的根基。根据联合国预计，全球城市人口的占比很快会从2012年的52%上升到全球总人口的三分之二，城市的发展对世界未来的发展有决定性影响，城市的可持续发展有助于世界的可持续发展，因此需要一种举措来"让城市和人类居住区更具有包容性、安全性、弹性及可持续性"。

创意城市在联合国教科文的语境中是将文化纳入城市发展规划中的举措，指的是将创意视为经济、社会、文化和环境层面可持续发展战略因素的城市。为了促进文化和创意产业的合作伙伴关系，加强对文化生活的参与，分享最佳实践，联合国教科文组织于2004年成立了创意城市网络（UCCN），来与这些城市合作，并且加强这些城市之间的合作。创意城市网络涉及手工艺与民间艺术、媒体艺术、电影、设计、美食、文学和音乐七个创意领域，截至2017年已经吸纳了72个国家的180个城市加入。网络目标被设定为六项，并据此采取相应的行动：

一、加强将创意视为可持续发展战略因素的城市间的国际合作；

二、着重通过公私部门和民间团体的合作伙伴关系，激发并强化成员城市引导的视创
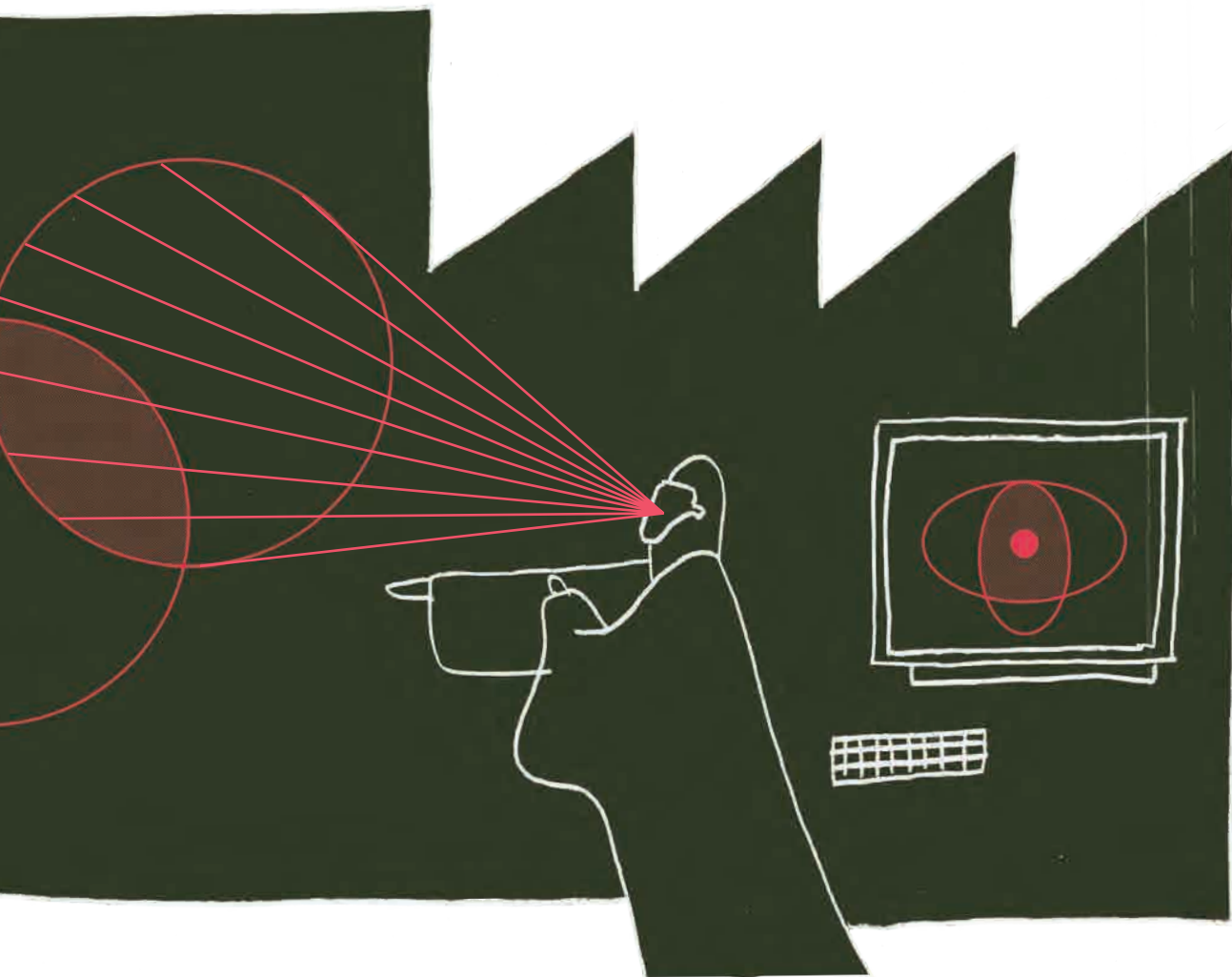
意为城市发展重要组成部分的各类举措；

三、加强文化活动、产品和服务的创建、制作、传播和宣传；

四、建立创意和创新枢纽，拓宽文化领域创意者和专业人士的机遇；

五、改善人们对文化生活的获取和参与，促进人们尤其是边缘化和弱势群体与个人对文化产品和服务的享有；

六、将文化与创意充分纳入地方发展战略和规划中。

不难看出，创意城市网络的建立是以一种突出重点的碎片化方式将诸多节点链接在一起，提供了一个品牌化的宣传和交流平台。加入网络的城市以单个的特征成为一个具有高辨识度的整体平台的一部分，享有品牌和共享的收益。而品牌和共享在创意产业发展中是重要的因素。

总的来说，城市与创意经济之间呈现出紧密互助的开放关系，而不是单向的依赖。城市具有的物理上人、财、物集聚能力为创意生产保障了最基本的要素；具有文化遗产基础的城市通过发展文化旅游增加收入、提升城市硬件环境；在各个城市和地区积极吸引外来投资的背景下，文化创意产业带来的城市品牌和推广效果，以及能够吸引人才留居的生活方式，都有助于这一城市在竞争中获胜。此外，创意城市通常更能包容各种文化表现形式，营造更为和谐多彩的生活环境。而作为一种新兴的产业门类，创意经济更可以直接贡献于城市的经济增长，从文化部门在伦敦经济中排名第三，到洛杉矶、纽约、多伦多、墨尔本等城市创意经济占据城市经济构成的优势地位等众多的例证中都可以得到鲜活的证明。

在文化底蕴深厚的亚洲城市中，不管在北京、东京还是首尔都可以观察到，当我们谈及文化创意，已经不再是对传统艺术、传统文学、传统音乐舞蹈的讨论，而是熟悉的当代文化产业和创造性活动，比如北京是以设计之都进入教科文创意城市网络，而首尔和东京也更容易让人联想到影视、游戏和互联网等产业形态。在发展中国家，由于工业基础的薄弱，创意经济可能无法像发达国家主要城市那样占据那么大的份额，但随着资本转移和产业结构调整，新文化经济占领发展中国家主要城市和区域经济更大份额的未来前景是可以预见的。

不过，随着数字经济的兴起，纽约、伦敦和旧金山等过去以技术密集型网站和多媒体闻名的"新"发展方式已经被更新的新媒体、设计和新数字经济所取代。尽管近年来经历了金融危机和广泛的经济衰退，但创意经济的持续发展证明了它不光是经济繁荣时期的产物，也需要未来持续展开创意经济与城市关系研究。遗憾的是，在这一领域，没有一种既成的研究结论能够成为"标准答案"，也没有政策"模板"可以参考，其他城市和地区的经验和案例永远不可能直接照搬而获得再次成功。推动创意经济和创意城市的政策理念，需要从"快政策"思维转变为"耐心政策"思维。正如我们期望创意经济促进城市和地区可持续发展，创意城市和创意经济本身，也需要我们长期持续地进行观察和研究。■

注：本文摘编自联合国教科文组织国际创意与可持续发展中心编制的《创意城市观察——创意城市网络发展历程与现状研究报告（2004-2018）》中同名作者文章。

Mobilizing for a Climate Moonshot

像实施登月计划一样应对气候变化

By **Mariana Mazzucato**
玛丽安娜·马祖卡托

LONDON – The 50th anniversary of the first Moon landing in July reinforced an important lesson: one of humankind's greatest feats occurred when imagination, common purpose, and a systemic approach to problem solving won out over siloed thinking and anxiety about where the money would come from. As US President John F. Kennedy made clear in 1961, going to the moon would cost money and entail risks, but it would be well worth it.

Kennedy understood that many of the lasting benefits of innovation happen not just at the end of the process, but along the way, through dynamic spillovers. And in the case of America's moonshot, he turned out to be right. Much of the technology in our smartphones today can be traced back to the Apollo program and related missions.

Imagine if we were to bring the same courage, spirit of experimentation, and willpower to bear on the greatest challenge of our time: climate change. Imagine having leaders who would proudly declare: "We choose to fight climate change in this decade not because it is easy, but because it is hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win."

To be sure, the moonshot was motivated by America's need for a victory – at once highly symbolic and tangible – in the Cold War. But, once the quest was started, it was about solving a specific problem. And, as is typical in most wars, completing the mission came first; worrying about how to pay for it came later.

Given the threat it poses, climate change should be confronted in the same way. According to the Intergovernmental Panel on Climate Change, we have just 12 years to limit global warming to 1.5°C above pre-industrial levels, or else invite disaster. Such warnings should be a wake-up call for those overseeing public and private budgets. As the young climate activist Greta Thunberg puts it, we must approach the issue with the same urgency "as if our house is on fire. Because it is."

To that end, we should heed the primary lesson of the Apollo program: that inspiring people with hope in a mission is crucial to ensuring its success. In the case of climate change, that inspiration must involve rethinking how we organize our societies.

We need to start thinking of ourselves as fundamental problem solvers once again. That means, first and foremost, abandoning the prevailing, ideologically skewed view that governments are lumbering bureaucratic behemoths that cannot innovate. We are told civil servants cannot compare to Silicon Valley entrepreneurs when it comes to taking risks. And yet the moon landing — one of the riskiest endeavors of the past century — was a government project.

I have spent the last year working closely with the European Union to adopt a mission-oriented approach to its spending on innovation. At the global level, though, the UN Sustainable Development Goals can define our future missions, from reducing greenhouse-gas emissions to removing plastic from the ocean. We must recognize that social missions are even more complex than purely technological ones: they require not just material adjustments, but also behavioral and regulatory change.

That means money is not enough. Governments also must be permitted to transform themselves for the mission at hand, by redesigning everything from their standard tools and instruments – such as procurement, grants, and loans – to their everyday operations.

Redesigning a large public system is not easy. The first step is to consider what public policy is actually for. Rather than just fixing market failures, policymakers should view themselves as market makers, using their resources to create the flexible and adaptable structures for guiding a collective vision and establishing the conditions for bottom-up solutions to emerge.

Those solutions must collectively point to a green and circular economy —with all sectors transforming operations in such a way as to reduce their material content. Government subsidies should not be handouts; rather, they should be made conditional on reaching specific benchmarks. The word "deal" must be taken as seriously as the word "green" in the Green New Deal.

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Photo/摄影:**Nasa**, 1969
Apollo 13 Hasselblad image from
film magazine 60/L — LM Extraction,
Trans-Lunar Coast
哈苏相机拍摄的阿波罗13号影像

More broadly, the choice before us is not between government and the private sector. Turning the climate challenge into a set of concrete missions will require the involvement of all sectors — from public health and transportation to food, energy, and housing — as well as new applications of digital technology and artificial intelligence. Formulating such missions will take creativity and first-hand knowledge: for example, urban planners and civic leaders could commit to designing 100 carbon-neutral cities worldwide by 2050.

The Apollo program was relatively top-down, but modern moonshots will need to engage civil society. Who decides the mission — and then monitors it along the way — is just as important as actually completing it.

Trade unions' involvement should not be limited to securing a "just transition" for workers in legacy industries. Rather, they also should have a seat at the table for co-defining what the term "green" even means.

In a society wracked by populist discontent, it is critical that all citizens participate in transforming our society for the better. Making our towns, cities, and streets healthy and sustainable will require inspired action from everyone – and the urgent realization that we cannot afford inaction today. ∎

S69-39529, by **Nasa**, 1969
https://images.nasa.gov

The 363-feet tall Apollo 11 space vehicle was launched from Pad A, Launch Complex 39, Kennedy Space Center (KSC), at 9:32 a.m. (EDT), July 16, 1969. Onboard the Apollo 11 spacecraft were astronauts Neil A. Armstrong, commander; Michael Collins, command module pilot; and Edwin E. Aldrin Jr., lunar module pilot.
1969年7月16日上午9点32分（美国东部时间），363英尺高的阿波罗11号宇宙飞船从肯尼迪航天中心39号发射场A平台发射升空。阿波罗11号飞船上的宇航员有：尼尔·阿姆斯特朗（指挥官）、迈克尔·柯林斯（指挥舱飞行员）和埃德温·奥尔德林（月球舱飞行员）。

S73-31570, by **Nasa**, 1973
https://images.nasa.gov

Overall view of the Mission Operations Control Room (MOCR) in the Mission Control Center (MCC), building 30, at Johnson Space Center during the Skylab 3 flyround inspection of the Skylab Earth-orbiting cluster.
在天空实验室3号楼对天空实验室进行全面检查期间，约翰逊航天中心30号楼任务控制中心（MCC）的任务操作控制室（MOCR）的全貌。

伦敦—7月份的首次登月50周年纪念强化了一个重要的教训：人类最伟大成就之一需要想象力、共同目标和系统性的问题解决方法压倒孤立思考和关于何处筹钱的担忧。美国总统肯尼迪在1961年明确指出，登上月球要花钱，也会带来风险，但这些都是值得的。

肯尼迪明白，创新的许多持续性收益不会在整个过程结束时发生，而是贯穿整个过程，产生动态溢出效应。在美国登月的例子中，肯尼迪是对的。今天我们所使用的手机中的很多技术，都可以追溯到阿波罗计划和相关任务。

想象一下，如果我们拿出相同的勇气、实验精神和意志力应对现时代最大的挑战：气候变化。想象一下，领导人骄傲地宣布："我们选择在这个十年与气候变化作斗争，不是因为这样很容易，而是因为这样很难，因为这个目标将组织和检验我们最好的能量和技能，因为这个挑战是我们愿意接受的，是我们不愿意停止的，是我们决心要赢的。"

平心而论，登月的动机是美国需要在冷战中赢得一场胜利——一场具有高度象征意义的、实实在在的胜利。但是，一旦任务启动，便需要解决具体的问题。和大部分战争中的通常情况一样，完成任务在先，担心如何"买单"在后。

从气候变化所造成的威胁看，气候变化也应该用同样的方法去对付。据气候变化政府间委员会 (IPCC)，我们只有12年时间去限制全球变暖至前工业化水平1.5℃以上，否则将引发灾难。如此警告应该成为公共和私人预算管理者的警世钟。年轻的其后活动家格蕾塔·塔恩伯格 (Greta Thunberg) 说，我们必须带着"好像自己的房子着了火一样"的方针看待这个问题，"因为就是这样。"

在这方面，我们应该遵循阿波罗计划的主要教训：在执行任务时用希望激发人们时取得成功的关键。在气候变化问题上，这一刺激必须包括反思我们的社会的组织形式。我们首先需要再一次将我们自己视为根本问题的解决者。

6903870, by **Nasa**, 1969 (https://images.nasa.gov)
During the second manned lunar landing mission, the astronauts Conrad and Bean landed on the lunar surface in what's known as the Ocean of Storms. In this photograph, one of the astronauts on the Moon's surface is holding a container of lunar soil.
在第二次载人登月任务中，宇航员康拉德和比恩在被称为风暴海洋的月球表面着陆。在这张照片中，月球表面的一名宇航员拿着一个装有月球土壤的容器。

这首先意味着抛弃存在意识形态漏洞的主流观点，即政府要与无法创新的官僚主义巨兽周旋。我们被告知，在承担风险方面，公务员无法与硅谷企业家相提并论。但登月——过去一个世纪中最危险的行动之一——恰恰是一个政府项目。

去年，我与欧盟紧密合作，采用了一个任务导向的方法看待创新支出。在全球层面，联合国可持续发展目标 (SDG) 可以用来定义我们的未来任务，包括降低温室气体排放、清理海洋中的塑料等。我们必须认识到，社会任务要比纯技术任务还要复杂：它们不仅需要物质调整，还需要行为和监管的改变。

这意味着光靠钱是不行的。必须允许政府为了手头的任务而改变自己，重新设计从标准工具和日常操作方法——如采购、授权和贷款的一切。

重新设计一个庞大的公共体系绝非易事。第一步是要思考公共政策的实质实什么。决策者不应该只顾解决市场失灵，而应该将自己视为市场制造者，用自己的资源创造灵活的、可调整的结构，指引集体愿景，为自下而上的方案创造条件。这些方案必须集体性地只想绿色循环经济——各部门都要改变操作方式，以降低物质含量 (material content)。政府补贴不应该是一种施舍，想法，它们应该是有条件的，必须达到具体的基准。"绿色新政" (Green New Deal) 中的"政"应该和"绿色"一样重要。

更广泛地说，摆在我们面前的选择不是政府部门还是私人部门。将气候变化挑战转化为一系列具体的任务需要所有各部门的参与——从公共卫生和交通到粮食、能源和住房——还需要数字科技和人工智能的新应用。

阐明这些任务需要创造力和第一手的知识：比如，城市规划者和公民领袖可以作出承诺，到2050年在全世界设计100个碳中性城市。

阿波罗计划相对而言属于自上而下，但现代登月需要将公民社会纳入。谁决定任务——并一路监督——和实际完成任务一样重要。工会的参与不应该局限于确保遗留行业 (legacy industries) 工人"公平分流"。相反，工会应该在共同决定"绿色"一词的含义中拥有一席之地。

在饱受民粹主义不满困扰的社会中，所有公民都参与到建设社会更美好的明天当中至关重要。让我们的村镇、城市和街道变得健康和可持续需要来自每个人的创意行动——并立即认识到我们绝不能够再无动于衷了。∎

Achieving Smart and Resilient Cities through a Low-Carbon and Intelligent Transport System
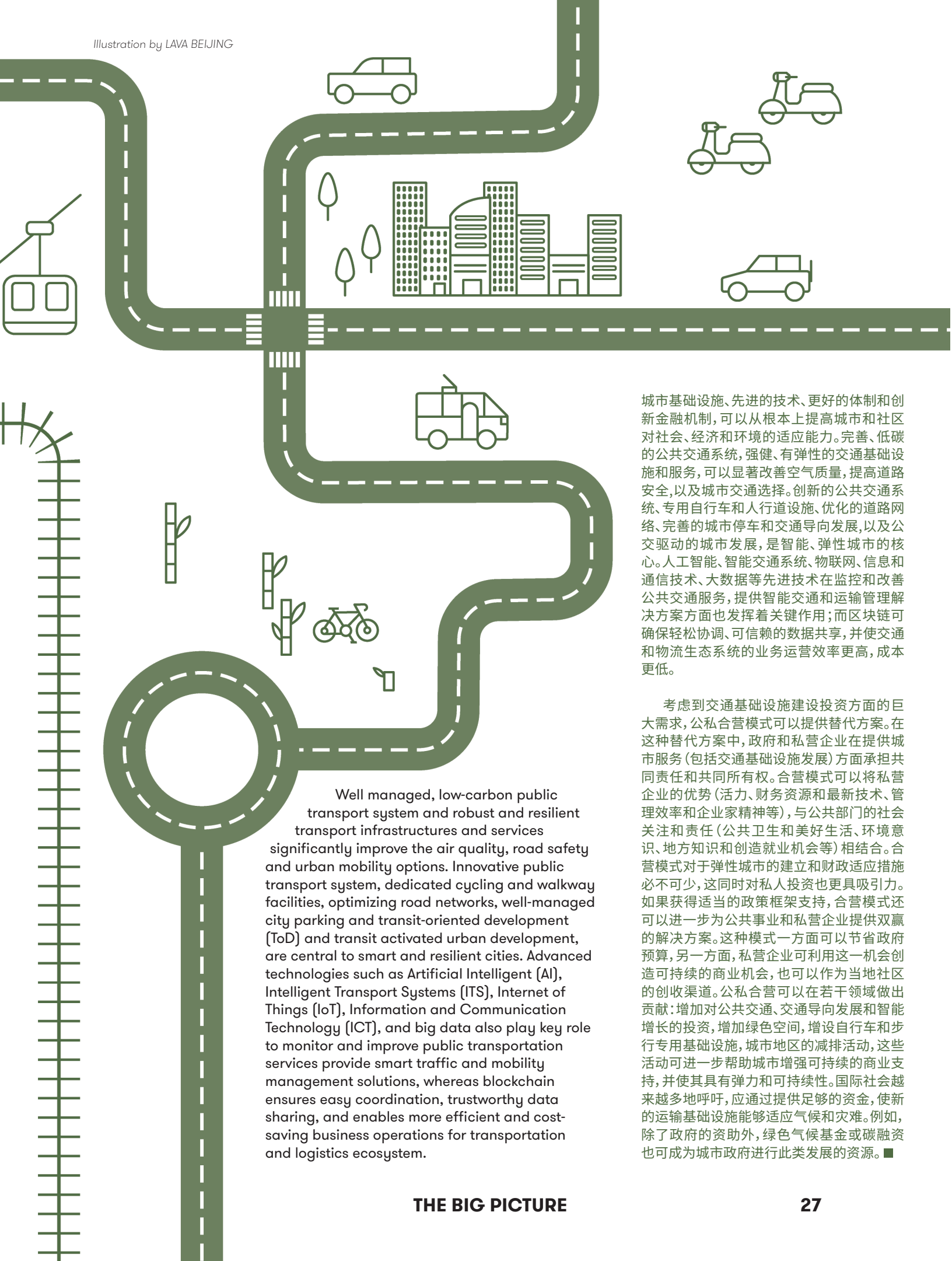
低碳智能交通系统, 实现智能弹性城市

The concepts of 'smart, resilient and sustainable cities' have emerged as a popular discourse in the world to address the existing and future urban issues. Although there is a wide variation of definitions on smart city, however the basic concept of the smart city is to make cities safer, improve citizen's welfare and enhance the quality of life of city dweller using new and advance technologies and big data such as Artificial Intelligent (AI), Internet of Things (IoT), Information and Communication Technology (ICT), Intelligent Transportation System (ITS), Global Positioning System (GPS), automatic translation apps and sensor networks by extensively networking people, infrastructures and services. The ultimate goal of the smart city is to make the city safer, economically vibrant, social protective and environmentally sustainable by improving city's transportation system, energy distribution, improvement of air and water quality, waste and sanitation management, better healthcare, education facilities and government services using digital data, smart application and smart solutions. Similarly, resilient cities have the capacity to reduce vulnerability to disaster risk and extreme climate events to respond in a fast, efficient and creative ways, and have the ability to adapt well for changing circumstances in order to increase long-term sustainability. Resilient cities further contribute toward the implementation and localization of the Sustainable Development Goals, which are fundamental for achieving the 2030 Agenda. The general perception is that a sustainable city is one which provides the highest quality of life together with the lowest environmental footprint, whilst ensuring the needs of future generations are not compromised.

Sustainable and low-carbon transportation provide environment friendly infrastructure and services that offers safe and secure access for both persons and goods while reducing short and long term negative impacts on the local and global environment. Sustainable transport contribute towards many SDGs, particularly those related to poverty alleviation, food security, access to clean water, health, education, and employment opportunities, gender equality, infrastructure and energy, safe and sustainable cities and human settlements, sustainable consumption and production, and climate change. Introducing appropriate policies, integrated urban and land use planning, high-quality and well planned city infrastructures, state-of-the art technologies, better institutions, and innovative financing mechanism can fundamentally improve all levels of social, economic and environmental resilience in cities and communities.

"智能、弹性、可持续城市"的概念在世界范围内已成为解决现有和未来城市问题的热门话题。虽然智能城市的定义多种多样,但其基本概念是使用诸如人工智能、物联网、信息和通信技术、智能交通系统、全球定位系统、自动翻译app、传感器网络等全新先进技术和大数据,广泛地将人员、基础设施和服务联网,进而提高城市的安全性,改善市民福祉,提高城市居民的生活质量。

智能城市的最终目标是通过利用数字数据、智能应用和智能解决方案,改善城市交通系统、能源分配、改善空气质量和水质、废弃物和卫生管理、更好的医疗保健、教育设施和政府服务,使城市更安全、经济更有活力、更具有社会保护性和环境可持续性。同样,弹性城市也能降低灾害风险和极端气候事件风险,以快速、高效和创造性的方式响应,并更好地适应不断变化的环境,以提高长期可持续性。弹性城市进一步促进可持续发展目标的实施和本地化,这是实现《2030年可持续发展议程》的根本。人们普遍认为,一个可持续发展的城市能够提供最高的生活质量和最低的环境足迹,同时确保不损害子孙后代的需求。

可持续和低碳交通提供有利于环境的基础设施和服务,为个人和货物提供安全通道,同时减少对本地及全球环境的短期和长期不利影响。绿色交通有助于众多可持续发展目标的实现,特别是与以下方面相关的目标:减少贫困,粮食安全,获得清洁水,卫生,教育、就业机会,性别平等,基础设施和能源,安全可持续的城市和人类聚居地,可持续消费和生产,以及气候变化。引进合适的政策、综合城市和土地利用规划、高质量和规划良好的

城市基础设施、先进的技术、更好的体制和创新金融机制，可以从根本上提高城市和社区对社会、经济和环境的适应能力。完善、低碳的公共交通系统，强健、有弹性的交通基础设施和服务，可以显著改善空气质量，提高道路安全，以及城市交通选择。创新的公共交通系统、专用自行车和人行道设施、优化的道路网络、完善的城市停车和交通导向发展，以及公交驱动的城市发展，是智能、弹性城市的核心。人工智能、智能交通系统、物联网、信息和通信技术、大数据等先进技术在监控和改善公共交通服务，提供智能交通和运输管理解决方案方面也发挥着关键作用；而区块链可确保轻松协调、可信赖的数据共享，并使交通和物流生态系统的业务运营效率更高，成本更低。

考虑到交通基础设施建设投资方面的巨大需求，公私合营模式可以提供替代方案。在这种替代方案中，政府和私营企业在提供城市服务（包括交通基础设施发展）方面承担共同责任和共同所有权。合营模式可以将私营企业的优势（活力、财务资源和最新技术、管理效率和企业家精神等），与公共部门的社会关注和责任（公共卫生和美好生活、环境意识、地方知识和创造就业机会等）相结合。合营模式对于弹性城市的建立和财政适应措施必不可少，这同时对私人投资也更具吸引力。如果获得适当的政策框架支持，合营模式还可以进一步为公共事业和私营企业提供双赢的解决方案。这种模式一方面可以节省政府预算，另一方面，私营企业可利用这一机会创造可持续的商业机会，也可以作为当地社区的创收渠道。公私合营可以在若干领域做出贡献：增加对公共交通、交通导向发展和智能增长的投资，增加绿色空间，增设自行车和步行专用基础设施，城市地区的减排活动，这些活动可进一步帮助城市增强可持续的商业支持，并使其具有弹力和可持续性。国际社会越来越多地呼吁，应通过提供足够的资金，使新的运输基础设施能够适应气候和灾难。例如，除了政府的资助外，绿色气候基金或碳融资也可成为城市政府进行此类发展的资源。■

Well managed, low-carbon public transport system and robust and resilient transport infrastructures and services significantly improve the air quality, road safety and urban mobility options. Innovative public transport system, dedicated cycling and walkway facilities, optimizing road networks, well-managed city parking and transit-oriented development (ToD) and transit activated urban development, are central to smart and resilient cities. Advanced technologies such as Artificial Intelligent (AI), Intelligent Transport Systems (ITS), Internet of Things (IoT), Information and Communication Technology (ICT), and big data also play key role to monitor and improve public transportation services provide smart traffic and mobility management solutions, whereas blockchain ensures easy coordination, trustworthy data sharing, and enables more efficient and cost-saving business operations for transportation and logistics ecosystem.

Considering large scale requirements of investment in transport infrastructure development, public-private-partnerships (PPP) can offer alternatives in which governments and private companies assume co-responsibility and co-ownership for the delivery of urban services, including transport infrastructure development. Partnerships can combine the advantages of the private sector (dynamism, access to financial resources and latest technologies, managerial efficiency, and entrepreneurial spirit, etc.) with social concerns and responsibility of the public sector (public health and better life, environmental awareness, local knowledge and job creation, etc.). Partnerships are indispensable for creating and financing adaptation measures towards resilient cities which in turn are more attractive for private investments. Partnerships can further provide win-win solutions both for the public utilities and private sector—if duly supported by appropriate policy frameworks. Such partnerships could lead to savings in government budgets, and the private sector, on the other hand, may use the opportunity to create sustainable business opportunities that could also serve as income generating avenues for the local communities.

The public-private-partnerships could contribute in a number of areas — increased invest in public transit, transit orient development (ToD) and smart growth, increase in green space, more dedicated bicycling and walking infrastructure, emission reduction activities in urban areas which could in return help cities enhance sustainable business opportunities as well as making them resilient and sustainable. There has been increased call by the international community that the new transport infrastructure should be made climate and disaster resilient, through provision of adequate financing. The green climate fund or carbon finance, for instance, could be the possible resources for city governments for such developments in addition of the government funding. ■
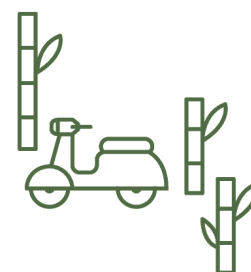
Tokyo's Sustainable Games
东京致力于举办可持续的奥运会

By **Yuriko Koike**
小池百合子

TOKYO — In the run-up to the Olympic Games, many host cities often become vast and dusty building sites. New construction is typically aimed at meeting the immediate requirements of the event, rather than the long-term needs of the local community. Hence, many host cities are left with new, state-of-the-art venues that often become white elephants after the Games. Equally important, many cities also face harsh financial reckonings. Tokyo, the host of the Summer Olympic and Paralympic Games in 2020, will not fall into this trap, because it is treating the event in the same way that it regards the economy: as needing to be run in a sustainable fashion and with a sharp eye to the future.

Of course, as Tokyo's governor, I am committed to delivering first-class athletic facilities and outstanding experiences to all spectators who attend this important event. Yet, every step of the way, my administration is making sure that the Tokyo 2020 Games — and their long-term legacy —adhere to the principles of environmental sustainability that the city has embraced for nearly a half-century.

Tokyo's commitment to these principles is hard-won. After the Pacific War (World War II) ended, Tokyo — like the rest of Japan — was concerned, first and foremost, with reconstruction.

During the 1950s and 1960s, Tokyo's economy (and its landscape) was transformed dramatically. Due to rapid economic growth beginning around 1955, growth in Tokyo's population accelerated. As many factories were built, the city's environment worsened visibly. Enthusiasm for hosting the Tokyo 1964 Olympic and Paralympic Games prioritized economic growth ahead of environmental concerns.

Then the oil crisis of the 1970s exposed the folly of building an economy so dependent on fossil fuels. In the ensuing decades, Tokyo transformed itself again, from one of the world's largest consumers of fossil fuels to a leader in the use of renewable energy. Once one of the world's most polluted cities, Tokyo is now one of the cleanest, despite the huge population that depends on this megacity.

This was not some felicitous outcome of an ad hoc process of short-term thinking and quick fixes. It involved careful planning, based on clear-eyed assessments of Tokyo's long-term needs.

The Tokyo Metropolitan Government is adhering to the same approach and seeks to go further.

When I became governor in 2016, my administration set environmental sustainability goals for 2020 and 2030. Just three years later, we are already approaching 100% compliance with our 2020 goals, including reducing the provision of free plastic bags at stores and a shift to LED light bulbs in households and businesses.

Tokyo is also making major strides toward achieving its 2030 goals. For example, we are close to the target for the reduction of waste that ends up in landfills, and we are roughly halfway toward achieving our target for renewable-energy use. We have also made progress toward the goal of ensuring that 50% of new car sales in Tokyo will be zero-emission vehicles by 2030.

Moreover, since 2016, we have reduced Tokyo's energy consumption by nearly 24% – more than half our 38% target for 2030 – using the Tokyo Cap-and-Trade Program for large facilities, and other aggressive measures.

Our "green building" policies are poised to slash energy use further and expand use of renewables. I am confident that, in the long term, Tokyo will reach zero emissions, as promised.

Far from being allowed to undermine this progress, the Olympic and Paralympic Games will reinforce it. The event can be thought of as the "Sustainable Games," though there is nothing playful or lighthearted about our commitment to managing their environmental impact.

But keeping the Games "green" is only the first step. Since the day I took office, I have been determined to ensure that the 2020 Games are a boon for Tokyo's economy — and that the positive effects will be felt well into the future. That has meant reducing the bloated budget I inherited, while embedding Tokyo's long-term

economic, social, and environmental needs into all planning processes. In the Athletes Village, for example, one of the buildings will be supplied with CO_2-free hydrogen generated in Fukushima Prefecture. The apartments in the Village will be sold after the Tokyo 2020 Games.

This is the kind of planning that cities around the world need. In fact, as a metropolis that has experienced rapid growth, Tokyo can serve as a model for other fast-growing urban areas like Beijing, Ho Chi Minh City, and Jakarta. That is why Tokyo's government consults with other urban leaders in Asia and elsewhere on the benefits – including the economic benefits – of environmental sustainability.

But the time for persuasion must end, giving way to an era of intense, concerted action.

As Haruki Murakami, perhaps the world's best-known contemporary Japanese author, wrote in his 1988 novel Dance Dance Dance, "the clock is ticking, the hours are going by. The past increases, the future recedes. Possibilities decreasing, regrets mounting."

Cities must act now, rather than allowing the passage of time to transform possibilities for a more prosperous and sustainable future into regrets about opportunities missed. Of course, it will not be easy. However, a better future is possible if cities around the world approach the challenge as Tokyo has approached the 2020 Olympic and Paralympic Games: with a strong, principled, and meticulously implemented commitment to protecting their citizens' — and the planet's — long-term interests. ∎

每当奥运会临近时，举办城市常常会变成尘土飞扬的大工地。新的建筑常常以满足奥运会的要求为目标，而不考虑本地社会的长期需要。因此，许多举办城市建设了崭新的漂亮场馆，在奥运会之后却变成了累赘。而且许多举办城市还会面临严峻的财务清算。

2020年夏季奥林匹克和残疾人奥林匹克运动会举办城市东京不会重蹈这一覆辙，因为东京对待奥运会的方式与其对待经济的方式一致：必须以可持续的方式进行，并要着眼于未来。

当然，作为东京都知事，我将致力于实现一流的竞技设施，为所有出席奥运盛事的观众奉献美好体验。但是，在此过程中的每一步，东京都政府都将确保东京2020年奥运会及其长期遗产符合这个城市践行了近半个世纪的环境可持续性原则。

东京对这些原则的坚持来之不易。太平洋战争（第二次世界大战）结束后，东京和日本的其他地区一样，首先考虑的是重建问题。20世纪五六十年代，东京经济以及城市景观发生了巨大的改变。拜始于1955年前后的高速经济增长所赐，东京人口增长也越来越快。大量工厂被建设起来，城市环境以可见的程度恶化。举办1964年奥运会和残奥会的热情，使得东京将经济增长摆在了环境问题之前。

70年代的石油危机，将建设如此依赖化石燃料的经济的愚蠢暴露无遗。在随后的几十年中，东京再一次改变自身，从全球最大化石燃料消费者之一，变成了可再生能源使用的领导者。作为曾经全球污染最严重的城市之一，今天的东京，尽管人口数量庞大，却是最干净的城市之一。这绝非短视思维和快速修补的权宜之计所带来的华而不实的结果。这其中包含了仔细的规划，清醒地评估了东京的长期需要。东京都政府遵守着这一方针，并在努力更近一步。

2016年我成为东京都知事，我的政府制定了2020年和2030年环境可持续目标。仅仅三年后，我们已经接近100%完成2020年目标，包括减少了商店中的免费塑料袋供应、家庭和企业中改用LED灯泡。

东京也在大踏步实现2030年目标。比如，我们已经接近降低填埋废物量的目标，而距离可再生能源用量的目标也已经完成了大约一半。2030年的另一个目标是确保50%的东京新售汽车为零排放车辆，我们在此方面也已经取得了进展。

此外，2016年以来，通过采取大型设施适用的东京限额交易机制和其他果断措施，东京的能源消费量下降了近24%，实现了2030年目标38%的一大半。我们的"绿色建筑"政策能够进一步减少能源用量，扩大可再生能源的使用。我很有信心，东京能够兑现承诺，实现长期零排放。

奥运会和残奥会将进一步推动而不是破坏这一进步。本届奥运会可被视为"可持续运动会"，但我们对管理环境影响的承诺绝非轻许之言。

但让运动会变得"绿色"只是第一步。自履新以来，我就决心让2020年奥运会成为对东京经济的恩惠，并且其积极影响要持续到遥远的未来。这意味着压缩我所接手的庞大预算，将东京长期经济、社会和环境需要纳入全计划流程。比如，奥运村的一栋建筑将使用来自福岛县的无二氧化碳氢气。奥运村中的运动员公寓在2020年奥运会结束后将出售。这便是全世界城市所需要的规划。事实上，作为一个经历过高速增长的大都市，东京可以为其他高速增长的城市地区提供榜样，包括北京、胡志明市和雅加达。因此，东京政府在积极与亚洲和其他地区的城市领导人一起讨论环境可持续性的益处，包括经济收益。但我们必须停止游说，开始紧锣密鼓的具体行动。日本当代著名作家村上春树在1988年的小说《舞！舞！舞！》中写道，"钟在走，时间在流逝。过去越来越多，未来越来越少。可能性在越来越少，后悔越来越多。"

城市必须现在就行动起来，不能坐视向着更繁荣、更可持续的未来转型的可能，演变成对错失机会的悔恨。当然，它并非易事。但是，如果全世界城市都像东京迎接2020年奥运会和残奥会那样迎接挑战，我们就有望实现更加美好的未来：强有力地、有原则地、一丝不苟地落实保护公民、保护地球长期利益的承诺。∎

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Utopia, Abandoned

By **Nikil Saval**

THE ITALIAN TOWN IVREA WAS ONCE A MODEL FOR WORKERS' RIGHTS AND PROGRESSIVE DESIGN. NOW, IT'S BOTH A CAUTIONARY TALE AND EVIDENCE OF A GRAND EXPERIMENT IN MAKING LABOR HUMANE.
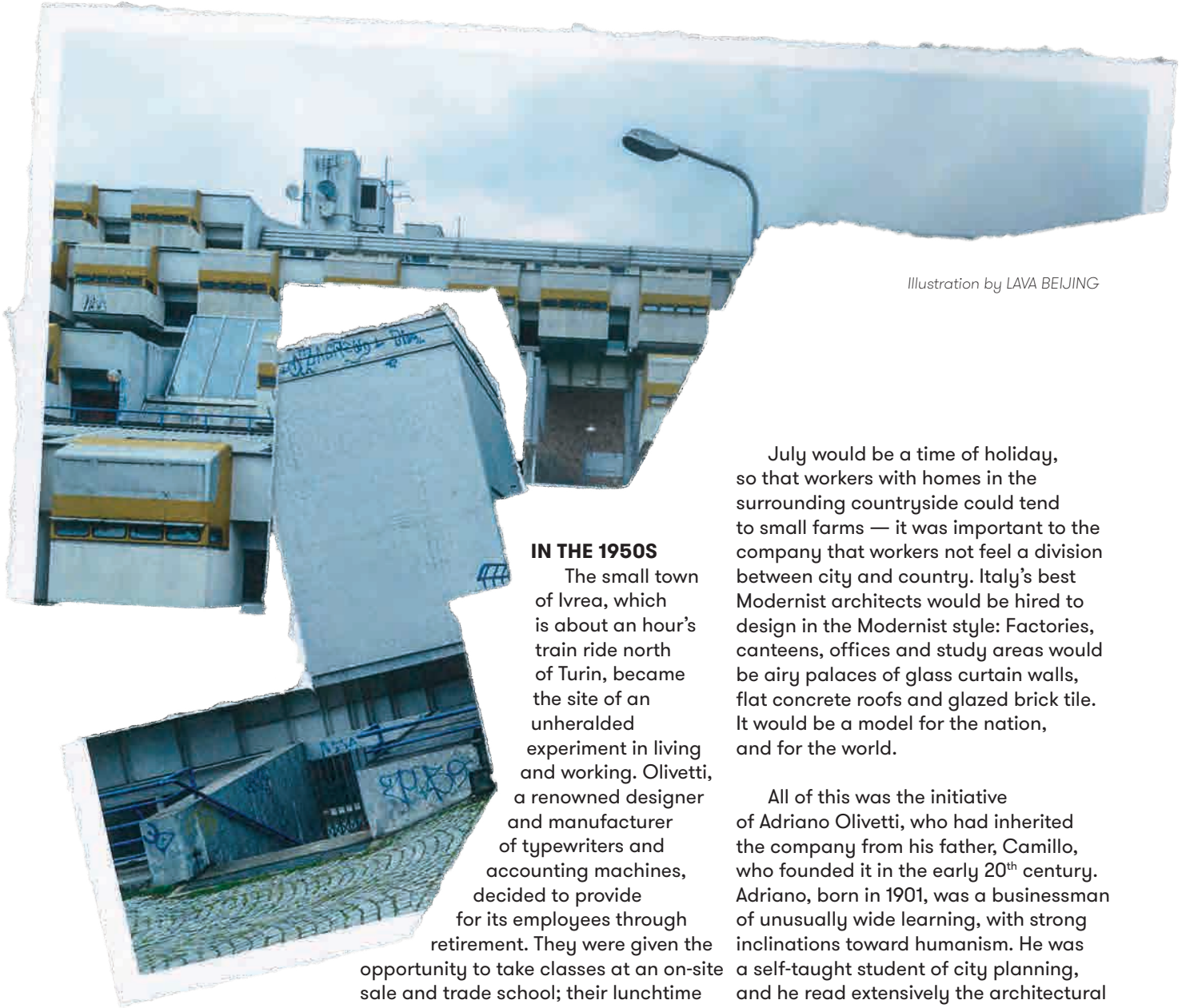
Illustration by LAVA BEIJING

IN THE 1950S

The small town of Ivrea, which is about an hour's train ride north of Turin, became the site of an unheralded experiment in living and working. Olivetti, a renowned designer and manufacturer of typewriters and accounting machines, decided to provide for its employees through retirement. They were given the opportunity to take classes at an on-site sale and trade school; their lunchtime hours would be filled with speeches or performances from visiting dignitaries (actors, musicians, poets); and they would receive a substantial pension upon retirement. They would be housed, if they liked, in Olivetti-constructed modern homes and apartments. Their children would receive free day care, and expecting mothers would be granted 10 months maternity leave.

July would be a time of holiday, so that workers with homes in the surrounding countryside could tend to small farms — it was important to the company that workers not feel a division between city and country. Italy's best Modernist architects would be hired to design in the Modernist style: Factories, canteens, offices and study areas would be airy palaces of glass curtain walls, flat concrete roofs and glazed brick tile. It would be a model for the nation, and for the world.

All of this was the initiative of Adriano Olivetti, who had inherited the company from his father, Camillo, who founded it in the early 20th century. Adriano, born in 1901, was a businessman of unusually wide learning, with strong inclinations toward humanism. He was a self-taught student of city planning, and he read extensively the architectural and urbanist literature of the day. He hired famous designers to work on his products, making some of them, such as the 1949 Lettera 22 typewriter and the 1958 Elea 9003 mainframe computer, into icons of design. Olivetti was a devout Christian and a socialist, but he was distant from the two main political parties, the Christian Democrats and the Communists, that occupied these poles in midcentury Italy.

Instead, in 1946, he formed his own political party, *Il Movimento Comunità*, which was intended to shift power to the diverse social bases and competences of a broadly conceived community, away from the patronage and bureaucracy encouraged by Italy's political parties, thereby charting a new course for not only the country but for the entire modern age. Though it was a failure, his ideas of increased welfare provision became more common and acceptable in Italian politics. Today, the infrastructure the company built might sound like the standard "company town," such as 19th-century Pullman, Ill., built by the Pullman railway company, but Olivetti was in fact different.

In America, company towns first arose as a result of low-wage workers lacking both rights and basic amenities like transportation. The more dependent an employee was on the company he worked for, the more control the company had: complacent workers whose boss is also their landlord don't strike or ask for sick leave or better health care — or so the logic went.This era of company towns in America was effectively ushered out by modernity, as labor rights increased thanks to New Deal domestic policies — and also because, in some instances, workers began striking when employers attempted to evict them from company housing. The rise of mass transport also made proximity to the workplace less of an essential need.

IT WAS IMPORTANT TO THE COMPANY THAT WORKERS DONT FEEL A DIVISION BETWEEN CITY AND COUNTRY.

In Europe, however, the company town had its roots in the model estates of the Victorian era, where wealthy landowners housed workers and caretakers in paltry accommodations. At the dawn of the 20th century, and in a rapidly industrializing Italy especially, the fortunes of various small towns were, and for the most part remain, inextricably linked to private companies. The main draw of Rosignano Solvay, established in 1912 in southern Tuscany, for instance, is its beautiful white sand beaches, the blanching of the sand a result of toxic chemical waste from the still-operational Solvay plant, which gave the town its name.

Colleferro, a dreary town just outside of Rome built around a munitions factory that closed in 1968, has been plagued for the last 70 years by occasional explosions. (There are still company towns in Italy — the designer Brunello Cucinelli has spent the last 30 years restoring the Umbrian hamlet of Solomeo to serve as his eponymous company's headquarters, and Diego Della Valle, C.E.O. of the fashion brand Tod's Group, relies on local craftsmen from Casette d'Ete, a region on the country's east coast, where his company's main factory is located.)

But many of the best-known towns that orbit around a single industry or company can seem decidedly un-Italian: there is no ancient architecture or grand cultural tradition because much of what remains of their history is contained almost exclusively within the 20th century. The people who still live in these towns are often descendants of the original company workers that inhabited them, even though the company has long since packed up and left. But Olivetti is unique among these places; for a time, it was likely the most progressive and successful company town anywhere in the world, existing not for the sake of control or convenience but rather representing a new and short-lived kind of corporate idealism, in which business, politics, architecture and the daily life of the company's employees all informed one another.

In 1960, Adriano died, and the company — already saddled with its Will-advised acquisition of the American typewriter company Underwood — went into a crisis. Adriano's brother, Roberto, took over but lacked Adriano's sense of vision. Twenty-eight years later, Carlo De Benedetti, a figure imbued with the ethos of a corporate raider, began to streamline Olivetti, shedding its socialist impulses in a bid to compete in the computer age. His efforts failed By the1980s, Olivetti had become subject to the same global headwinds as many manufacturers, and the company foundered.

In the early 2000s, it was merged with a telecom giant. At its peak in the 1970s, the company had 73,283 workers worldwide; today, it has around 400. But it's the surrounding town that has been affected most deeply. Ivrea today has a population of 24,000, having lost a quarter of its residents since the 1980s. The average age is 48.

In 2018, UNESCO declared Ivrea a World Heritage site; the effect has so far, for better or for worse, been unnoticeable. ("UNESCO's 'World Heritage' listing is the kiss of death,"

MANY OF THE REMAINING DOZEN OR SO STRUCTURES ARE EMPTY, SPEECHLESS MONUMENTS TO AN ABORTED UTOPIA.

the acerbic Italian critic Marco D'Eramo wrote in a 2014 article for New Left Review. "Once the label is affixed, the city's life is snuffed out; it is ready for taxidermy.")

Arriving by commuter rail from Turin, one would have no idea that one was in a former capital of industrial design. An eerie spellbound nothingness prevails. Except for a set of fading explanatory placards along the town's main road, there are few signs pointing to the landmark buildings — a housing project designed by Marcello Nizzoli, the lead designer of the Lettera 22; the Olivetti Research Center, designed by the architect Eduardo Vittoria, where the Elea computer was conceptualized — once renowned as much for their design as for the part they played in a munificent private welfare state. Only one of the office buildings is still in use. A former factory has been converted into a gym. Many of the remaining dozen or so structures are empty, speechless monuments to an aborted utopia.

FROM ABOVE, IVREA

Ivrea is an hourglass, cinched in the middle where it is crossed by the Dora Baltea river. The northern side is the historic center, with the usual array of squeezed cobblestoned streets issuing into breathable piazzas. The southern side, with the buildings located at distances best traversed by automobile, sometimes set back from the Via Jervis and fronted by useless ceremonial greenery, is where the city's decrepit industrial and managerial heritage lies. Via Jervis is the chief artery.

It is a name that feels strange to say in Italian, though it is dedicated to the partisan Guglielmo "Willy" Jervis, who was captured by fascists in 1944 and executed by firing squad. To walk it, as I did from my guest home in an adjoining town, is to experience the desolation of an idea that has gone to seed. An office building from the 1980s looks faded and unremarkable without the hum of activity that must have once surrounded it. Tennis courts are covered with weeds.

Ivrea had been a settlement since the fifth century B.C., and under the Roman Republic it went by the name of Eporedia.But it came into greater prominence during the Renaissance, when it fell under the sway of the Turin-based House of Savoy. A sterling example of this past lingers in the convent of San Bernardino, with its excellent frescoes of the life of Christ completed around 1490 by the minor Italian artist Giovanni Martino Spanzotti. It was to this convent that Camillo Olivetti, born and raised in the surrounding Alpine foothills that are visible from nearly anywhere in the town, moved his family when he established his typewriter company in a still-standing brick building. If you stand in front of the tan stucco of San Bernardino, you stare directly at the once-modern exteriors of Olivetti, whose glass exteriors were meant to exude the future and reflect the past.

In contemporary Ivrea, however, it is hard to imagine the bustle of the recent past. A former employee, Enrico Capellaro, who had started in manufacturing in the 1950s before working his way up to management, described his daily routine as fairly relaxed: renowned Italian actors like Vittorio Gassman and comedians came through at lunchtime. New books and magazines could be consulted at the 30,000-volume library (which was open to all Ivreans).
A Pullman bus would drive through town at midday, carrying workers home for lunch, if they wanted. The Social Services Building, built of sandy concrete and organized entirely around repeating hexagonal shapes, from spindly columns to large rooms, was across from the main factory buildings and was where the company offered health care to its workers.

Two major additions to the red brick building, built between 1939 and 1949, look like perfect representations of a moment in architectural thought: The first is a long, low-slung block threaded with ribbon windows; the second, known as Ico Centrale, is a fully glazed, curtain-walled facade, shielded from the light by Corbusier-style brises-soleil.

A third building, also covered with a slick glass-skinned facade, now houses a nursing school. The others are empty, filled with the detritus of companies past, having only recently been acquired by a developer who is attempting to secure contracts for new firms while preserving the buildings. These are glorious, light-filled spaces, unsung monuments to the rationalist, functionalist architecture that dominated progressive thinking in the midcentury. On the southern side of Ico Centrale, a perpendicular bend causes two portions of the building to face and reflect each other — the implicit idea being that employees on either side would have the opportunity to see each other in their daily work, and, even more implicitly, that the company was open and transparent to itself and the world.

Olivetti also built housing and hotels, two of which are the most strange and wonderful buildings in any city. The West Residential Center, popularly known as the Talponia, is a crescent-shaped block built into a hillside. Its roof is paved and walkable, its façade entirely glass, articulated into rectangles by dark gray metal framing. Originally intended for short business stays, it projects a spirit of efficiency, with modular furniture and bedrooms separated only by curtains The Hotel La Serra, outside the main center, was built in the 1970s and betrays the influence of postmodernism. Composed of an irregular series of stacked, graduated floors, it is meant to look like a typewriter, but from the inside, the rooms feel like the tightly constructed cabin of a ship, with oval porthole-like windows and a secret armoire holding a vanity mirror, whose curved doors open perfectly into the concave surrounding space.

It makes sense that Olivetti would be a symbol of historic pride. As a principal player in the 20th-century "miracle," when Italy climbed out of the depths of fascism and the catastrophe of World War II to become the eighth largest economy in the world, it is essential to Italian identity. The nostalgia for this time in Ivrea can be intense. Stefano Sertoli, the recently elected mayor, mentioned how often he came across people with an incredibly precise recall for eras and moments in company history. Some 1,900 residents of the city are recipients of the spille d'oro, or "gold pins," which represent 25 years of continuous service to the company. The legacy of Olivetti is, he said, "un patrimonio pazzesco" — an insanely rich heritage.

A PLACE OF WORK RULED BY PROGRESS, GUIDED BY JUSTICE, AND FIRED BY THE LIGHT OF BEAUTY.

IF AMERICAN COMPANY TOWNS
were tied to private industry's desire to quell progressive movements, in Italy, the company town was just as influenced by the rise of fascism. Sabaudia, a coastal town near Rome, was created in 1933 as a result of orders from Benito Mussolini, who transported the urban poor from Rome to the coast in order to drain the surrounding malaria-infested marshlands. Monfalcone, near the border of Slovenia, became a part of Italy only after World War I but was soon converted into an important shipbuilding outpost by the fascist regime. Many of these towns began a slow decline in business and population following World War II, though it's no accident that the best of Ivrea as imagined by Olivetti emerged as a postwar phenomenon, a place in direct ideological opposition to Mussolini's government. If most company towns, both in Europe and America, were paternalistic in the extreme — some of them going so far as to pay workers with "company scrip," which could only be used at company-owned stores — this was not the intention in Ivrea, thanks in no small part to Adriano, who combined in his person the grandiose impulses of a humanitarian, the self-obsession of an entrepreneur and the sententiousness of a rich autodidact.

Inducted into an already successful company, he also, crucially, had experience working in a factory. Unlike the mechanical engineer Frederick Winslow Taylor from a generation earlier, who also came into factory life from an elite background but drew the conclusion that work needed to be rationalized within an inch of its life — leading to his concept of "scientific management" — Adriano arrived at a factory and experienced the full spectrum of alienation. He would later testify to knowing "the awful monotony and the weight of repeating actions ad infinitum, on a drill or a press." His experience led him to the realization that "it was necessary to set man free from this degrading slavery." Gastone Garziera, an engineer who had worked on computing and electronics in the 1960s and '70s, recalled Adriano Olivetti's "desire to lighten in any way possible" the burden of work.

Adriano returned to Italy to take up the mantle of the family firm; he became president in 1938. He was committed to Modernism — not just as an architectural and aesthetic phenomenon but as a political program. Though he joined the Fascist Party during the years of Mussolini, he eventually sought to make contacts with Americans and supported the resistance, for which he was arrested. Adriano makes an indelible character in the Italian novelist Natalia Ginzburg's marvelous "Family Lexicon" (1963), a memoiristic novel of life in Turin during the two World Wars. He was fat and pale and his uniform fit badly over his round, fat shoulders. I've never seen anyone wear that gray-green outfit with a pistol at the waist more awkwardly and less martially than him. He had a pronounced melancholic air about him, which was perhaps because he didn't like being a soldier in the least. He was shy and quiet, but when he did speak he talked for a long time in a low voice and said confusing and enigmatic things while staring off into space with his small blue eyes, at once cold and dreamy.

This implicitly self-regarding personality expressed itself in the spirit of the company he led and in the products they created. As with the Bauhaus, the short-lived but highly influential German school of design, there was an attempt to unify aesthetically the entire production, from the products themselves to the advertisements for them, but with a markedly stronger emphasis on rendering the work environment itself a humane one. (The influence of the Bauhaus was in some cases direct: Alexander "Xanti" Schawinsky, an alumnus of the Bauhaus, designed a new typewriter for Olivetti, the Studio 42, and consulted on the construction of the new headquarters. Herbert Bayer, one of his instructors, designed company advertisements.) Olivetti wanted to build, as the modernist architecture critic Mario Labó wrote, "a place of work ruled by progress, guided by justice, and fired by the light of beauty." Workers became part of the management of the company through a system of co-determination, and thus helped build the welfare institutions that catered to them.

In these years, Olivetti produced several of the products that brought it world renown. The lightweight and (relatively) portable Lettera 22, one of the most beautiful and functional machines ever made, became a popular typewriter for business as well as private use. Its baby blue coloration and the light, springy action of its rounded keys were part of the transformation

from a typewriter as a loud, mechanical object for processing business to one that lent itself to contemplative, private writing. (It was the favorite of many American writers, including Thomas Pynchon, Sylvia Plath, Gore Vidal.) A couple of decades later, in 1968, and with the help of the designer Ettore Sottsass Jr., Olivetti would produce the apotheosis of the typewriter-for-pleasure, the Valentine, a lollipop of a machine, the high point of Pop Art in design. Advertisements for the Valentine showed its users taking the typewriter to the beach.

But by the 70s, people were moving from typewriters to electronic devices, and though the company had created what is considered the first personal computer, the P101, the company's success on this front had stalled. Some observers attribute Olivetti's downfall less to company failings than to nefarious plotting by foreign powers. Mario Tchou, Olivetti's brilliant chief computer programmer, died in a car accident, and Olivetti's last independent president, Carlo De Benedetti, suggested that it was widely believed among Olivettians that "he had been killed by forces connected to American secret agents."

Garziera also vouched that the Americans were suspicious of computing advances falling into the hands of a country that was perpetually on the verge of Communism.

And in 2019's "The Mysterious Affair at Olivetti," the journalist Meryle Secrest advances a circumstantial version of the same theory (without, it must be admitted, confirming it). Whatever the reasons, the failure to achieve results in computing doomed the company, and — at least for the near term — Ivrea with it.

HOW DOES A COMPANY TOWN REINVENT ITSELF ONCE THE COMPANY LEAVES TOWN?

In some respects, Ivrea reflects broader trends in Italy, rather than circumstances unique to itself. Changes in technology may have made Olivetti obsolete, but the Italian economic miracle of the 1950s and 60s peaked around 1970 anyway, when Fiat's production headquarters, in nearby Turin, became one of the largest car factories in Europe (and during which time Olivetti was still one of the most successful manufacturers of typewriters and other business machines in the world). This growth was helped by a mass migration of workers from the country's impoverished south to the heavily industrialized northwest.

But as the '70s turned into the '80s, Turin, Ivrea and other cities and towns that had grown rapidly after World War II fell victim to the same economic trends that would stunt the growth of American manufacturing towns across the Rust Belt. Recurring recessions meant that costs were cut across all industries, labor was outsourced to cheaper countries and companies like Fiat and Olivetti began laying off thousands of workers, plunging the very concept of the company town into an existential crisis. There are, according to a 2016 Italian environmental association report, some 2,500 rural Italian towns that are nearly abandoned and depopulated, half-empty monuments to departed industry. Others, like Ivrea, are more of a nostalgic time capsule, less a ruin than a shell of the past trying to find ways to bring back their old glory.

As major companies shrank in size or merged with larger corporations (Fiat now owns Chrysler), their corporate paternalism faded from view, replaced by more immediate economic concerns. This would end Olivetti's well-intentioned experiment in humane labor.

IT IS THE BEST EXAMPLE IN HISTORY OF A CITY ORGANIZED AROUND A SINGLE COMPANY AND ITS VISION, IN WHICH SOME PROFITS WERE REINVESTED INTO THE LIFE OF THE COMPANY'S WORKERS.

Now, as is the case in so many small municipalities in Italy and elsewhere in the world, Ivrea has experienced an alarming turn in its politics. After decades of center-left rule — including a stint by Adriano himself as mayor — last year the leadership shifted to the right, with a new government affiliated with the anti-immigrant party La Lega.

I spoke with the new mayor, Sertoli, who had been part of the effort to secure UNESCO recognition for the city. He talked vaguely of the need to "bring back excellence" to the city, but also noted it was problematic that so many of Olivetti's structures were in various private hands. The current holder of the Brick Factory building is Icona, a coalition attempting to redevelop the original Olivetti buildings in the hope of returning industry and innovation to the area. Icona's slogan is "The Future Is Back Home." The atrium connecting the Brick Factory to the others still has a mosaic tile statue of Camillo Olivetti.

Other efforts at reviving Ivrea don't take their cues from Olivetti at all. Gianmario Pilo, a book marketer in Turin whose father worked at the company for 35 years, has started a literary festival, La Grande Invasione, with the aim of jump-starting the cultural life of the town and encouraging younger residents to stay. He spoke about how his parents were always passionate readers, partly because of the company's efforts to inculcate culture in its workers' lives.

The extraordinary achievement of Olivetti is also part of what overwhelms and partly vitiates the lives that have come after it. The afterglow that still hovers over Ivrea is that of young Adriano in "Family Lexicon": dreamy, speaking at once to everyone and no one, quietly saying "enigmatic things." It may be the best example in history of a city organized around a single company and its vision, in which some profits were reinvested into the life of the company's workers and the surrounding community.

At its best, the spirit of reinvestment can be given back, if perhaps never again at the level it once had. When I asked Pilo why he pursued his desires in Ivrea, he said simply that it was to "give back to the city that had gifted me a happy childhood and adolescence." The children of Olivetti may yet restore the ideas that still whistle down the quiet streets of the town it once dominated. ■

被遗弃的乌托邦

尼基尔·萨瓦尔

Illustration by LAVA BEIJING

意大利小镇伊夫雷亚曾经是工人权利和先进设计的典范。现在，它既是一个警示故事，也是一个让劳动人性化的伟大实验的证据。20世纪50年代，在都灵以北大概一小时火车路程的伊夫雷亚小镇，成了一场史无前例的生活和工作实验的进行地。著名的打字机和记账机的设计师/制造商奥利维蒂决定为员工提供退休保障。员工有机会参加一个设在工厂内的销售和贸易学校的课程；午餐时间会有显要人物（演员、音乐家、诗人）来此演讲或表演；他们退休后会获得数目可观的养老金。如果他们愿意，他们将被安置在奥利维蒂建造的现代住宅和公寓里。他们的孩子会得到免费日托照顾，怀孕的母亲会获得10个月的产假。七月基本是假期，这样，家在周围农村的工人就可以照料小农场——要让工人们感觉不到城乡差异，公司很在意这一点。意大利最好的现代主义建筑师被请来做现代主义风格设计：车间、食堂、办公室和学习区会是由玻璃幕墙、平板混凝土屋顶和光滑的瓷砖建成的通风良好的宫殿。它会成为国家和世界的典范。

所有这些都是阿德里亚诺·奥利维蒂的构想。他的父亲卡米洛在20世纪初创立了这家公司，阿德里亚诺是子承父业。他出生于1901年，是一位学识渊博的商人，具有强烈的人文主义倾向。他自学城市规划，广泛阅读当时的建筑学和城市规划文献。他聘请知名设计师来设计产品，其中一些成为经典设计作品，如1949年的Lettera 22打字机和1958年的Elea 9003大型计算机。奥利维蒂是一个虔诚的基督徒和社会主义者，但他始终与20世纪中期在意大利占统领地位的两大政党——基督教民主党和共产党保持距离。

相反，在1946年，他成立了自己的政党——"社区运动"，其目的是将权力交给一个构成广泛的社区的各种社会基础和能力，而不是意大利其他政党所鼓励的互惠互利和官僚机构，从而不仅为国家、而且为整个现代时代制定了新的路线。尽管运动最终失败，但他的增强福利理念在意大利政界变得更加普遍，逐渐被接受。

> 奥利维蒂一度堪称世界上最进步、最成功的公司城镇，它的存在不是为了控制或方便，而是代表着一种新的、短命的企业理想

如今，该公司建造的基础设施听起来像是标准的"公司城镇"，比如19世纪由普尔曼铁路公司建立的普尔曼城；但奥利维蒂实际上并不一样。

在美国，公司城镇最初出现是由于低薪工人缺乏权利和交通等基本便利设施。员工越是依赖所属的公司，公司的控制力就越大：老板也是房东，这样心满意足的工人就不会罢工，也不会请病假或要求更好的医疗福利——或者说逻辑是这样的。现代性有效地驱除了美国公司城镇的时代，因为新政的国内政策增强了劳工权利，而且，在某些情况下，当雇主试图将工人驱逐出公司住房时，工人开始罢工。大众运输的兴起也使得人们不必得离工作场所那么近。

但在欧洲，公司城镇根源于维多利亚时代的模范庄园，在那里，富有的地主为工人和看门人提供简陋的住所。在20世纪初，尤其是在迅速工业化的意大利，各个小城镇的财富在很大程度上与私营企业有着千丝万缕的联系。例如，1912年在托斯卡纳州南部建立的罗西格纳诺苏威，最有名的就是它美丽的白色沙滩，这些沙滩的白化是仍在运营中的苏维工厂产生的有毒化学废物造成的，小镇的名字也是由这座工厂而来。罗马城外的枯燥小镇科勒费罗，是围绕着一家军工厂（1968年关闭）建的，在过去70年里这里不时发生爆炸，阴魂不散。

意大利仍有一些公司城镇，比如设计师布鲁内洛·库西内利过去30年来一直在修复索罗米奥的翁布利亚小村庄，作为他的同名公司的总部；时尚品牌Tod's集团CEO迭戈·德拉·瓦莱主要依靠来自Casette d'ete的当地工匠，Casette d'ete是意大利东海岸的一个地区，也是Tod's的主要工厂所在地。但许多围绕单一行业或公司发展的知名的城镇看起来都是"非意式的"：那里没有古老的建筑或伟大的文化传统，因为那段历史大部分的遗存物几乎都在20世纪。尽管公司早已打包走人，但现在仍住在这些城镇的人往往是原来住在这里的工人的后人。但奥利维蒂与其他这些地方不同；它曾一度堪称世界上最进步、最成功的公司城镇，它的存在不是为了控制或方便，而是代表着一种新的、短命的企业理想，在这种理想中，商业、政治、建筑和员工日常生活紧密关联着。

1960年，阿德里亚诺去世，公司本已受收购美国打字机公司安德伍德的不明智之举的拖累，此时更是陷入了危机。阿德里亚诺的兄弟罗伯托接手了公司，但他不像前者那么有远见。28年后，卡洛·德贝内德蒂（一个企业掠夺者）开始精简奥利维蒂，试图摆脱公司的社会主义背负，以期在计算机时代展开竞争。他的努力失败了。到20世纪80年代，奥利维蒂与许多制造商一样受到全球不利因素的影响，公司垮掉了。21世纪初，它与一家电信巨头合并。在1970年代的巅峰时期，奥利维蒂在全球有73 283名员工；如今只有约400名。但受影响最深的还是周边城镇。
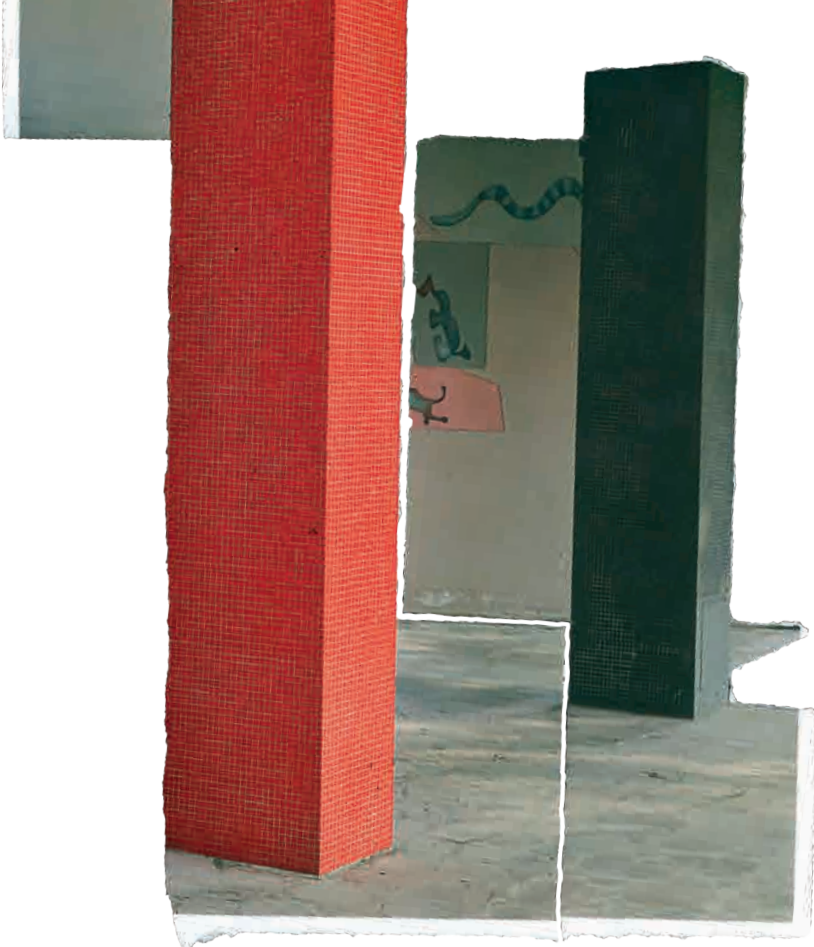
今天，伊夫雷亚有2.4万人口，自1980年代以来已经减少了四分之一，且居民平均年龄是48岁。

2018年，伊夫雷亚被联合国教科文组织列为世界遗产地；这个消息的影响，到目前为止，无论好坏，尚不明显。（"联合国教科文组织的'世界遗产'名录是死亡之吻，"尖刻的意大利批评家马可·德拉莫在2014年为《新左派评论》撰写的一篇文章中说。"一旦被贴上标签，城市的生机即被扼杀；它可以被做成标本了。"）从都灵乘通勤列车到达这里，人们不会想到这里曾是一个工业设计之都。弥漫这里的是一种可怕的、被咒语束缚的虚无。除了沿着小镇主路的一组褪了色的说明性标语牌外，几乎没有指向地标性建筑的标识：由Lettera 22的首席设计师马塞罗·尼佐里设计的住宅工程；由建筑师爱德华多·维托里亚设计的奥利维蒂研究中心，Elea计算机的概念正诞生于此，它们的设计曾经和它们在一个慷慨的私人福利国家中所扮演的角色一样著名。办公楼只有一栋还在使用中。以前的一间车间已经被改成了健身房。剩下的十几座建筑中，有许多都空空荡荡，成了对一个破灭了的乌托邦的无言纪念碑。

从上面看，伊夫雷亚是一个沙漏状，中部收紧，多拉巴尔提亚河正好从那里穿过。北侧是历史中心，常见的一条条鹅卵石街道通向空旷的广场。南侧，建筑距离刚好容得汽车穿过，间或从杰维斯大道街面退后少许，前面种着毫无用处的象征性的绿化，那里就是该市陈旧的工业和管理遗产所在地。杰维斯大道是主干道。这个名字用意大利语说起来有点奇怪，但它是献给游击队员古列尔莫·"威利"·杰维斯的，他在1944年被法西斯俘虏，随后被行刑队处决。我从邻镇的民宿出来，走在这条大道上，体验到了一种花谢结子的落寞。一栋1980年代的办公楼，没有了昔日包围它的嗡鸣声，看起来已经褪色变得毫不起眼。网球场上杂草丛生。

伊夫雷亚自公元前5世纪起就是一个定居点，在罗马共和国统治下，它被称作Eporedia。但在文艺复兴时期，当它被位于都灵的萨沃伊家族统治时，它变得更加突出。圣贝纳迪诺修道院就是这段历史的一个典型例子，那里出色的基督生活壁画是1490年左右由意大利艺术家乔瓦尼·马蒂诺·斯潘佐蒂完成的。卡米洛·奥利维蒂出生于附近阿尔卑斯山麓，几乎从镇上任何地方都能看到。当年他在一幢砖房（房子还在）里创办了自己的打字机公司，之后就把家搬到了这座修道院。如果站在圣贝纳迪诺的棕褐色灰泥前，你直盯着的就是奥利维蒂曾经的现代主义外观，它的玻璃外观意图要散发未来、反映过去。

然而，在当代的伊夫雷亚，很难想象它近代史上的喧嚣。恩里科·卡佩拉罗曾经是奥利维蒂的雇员，他从1950年代开始从事制造业，后来一直做到管理层，他描述自己的日常工作相当轻松：类似维托里奥·加斯曼这样的著名意大利演员和一些喜剧演员会在午餐时间出现；图书馆里有3万册藏书，向所有伊夫雷亚居民开放，在那里能查阅新的书刊杂志；如果工人想回家吃午饭，中午会有一辆普尔曼巴士接送。主厂房的对面是社会服务大楼，它是用砂质混凝土建造的，完全由六边形的重复结构（从细长的柱子到大房间）围绕组织。那里是公司为员工提供医疗服务的地方。

在1939年至1949年间，那栋红砖建筑多了两个加建部分，它们看起来是彼时建筑思想的完美体现：第一个是一个长且低矮、带着条形窗的建筑；第二个被称为Ico中心，采用了全玻璃幕墙立面，遮阳采取了柯布西耶的brises-soleil策略。第三栋建筑表面也是光滑的玻璃墙，现在是一所护理学校。其他建筑都空荡荡的，满是公司的过往残骸。它们直到最近才被一个开发商收购，开发商试图在保留这些建筑的同时争取引进新公司入驻。这些都是辉煌的、光线充足的空间，是在20世纪中叶主导了进步思想的理性主义与功能主义建筑的无名纪念碑。在Ico中心的南面，一个垂直的弯道使建筑的两个部分面对面并相互映照——这意味着两边的员工都有机会在日常工作中看到对方，更隐喻着这家公司对自己、对世界都是开放和透明的。

奥利维蒂还建造了住房和酒店，其中两座是所有城市中最奇特、最绝妙的建筑。通常被称为Talponia的西部住宅中心，是一个建在山坡上的月牙形街区。它的屋顶有铺面，可以行走；外墙全是玻璃，由深灰色的金属框架划分成一个个矩形。它最初是为短期商务居留而设计的，体现了一种高效精神，模块化的家具和卧室仅用窗帘隔开。主中心外的拉塞拉酒店建于1970年代，显示出后现代主义的影响。它由一系列不规则的成堆的分层式地板组成，本意是看起来像一台打字机，但从内部看，房间感觉就像是一个结构严密的船舱，有椭圆形舷窗状的窗户和一个装着梳妆镜的隐蔽衣橱，弧形的门与周围的凹形空间完美契合。

奥利维蒂能成为历史骄傲的象征是有道理的。作为20世纪意大利"奇迹"的主要参与者，当这个国家从法西斯主义的深渊和第二次世界大战的灾难中爬出来，成为世界第八大经济体时，奥利维蒂是对意大利身份的重要体现。对于这个时期的伊夫雷亚的怀旧之情是很强烈的。

最近当选的市长斯特凡诺·塞尔托利提到，他经常遇到一些人，对公司历史上的不同时代和时刻记得非常准确。该市约有1900名居民获得"黄金别针"，这代表着对公司至少25年的持续贡献。他说，奥利维蒂的遗产是"一笔极其丰厚的财富"。

如果说美国的公司城镇与私营企业镇压改革运动的愿望紧密相连，那么在意大利，这类城镇的产生也同样受到法西斯崛起的影响。罗马附近的沿海城镇萨博迪亚，是1933年贝尼托·墨索里尼下令建立的，为的是把罗马的城市贫民运到这里来，排干周围疟疾肆虐的沼泽地。靠近斯洛文尼亚边界的城镇蒙法尔科内，在第一次世界大战后才成为意大利的领土，但很快被法西斯政权改建为重要的造船基地。这些城镇中有许多在二战后开始慢慢衰败，商业颓败、人口下降，但奥利维蒂构想的伊夫雷亚之巅出现在战后并非偶然，毕竟这里与墨索里尼政府在意识形态上是直接对立的。欧洲和美国的大多数公司城镇都极端地奉行家长式作风——其中一些甚至用只能在公司商店里使用的"公司代金券"给工人付工资——但这不是伊夫雷亚的本意，这在很大程度上要感谢阿德里亚诺，他身上集中了人道主义者的雄伟冲动、企业家的自我陶醉，和一个自学成功的富人的睿智。

他进入的是一家已经成功的公司，而且更重要的是，他有在工厂工作的经验。比他早一代的机械工程师弗雷德里克·温斯洛·泰勒，也是从精英阶层出身进入工厂生活的，但他得出的结论是，工作应该被彻底理性化——因此他提出了"科学管理"概念。阿德里亚诺来到一家工厂，经历了各种各样的异化。他后来曾说他知道"在钻头或压机上可怕的单调性和无限重复的重量"。他的经历使他意识到，"有必要使人类摆脱这种有辱人格的奴役。"20世纪六七十年代曾在公司里从事计算机和电子工作的工程师加斯托内·加齐拉回忆说，阿德里亚诺·奥利维蒂"有一种强烈的愿望，要用一切可能的方式减轻工作负担"。

阿德里亚诺·奥利维蒂"有一种强烈的愿望，要用一切可能的方式减轻工作负担"

伊夫雷亚在2018年被联合国教科文组织列为世界遗产地；无论好坏，这个地位的变化尚未带来明显的影响

Illustration by LAVA BEIJING

奥利维蒂的非凡成就在一定程度上也是其不可承受之重，部分阻碍了小镇在没有了公司之后的生活

Illustration by LAVA BEIJING

阿德里亚诺回到意大利，接过家族企业的衣钵，1938年成为公司总裁。他致力于现代主义，而且不仅仅是把它作为一种建筑和美学现象，更是作为一种政治纲领。尽管他在墨索里尼执政期间加入过法西斯党，但他最终还是设法与美国人取得联系，支持抵抗运动，并因此被捕。意大利小说家纳塔莉亚·金茨堡写过一部非凡的作品《家庭词典》(1963)，是一部关于两次世界大战期间都灵生活的回忆录小说，阿德里亚诺在这部小说里塑造了一个不可磨灭的形象：

"他又胖又苍白，制服穿在他又圆又胖的肩膀上很不合身。我从来没见过有人穿那件灰绿色的衣服，腰间别着手枪，会比他更笨拙，也更不具军事色彩。他有一种明显的忧郁神情，这也许是因为他一点也不喜欢当兵。他很害羞很安静，但当他开口的时候，他低声讲了很长一段时间，用他蓝色的小眼睛凝视着太空，说着一些令人困惑和高深莫测的事情，立刻又冷又梦幻。"

这种自我觉察的性格在他领导的公司的企业精神和他们创造的产品中展现得淋漓尽致。与短暂但极具影响力的德国设计学院包豪斯一样，奥利维蒂试图让所有产品在美学上统一，从产品本身到广告，但明显更强调将工作环境本身打造成一个人性化空间。

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包豪斯的影响有时是直接的：包豪斯校友亚历山大·夏温斯基为奥利维蒂设计了一款新打字机：Studio 42，还为公司新总部的建设提供了意见。他的导师之一赫伯特·拜尔设计了公司广告。奥利维蒂想建造一个"由进步统治、由正义引导、由美丽之光点燃的工作场所"(现代主义建筑评论家马里奥·拉博语)。工人通过共同决定制成为公司管理的一部分，因此帮助建立了为他们服务的福利机制和设施。

在这些年里，奥利维蒂生产了几款闻名世界的产品。轻巧且(相对)便携的Lettera 22是有史以来最漂亮、最实用的机器之一，成为商业和私人使用的流行打字机。淡蓝色的色彩和圆润按键轻快而有弹性的动作，一定程度上使它从一台噪音大、机械处理业务的物品，变成为一个安静的、供私人写作的物品。(它是许多美国作家的最爱，包括托马斯·品钦、西尔维亚·普拉斯、戈尔·维达尔)几十年后，在1968年，在设计师埃托·索特萨斯的帮助下，奥利维蒂创造出了消遣用打字机的典范——"瓦伦丁"，它是机器界的棒棒糖，是波普艺术在设计上的巅峰。瓦伦丁的广告里展示了用户可以把它带到海滩上去。

但到了20世纪70年代，人们开始从打字机转向电子设备。奥利维蒂公司虽然发明了被认为是第一台个人电脑的P101，但在这方面始终停滞不前。一些观察家称奥利维蒂的败落与其说归因于公司的失败，不如说归因于外国列强的邪恶阴谋。奥利维蒂杰出的首席计算机程序员马里奥·丘死于车祸；奥利维蒂的最后一位独立总裁卡罗·德·贝内德蒂暗示说，奥利维蒂公司内部普遍认为"他是被与美国特工有关的势力杀害的。"加齐埃拉也作证，美国人怀疑计算机技术的进步落入一个永远处于共产主义边缘的国家手中。而在2019年的《奥利维蒂的神秘事件》中，记者梅雷尔·塞克雷斯提出了同一推测的详尽版本(必须承认，并没有证实)。不管是什么原因，在计算方面的失败注定了这家公司的命运，而且至少在短期内也牵连了伊夫雷亚。

一旦公司离开小镇，公司小镇要如何重塑自我？在某些方面，伊夫雷亚反映了意大利一种更广泛的趋势，而不是其自身特有的情况。技术上的变化或许已经让奥利维蒂过时了，但无论如何，20世纪五六十年代的意大利经济奇迹在1970年左右达到顶峰，当时生产总部位于附近都灵的菲亚特成为欧洲最大的汽车工厂之一(在此期间，奥利维蒂仍然是世界上最成功的打字机和其他商用机器制造商之一)。这一增长得益于有大量工人从意大利贫困的南部向高度工业化的西北部迁移。但是，随着80年代的到来，都灵、伊夫雷亚和其他在二战后迅速发展的城镇，成了和美国同样的经济趋势下的牺牲品，这些经济趋势阻碍

了美国制造业城镇在"锈带"地区的发展：反复的经济衰退意味着所有行业的成本都被削减，劳动力被外包到更廉价的国家，像菲亚特和奥利维蒂这样的公司开始成千上万地裁员，使公司小镇这一概念陷入生存危机。根据意大利环境协会2016年的一份报告，意大利约有2500个农村城镇几乎被遗弃，人口减少，成为半空的已逝工业的遗迹。其他，像伊夫雷亚，更像是一个怀旧的时间胶囊，与其说是废墟，不如说是一个试图找回昔日荣光的躯壳。

随着大公司规模缩小或合并成为更大的公司(菲亚特收购了克莱斯勒)，他们的企业家长式作风逐渐消失，取而代之的是更为紧迫的经济考量。这将结束奥利维蒂向善的人道劳动实验。现在，像意大利和世界其他地方的许多小城市一样，伊夫雷亚在政治上经历了令人担忧的转向。在经历了几十年的中左翼统治后(包括阿德里亚诺本人担任市长期间)，去年，反对移民的右翼政党联盟党开始掌权。我与新市长塞尔托利进行了交谈，伊夫雷亚列选联合国教科文组织遗产地有很大部分归功于他的努力。他含糊其辞地谈到了"恢复昔日荣耀"的必要性，但也指出，奥利维蒂的许多建筑都掌握在不同的私人手中，这是个问题。目前拥有那座砖厂建筑的是意柯纳。这是一个试图重新开发奥利维蒂原有建筑的联盟，希望将工业和创新带回该地区，提出的口号是"未来就在家门口"。连接砖厂和其他建筑的中庭里仍立着卡米洛·奥利维蒂的马赛克瓷砖雕像。

其他一些复兴伊夫雷亚的努力并没有从奥利维蒂出发。吉安马里奥·皮洛是都灵的一名图书营销员，他的父亲在这家公司工作了35年。他创办了一个名为"la grande inva-sione"的文学节，目的是全力启动小镇的文化生活，鼓励年轻居民留下来。他谈到，部分由于奥利维蒂在员工生活中灌输文化的缘故，他的父母一直都很喜欢阅读。

奥利维蒂的非凡成就在一定程度上也是不可承受之重，部分导致了对其后生活的损害。《家庭词典》中年轻的阿德里亚诺的形象依然萦绕在伊夫雷亚上空：梦呓一般，对着所有人、又非对着哪个人，悄悄地说着"高深莫测的东西"。它可能是历史上围绕一个公司和它的愿景而组织一座城市的最佳案例，公司利润在这里被重新投资到公司员工和周围社区的生活中。在最好的情况下，再投资的精神是可以恢复的，即使可能再也不会回到曾经的水平。当我问皮洛为什么要在伊夫雷亚追求他的心愿时，他只是简单地说，这是为了"回馈那个给予我快乐童年和青春的城市"。曾经弥漫在安静的城镇街道上的那些理想，可能尚待奥利维蒂的孩子们恢复。∎

The Small Picture

微格局

Turin:
From City of Cars
to City of Design

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都灵：从汽车之城到设计之都

本文摘编自联合国教科文组织国际创意与可持续发展中心编制的《创意城市观察——创意城市网络发展历程与现状研究报告》(2004-2018)

Turin, the capital of Piedmont, is Italy's third largest city, and was its first capital following reunification. As such, Turin is rich in historical and cultural resources, with large numbers of classical and baroque buildings. After World War II, it became an industrial powerhouse, especially in automobile manufacturing. Fabbrica Italiana Automobili Torino (Fiat) has its headquarters there.

In the early 1990s, Italy experienced a severe economic crisis, with industrial cities such as Turin being hardest hit. The decline in industrial activity peaked in 1993, seriously hampering the pace of urban development. Turin was a typical industrial city of the post-Fordism period. Its large-scale factory relocations and closures produced more than 5 million m² of industrial wasteland.

The economic crisis and its negative impact prompted Turin to begin urban regeneration and industrial transformation. Turin has upgraded its core industries with industrial design, reshaped creative spaces through protection and utilization of its industrial heritage, and dug deeper into its historical and cultural resources to develop tourism. After more than two decades, Turin has completed its transformation from an industrial to a cultural city, and its development orientation has returned to culture. In 2014, Turin was appointed a City of Design by UNESCO and became part of the Creative Cities Network.

AUTOMOBILE INDUSTRY UPGRADING IN TURIN TO BECOME A "CITY OF DESIGN"

The automobile industry has always been the core representative of industry in Turin. Fiat and the automobile manufacturing industry has played a crucial role in Turin's economic boom, but its downturn has had a major impact. As the center of Italy's automobile industry, a number of independent car styling studios and design companies have sprung up, such as the world-famous Pininfarina SpA, Gruppo Bertone, and Torino Design. A considerable number of world-class experts in car design have emerged, including Giorgetto Giugiaro and Gandin, and classic cars such as the Ferrari 250 GT, Maserati 5000 GT, BMW 3200 CS are made in the city. A wealth of design talents and strong research and development innovations are the secret to Turin's world-leading competencies.

In the upgrading and transformation of the automobile industry, Turin has made full use of its advantages in design to attract global talents and enhance the international influence of the industry. In 2005, the Turin Chamber of Commerce launched a "From Concept to Car" project, pointing out that "60% of Turin's economy is dependent on exports. Turin should take advantage of the research and development industry chain to change its economy from exporting products to exporting knowledge, technology, and know-how." The global project attracts automobile companies from all over the world every year. In 2014, Chrysler, one of the three major U.S. auto brands, formally merged with Fiat to become Fiat Chrysler Automobile (FCA), opening up the US market and raising the international profile of Fiat and Turin.

INDUSTRIAL HERITAGE

From 1993 to 2001, Turin made several policy adjustments, and proposed a Comprehensive Master Plan in 1995 to develop the service sector in the former industrial wastelands. Factories were relocated to the suburbs and key areas were remodeled. For example, the Lingotto Factory, once Fiat's main building, was converted into a service building combining offices, hotels, theatres, concert halls, conference rooms, and shopping centers.

The famous riverside Parco Dora in Turin was designed by renowned German landscape architect Peter Latz and transformed from an industrial site. The park has five distinct areas, Ingest, Vitali, Michelin, Mortara and Valdocco, the first three of which are named after former factory sites, and the last two are located above the newly repaired tunnel. The refurbished area, with new residential buildings, new trunk roads and recycled industrial sites, has become a modern, green, stylish and avant-garde park.

After joining the Creative Cities Network, Turin has hosted a number of creative design events to promote urban development. In October 2018, Turin launched a one-month project called, "Turin. Towards an Accessible City," aiming to use creative design thinking to protect cultural heritage. More than 150 institutions, large and small, were involved in the project, and there were a total of 160 seminars, theatrical performances, concerts, films and exhibitions. At the same time, Turin successfully hosted the second "Turin Design of the City of 2018," mainly focusing on the revival of cultural heritage.

GOVERNMENT PLANNING OF THE TOURISM INDUSTRY

Last century, Turin's tourism industry was in a miserable state, with few international tourist products or brands, a supply-driven rather than demand-driven market, and a deeply rooted industrial image.

The government paid little attention to its development. In 1998, in order to raise its international profile, Turin made a new strategic plan, proposing to become a city of "culture, tourism, trade and sport."

In the 21st Century, the Turin Municipal Government has recognized the driving role of tourism in urban transformation and social progress. In 2003, the Turin Tourism Bureau formulated the overall tourism plan, with the overall goal of diversifying the sector and develop business tourism with business talks and and promote short urban tourism by way of festivals. Government-enterprise cooperation will result in integrating and promoting the city's more than 40 museums, Baroque cultural sites, architectural features, chocolate, wine and other specialties, ultimately making Turin a rich and unique destination.

Since the development plan of the tourism industry was clarified in 2003, the tourism industry in Turin has made great progress. The following year, Turin registered a 13.7% increase in tourists, with the majority first time visitors.

To further release its cultural vitality, Turin has managed to shape the city's cultural brand by setting up institutions and hosting world-class cultural and artistic and sporting events. The Turin's International Book Salon, held in Turin, has grown into one of the most famous book fairs in Europe, and Turin was named the World Book Capital City by UNESCO in 2006. In the same year, Turin hosted the Winter Olympics, providing an opportunity for the local tourism industry to flourish.

Since then, Turin has fully exploited its museum resources, cultural and industrial heritage, and attracted more visitors through international conferences and colorful festivals. According to tourism statistics (2018), tourist numbers reached 7,248,575 in 2018 which is 2,87% more than the year before.

Overall planning, use of industrial heritage, and cultural and artistic activities have played an important role in Turin's transformation from industry. Over the past few decades, Turin has become a creative center and one of the most dynamic cities in Italy. Turin's creative and cultural sectors account for 9.1% of the total number of active institutions and companies in Italy and rank third in Italy with approximately 100.000 employee.∎

TURIN HAS UPGRADED
ITS CORE INDUSTRIES
WITH INDUSTRIAL DESIGN,
RESHAPED CREATIVE SPACES
THROUGH PROTECTION
AND UTILIZATION OF ITS
INDUSTRIAL HERITAGE,
AND DUG DEEPER INTO
ITS HISTORICAL AND
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RESOURCES
TO DEVELOP
TOURISM.

经济危机和发展工业带来的负面影响，促使都灵开始了城市再生和产业转型的步伐。在推进城市更新过程中，都灵市借助工业设计的优势，升级了核心产业；通过对工业遗产的保护和利用，重塑了城市的创意空间；并不断发掘历史文化资源，发展旅游业

都灵是意大利第三大城市，皮埃蒙特区的首府。作为意大利统一之后的第一个首都，都灵历史和文化资源丰富，保存有大量的古典式和巴洛克式建筑。二战后，都灵的工业迅速发展起来，尤其以汽车制造业闻名于世，都灵的城市经济高度依赖机械和汽车制造，世界著名的汽车制造公司菲亚特将其总部和工厂定在都灵，使得都灵被誉为"意大利汽车之都"，其强大的工业实力对国家经济发展有着举足轻重的作用。

20世纪90年代初，意大利出现了严重的经济危机，像都灵这样的工业城市受到的影响最大，1993年工业活动缩减达到顶峰，这严重阻碍了城市的发展步伐。都灵是典型的后福特主义时期的工业城市，大规模工厂搬迁和倒闭产生了超过500万平方米的工业废地，其工业活动的衰退对城市形态及物质空间影响深远。

经济危机和发展工业带来的负面影响，促使都灵开始了城市再生和产业转型的步伐。在推进城市更新过程中，都灵市借助工业设计的优势，升级了核心产业；通过对工业遗产的保护和利用，重塑了城市的创意空间；并不断发掘历史文化资源，发展旅游业。历经二十多年的改革与发展，都灵已经完成了从工业城市向文化城市的转变，城市的发展定位回归到文化，2014年，都灵被联合国教科文组织授予"设计之都"的称号，成为创意城市网络的一员。

汽车产业升级促成设计之都

作为意大利的汽车产业中心，都灵诞生了大批独立汽车造型工作室和设计公司，例如世界著名的宾尼法利纳、博通、都灵设计公司等；也涌现了大量世界级的汽车设计大师，如乔盖托·乔治亚罗、甘迪尼等；生产了许多世界经典款式的汽车，如法拉利250 GT、玛莎拉蒂5000 GT、宝马3200 CS等。丰富的设计人才和强大的研发创新能力，是让都灵汽车产业保持世界领先的核心竞争力。

在汽车产业的升级转型中，都灵市充分利用了其在汽车设计方面的优势，一方面重视吸引全球的设计人才，另一方面着重提高汽车产业的国际影响力。2005年，都灵商会启动了"从概念到汽车"的项目，旨在向国外推介该地区独特的汽车设计。该项目负责人指出："都灵的经济60%依赖出口，以往都是出口产品，今天都灵应该利用自身的研发产业链这个优势，向世界出口知识、出口技术、出口know-how。"这一项目面向全球，每届都能吸引全球各地的汽车企业前来参与。2014年，菲亚特与美国三大汽车品牌之一克莱斯勒正式合并为菲亚特克莱斯勒汽车公司，这进一步打开了美国市场，提升了菲亚特和都灵的国际知名度。

保护工业遗产并加以利用

从1993年到2001年，都灵市调整了一系列规划政策，1995年都灵市"总体规划"提出转变经济结构，通过再次利用工业废地来发展服务业，将工厂搬迁至郊区，并对重点区域进行改造。例如，曾是菲亚特主厂房的林科特工厂被改造成一座综合服务大厦，集合办公室、酒店、剧院、音乐厅、会议室、购物中心等功能为一体。

都灵著名的多拉公园也是一座由德国著名景观设计师彼得·拉茨设计，改造河岸工业遗址而成的现代公园。公园拥有因吉斯特、维塔利、米其林、莫尔塔拉和华道谷五个各具特色的区域，其中前三个区域被冠以之前工厂旧址的名字，后两个位则位于新修隧道的上方。更新后的多拉河区域两岸有新的住宅楼、新的交通干道、更新再利用的工业遗址，成为一个绿色环保、时尚前卫的现代公园。

在加入教科文组织创意城市网络之后，都灵更加注重把设计应用于文化遗产保护，每年举办诸多创意设计活动来推动城市发展。2018年10月，都灵开展了为期约一个月的"都灵，向可预见城市迈进"计划，旨在利用创意设计思维来保护文化遗产，计划涉及大小机构150多个，包含160项具体活动内容，如研讨会、戏剧表演、音乐会、电影放映和展览等。同年，都灵还成功举办了第二届"2018都灵城市设计"活动，专注于复兴文化遗产。

政府系统规划旅游产业发展

都灵的历史文化资源丰富，但是在21世纪前，都灵的旅游产业一直呈现低迷状态，具体表现为缺乏国际旅游产品和国际品牌，市场由供给而非需求带动，工业城市的形象深入人心，政府对开发旅游业的重视不够。1998年，为了提升国际形象，都灵开始探索"都灵国际推广战略规划"，在这一规划中创造性地提出将都灵打造为"文化、旅游、商贸和体育"之城。进入21世纪，都灵市政府进一步认识到旅游对城市转型和社会进步的驱动作用。

2003年，都灵市旅游观光局全面制定了都灵的整体旅游项目，总目标是通过增加旅游供给的多元化努力发展新的旅游市场，重点发展以商务会谈和会展为主体的商务旅游和以都市节庆活动为主体的都市短假期休闲旅游。在政企合作的平台下整合推广都灵的40余所博物馆、巴洛克文化、建筑文化，以及当地美食、巧克力、葡萄酒等特色食品，最终使都灵成为全球知名的特色旅游目的地。

这些发展举措在次年就得到了较大的成果，游客数量上升13.7%，且新增游客大多数都是第一次来都灵的新游客。为进一步释放城市的文化活力，都灵市通过设立相关机构、举办世界级的文化艺术和体育活动，来塑造城市的文化品牌。"都灵国际图书沙龙"逐渐发展成为欧洲最著名的书展之一，都灵因此在2006年被联合国教科文组织评选为"世界图书之都"。2006年，都灵成功举办了冬季奥运会，为本地旅游业的繁荣发展提供了契机。此后，都灵充分发掘博物馆资源、文化和工业遗产资源，利用国际性会议、多彩的节庆来吸引游客。2018年皮埃蒙特旅游统计数据显示，都灵的旅游产业规模从2009年开始一直保持增长态势，2018年的旅游人数达到724 8575人次，同比增长2.87%；入境人次达到250 5985人次，同比增长1.58%。

整体性的旅游规划、合理利用工业遗产、诸多的文化艺术活动为都灵工业城市的转型发挥了重要作用。据联合国教科文组织创意城市网络官网上数据，都灵的创意和文化领域占意大利活跃机构和公司总数的9.1%，在意大利排名第三，拥有约10万名从业人员。经过几十年的努力，这周城市已经成功地从一个工业中心转变为一个创意中心，成为意大利文化和创意领域最具活力的城市之一。■

The refurbished Parco Dora,
Garden Design Journal (SGD), https://www.gardendesignjournal.com/
features/project-parco-dora-turin, access time: June, 26th, 2019
改造之后的多拉公园

Curitiba: Creativity for an Ecological City
库里蒂巴：创意打造生态城市

Curitiba in southern Brazil is thecapital of the state of Parana. In the industrial age, Curitiba was a trading and processing center for agricultural and livestock products such as tea, coffee, tobacco, corn and soybeans. After World War II, the city's economy developed rapidly and it expanded too. Congestion, unemployment and environmental pollution soon showed up to hinder modernization.

Led by the mayor Jaime Lerner, Curitiba has embarked on a comprehensive urban reform program. The social and environmental problems hindering urban development have been solved by rational urban development planning, improvement of the public transportation system and urban infrastructure and comprehensive management of the environment. Curitiba is the only city in a developing country to have been named UN "Best City for Living."

In 1994, it was recommended as a model public transportation city by the UN Conference on the Environment and Development. In 2012, Curitiba won the Global Green City Award at the Rio Earth Summit. Good ecological environment and social order provide support for Curitiba's development of the creative economy, and in 2014 it was awarded "City of Design" by UNESCO and became a member of the Creative Cities Network.

FIRST-CLASS URBAN PLANNING AND POWERFUL LEADERSHIP

Alfred Agache, a French expert, formulated the first urban master plan for Curitiba in 1943. Knowing that Curitiba's transportation system would be full of cars in the future, the plan applied a Parisian model, taking the old downtown as its core and using a combination of ring roads and radial roads to deal with traffic while keeping apace with expansion. However, this needed large-scale urban infrastructure construction and would have involved the demolition of a large numbers of historic buildings.

As Curitiba was not a developed city, it did not have the financial resources to implement the plan.

Curitiba implemented a 1965 master plan instead. The idea was that urban transportation should meet the needs of people to travel in ways other than by car. Planners would strengthen the central and radial axis to form a transportation hub and terminal, and ban motorized vehicles from the city center. The historical buildings areas were made into pedestrian-only zones. This had the effect of turning car travel into a secondary option for most citizens.

The key proponent was Jaime Lerner, who was elected mayor in 1971. Lerner had served as the dean of the Curitiba Research and Urban Plan Institute and was trained as an architect.

Under his leadership, the city ventured into new experiments in urban planning while most Brazilian cities were building expressways and flyovers to facilitate car travel.The idea of "bigger is better" was so prevalent that proposals to limit the automobile were seen as leftist. Lerner insisted on putting car travel on the back burner and this proved far-sighted.During his tenure, he led all aspects of urban planning. In 2010, Time magazine named him "one of the most influential thinkers in the world."

BUILD AN EFFICIENT URBAN TRANSPORTATION SYSTEM

Efficient transport systems are critical to the development of cities. It follows that Curitiba's public transport system was the main reason it was awarded best city for living. The Integrated Transit Network, similar to a surface metro, was a complete and diversified network and service system.

From 1974 to 1994, average annual passenger flow was 15%, three to four times the population growth rate. Public transport as a proportion of commuter travel increased from 8% to 70%. The bus network comprises 390 routes and two thousand vehicles, carrying more than two million passengers per day. These routes cover a thousand kilometers in and around Curitiba.

The key to this system is the original trinary road system, which consists of three parallel roads leading to the city center and three parallel roads leaving the city center, namely, the BRT dedicated lane, the auxiliary lane, and the high-capacity one-way lane. The three roads are parallel to each other, with the BRT dedicated lanes in the middle, connecting the city center and outlying areas. The auxiliary lane is near high-rise buildings on the right side, and travels in the same direction as the BRT lane, allowing different vehicles to pass.

The high-capacity one-way lane is located one block away at the boundary of the structural axis line with a direct express line, at an average speed of 32 km/h. Buses on the BRT dedicated lane stop at every bus stop, and travel at an average speed of only 20 km/h. This unique Curitiba innovation embodies the essence of integrated public transport, urban roads and land use.

PROMOTE ALL ROUND URBAN GREENING AND SUSTAINABLE DEVELOPMENT

Curitiba is one of the cities with the highest proportion of green space in the world, with several times more green space than UN-recommendations. Curitiba keeps increasing urban green space. Curitiba has nine forests and more than 200 parks built with government support. A policy of providing free green space for conservation development by immigrant communities from different countries attracted designers to participate in the process. In addition to parks, streets, neighborhoods and other public spaces are lined with trees and plants and covered in grass.

Curitiba raises awareness of environmental protection among residents and carries out ecological literacy activities. For example, children learn about ecology via textbooks. The media vigorously advocates environmental protection, low-carbon travel and a low-carbon lifestyle.

Taxi drivers can only get a license if they complete environmental protection training. Environmental protection has penetrated every aspect of people's lives.

Furthermore, Curitiba carries out social welfare projects in environmental protection. The most representative is a garbage purchase project called "garbage that it is not garbage". The municipal government buys classified recyclable garbage, drawing people to garbage depots by giving out bus coupons. This measure not only increases participation but also contributes to reducing garbage and increasing collection and reuse. Later, in response to the problem of a plethora of cabbages, Curitiba upgraded the scheme and launched a Green Exchange Programme, in which citizens trade recyclable garbage for food. This initiative has continued to this day as it combines environmental protection with the fight against hunger and the eradication of poverty.

CULTURAL COLLISION INSPIRES THE CREATIVE INDUSTRY

In the 19th Century, immigrants from Germany, Poland, Ukraine and Italy began to settle in Curitiba, making it an inclusive and multicultural city. The collision of different cultures stimulated local music, food, drama, design and other creative industries. Currently, Curitiba has 98 museums, 55 higher education institutions and 15 cultural training centers.

The Fundação Cultural de Curitiba (FCC) plays a huge role in the field of artistic development. Founded in 1973, the Foundation managed the development of the city's various arts industries, including film, dance, literature, music, cultural heritage, and theatre. It carried out artistic and cultural popularization activities, and established awards. In 2016, Curitiba launched a new focus on video games and design, and in 2017, it encouraged new ways of thinking about agriculture. In 2019, the Smart City Expo Curitiba was held, exploring creative measures to solve issues in urban development.

Curitiba has a pool of artists and creative talents. During the urban renewal process, designers created a number of new and distinctive buildings and blocks. For example, Rua das Flores used to be a crowded messy street, but it has been transformed into a stylish and avant-garde pedestrian street. The Teatro Paiol, which promotes traditional Brazilian music, used to be an abandoned arsenal. Curitiba also hosts cultural and creative events including Latin America's influential "Bienal de Curitiba", and the well known Street of Styles - Encontro Internacional de Graffiti em Curitiba. ∎

巴西南部巴拉那州首府库里蒂巴曾是茶叶、咖啡、烟草、玉米、大豆等农牧产品的贸易和加工中心。二战后，当地经济依靠工业得以高速发展，城市规模也随之扩大，出现了人口拥挤、交通、失业、环境污染等社会及环境问题，这些问题严重阻碍了城市的现代化进程。

为了解决城市问题，库里蒂巴在第三任市长贾米·勒讷的带领下，开展全面的城市改革。通过合理的城市发展规划，修建完善城市公共交通体系，完善基础设施和综合治理环境等措施，解决了阻碍城市发展的社会和环境问题。库里蒂巴是第一批被联合国命名为"

最适宜人居的城市"中唯一位于发展中国家的城市（其他四座城市为温哥华、巴黎、罗马、悉尼）。1994年被联合国环境与发展大会推荐为公共交通示范城市。2012年，库里蒂巴在里约地球高峰会上获得全球绿色城市奖。良好的生态环境和社会秩序为库里蒂巴发展创意经济提供了良好的支撑，2014年它被联合国教科文组织授予"设计之都"的称号，成为创意城市网络的一员。

一流的城市规划

法国专家阿尔弗雷德·阿加奇在1943年曾为库里蒂巴制定了第一个城市总体规划。这一规划主要是基于未来库里蒂巴的交通会被小汽车困扰这一问题，套用了巴黎城市的规划模式，以老城区为核心，采用向外扩散的环形道路和放射状道路相结合的方式来处理城市交通，以跟上城市不断扩大的步伐。但是，这一规划需要进行大规模的城市基础设施建设，甚至拆除大量古老珍贵的历史建筑，而且，库里蒂巴并不是发达城市，没有足够的财力来实施这一规划。

库里蒂巴真正实施的是通过竞赛评选出来的1965年城市总体规划。这一规划的理念是城市交通要满足人们出行的需求而非小汽车，规划的核心是强化中心城区和中心城区放射线型轴线，把中心城区作为交通枢纽和终点，而且城市核心区和历史建筑街区要部分地禁止机动车通行，改为步行街区，小汽车出行的便利性降低到次要位置。

园。这些公园的修建得益于政府的支持,当时市政府出台了一项政策,即政府免费提供绿地,供来自不同国家的移民社团进行保护性开发,这一措施吸引了诸多设计师参与。除了大量的公园,街道两旁、小区等城市公共空间同样布满了绿植和草地。

与此同时,城市也全面开展了生态扫盲教育和相关活动,提高居民的环保意识。例如,通过学校和课本教育向孩子们普及环保理念;充分借助电视台、广播报纸、网络等媒体的力量,大力倡导环保理念和低碳生活,鼓励市民低碳出行;出租车司机必须接受与环保相关的课程并取得结业证书才能取得营业执照。现在,环保理念已经渗透到市民生活的方方面面,整个城市有着浓郁的环保氛围。

库里蒂巴也在积极开展社会公益环保项目。"垃圾不再是垃圾"是一个垃圾购买项目,由市政府用公交车抵价券来购买经过分类的可回收垃圾,吸引人们主动把垃圾送到最靠近垃圾车的地方。这个项目不仅提高了市民的参与性,让贫困居民也能够乘坐便捷的公交,也为减少城市垃圾、提高垃圾回收和再利用做出了贡献。后来针对都市区出现了卷心菜过剩的问题,政府又对垃圾购买项目进行升级,开展"绿色交换项目",即市民用可回收垃圾来换取食物。这一举措兼具保护环境、对抗饥饿和消除贫困等多项作用,一直持续到现在。

文化碰撞激发创意产业繁荣发展

19世纪时,来自德国、波兰、乌克兰和意大利等国的移民开始在库里蒂巴定居,使这里逐渐成为一座包容多元文化的城市。不同文化的碰撞激发了当地音乐、美食、戏剧、设计等创意产业的繁荣发展。

在艺术发展领域,库里蒂巴文化基金会发挥着巨大作用。基金会成立于1973年,专注于城市电影、舞蹈、文学、音乐、文化遗产、剧院等各类艺术产业的发展,并制定文化发展规划和政策,开展艺术活动和文化普及活动,设立文化奖项。这个城市也鼓励把创意应用到各个方面:2016年推出的库里蒂巴创意经济竞赛,涉及电子游戏、设计等创意领域;2017年成立的城市农业和创意经济中心,鼓励把创意思维应用到农业和城市可持续发展上;2019年又举办了库里蒂巴智慧城市博览会,探讨用创意来解决城市发展问题。

库里蒂巴市艺术家和创意人才集聚,有着突出的城市创新和创造能力。在城市更新过程中,设计师在城市创造了大批标新立异的建筑和特色街区,例如最繁华的步行街——花街,本是一条拥挤不堪的街道,在72小时内就被改造成了一条时尚前卫的商业步行街。又如,以弘扬巴西传统音乐为主的派奥尔剧院是由一座废弃的军火库改造而成的。此外,库里蒂巴每年都会举办许多大型文化创意活动,比如拉丁美洲最有影响力的"库里蒂巴双年展",面向国际的"风格街:库里蒂巴国际涂鸦大会"等。■

建设高效完善的城市交通体系

库里蒂巴的公共交通系统类似于"地面地铁",是一个完整、多元化的网络与服务体系。勒纳提出了一体化公交网络概念来解决城市交通问题。发表在《城市交通》2009年第3期的研究文章《库里蒂巴——一体化公共交通系统》表明,从1974年到1994年,库里蒂巴一体化公共交通系统的年平均客流增长率为15%,是人口增长速度的3到4倍,公交在通勤出行中所占的比例从8%增加到70%。目前,库里蒂巴一体化公交网络由390条线路、2000辆车构成,每天客运量超过210万人次,其中49万人次来自大库里蒂巴邻近地区。这390条线路覆盖了库里蒂巴市的1100公里道路,公共汽车日行驶里程为38000公里。

库里蒂巴一体化公交网络体系的关键是其独创的三重道路系统,即:由3条平行的通往城市核心区的道路和3条平行的驶离城市核心区的道路组成,这三重道路分别是BRT专用车道、辅助车道、大容量单行车道。三条道路相互平行,其中,BRT专用车道位于中心,连接城市核心区域与外围区域;辅助车道靠近右侧高层建筑,与BRT车道同向行驶,允许各种车辆通过;大容量单行车道位于一个街区以外,结构轴线的边界,开设有直达快线,其平均运行速度可达32公里/小时,而BRT专用车道上的公交车每站都停,其平均运行速度仅为20公里/小时。这一独特的库里蒂巴创新体现了公共交通、城市道路与土地利用一体化的精髓。

全方位推进城市绿化与可持续发展理念

库里蒂巴是世界上绿化率最高的城市之一,有9个森林区和200多座免费开放的公

Los Angeles: Localizing the SDGs at City Level

洛杉矶：在城市层面本地化可持续发展目标

HOW TO IMPLEMENT THE SDGs AT A LOCAL LEVEL ?

❶ MAPPING AND ALIGNMENT TO THE SDGS:
How does our current activity align to the SDGs ?

❷ GAP ANALYSIS:
Where do we have gaps in current activity ?

❸ MOBILIZATION:
How can we drive new initative partnerships, or investments to accelerate meeting the Goals ?

Indicators, data for monitoring progress

Policy, best practices to accelerate progress, initiatives

❹ LOCALIZATION:
Do we need to add context and priprities unique to L.A. ?

In October 2017, with the support of the Conrad N. Hilton Foundation and local universities, Mayor Eric Garcetti announced that the City of Los Angeles would adopt and implement the Sustainable Development Goals. In July 2019 it release a "Voluntary Local Review" (Review) that maps the City's progress towards the SDGs: from the policy initiatives implemented, to the efforts to expand shelters, housing and services for the homeless and to provide equal economic opportunities for women and girls.

The SDGs review and localization methodology has been implemented thanks to students from local universities: if a goal is found to not apply to the City, should consider revising it while meeting its original intent. Maintaining a balance between what could appeal to the community of local stakeholders, and what should increase the ability for other cities to share methodology and knowledge is key for a successful City-level localization: Los Angeles has already partnered with New York (US), and Helsinki (Finland).

Cities are uniquely positioned to discuss and implement SDG 11 (Sustainable Cities and Communities), therefore inside the Review, there is a special section of comments on Goal 11, and particularly:

"OUR STRUGGLE FOR GLOBAL SUSTAINABILITY WILL BE WON OR LOST IN CITIES."
— **Ban Ki-moon**, former Secretary-General of UN

equal access (inclusion, mobility, healthcare), risk management, culture and environmental impact and Resilience: Los Angeles is an inaugural member of the 100 Resilient Cities network. The Review also details efforts to: achieve cleaner air and water, clean energy, green jobs and environmental justice through the City's Green New Deal; increase access to affordable education workforce training; reduce income inequality and close gaps in economic prosperity; and meet targets on public safety, transportation and hunger.

Accompanying the Review's launch, the City also launched two websites. One gathers content from the Los Angeles community to create an index of SDG-related activities in the City. The second is a local data-reporting platform that is built with open-source code, and others are invited to use the code to build their own reporting platforms.

2017年10月，在康拉德·N.希尔顿基金会和当地大学的支持下，市长埃里克·加希提宣布洛杉矶市将通过并贯彻可持续发展目标。2019年7月，它发布了一份《自愿性本地评估》，列出了该市在实现可持续发展目标方面的进展情况：从落实的政策措施，到为无家可归者扩大庇护所、住房和服务，以及为妇女和女童提供平等经济机会的努力。

感谢来自当地大学的学生，可持续发展目标审查和本地化方法已得以实施：如果发现某一目标不适用于该市，应考虑在符合初表的同时对其进行修改。在怎样可以吸引当地利益相关者社群，和应该怎样增加其他城市共享方法和知识的能力之间保持平衡，是成功进行城市层面本地化的关键：洛杉矶已经与纽约（美国）和赫尔辛基（芬兰）建立了合作伙伴关系。在讨论和实施可持续发展目标11（可持续城市和社区）时，城市处于独特的地位，因此在《评估》中，有一节专门介绍目标11，尤其是：平等获取（包容性、流动性、医疗保健）、风险管理、文化和环境影响与弹性：洛杉矶是"100个弹性城市"网络的创始成员。

该《评估》还详细介绍了以下方面的努力：通过该市的"绿色新政"实现了更清洁的空气和水、清洁能源、绿色就业和环境正义；增加获得负担得起的教育劳动力培训的机会；减少收入不平等，缩小经济差距；并实现公共安全、运输和饥饿方面的目标。

"我们为全球可持续发展所做的努力将在城市中决出成败。"
— 联合国前秘书长潘基文

伴随《评估》的发表，该市还发布了两个网站：其中一个从洛杉矶社区收集内容，以在该市创建一个与可持续发展目标相关活动的索引；第二个是一个使用开源代码构建本地数据报告平台，邀请其他人使用该代码构建自己的报告平台。

Download the Voluntary local review: **sdg.Lamayor.org** and read more about the Green new deal: **plan.Lamayor.org**

下载《自愿性本地评估》：sdg .lamayor.org
了解更多关于"绿色新政"的信息：
plan lamayor.org

THE SMALL PICTURE

X-Runner's Sanitation Solutions

By **Design Magazine**
Photo by : **iF award**

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) have made it clear that 1.7 billion people still need basic sanitation and face a health crisis caused by inadequate provision, especially in arid regions of developing South American and African countries. The lack of basic sanitation and the environmental problems it creates may be harder to solve than the problem of safe drinking water.

X-Runner is a certified social enterprise with the mission of providing sustainable sanitation solutions that adapt to the needs at hand in any context. In Peru, X-Runner collaborates with the association Sanisol which sources and supports project families. It aims to provide access to safely managed sanitation, sadly all to often lacking in low-income households in urban areas.

Their sanitation system offers an immediate, effective and reliable solution in the form of the installation of a waterless toilet, the collection and the responsible management of the organic waste generated. The aim is quite simply improving health and quality of life. X-Runner eco-toilets cost about USD30, and each storage box can be used by a family of three for a week.

X-Runner collects storage boxes once a week and turns their contents into fertilizer to improve soil quality in arid areas. It charges users USD13 a month. So far, more than 2000 families in the Lima area are using these eco-toilets.

Installation of dry toilets in Lima, Peru
秘鲁首都利马干旱区进行无水洁净厕所安装

X-Runner的可持续卫生解决方案

文:《设计》杂志
图: **iF award**

世界卫生组织和联合国儿童基金会明确指出,全球仍有17亿人口无法获得基本的卫生设施,面临着因卫生设施不足而导致的健康危机,特别是在南美及非洲等发展中国家的干旱地区。X-Runner是一家经过认证的社会企业,其使命是提供可持续的卫生解决方案,以适应任何环境下的需求。

在秘鲁,X-Runner与支持家庭项目的Sanisol协会合作。它的目标是提供安全管理的卫生设施,而城市中低收入家庭往往缺乏安全管理的卫生设施。X-Runner生态厕所通过无水循环,收集并存储固体废物,添加锯屑等材质消除臭味,减少蚊虫滋生,并对产生的有机废物进行回收和负责任的管理,以帮助贫困家庭与小型企业节约水资源同时改善卫生条件,通过创新方法改变那些在经济发展过程中被忽视人群的生活。

X-Runner生态厕所售价仅为约30美金,其存储盒足够三口之家使用一周。X-Runner公司每周回收一次存储盒,并将收集的粪土变成肥料,用于改良干旱地区的土壤质量,一个月向用户收取13美元的服务费。截至目前,利马地区已有2000余家庭在享受X-Runner公司提供的服务。
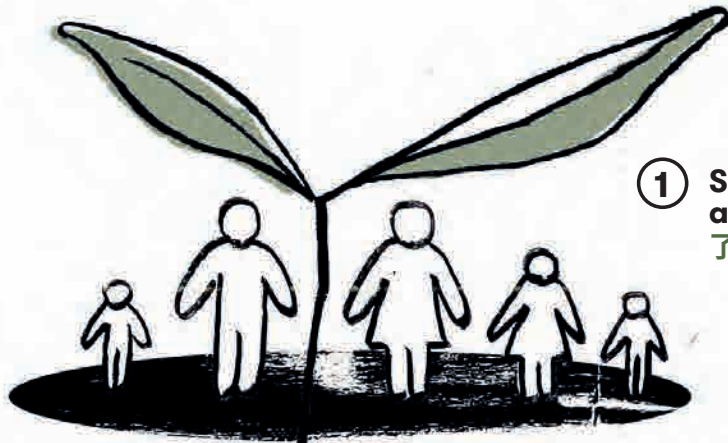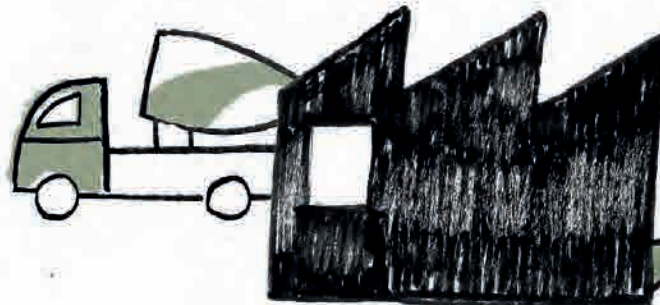
1 **Sensitize communities and understand the context**
了解社区, 了解环境

2 **Install the dry toilets**
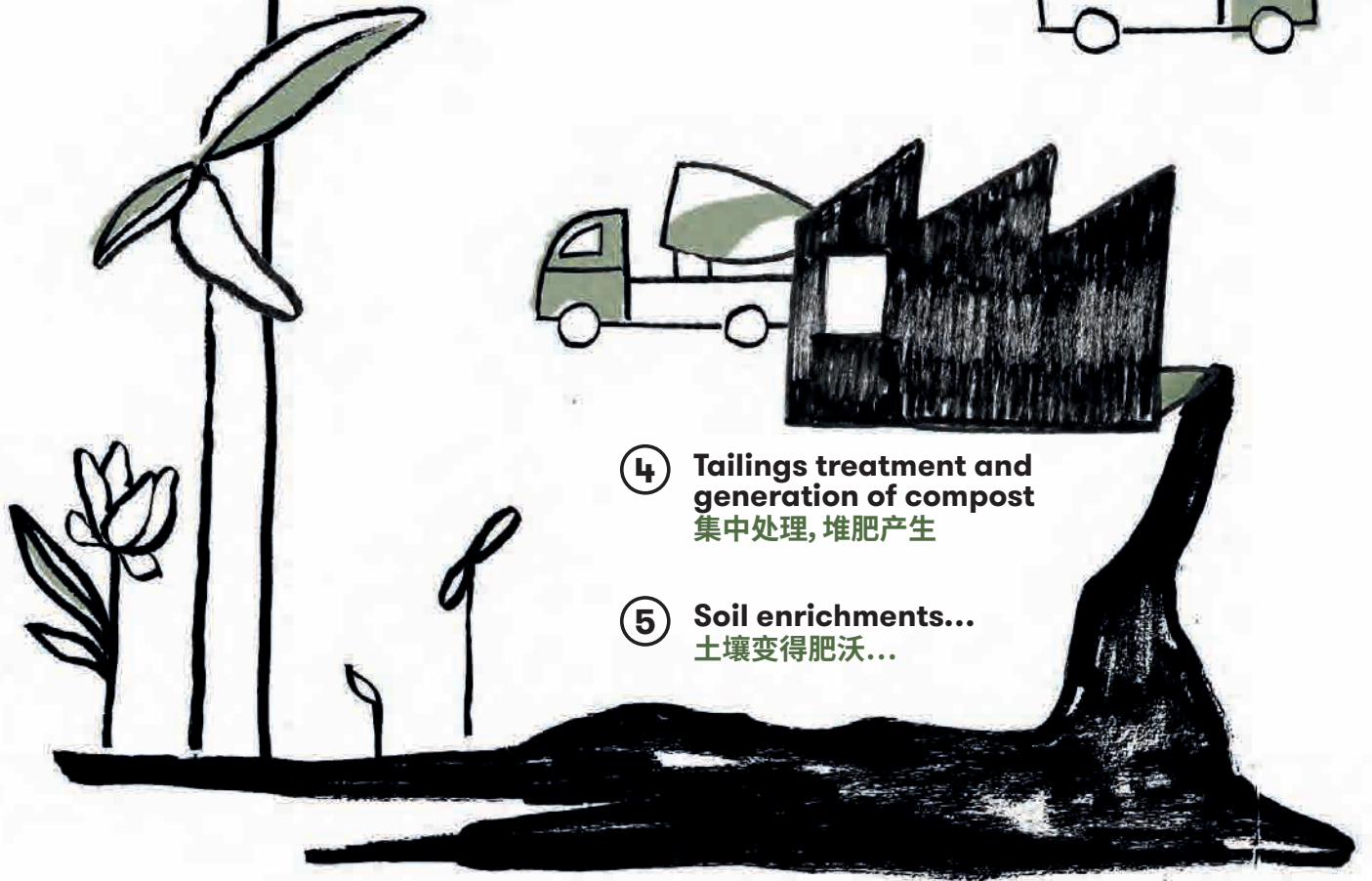安装无水清洁厕所

3 **Monthly collection service**
每月定期收集

4 **Tailings treatment and generation of compost**
集中处理, 堆肥产生

5 **Soil enrichments...**
土壤变得肥沃...

... Restart the process !
... 如法炮制, 再来一遍!

Illustration by LAVA BEIJING

Garbage Clinical Insurance: 'Two Birds With One Stone'

印尼"垃圾诊所保险" 一举两得

There are countless poor people in Indonesia who are in need of medical assistance. And given rapid urban and industrial development, environmental protection facilities have not been able to keep up. One aspect in particular needs highlighting: Indonesia's acute garbage pollution problem.

Garbage Clinical Insurance is a micro health insurance program launched by Gamal, an Indonesian community doctor. "While health care may be unaffordable for the poor, there is one thing everyone has access to, and that is garbage," he said. In an effort to help those who cannot afford health care and at the same time solve the city's garbage issue, Gamal proposed a program called Garbage Clinical Insurance and founded a company called Indonesia Medika so as to get free health insurance for the poor instead of money. The poor people who take part in the program receive 11,750 Indonesian rupees (about 0.9 USD) per month to pay for health insurance if they contribute three kilos of recyclable waste, including plastic, metals, and organic waste that can be used as fertilizers. Since then, Gamal has built up a full team of professional volunteers to teach those taking part in the program how to sort garbage, and help them make contact with middlemen who will buy it.

With this program, the community has created an insurance scheme that pays for health services with garbage. This mobilizes idle resources in the community to improve access to health care and break down barriers between health facilities and the community. It can also be used as a social vehicle to increase public awareness and community willingness to manage waste at a household level.

The Garbage Clinical Insurance was awarded the iF Social Impact Prize in 2018. The jury statement concluded it was a "very good approach to solving two problems at once: the health care problem and the environmental problem. It demonstrates a meaningful way of making health care available to a broader public. The project also offers a lot of potential for other countries with similar problems."

印度尼西亚一方面有大批迫切需要医疗帮助的穷人，另一方面，由于城市和工业发展迅速，而配套的环保设施没有及时跟进，多年来垃圾污染问题非常严重。

"垃圾诊所保险"是印尼社区医生Gamal推出的一项微型医疗保险计划。他认为"穷人可能看不起病，但有一样东西人人可得，那就是垃圾。"为了帮助无钱看病的穷人，同时缓解城市的垃圾问题，他提出了这项计划，并创立了一家名为Indonesia Medika的公司来帮助执行——用垃圾代替金钱，让穷人享受免费的医疗服务。参与这项计划的人只要每个月缴交3公斤的可回收垃圾，包括塑料、金属、可作为肥料的有机垃圾等，便可换得11 750印尼卢比（约0.9美元），用以支付医疗费用。从那时开始，Gamal已经组建了一支专业志愿者团队，负责教人们如何给垃圾分类，并帮助联系收购垃圾的中间商。

这项计划把垃圾当作财物资源，让参与计划的民众用垃圾支付医疗服务，促使居民们开始整理、利用其废弃资源，更增进了他们获取医疗保健服务的机会，破除了医疗设施与贫困人群间的藩篱。此计划可谓一举两得，同时解决医疗问题和环境问题。它也是一种社会媒介，可以从家庭层面开始，提升民众对废弃物处理的环保意识与意愿。

项目获得了2018年iF社会影响力奖，评委认为"这是一个同时解决了医疗问题和环境问题的好办法，也示范了如何以一种有意义的方式，让更大范围的民众获得医疗服务。这项计划也为其他面临类似问题的国家提供了借鉴。"
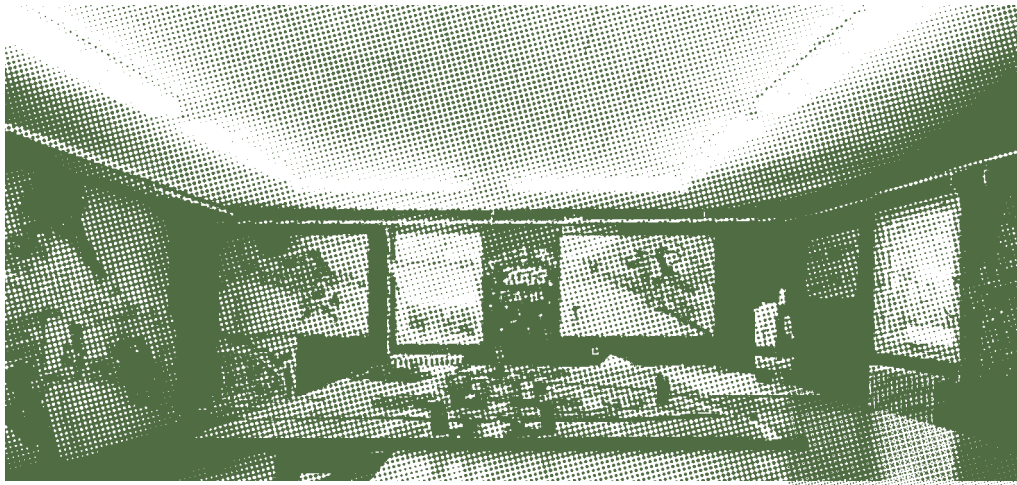
Kenzo Tange, Urban Planning
Institute, a segment of his project
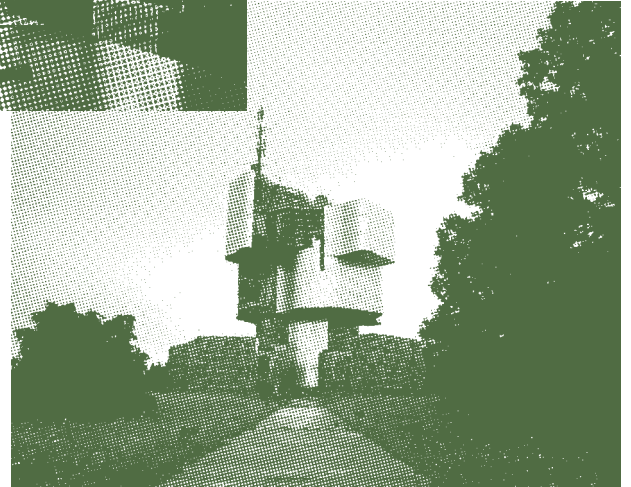for the city Skopje Republic
of Macedonia, 2009.
丹下健三设计的城市规划研究所,
这是他为马其顿共和国斯科普里市所做
规划项目的一部分, 2009年。
Photo by **Armin Linke**

Vojin Bakić, Branislav Šerbetić,
Petrova Gora Memorial, Croatia, 2011.
沃金·巴基奇、布兰尼斯拉夫·
什尔贝蒂奇设计的彼得罗瓦·
戈兰纪念馆, 克罗地亚, 2011年。
Photo by **Armin Linke**

Socialist Architecture : The Reappearing Act

Socialist Architecture — The Reappearing Act
is a cooperation between the architect Srdjan Jovanovic
Weiss and the photographer Armin Linke.

Since 2009, Weiss and Linke have been documenting
the current state of selected places of socialistic
architecture in former Yugoslavia. The Socialist Federal
Republic of Yugoslavia disappeared in the early 1990s
and was "balkanized" in various new democracies and
former socialist states. Every of these new states inherited
monuments, buildings and infrastructures, which were built
for the earlier socialist society. After the disappearance
of Yugoslavia, this inherited architecture often remained
empty in a kind of limbo between reutilisation and modern
archaeological ruin.

The documentation *Socialist Architecture —
The Reappearing Act* considered this indecisiveness
in five emerging democracies: Croatia, Bosnia-Herzegovina,
Macedonia, Montenegro and Serbia, and investigates
the relative impact on the spatial perception and the fate
of the former ideological architecture of Yugoslavia.
This book dares the assertion, that socialistic architecture
is insofar successful to date, as it creates public space,
even if the system, which produced it, disappeared.

《社会主义建筑: 再现行为》

此书是建筑师Srdjan Jovanovic Weiss和 摄影师
Armin Linke合作的成果。

Jovanovic Weiss 和 Linke自2009年开始就在记录一些
前南斯拉夫国家里社会主义建筑的现况。南斯拉夫社会主义
联邦共和国在1990年代初解体成为各种新民主国家和前社
会主义国家, 这些新成立的国家都继承了为早期社会主义社
会建造的纪念碑、建筑和基础设施。南斯拉夫社会主义联邦
共和国解体后, 遗留的建筑通常长久空置, 成为介于重新利
用与现代考古遗址之间的一种废 弃场所。

《社会主义建筑:再现行为》记录了在其中五个新兴民主
国家里的建筑不明朗状态, 包括克罗地亚、波斯尼亚-黑塞哥
维亚、马其顿、黑山共和国和塞尔维亚, 并考察了这些前南斯
拉夫意识形态建筑对空间感知的影响及其命运。这本书断
言, 即 使产生这些社会主义建筑的制度消失了, 该建筑体系
依然堪称是成功的, 因为它创造了公共空间。

Model City: a Visual Journey through Pyongyang's Fictional Reality

By **Cristiano Bianchi** and **Kristina Drapić**

模范城市：穿越平壤虚构现实的视觉之旅

白山、克里斯蒂娜·德拉皮奇

The idea of designing a 'model city' for a new kind of society recurs throughout the history of architecture – an ambition shared by political leaders and architects alike. Model cities have been envisioned and built over the centuries, from the Renaissance to the Modernist utopias. Pyongyang is an outstanding example, but due to the isolation of the country, access to this open-air museum of socialist architecture has been limited. While most of these model cities were laid out on an existing urban fabric, Pyongyang is a unique example of an urban centre that was completely planned and rebuilt after a single event — the Korean War — and developed under one vision: the peculiar state ideology known as 'Juche'.

When we first visited Pyongyang in 2015, we realized that — once we let go of our view of the European ideal - the city had its own kind of beauty. Pyongyang embodies the dream of total planning, to which every architect secretly aspires: jettisoning planning restrictions, space-ratio guidelines, land costs and all other constraints that govern modern architecture, and returning to the idea of a 'city of the people', in which everything is designed in a single, cohesive vision.

The human side of Pyongyang is barely visible in the book – people are small presences in the grand urban space or in front of gigantic statues – but it can be seen if you look carefully. In order to capture the feeling of 'fictional reality' you have when you visit the city, we followed the techniques used by Korean artists when depicting the supreme leaders or sacred places. We were fascinated by the striking way in which the sky is represented in art and propaganda. In homage to this, our photographs combine classic architectural views of buildings with the skies that have been replaced by gradients of pastel colours. The contrast between the two halves creates a visual alienation, where the real becomes unreal and vice versa.

建筑史上不乏为一个新型社会设计一座"模范城市"的尝试，这是政治领导人和建筑师的共同抱负。从文艺复兴时期到现代主义乌托邦，几个世纪以来，模范城市的构建不曾停止。在迄今为止的成果中，平壤是一个杰出案例——尽管由于该国处于封闭状态，我们很难见识到这个社会主义建筑的露天博物馆。与大多数模范城市在现有城市结构上进行布局的做法相比，平壤的独特之处在于，这个城市中心是在朝鲜战争这一重大事件之后从头规划、重建的，并且是在被称为"主题思想"的国家意识形态特殊愿景下发展起来的。

2015年第一次去平壤时，我们意识到，一旦摆脱欧洲理想城市的思维，便能体会到这座城市自有其美。平壤的"整体规划"是每个建筑师的梦想：没有规划限制、空间比例准则、土地成本等现代建筑条件的束缚，回归到"人民城市"的理念，一切都依照一个统一的愿景中来设计。

这本书中几乎看不见人——他们只是宏伟城市空间中或巨型雕像前面的微小存在，但如果你看得足够仔细，依然可以发现他们。
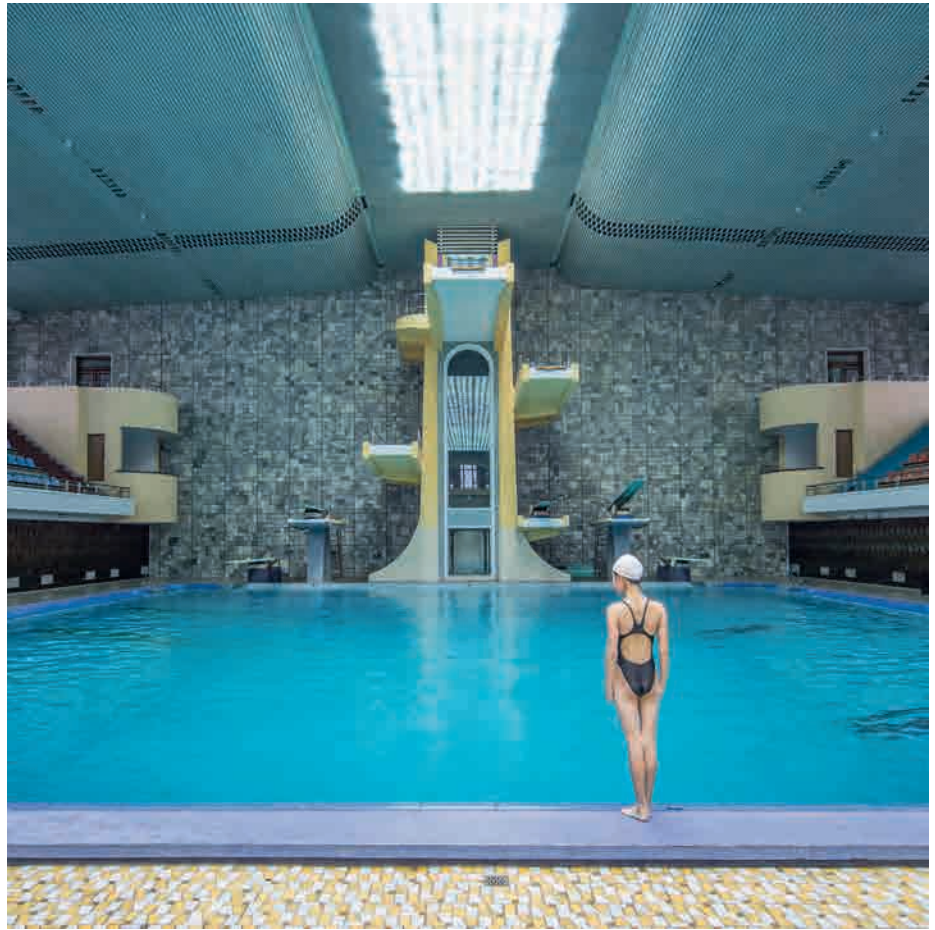
为了捕捉身处这座城市时的"虚拟现实"之感，我们借鉴了朝鲜艺术家描绘最高领导人或神圣场所时所用的技巧。他们在艺术作品和宣传作品中描述天空的方式让我们深深着迷。为示敬意，我们在照片中把经典建筑景观与渐变柔和色彩的天空结合起来，二者的对比在视觉上产生一种异化效果，亦真亦幻。

THE SMALL PICTURE   **59**

Changgwang Health Complex
© 2019 Cristiano Bianchi

Mangyongdae Children's Palace
© 2019 Cristiano Bianchi

Mirae Scientists Street
© 2019 Cristiano Bianchi

China Logs

中国日志

Building the Cultural Space of a Creative City

创意城市的文化 空间建设

By **Hua Jian**
花建

Hua Jian — Director and Researcher of the Cultural Industry Research Center, Shanghai Academy of Social Sciences and Chief Expert responsible for significant projects of the National Social Science Fund of China
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The UNESCO Creative City Network initiated by UNESCO was established in October 2004. To initiate cultural diversity, encourage urban residents to develop diversified cultural resources and create sustainable new economic models is actively encouraged by the UN. This has become the fundamental purpose of the "Creative City" scheme and an important trend in human civilization as it deepens globalization. Creative cities aim to inspire and stimulate people, and turn this energy into significant assets and social wealth that can be value added, invested in and circulated.

In consideration of this, the Creative City should focus on building a cultural space. This can be described as a smart, compact and intelligent urban physical space full of design, symbolism and art, transmitting its heritage, cultural imagination, aesthetic judgment and diversified charm. The cultural space offers a comprehensive cultural field for creativity, experience, production, exchange, and the merging and spreading of ideas. Spaces have the following four features: firstly being a cluster of intensively productive cultural creators who can attract resources including monetary capital, social capital and cultural resources. Secondly, centralizing cultural infrastructure and various cultural services, so that they become cost efficient, convenient and highly internationalized, enabling the generation of various creative results. Thirdly, pooling cultural and artistic activities, convenient for cultural producers to engage in R&D, creation, performance and exchange, and for the public to participate in and share creative results, thus having the active humanitarian value. Fourthly, the cultural space acts as a place of experiment endowed with aesthetic and artistic value. These four aspects are fundamental features we should see in a cultural space in a Creative City.

Only if a Creative City has a quality and important cultural space can it lay the foundations for creative results. As it is insufficient to play its role as the arts and trade center, a city of culture must also become a place for artistic production, sales and consumption, and its core is the characteristic cultural spirit of the city. Looking from the practice of building creative cities in various countries, for a city, regardless of its geographical space and population, the more cultural space it has, the more vigorous its creativity and vitality. Just like the first UNESCO Creative City in the US, Santa Fe, with a population of just 70.000, it has over 250 art galleries and distributors. Known as the country's third largest art market, Santa Fe has countless art shops, small museums, galleries, craft bars, bookstores, cafes,

由联合国教科文组织发起的创意城市网络（UNESCO Creative City Network）成立于2004年10月，它的前身是该组织在2002年建立的文化多样性全球联盟（UNESCO's Global Alliance for Cultural Diversity）。倡导文化多样性，鼓励城市居民开发多样性的文化资源，创造可持续发展的新经济模式，是联合国积极推动而且获得广泛响应的一个国际潮流，是在全球范围内倡导和建设"创意城市"的基本目的，也是人类文明在全球化深入发展阶段的一个重要趋势。建设创意城市的根本目的，是激发全体人民的创造性和想象力，并且把这些创造力转化成为可增值、可投资、可流通的重要资产和社会财富。

有鉴于此，创意城市建设应该把建设文化空间作为一项重要任务。这种文化空间既是精明型、紧凑型、智慧型的城市实体空间，也充满设计、符号和艺术识别度，能够给人以历史传承、人文想象、艺术审美、多元魅力，是一种兼备创意、体验、生产、交流、集聚、辐射的复合型文化功能场域。它应该具有如下四个鲜明的特点：第一，它是文化创意人士和创造主体的集聚之地，形成文化生产力的集约效果，能够吸引大量资本包括货币资本、社会资本、文化资源；第二，它是文化基础设施和各种文化功能服务的集中之地，在这里进行创意活动的成本最为低廉、创造工作最为便捷、国际化程度最高，因而成为各类创意成果的诞生之地和首发之地；第三，它是大量文化艺术活动的荟萃之地，便于文化生产力主体从事各种研发、创造、演艺和交流活动，也便于社会公众参与和共享创意成果，具有积极的人文价值；第四，它是富于审美价值的体验性空间，具有高度的艺术识别性。一言蔽之，基础设施的便利性、创意主体的创造性、文化交流的活跃性、审美活动的体验性，这四点应该成为创意城市文化空间的基本特点。

Inside space of a Metro Station in Shanghai
上海地铁站站内空间

and creative cuisine restaurants along the two sides of Canyon Road, scattered in picturesque disorder. It is rightly because of its cultural space that Santa Fe has become famous. Every year, people from across the world gather there for art events.

BUILDING A LARGE SCALE INTENSIVE CULTURAL SPACE

The building of the Creative City in the post-industrialization time brings about the cultural spaces with a large scale. The key is not to how king size it is and what a big volume it has, but to the high-end configuration of resources, sophistication of dominant philosophy, and the effectiveness of the running mechanism, so that it can gather batches of cultural producers and creators.

The US scholar Joel Kotkin pointed out in *NEW GEOGRAPHY: How the Digital Revolution Is Reshaping the American Landscape* that "the rising digitalization and new economy makes the USA to deeply adjust and transform its culture, economy and topography.

A metropolis will integrate the publication, film, advertising, new media, thematic parks, etc. This is critically positioned in the overall urban planning and forms a super large 'cultural industry complex' thus becoming an effective carrier of urban competitiveness." At the backdrop of globalization, the building of the large cultural space of the Creative City not only considers the layout of the macro-space, but also highlights the innovation benefits and optimizes the micro-mechanism, in order to conglomerate the most precious space resources in the city towards the combos and projects that are the most innovative, prospective and representative in the market, and what is more, establishes the wide international relation to combine the cultural creative resources in various cities in the world to form a network of cooperation and exchange, thus making the urban space have the conglomeration function and radiation that far exceed the physical area. Although such "super large cultural space" is physically limited,

一个创意城市拥有文化空间的品质和规模，形成了它培育创意成果的基础条件。文化之都仅仅发挥其艺术贸易中心的功能是不够的，它必须成为艺术生产、销售和消费的场所，而它的核心则是城市特有的人文精神。从各国建设创意城市的实践来看，一座城市的地理空间和人口规模无论大小，它所拥有的文化空间越多，它所集聚和焕发的创意和创造活力就越是旺盛。像美国第一个获得联合国教科文组织命名的创意城市——圣达菲，虽然只有7万人口，却拥有250多家艺术馆和经销商，被称为美国第三大艺术品市场。城里著名的大峡谷街（Canyon Road）两侧错落有致地排列着几十家特色艺术品商店、小型博物馆、画廊、工艺美术吧、书店和咖啡馆、创意烹饪机构等。正是这些充满创意活力和艺术识别度的文化空间，使圣达菲名声大噪，每年都吸引世界知名的艺术活动来此举办。

营造规模化和集约化的文化大空间

后工业化时代的创意城市建设，催生了大规模的文化空间。它的关键不在于面积如何超大、体量怎样超群，而在于资源配置的高端化、主导理念的先进性和运作机制的有效性，要能够集聚大批的文化生产主体和创意人士。美国学者乔尔·科特金在《新地理：数字经济如何重塑美国地貌》中指出："随着数字技术和新经济的崛起，美国的文化经济地貌也在深刻地调整和转换。大都市会融合出版、电

it assembles the cultural entities with the most innovative vitality and can become the international hub and port that intensify various cultural creative resources. This "super cultural area" may be flexibly combined, like heritage and innovation, public services and scaled-up strength, local context and international inclusion, or on-the-up urban and industrial transformation tide in the world.

It is typically represented by the "City of Film" - Bradford, which was the first Creative City named by UNESCO in the UK. Bradford, located in the northern part of England, was the most polluted textile center in the UK before, and Dawson International PLC, one of the largest wool processing enterprises in the world, was headquartered here. The city welcomed the 21st century by investing more in the industrial transformation and environmental reform and successfully transformed into the greenest city with full vigor in the UK, where the film industry, as one of the emerging green industries, plays its key role. The director of the "City of Film" is Bradford Urban Committee, which selected those major partners from local entities, including the National Media Museum, University of Bradford, Yorkshire and Humber screen agencies, and Yorkshire Big Screen,

etc., and then facilitated these museums, universities, organizations and enterprises to synergize to form the Industry-Academe-Research interactive mechanism, thus creating the large-sized film conglomerate space that plays its role of connecting the western culture and the eastern film. Bradford becomes one of the most important overseas exchange centers for Indian movies. Yorkshire, where Bradford is located, is the city winning the award in the International Film Festival of India 2007, and keeps in close touch with South Asia, including India, Pakistan, Sri Lanka and Bangladesh, etc. with respect to film and culture. The Indian film Slumdog Millionaire that received awards at several international film festivals was "born" here. It was very successful because of, among other things, Bradford's inclusion of diversities.

This case inspires the builders of the Creative City - the core to build the cultural space is conglomeration. For a Creative City, only sufficient innovative factors and quality can result in the intensive effects of creativity and innovation, so that a city can play its critical role in the global industrial chain.

影、广告、新媒体、主题公园等产业，在城市的总体规划中占有重要位置，形成一种超大型的'文化产业复合体'，成为城市竞争力的有效载体。"在全球化的背景下，创意城市的文化大空间建设，不但要考虑宏观空间布局，还要突出创新效益、优化微观机制，使得城市宝贵的空间资源，向最有创新活力、最有市场前景、最能够代表创新要求的组团和项目集聚，更要建立广泛的国际联系，与全球各个城市的文化创意资源形成合作与交流的网络，从而使得城市空间形成远远超过物理面积的集聚功能和辐射能力。这种"超级文化大空间"的物理空间有限，但是它汇聚了最富有创新活力的文化主体，可以成为集约各类文化创意产业资源的国际枢纽和良港。这种"超级文化区域"可以有多种组合形态，比如把遗产传承与创新开发、公共服务与规模优势相结合、把本土文脉与包容国际化相结合等，也可以结合全球范围内方兴未艾的城市和产业转型浪潮。

第一座获得联合国教科文组织创意城市"电影之都"称号的英国城市布拉德福德是一个典型案例。这座英格兰北部城市当年曾是英国污染严重的纺织中心，世界上最大的羊毛加工企业之一道森集团总部就位于这里。进入21世纪之后，城市投入大量资金进行产业转型和环境改造，成功转型成为英国最富有绿色活力的城市，而它新兴的绿色产业之一就是电影产业。这个"电影之都"的执行方是布拉德福德市都市区域委员会（简称布拉德福德合作委员会），它从当地业界中选取了主要合作伙伴，包括国立媒体博物馆、布拉德福德大学、约克夏和亨伯郡银幕代理处和约克夏大银幕公司等，然后推动这些场馆、院校、机构和企业分工协作，形成了产学研政相

"Magic Forest" in Hanzhong Metro Station in Shanghai
上海地铁汉中路站："地下蝴蝶魔法森林"

结合的联动机制，也催生了大型的电影产业集聚空间，并且以此发挥了联系西方文化与东方电影的枢纽作用。布拉德福德成为印度电影最重要的海外交流中心之一，它所在的约克郡成为2007年国际印度电影节的授奖之城，并且与南亚地区包括印度、巴基斯坦、斯里兰卡、孟加拉国等保持着电影和文化方面的密切联系。《贫民窟里的百万富翁》之作者就在这里成长起来。这部电影剧本的创作成功，与布拉德福德对于多元文化的包容密切相关。

这个案例启发了创意城市的建设者，建设文化空间的核心要素是集聚。就如一个大号水杯，自身的水满了才会溢出来。同样，对于一座创意城市来说，只有创新要素足够多，能级足够高，才能形成创意和创新的集约效果，并且在全球产业链中占据重要的位置。

Photos: Streetscape of American creative city Santa Fe
美国创意城市圣达菲市街景

BUILDING A SMALL DIFFERENTIATED CULTURAL SPACE

Nevertheless, the building of a cultural space for a Creative City not only focuses on large cultural entities, but should also project flexible and rich small cultural projects, in order to establish a rich integrated, clustered and networked social fabric. Developing a small cultural space requires flexibility to bring elements together like technology, creativity, business and trade, art, recreation, and fashion, to form a cultural ecology that inspires and stimulates people to imagine and create. This is driven by the laws of the modern creative economy. In the third phase of the globalization, innovative market players and talents should be able to bring together their knowledge and experience from different fields. From a global perspective, the innovative

activities of cities act according to a geo-distribution principle. The innovative "shoal" does not exist in any one place, but instead is active in waters with a sound ecology. Small cultural spaces in a Creative City should operate like these sound waters.

The design of the inside of Hanzhong Metro Station in Shanghai is one such sound water. This mini cultural space was designed by Norman Foster and received the participation of other international teams including the Architectural Association School of Architecture and the Royal College of Art. It is a dazzling "Magic Forest" comprising of one 140m core tube and five adjacent structured oblique pillars in the transfer hall. In such a transportation and art space, 2015 butterflies flash and fly continuously, and the circular pillars are like sunshine.

Four species of butterflies are used for lighting design, representing the four development phases of the Shanghai Metro. 18 colors are used for butterflies that magically dance around the core tube using photoelectric digital technology, representing a network of 18 metro lines to be completed by 2020.

The alluring mini cultural space design gives this ordinary urban transport hub a poetic flavor, offering light, butterflies, love and magical trees to those waiting for the train. It may not be a major historic reserve, protected building or industrial park, but it can still sow creative innovative seeds for millions of passersby. As cities advance, more and more commercial, traffic, green and residential spaces will be endowed with cultural and artistic functions and become integrated mini cultural spaces. ∎

打造形态丰富多样的文化小空间

然而创意城市对文化空间的建设,不仅要注重大型文化空间,也要利用原有的交通空间、工厂空间、商业空间、乡村空间等,打造灵活多样、形态丰富的小微文化空间,形成强集聚、多组团、网络化的文化生产力格局。打造文化小空间的核心,是把科技、创意、商贸、艺术、休闲、时尚等要素进行灵活的组合,形成启发人们联想和创意、激发人们创造热情的文化生态。这是由现代创意经济的规律所驱动的。在全球化进入到第三阶段即创新全球化的时代,一个世界城市需要形成大批创新型的市场主体和人才,让多个专业领域的知识和经验相互交融,才能激发人们的想象力和创造力。从全世界范围来看,城市的创新活动具有地缘分布规律。创新之"鱼群"并非随处可见,而是活跃在一部分优良生态的"水域"中。创意城市的小微文化空间建设,正应该成为这样的优美"水域"。

上海地铁汉中路站的站内设计正是这样一片优美"水域"。这个由世界著名建筑事务所诺曼·福斯特设计总监、英国建筑学院联盟、英国皇家艺术学院等国际团队参与设计的文化小微空间,以围绕换乘大厅140米长的核心筒和5根临近的结构斜柱,开辟出一片令人目眩的"地下蝴蝶魔法森林"。在这个交通空间兼艺术空间中,2015只彩色蝴蝶不断地闪现跳跃,环绕的圆形立柱也仿若从天窗外投射下来的阳光。它的光影设计选定了凤蝶、蛱蝶、绢蝶、斑蝶四种造型,代表上海地铁系统的四大发展过程。它以智能化的光电数码技术,让2015只形态各异的3D打印蝴蝶围绕核心筒翩翩起舞,变幻出赤橙黄绿青蓝紫等18种颜色,魔法般围绕核心筒的轨迹飞翔,寓意2020年将建成的18条上海地铁线路网络。

这一小微文化空间设计的迷人之处就在于,它让平淡无奇的交通空间涌现出神奇的诗意,让人们在脚步匆匆的地铁站突然间有了光和蝴蝶、爱情与魔法森林的奇妙体验。尽管它不属于主要的历史风貌保护区,也不是特色保护建筑,更不是大型的产业园区,但依然可以让千千万万的上班族和家庭以及孩子们,在匆匆一瞥中感受到艺术大师的奇妙想象和优美灵感,从而根植了创意和创造的梦想种子。随着城市更新的步伐,应该让更多的商业空间、交通空间、绿化空间、居住空间等,逐渐地被赋予文化艺术的独特功能,成为复合型的小微文化空间。■

Hua Jian is the Director and Researcher of the Cultural Industry Research Center, Shanghai Academy of Social Sciences, who has long been engaged in the professional study and decision making on the cultural industry, creative economy, urban culture, etc., and is the Chief Expert responsible for significant projects of the National Social Science Fund of China. He has published over ten academic monographs, for example, *Creative Cluster and Conglomeration Development of Cultural Industry*, and was granted many awards and honors, for example, the Excellent Subject in the Cultural Industry of the Ministry of Culture – 1st Prize.

花建:上海社会科学院文化产业研究中心主任、研究员,长期从事文化产业、创意经济、城市文化等的专业研究和决策服务,担任国家社会科学基金重大项目首席专家,先后出版《文化产业的集聚发展》等10多部学术专著,荣获国家文化部文化产业优秀课题一等奖等诸多奖项。

Changchun: Developing a Greener Auto Industry

长春红旗国际小镇的 绿色智能蓝图

By **Xie Shijia**, report at CRI Online

It's mid August and in Changchun it has begun to drizzle. In a red-brick workshop building in the Changchun Automobile Development Zone, staff are scattered around the factory. Many little robots are busy at work, doing everything from assembly to transportation to inspection. With "perfect coordination," brand-new Red Flag cars roll off the assembly line and are shipped across the country.

Changchun is the cradle of the Chinese automobile industry: the very first car of the People's Republic was born here. At the FAW Red Flag H comprehensive assembly workshop built in the 1970s, we are given a tour to highlight its state of the art modernizations. "Our workshop uses the most advanced technology and equipment. Smart assembly accounts for more than 80% of total assembly stations. You could say this is the greenest and smartest auto manufacturer in China today." We pass a small robot and are told about to its role in production. After a year of upgrades, in February this year, the refurbished plant officially launched its newer greener production lines.

"It's an old factory building, and with relatively low ceilings. With little space, we've found we can make savings on energy and heating. We have have many new skylights for lighting and air circulation." Zhang Guolong, a FAW employee, talked excitedly about the outcome of the remodeling.

The "green and smart" transformation at the Red Flag factory is just the tip of the iceberg for the partnership between Changchun Automobile Manufacturing Development Zone and FAW. They are working on the development of an entire new town: the Red Flag International Town. At the beginning of 2018, to promote high-quality development in the automobile manufacturing economy and support the development strategy of FAW's Red Flag brand, the Automobile Manufacturing Development Zone has integrated the original town with Red Flag brand strategy, and proposed to the government the joint creation of a green and smart Red Flag town.

The automobile manufacturing development zone covers 110km2. The headquarters of FAW Group and the company's four main brands Volkswagen, Fengyue, Jiefang and Red Flag are all located here.In July 2019, at the Changchun International Automobile Culture Festival and the first Red Flag Carnival, the concept behind Changchun's International Red Flag Town was officially released.

YOU COULD SAY THIS IS THE GREENEST AND SMARTEST AUTO MANUFACTURER IN CHINA TODAY

2019年8月中旬的长春下起了绵绵细雨，在长春汽车经济开发区内的一个枣红色厂房内，工作人员零星分散在厂区的几个位置，现场随处可见忙前忙后的小机器人。机器人自动完成汽车装配、运输、检查等各项工作，一辆辆崭新的红旗汽车在它们的倾力配合下完成总装，走向全国各地。

"我们车间采用了最先进的工艺装备，智能化工位占全部工位数量的80%以上。可以说是目前全国汽车制造领域最先进的智能工厂和绿色工厂了。"现场的讲解员指着忙碌工作的小机器人介绍道。这栋厂房是一汽红旗工厂新H总装车间，建于20世纪70年代。在经历一年的改造升级后，今年2月28日，全新的厂房正式进入投产，"绿色"和"智能"是其主打的两张牌。

"这个工厂是老厂房改建的，它的高度比较低，意味着空间较小，整个采暖、节能效果也就越好。另外，厂房顶部开了很多天窗，也保证了采光和空气流通。"谈起改造细节时，全程对接老厂改造的一汽员工张国龙如数家珍。

红旗工厂的绿色智能改造只是长春汽开区携手一汽打造红旗国际小镇蓝图的冰山一角。2018年初，为促进汽开区经济高质量发展，支持一汽集团红旗自主品牌发展战略，汽开区将原来的汽车文化小镇与一汽集团红旗自主品牌发展战略进行有机融合，提出政企共同打造一个红旗绿色智能小镇。

今年7月，长春红旗国际小镇概念规划正式对外发布。根据此份概念规划，红旗国际小镇将被设计和打造为集"智慧城市与交通"、"智能制造与汽车"、"品质生活与优美生态"以及"创新、创造、创业"和"乐山、乐水、乐活"的绿色智能小镇。

汽开区将在东风大街沿线布局多个公共服务节点、汽车高端服务节点和特色产业区，这些布局将串联汽开区特有的汽车文化线和

According to the plan, the Red Flag International Town will be a smart city with transportation at its heart. It will promote "smart manufacturing and the car," "quality lifestyle and ecology," "innovation, creation, entrepreneurship" and becoming the location of "happy livelihoods."

The zone will be arranged around a series of public nodes, high-end service nodes and special industrial areas, along Dongfeng Street. The layout connects car culture to an upgraded industrial economic area to form a "double spiral" development thread. A new industrial pattern of "one axis, four zones" will be created. The "one axis" is the central Dongfeng Street manufacturing axis; the "four districts" will be the history of car-making in the PRC, international cooperation demonstration zone, innovative leadership headquarters zone and the national independent brand zone.

Aerial image of the historical and cultural areas of the planned Red Flag "green smart" International Town "We will start off by building a red flag museum, a historical and cultural block, a 1958 cultural and creative garden, and an international cultural village. We hope these will be completed in the next three years." Gao Qihua, Chairman of Red Flag International Town Management Company introduces the various components of the project. An operating company has been set up for this project with 100 million RMB in registered capital, pooled from the manufacturing district and FAW Group, each contributing 50 million RMB. This company will take the lead in undertaking strategic investment, fundraising, planning and construction.These red-brick former dormitories are over 50 years old, and were nicknamed the "big house" and the "little hut." They have been granted protected historical building status. The Red Flag green smart International Town has already been included in the second round of pilot national new comprehensive urbanization projects headed by the National Development and Reform Commission. A lot of effort is going into promoting and establishing the historical and cultural aspects, Dongfeng Street cultural endeavors, and innovative smart practical zones. ∎

A LOT OF EFFORT IS GOING INTO PROMOTING AND ESTABLISHING THE HISTORICAL AND CULTURAL ASPECTS, DONGFENG STREET CULTURAL ENDEAVORS, AND INNOVATIVE SMART PRACTICAL ZONES.

升级的产业经济线,形成"双螺旋"的发展脉络。届时,汽开区内将形成"一轴、四区"的新产业格局:"一轴"即汽开区东风大街中央轴线;"四区"分别是红色汽车历史文化区、汽车产业国际合作示范区、总部基地创新引领区和民族工业自主品牌区。

"初期我们将以汽车文化和红旗品牌为基底,打造红旗博物馆、历史文化街区、红旗1958文创园、国际文化村落等经典文化区域。各项目规划工作正在有序推进,预计将在三年内建成。"红旗国际小镇运行管理有限公司董事长高轶华介绍小镇各项目的进展情况。据了解,该运营公司专为红旗国际小镇设立,注册资金为1亿元,汽开区和一汽集团各出资5000万元,将以业主身份对小镇进行政策承接、筹资资金、规划建设和运营管理。

目前,红旗绿色智能小镇已被中国国家发改委列入第二批国家新型城镇化综合试点,历史文化街区、东风文化十里长街、创新智慧实践区等项目的规划正在全力推进。∎

Replacing Products with Services so We Don't Need to Own so Much

用服务替代产品，我们不必人人占有

Interview with **Liu Xin**, Professor of the Academy of Fine Arts, Tsinghua University, Director of the Collaborative Innovation Ecological Design Center
专访刘新 (清华大学美术学院教授、协同创新生态设计中心主任)

刘新，设计艺术学博士，主要研究方向为"可持续设计"、"产品服务系统设计"和"综合造型基础"。从攻读博士学位期间开始，刘新老师就关注于"可持续设计"的理论、方法和实践案例的整理和研究，所撰写的相关主题博士论文获得清华大学优秀博士论文奖。2008年作为中方协调人参与LeNS(The Learning Network on Sustainability 亚欧可持续设计教学合作项目；创建LeNS-China中国可持续设计学习网络；2009年与同济大学设计创意学院等6个国内著名设计学院共同创建DESIS-China社会创新与可持续设计联盟中国分支机构，并作为DESIS国际联盟清华大学美术学院lab的负责人。2012年入选教育部"新世纪优秀人才支持计划"。

Please tell us how sustainable design came about?

Sustainable design is closely related to green design, eco-design, and low-carbon design. Green design concerns are more specific, target is stronger, and more thinking is about the pollution caused by human development to the environment, and how to design products with low environmental impact. Eco-design considers the entire lifecycle of a product from raw materials, manufacturing, distribution, consumption to disposal. Eco-design and green design complement each other.

Sustainable design has a grand and strategic vision. In the 1970s and 1980s, people began to deeply reflect on the conflict between industrial development, economic development and the environment. At that time, the Roman Club gathered experts from various fields. This was when the economy had become its most prosperous since World War II. They found that according to the global population and speed of development, we would hit a glass ceiling in the end. This also reflected the load capacity of resources and the environment, as well as economic development. Since then, organizations including the United Nations began taking note of the issue of sustainable development.

In the 1980s, the World Environment and Development Committee led by the Norwegian Prime Minister Brundtland published the report, "Our Common Future", stating that human development should reach a consensus not only to meet the needs of this generation, but also to consider future generations. The need for survival matches the concept of sustainable development. In addition, sustainable development sees the economy, society and environment are three very important support points. Gandhi once said poverty is the biggest polluter. The West had developed before it was discovered that environmental pollution was extremely serious. So this reflection did not take into account the issue of fairness. Sustainable development is not limited to environmental protection, but also to human needs, including the needs of low-income periphery societies to reach the level of basic security and dignity. Balance is critical, and these three pivots should be prioritized. If it is expressed in three circles, the ecological environment must be the largest circle, then society, then the economy. Obviously, the ecological environment is the most decisive factor.

What kind of resistance is there to sustainable design in China?

This is a systemic issue, so we need to consider the overall policy background, corporate focus and inputs, increasing consumer awareness, and changing designers' mindsets and knowledge. When designers are working for a company, they can integrate sustainable ideas into their design projects and do not have to always just follow the boss. In fact, if you think about the long-term development of a company, and integrate strategic elements into the sustainable design aspect of a project, this benefits your company and allows your value to be fully reflected. Of course, the profit-seeking madness of capital can be daunting, and poor management can become a hindrance, just like with shared bikes. The concept of sharing is good, especially in a populous country like China, but many shared designs are kidnapped by capital, in turn creating huge waste of resources.

What related design are you doing at Tsinghua?

We have a lot of teachers who are interested in this field. Our work comprises course teaching, corporate projects and theoretical research. These three directions have their own focuses, but they are also closely related.

There are sustainable design courses for undergraduates and graduates. Undergraduate students have been focusing on the redesign of "urban gems" for the past two years. Nowadays, underground gems are being depleted, and transferred into items we use every day.

The focus of the course is to allow students to get to grips with abandoned things and set about upgrading them. First of all, they need to be familiar with the waste around them, study their entire usage path, including disposal, sorting, recycling, reuse or incineration and landfill, and then design a new product or service system based on popular need. The goal is to minimize the number of valuable resources that end up at the incinerator or landfill, and more importantly, to encourage students to reflect on modern lifestyles and use design to reduce consumption from source.

"Urban Gems" redesign coursework

Our graduate students has worked on the topic of the distributed economy over the past two years, also in collaboration with the EU. The distributed economy is different from the traditional centralized economy. With a centralized economy, large power plants send electricity to various places through wires, which in turn consume energy.

The use of localized wind energy and solar energy is a distributed concept. 3D printing is a distributed manufacturing method. People around the world can access product data via the Internet and manufacture it on localized 3D printers instead of having their design shipped from factory out to the world. As with WeChat and Weibo, people can now self-publish, which is a kind of distributed information dissemination. Most of the traditional industrialized societies are centralized, and now they are slowly decentralized, and the future trend is distributed. In a distributed economy, new opportunities will arise, such as pooling people's wisdom for distributed innovation. Students have been encouraged to grapple with these issues, while the contents of the course changes. This year's graduate program will focus on the theme of sustainable communities.

In the past two years, our corporate projects have focused on toilet design. Some of these eco-toilet use distributed processing, because the centralized sewage treatment methods in the city are not up to the task. In addition, China's rural hinterlands do not have complete pipeline networks and processing plants, so distributed technology is needed locally. In 2014, the Bill Gates Foundation promoted toilet innovation projects around the world, and I was lucky enough to be involved as an industrial design expert. In 2015, we set up an ecological toilet research group and began to carry out relevant research in a planned manner.

There are many problems involved in toilet design: hygiene, needs, habits, eco-friendly requirements, deodorization, insulation, cleaning, collection and treatment.

We had to do a lot of background research, including into the history of toilet technology and culture, collecting and designing toilet design standards and cases, doing conceptual design and experimental samples, and then gradually beginning to carry out practical projects, and develop our own design Principles. Some projects have now landed or turned into demonstration sites.

What is social innovation?

The concept of social innovation has a historical and developmental context. One thing that's very important is to include different kinds of people. The combined wisdom and energy can help solve practical societal issues. Not just for the people, but also with the people. Li Qiang at the Department of Sociology at Tsinghua University, has worked with the Qinghe wool mill community to bring residents together to discuss how to build better neighborhoods and promote a sense of community. Getting residents involved is better than a top-down approach. When we designed the public toilets in Beijing's old hutong areas, colleagues talked to the locals, mobilizing their enthusiasm and participation, and integrating their real feelings into the design. Social innovation is about getting the public involved in the design process. Designers need to be low-profile and integrated to truly drive design innovation.

Many companies continuously update their products in pursuit of profit. How do you see this from the perspective of sustainable design?

Necessary technical updates can be understood, but the "planned discontinuation" approach that purely follows the logic of capital is unsustainable. The basic laws of early industrialized development are large-scale production, consumption, and discontinuation. These interdependence factors shape our way of life and consumption patterns today, but they come at the cost of using huge amounts of natural resources, to the point where discussing green product design is hardly meaningful, as we are still consuming resources, green or not. Service design can be an important additional strategy, in which design efforts go towards dematerialized products. Demand is satisfied without extra possessions being generated. Companies can still profit significantly if they make such a transition. For consumers, their demands can be met through sharing or other services. Service design as a future trend and a very important aspect of sustainable design. ∎

Note: This article is an excerpt from an interview of Professor Liu Xin in Design magazine 2019 (Second half of August) Editors: Lin Nan, Li Jie, and Li Ye

请您简单介绍一下可持续设计的发展过程?

可持续设计和绿色设计、生态设计、低碳设计密切相关。绿色设计关注的比较具体,目标性比较强,思考的更多是人类发展给环境造成的污染,以及如何设计低环境影响的产品。生态设计会考虑产品从原料、制造、分销、消费一直到废弃的整个生命周期。生态设计与绿色设计是相互补充的。

可持续设计的角度偏宏大和策略性。20世纪七八十年代,人们开始深刻反思工业化发展、经济发展与环境之间的冲突。当时的罗马俱乐部聚集了各种领域的专家,他们在二战以后经济最繁荣的时候发现了这样一个问题:按照当时的人口基数和每年的发展速度,再过一段时间,人类必然会遭遇玻璃天花板,也就是资源、环境的承载力与人类经济发展的冲突问题。在这之后包括联合国在内的很多组织都开始注意到可持续发展的问题。上世纪80年代挪威首相布伦特兰夫人领导的世界环境与发展委员会发表了《我们共同的未来》报告,提出人类的发展应该达成一种共识,不仅要满足这一代人的需求,还要考虑子孙后代的生存需要,即可持续发展的理念。可持续发展除了关注环境,也关注社会,并认为经济、社会、环境是三个非常重要的支撑点。甘地曾说过一句非常著名的话:贫穷是最大的污染。当年西方社会经历了快速发展以后,发现对环境造成的污染极为严重,开始反思,但并未顾及公平性问题。可持续发展不仅限于环境保护,也关注人的需求,包括一些低收入的非主流人群的需求,要得到基本的生存保障和尊严。所以,可持续发展中这三点的平衡才是最关键的。也有观点认为这三个支点是有优先级的。如果用三个圈表示,生态环境一定是最大的那个圈,然后是社会,里面的是经济。显然,生态环境是最具决定性的要素。

在国内推进可持续设计存在哪些阻力?

这是个系统问题,需要大的政策背景、企业的重视与投入、消费者意识的提升,以及设计师的观念改变和知识更新。设计师在为企业服务的时候,可以将可持续的理念有机融入到设计项目中,不能完全听从甲方的意见。实际上,如果你为企业的长期发展着想,把可持续设计的策略手段巧妙整合到项目中,还能为企业带来利益,那么你的价值就充分体现出来了。当然,资本的逐利与疯狂很可怕,管理不好就会成为阻碍,就像共享单车。共享的理念是非常好的,尤其是对中国这样的人口大国来说,但很多共享的设计被资本绑架了,反而造成巨大的资源浪费。
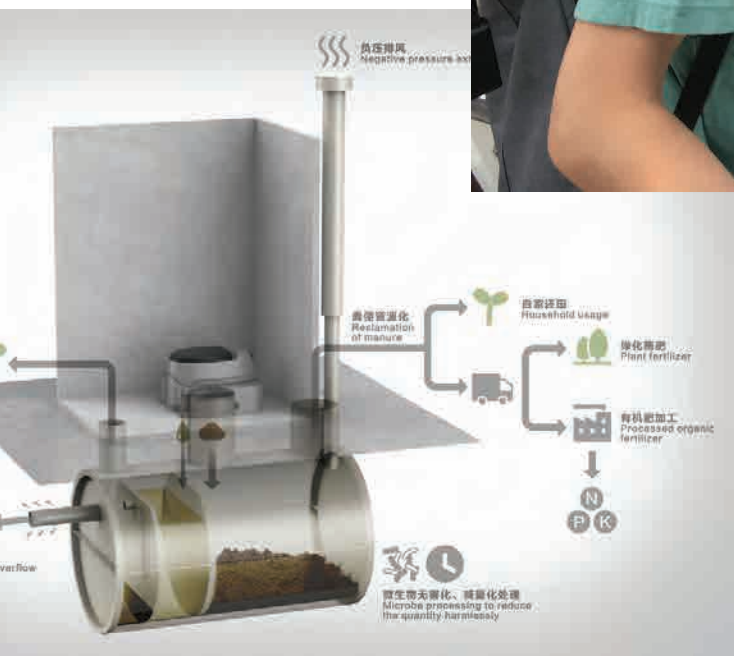
清华美院有哪些与可持续设计相关的项目?

我们有很多老师关注这个领域,这方面的工作可以分三个方向:课程教学、企业项目和理论研究。这三个方向各有聚焦,但彼此间也是紧密联系的。

在课程上有本科生和研究生的可持续设计课程。本科生这两年关注的是"城市矿产"再设计。现在地下的矿产越来越少,都转移到我们日常所用的物品中了。课程的重点是让学生充分认识身边被废弃的物品,然后进行升级再造。首先要熟悉身边的废弃物,研究这些物品的使用、废弃、分类、回收、再利用或焚烧与填埋的完整路径,然后结合人的需求,设计出新的产品或服务系统。目标是尽量减少这些宝贵资源进入焚烧与填埋环节,更重要的是鼓励同学们反思现代生活方式,利用设计手段从源头上减少消耗。

研究生的课题这两年是跟分布式经济有关的。这也是我们与欧盟合作的一个设计研究课题。分布式经济区别于传统的集中式经济。大型发电厂通过电线将电力输送到各个地方,这个过程中会造成能源的消耗,这是集中式经济的案例。

产品系统
Product system

尿液资源化
Reclamation of urine

无害处理
Harmless ov

和处理技术等。开始时我们做了大量背景资料研究，包括厕所技术与文化的发展史，收集整理厕所设计标准与案例，做概念设计与实验性样品，然后逐渐进入到一些实际项目中，并慢慢形成自己的设计原则。现在有些项目已经落地或做成了示范点。

什么是社会创新？

社会创新概念有其历史背景和发展脉络，但有一点非常重要，就是让不同的人参与进来，凝聚大家的智慧和能量，去解决社会生活中的实际问题。不仅是for the people，而且要with the people。清华大学社会学系李强老师在清河毛纺厂社区做了这样一个项目，将居民融合在一起，共同探讨如何建立更好的社区邻里关系，如何促进社区的共建。让居民参与进来推动一件事，会比自上而下的方式更好。我们在设计北京胡同的公共厕所时，同事们经常与胡同的大爷大妈在一起讨论，调动起居民的积极性和参与感，把他们的真正想法融入到设计中。社会创新是让大众参与到设计的过程中。设计师需要放低姿态、融入到受众中，这样才能了解他们的真实诉求，真正推动设计创新。

很多企业为了追求利润，不断对产品进行更新换代，从可持续设计的角度，您如何看待这个问题？

必要的技术更新可以理解，但这种纯粹随着资本的逻辑、"有计划废止"的方式是不可持续的。早期工业化发展的基本规律就是大规模生产、大规模消费、大规模废弃，这三大相互依存，塑造了我们今天的生活方式和消费方式。这是以大量消耗自然资源为代价的。所以我们只是讨论绿色产品设计意义不大，因为再绿色环保还是要消耗资源。服务设计是一个很重要的对应策略，虽然它不是唯一的路径，但是设计应该朝这个非物质化的方向走。

用服务性的非物质产品满足需求，替代人人占有。企业可以逐渐转型，用服务替代产品，利润空间同样很大。因为对消费者而言，要满足需求，不一定是物质化的产品，而可以通过共享或其他服务方式来解决。服务设计是未来的趋势，也是可持续设计中非常重要的方面。■

而利用在地化的风能、太阳能就是分布式的概念。3D打印是一种分布式的制造方式。世界各地的人们都可以通过网络获取产品数据，并用在地化3D打印机进行制造，而不是由一家工厂生产之后运输到全世界。就像微信、微博，每个人都是自媒体，这就是一种分布式信息传播。传统工业化社会大多是集中式的，现在慢慢地去中心化，而未来的大趋势是分布式的。在分布式经济下会产生新的机会，比如利用每个人的智慧，在不同的地方去做分布式的创新。这是课程上鼓励同学们思考与创新的领域。当然，每年课程内容会有所调整，今年研究生课程将会关注可持续社区的主题。

这两年我们的企业项目以厕所设计为主。其中部分生态厕所也用了分布式处理的方式，因为以往城市里集中式的污水处理方式已经不能真正解决今天的问题了。另外，中国广大农村地区还没有完善的管网系统和处理厂，所以要用分布式的技术做在地化处理。2014年比尔·盖茨基金会在全球推广厕所创新项目，我有幸作为工业设计专家参与其中。2015年我们组建了生态厕所课题组，开始有计划地开展相关研究。厕所设计涉及的问题很多，比如卫生标准、人性化需求、文化习惯、生态环保要求和各种去味、保温、清洁、粪便收集

Innovative Practices of the Eco Toilet

By **Lin Nan**
Photos by **Liu Xin**

In 2015, Professor Liu Xin established a public toilet research and design team. They used all the advanced techniques they could gather from China and overseas to propose an integrated eco-toilet solution that would meet China's needs. It order to do so, it would have to include green recycling technology, ecological agriculture, human facilities and spatial design, community building and, last but not least, a viable business model. On top of basic toilet technology and cultural research, they aimed to work with large companies and foundations to implement a system design practice for the new eco toilets.

❶ SYSTEM DESIGN:

Taking into accout the relationship between the internal system (architecture, space, facilities, signs) and the external system (landscape, community, municipal pipe network, farms); factoring in waste recycling including collection, treatment and usage.

❶ 系统设计：

兼顾厕所的内部系统设计(建筑、空间、设施、标识等)与外部系统(景观、社区、市政管网、农场等)关系；完整考虑废弃物收集、处理与使用的循环系统。

❷ REASONABLE FUNCTION:

Depending on the region and people, the toilet is used differently and according to different functional positioning. Ensure the necessary functional space and facilities, avoid over-engineering and focus on adaptability.

❷ 功能合理：

根据不同地区、不同人群特征和行为习惯进行功能定位，保证必要的功能空间和设施，避免过度设计，兼具适应性。
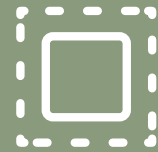
❸ APPROPRIATE TECHNOLOGY:

Risk reduction and resource utilization are at the bottom of choices regarding waste processing. Choose the right technology based on environmental conditions and construction costs and not be too attached to either high tech or low tech solutions.

❸ 技术适当：

减量化、无害化与资源化是废弃物处理技术选择的基本逻辑。根据环境条件与建设成本选择适当的技术，不执着于高技术或低技术。

TONGZHOU'S FIFTH SPACE PUBLIC HEALTH COMPLEX

In 2016, Tsinghua University's Collaborative Innovation Eco Design Center cooperated with OA architects to develop a "Fifth Space" public health complex for the Beijing Environmental Sanitation Group in Tongzhou district. Due to its location in the suburbs of Beijing and as a renovated toilet, people flow is comparatively large, and many restrictions exist. At the beginning of the design process, the team carried out on-site observation, building a statistical, interview and video-based picture of the site. Humanist and eco design principles were applied, pain points determined and needs examined, and an integrated design was finally proposed.

通州第五空间公共卫生综合体

2016年，清华美院协同创新生态设计中心与原本营造建筑事务所合作，为北京环卫集团在通州区的"第五空间"公共卫生综合体进行系统设计。由于地处北京副中心，又是改建厕所，人流量较大，限制性要素繁多。设计初期，团队做了大量现场观察、统计、访谈及视频记录等工作。本着生态化与人性化的设计原则，发现痛点，洞察需求，最终提出了整合性设计方案。

文:林楠
图:刘新

2015年,在清华大学美术学院协同创新生态设计中心主任刘新教授的带领下,厕所研究与设计项目组成立。项目组将绿色循环技术、生态农业、人性化设施与空间设计、社区营造以及可行的商业模式进行系统整合,目标是针对中国现状提出整合性的生态厕所解决方案。除了基础性的厕所技术与文化研究外,项目组还与多家企业及基金会合作,开展新型生态型公共厕所的系统设计实践,并最终基于这些研究与实践,提出了可持续发展的公共厕所设计原则。

生态厕所的创新实践

❹ HUMAN-FRIENDLY DESIGN:

Pay attention to users' physiological and psychological needs, and to the configuration of facilities. Factor in people with special needs. Based on public design thinking and health considerations, not everything can be boiled down to "user needs."

❹ 人性化设计:

兼顾人的生理和心理需求,重视人性化设施的配置,关注对特殊人群的关照。基于公共性的设计思想与健康的考量,不可一味迁就"用户需求"。

❺ SERVICE-ORIENTED DESIGN:

Consider the user, maintainance and management perspectives, locate pain points in the interactive process, and provide the right software and hardware services. This may include finding a toilet, waiting, usage, cleaning, makeup facilities, infant care, as well other value-added services.

❺ 服务导向设计:

从使用者、维护者和管理者多角度进行思考,在完整交互流程上发现痛点,提供适合的软件与硬件服务,如找厕所、等候、如厕、清洁、补妆、婴幼儿护理等环节,以及其他增值服务。

❻ QUALITY AND AESTHETICS:

Quality means taking care over the details; beauty means reaching for a certain kind of harmony, whether with environment, culture, demand, or emotions. Especially at cultural sites and attractions, such considerations should be part of the toilet architecture, landscaping and interior design.

❻ 品质与美学:

品质是对细节的关照;美是一种和谐,与环境、文化、需求、情感的呼应。尤其对文化场所与景区,在建筑、景观与内装设计中应考虑特色与差异。

❼ OPERATIONAL SUSTAINABILITY:

Ensure a sound, sustainable business operational model. This includes profiting from resource use, advertising, sales and other service items.

❼ 运营可持续:

保证良好的、可持续的商业运营模式,如废弃物资源化盈利、广告设施、物品售卖以及其他服务经济形式。

Besides user-friendly toilets, the project satisfies the need for commercial and community services, places for sanitation workers and managers to rest and live, as well as connections to urban waste recycling facilities. Some pollutants are recycled (urine collection, shipment, static decomposition, organic planting). The modular building and spatial design fullfils functional requirements and can be adapted to different environments. The architectural style is simple and modern, identifiable as public buildings but not obtrusively so. The toilet block can thus be integrated into the urban environment. Interior design including disabled facilities, lighting, green wall and visual communication has been carefully thought out, for the best possible spatial distribution of the limited space.

该项目将人性化的如厕空间、商业服务、社区服务、环卫工人休息、管理员居住以及城市废旧资源回收等功能整合在一起,并根据实际情况,将部分污染物进行资源化处理(尿液收集、转运、静置腐熟、有机种植)。模数化的建筑与空间设计,在保证功能性要求的同时,也可以根据不同环境进行适应性调整。建筑风格简约现代,既具有公共建筑的识别性又不突兀,能够有机融入城市环境。厕所内部设计中,对功能性区域分布、残疾人如厕、采光、绿植墙以及视觉传达都有细心的思考和设计。

The project breaks down conventional notions of the public toilet, as it brings in certain community functions and commercial services, creating a new type of urban public health complex. Every inch of urban space is precious, fifth space design provides new ideas for the construction of future public toilets, in terms of treatment, user-friendly design, community participation, sanitation, value-added services and other as yet unexplored facets. This toilet block therefore has important significance as a demonstatraion of best practice.

此项目突破了对于公共厕所的传统定义，将部分社区功能与商业服务融入其中，创造出新型的城市公共卫生综合体。在寸土寸金的都市空间中，第五空间的设计实验为未来城市公共厕所建设提供了新的思路，在无害化处理、人性化设计、社区参与、环卫增值服务等多个方面都具有重要的示范意义。

ECO SCIENCE HOUSE

This Eco Science House is an integrated experiential space for science and technology knowledge transfer for primary and secondary school children. Students learn about the ecological cycle, sanitation and health facts, and carry out experiments, planting and other practical activities, which is the outcome of the "learning from doing" educational concept.

The project comprises three modules: toilet, planting and science. In addition to providing a comfortable toilet experience, incformation regarding the collection and conversion of human feces into organic fertilizers using appropriate techniques. The science module displays the relevant information regarding the ecological system, including a map of the domestic sewage recycling system and a multimedia explanation of the process by which urine breaks down into liquid fertilizer. The planting module takes place outdoors on the roof. Temperatures can be regulated, and the use of organic fertilizer in agriculture is explored. The planting zone has the side impact of beautifying the school environment.

The project takes the ecological recycling concept of making the best use of resources and turns waste into treasure. Human-oriented and inclusive, the course shows students how green technologies work, including photovoltaic, rainwater and grey water collection and treatment. These is an integrated ecological exploration of scientific knowledge and real experience, using education to promote sustainable development.

生态厕所科普屋

生态厕所科普屋是为中小学提供的一个科普生态循环知识的体验式综合空间。学生在其中既可以学习生态循环、卫生健康等知识，又可以进行实验、种植等实践活动。它是"从做中学"教育理念的产品化呈现。

该项目将厕所、科普和种植三种空间功能模块集于一体。厕所空间模块除了能提供舒适的如厕体验、科普卫生健康的知识外，还承担着收集人粪便并通过适当技术将之转化成有机肥料的功能。科普空间模块主要用于展示循环系统的相关知识，包括生活污水循环利用系统图、尿液腐熟成液肥的过程演示装置以及多媒体演示系统等。种植空间模块位于室外二层，既可为一层空间调控温度，又提供了有机肥种植体验的实践场所，同时也美化了校园环境。

该项目以物尽其用、变废为宝等生态循环理念为出发点，以人性化和包容性为设计原则，采用了光伏、雨水与灰水的收集处理等多种绿色技术，是一种将生态理念、科学知识与真实体验融为一体的设计探索，以期通过教育来促进可持续发展。

MOBILE BIOLOGICAL TOILET DESIGN

The project is a product of multidisciplinary collaborative innovation in industrial design, mechanical design and biological bacterial treatment technology. The goal of the design of the mobile toilet is to solve temporary toilet issues at large scale public events. The design comprises of 8 gender-neutral toilets and 6 male urinals, making maximum use of the limited space inside the car. The hydraulic device means the toilet can be quickly packed away, and switched between stationary and driving mode. Solar energy is used for the lighting and display system; the design uses the urine diversity technology: urine is collected in a storage tank, waiting to be decomposed.

Feces in the storage tank is reduced using biological bacteria technology. When full, the mobile toilet can be driven directly to a field for further decomposition or direct fertilization. In addition to the spatial layout of the toilet, frame design, interaction design, surface coating and logo design, the team was involved in the mechanical structure design, and the overall system flow including collection, processing, transportation and waste usage.

CONSTRUCTION SITE URINAL BUCKETS DESIGN

High-rise construction sites generally lack toilets, and workers pee all over the place, polluting the working environment, causing health hazards, and not conforming to civilized construction site norms. Social issues are design issues. The "construction site urinal bucket design" pays attention to the needs and interests of construction site workers, provides them with basic dignified public health facilities, and recycles the waste to fully reflect humanistic care in design, environmental awareness and social values.

As a public facility, the design fully meets the requirements of functionality, usability, processing and transportation. The modeling language is clean, the design has a stable and elegant shape, and it can be used on all sorts of construction sites. A professional service company is responsible for sales, including set up, maintenance, management and recycling, and the high-quality urine collected (urokinase extracted or decomposed matter turned into liquid fertilizer) makes a tidy profit, so that the business model is even more sustainable. ■

车载资源型生物厕所设计

该项目是工业设计、机械设计与生物菌处理技术等多学科协同创新的产物。车载资源型厕所设计的目标是解决大型公共活动场所的临时性如厕问题。该设计设置了8个无性别厕位以及6个男性小便器，最大程度地利用了车内有限空间。通过液压装置，快速实现临时通道的翻折与收纳，以及停靠与行驶状态的转换；利用太阳能为车载厕所的照明与显示系统提供能源；使用粪尿分集技术，尿液收集在车厢下部的储尿箱中，静置腐熟；储粪箱中的粪便通过生物菌技术，进行减量化与资源化处理。满载后，车辆可直接开往田间地头，对粪尿进行进一步腐熟或施肥。除了如厕空间布局、车身造型设计、交互设计、表面涂装和标识设计外，设计团队还介入了机械结构设计，并整体构想了粪便的收集、处理、运输、使用的全系统流程。

建筑工地小便桶设计

此设计关注建筑工地一线工人的实际需求与切身利益，为其提供最基本的、有尊严的公共卫生设施，同时对废弃物进行资源化再利用，体现出设计的人文关怀、环境意识和社会价值。

作为公共设施，该设计满足了功能性、使用性、加工制造和运输的要求；造型语言干净、形态稳重而不失优雅，可普遍适用于各类工地场所。该产品由专业的服务公司负责采购、配置、维护、管理与回收，同时将收集到的尿液进行资源化处理（如提取尿激酶或腐熟制成有机液肥）获得盈利，使整个商业模式更具可持续性。■

Notes on Rural House Construction
谢英俊谈农村建房

By **Hsieh Ying Chun**
谢英俊

Sichuan Province, Yangliu Village, *Post-disaster Rebuilt House.*
An easy to learn method for villagers integrating traditional timber frame construction
and prefab systems with local crafts. These building materials reduce emissions
by 39 ton of CO_2 per household.
四川省杨柳村震灾重建。与传统穿斗式木架相似的构法与组装方式，
村民很快熟悉做法，结合传统工艺。建筑材料使用减排量每户39吨CO_2。

Hsieh Ying Chun Architects and its civil construction team Design for People have developed an open-source technology to satisfy social requirements by engineering a market ready light-steel residential system for rapid construction with low cost, eco-friendly and energy saving features, which integrates solutions addressing factors such as safety, comfort, cost-effectiveness and sustainability into a unique building methodology based on years of exploration and practice. The system has been applied and perfected in numerous rural sites and used for post disaster reconstruction, to rehabilitate both the infrastructural and social environment of rural areas while implementing long lasting solutions for sustainable development.

Rural house construction must take into account the following factors: its large-scale, behavioral patterns of production not consumption, the limited accessibility for professionals, and sustainability. The demand is huge. Every year about eight to ten million housing sites are under construction in Chinese rural areas, a condition similar to various developing and under-developed regions around the world - nearly everyone is letting go of tradition in the high-speed pursuit of modern living and architectural styles.

Yet modernization won't reach the entirety of society in cultural and industrial development all at once. How to cope with the challenge of housing 70% of the population? The answer must be found by a combination of research methodologies relevant to modernization, industrialization, digital technology and connectivity, as well as the internet of things.

For farmers investment into one own's house construction cannot be looked at as an object of "consumption", meaning it is not common for them to trust architects to design and supervise construction process and related tasks, as this is something they normally take care of themselves – so it is an issue of productivity. Since professionals' accessibility to such processes is limited, a cooperative framework has to be put in place, where architects would focus on basic outputs such as proper spatial arrangement, ensuring structural safety, optimizing procedures such as the proper use of materials and the supply of key components, thus allowing for an "open zone" of intervention where users become involved in the production process as active contributors.

This kind of subject oriented relationship makes it impossible for professionals to detail individual designs, allowing only for systemic or case-driven forms of planning. In this situation two core principle must be considered: the open-source nature of the system and its technical simplicity. The open system shall integrate traditional crafts and local building materials, that can be flexibly adjusted in response to different economic and social preconditions. Technical simplicity allows residents to participate, like villagers and women without formal skills, which helps preserving a spirit of communal reciprocity typical of rural communities in the construction of their dwelling.

This is not just a matter of simplification in the construction processes and tools, but also in the employment of materials, the design drawings and the style of management and communication. This approach does not require for large professional teams and technical personnel

专业者有些时候只能做有限度的介入，做农民没法做的事，例如合理空间的规划、结构安全的把握、构造材料的适当使用和关键构件的供应等；要预留开放的空间，让使用者能发挥他们的创造力和劳动力

谢英俊建筑师事务所及其主导的常民建筑团队（Design for People），经过多年探索与实践，已经开发出简化和开放的技术体系，可应社会需求，提供施工便捷、建造快速、成本低廉、环保节能、极具针对性和市场价值的强化轻钢住宅系统，同时兼顾安全性、经济性、舒适性，并将环境、生态、人文、永续等融入建筑。这一系统已在常民的新农村和灾后重建等项目中得到实践与完善，也将为中国正在进行的乡村建设运动提供创新性的策略和方案，帮助改善乡村的基础设施与人文环境，实现节能型社会与可持续发展的目标。

农村建房涉及几个重点：数量庞大、是生产行为而非消费行为、专业者只能有限介入、必须是可持续建筑。

农村建房数量庞大，中国大陆农村每年要盖800~1000万套房子。全世界发展中及未开发国家和地区的情况与之类似，几乎所有的人都放弃传统，高速地追求现代化的生活方式和建筑。但现代化牵涉到整体社会文化和产业的发展，无法一蹴而就。这关系到70%人类居所问题的挑战，该如何因应？使用现代化、工业化、数码技术、互联网、物联网都是必须考虑的手段。

对农民来讲，建房这么庞大的投入，不可能只是单纯的消费行为，也就是说，花钱委托建筑师设计监理，由施工队施工。相反，大都是自己设计、自己盖，这是高产值的生产行为。所以专业者在这种情况下只能作有限度的介入，做农民没法做的事，例如合理空间的规划、结构安全的把握、构造材料的适当使用和关键构件的供应等，预留开放的空间，让使用者能发挥他们的创造力和劳动力，让使用者成为另一个主体。

这种专业者和使用者互为主体的关系，使得专业者不可能针对个别建筑做设计，而仅能做通案性的或做体系化的设计。这些作为都须具备两个核心原则：其一为开放体系，另一为简单技术。开放体系能让传统的工艺、生

to participate in the field work, which equalizes salary and income, thus becoming beneficial to the formation of house construction cooperatives as well as the development of regional and local economies.

The massive scale of rural house construction calls for the adoption of sustainable architecture in both concept and practice, which means taking vernacular factors of social, economic and cultural nature as central to the question. ■

活习惯、当地的建材结合进来，同时因应经济及社会条件的改变能灵活调整。简单技术让居民能参与，没有建筑专业技术的村民甚至妇女都能参与施工，农村互相帮忙协力建房的优良传统才能保存。简单技术不仅限于施工工艺的简化、使用工具的简化，还涉及材料的生产、设计图的绘制以及管理沟通方式的简单化。这种做法由于现场施工不需要太多专业技术人员投入，较无工资所得的差异，有益于合作建房以及合作社的操作，也有利于区域性或社区经济的发展。

既然农村建房涉及如此庞大数量的建造，它必然要采用可持续建筑的理念和作为。这里的可持续建筑不仅要符合绿色建筑的技术要求，更要能与社会、经济、文化等因素一并考虑。■

Sichuan Province, Ya'an City
Bamboo Rebuilt House,
it can be realized year after year.
四川省雅安市箭杆林震灾重建，
可逐年完成。

Steel, recycled stones
and wood are integrated.
钢构与回收石材、木料结合使用。

Henan Province, Lingbao, Hongnong County College.
Integrating traditional crafts, recycled roof tiles, wood,
stones, grass and soil.
河南省灵宝弘农书院。结合传统工艺、
回收瓦、木料石材及就地取材草土。

Reinforced Light-weight Steel System:
metal sheet stamping, can be mass produced,
safety and quality can be controlled, with vacuum grouting techniques
stability and strength are improved, the bolt connections
make assemblage easy, and the beam systems allow for simple
structural analysis. The system is open and flexible.
强化轻钢体系：薄钢板冷弯辊压成 形，可量化生产，质量安全可控，
梁柱空腔灌浆可增加稳定性及强度，用螺栓结合施工简单、梁
柱系统结构分析容易。具有开放性及弹性。

Hong Kong's Housing of Last Resort: Engagement and Intervention

香港最后的住房：社区参与和设计介入

By **Juan Du**, qssociate Professor and Associate Dean, Director of Urban Ecologies Design Lab Faculty of Architecture, The University of Hong Kong

杜鹃 (香港大学建筑学院副教授)

Translation by **Julian Luo**

翻译：**罗名川**
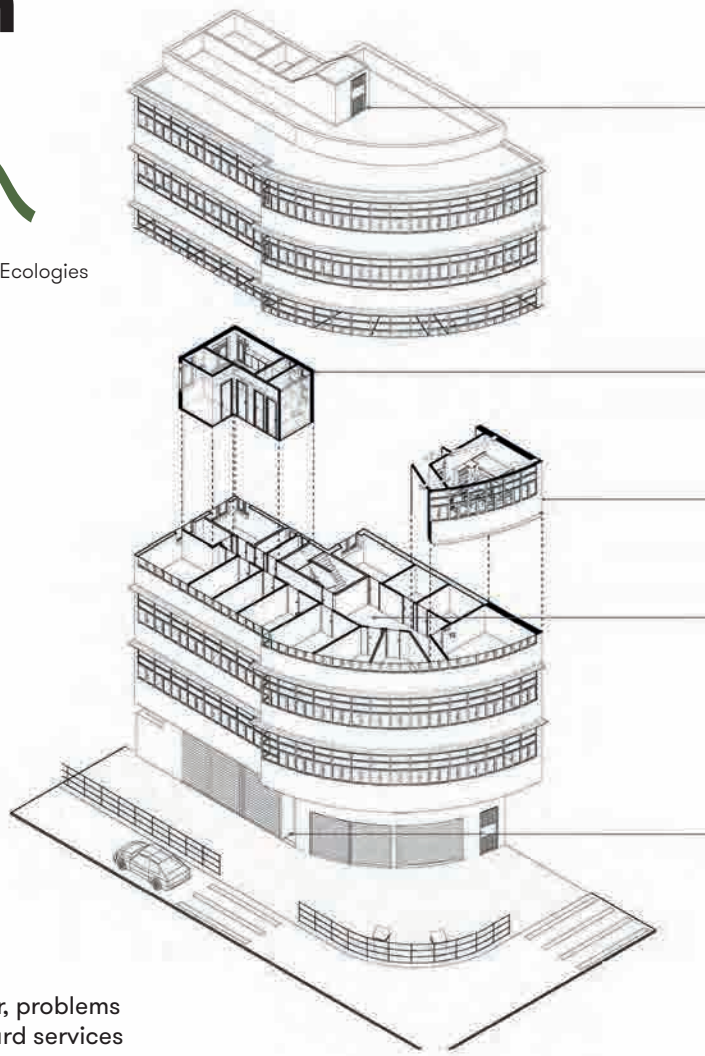
Hong Kong is one of the world's wealthiest cities. However, problems of inadequate housing such as overcrowding and substandard services are pervasive. Due to the disproportionately high cost of private real estate, many low-income families that do not qualify for public housing turn to the informal supply of squatter settlements on village lands, rooftop houses, cage cubicles and subdivided units. This has created invisible financial, social and spatial networks that are outside of Hong Kong's formal frameworks of public and market rental housing. Stringent building control over existing village squatters, limited supply of rooftop houses and the extremely poor environments of cage cubicles have made one particular type of dwelling the most popular choice for the marginal groups – Sub-Divided Units (SDU).

SDUs refer to rental units of Hong Kong's already small apartments - an average size of 43.5 m² compared to 76 m² in the UK and 95 m² in Japan – that are subdivided further to obtain a number of room-sized individual units accommodating entire families of often multiple generations. Latest governmental reports put the numbers to 85,000 families, or 200,000 people. Estimates by independent NGO's are much higher, reaching close to 1 million out of Hong Kong's total population of 7.5 million. Unlike the informal housing settlements in other cities such as the urban villages in mainland China or slums in India, the extraordinary density of space and dwellers of SDUs are mostly hidden from view.

香港是目前世界上最富有的城市之一。但在这座城市里，住房拥挤和房屋基础服务不达标的问题却无处不在。价格离谱的房地产市场让无数不符合政府公租房申请资格的低收入家庭，不得不变成寄居在田间、天台房、笼屋，以及一隔再隔的单元屋内的寮屋居民。由此，一系列有关经济、社会、空间的网络，均已透过这一现象在香港正规的公共房屋与市场房屋的租赁框架外，无形地延展开来。而政府对田间寮屋的严格管控，加上天台住房有限的数量以及笼屋的恶劣环境，也一同促就了处于社会边缘阶层的居民们对隔断单元(SDU)这类住房的广大需求。

在这里，隔断单元(SDU)指的是在香港本就十分狭小的公寓房基础上，进一步将其面积进行隔断，最终划分出可容纳多户数代同堂家庭居住的多个单元(香港公寓房的平均面积为43.5平米，而英国的同类住房平均面积为76平米，日本为95平米)。根据最新的政

PROJECT HOME IMPROVEMENT COMMUNITY ENGAGEMENT

The issues of Hong Kong's SDUs are complex and range from public policy, planning and design, urban informality, substandard construction, to poverty and social inequality. We initiated Project Home Improvement in 2014 to engage with the residents and generate creative design solutions that could improve the quality of living, as well as gather in-depth knowledge to improve Hong Kong's housing policy. By way of small scale architectural interventions, the project is a collaborative process between researchers and students from the Urban Ecologies Design Lab of Hong Kong University, social workers at the local NGO Caritas, and families living in the SDUs.

Rounds of semi-structured discussions regarding the families' first-hand dwelling experience were conducted, and communication facilitated by the use of apps such as WhatsApp and WeChat. Data loggers for indoor temperature, light intensity and humidity were installed for environmental tracking and evaluations. The dialogue with residents and architectural surveys allowed us to identify key problems such as: lack of individual's privacy within the unit, insufficient storage space, and undesirable daylight performance and natural ventilation, for which the project team utilized drawings, physical models, as well as computational technologies to explore solutions. These included 3D digital models, computer simulations for environmental performance and Virtual reality (VR) scanning of the existing interior condition which created digitized representations of indoor spatial information thus facilitating the co-creation process with SDU occupants on qualitative issues.

DESIGN INTERVENTION

A key intention, as well as challenge, of the project is working with renters of the units, rather than the owners, to ensure direct engagement with the user group. To avoid phenomena like rental increase and gentrification-led displacement the interventions must be light, mobile, and not altering existing structures. This condition and constraint focused the design of scaled solutions that would not further overwhelm the limited home space. For examples, loft-beds with storage and bed space beneath to be temporarily used as a private study for school children; dining tables that can be converted into a child's bed during weekend visits; storage units that function as study-dining space also diffusing daylight into the room; and wall cabinets that, among other functions, keep heat-emitting appliances away from young children. Curtains are optional to all the design prototypes to provide operable solutions for privacy and daylight control.

府调查报告,目前居住在这类隔断单元内的人口已高达八万五千个家庭,又或二十万人左右。针对这一数字,独立非政府机构的估算则更高。与其他城市中的非正规类住房——如中国大陆的城中村和印度的贫民窟——所不同的是,香港隔断单元房异常拥挤的空间以及居住在内的人们的生活状况,一直以来都是隐蔽在世人视线之外的。

社区参与

香港隔断单元房的问题十分复杂,这里面涉及公共政策、规划与设计、城市非正规性、社会不平等、贫困、施工建设不合规等一系列议题。我们于2014年启动了"改进公租房"项目。在这次项目中,我们与住在这些公租房中的居民进行了深入的沟通,用具有创意的解决办法提高了他们的生活质量,同时为未来相关政策的制订收集了具有深度的知识与资料。

通过建筑方面的小尺度介入,我们在积累有关隔断单元房的知识及经验的同时,还将香港大学城市生态设计实验室的调研团队和学生、当地非政府机构的社工以及居住在这些隔断单元房里的居民聚集到了一起,大家共同经历了一次创造的过程。在这个过程中,我们从居住者亲身的角度与体验出发,对问题进行一轮轮的讨论,期间还借助了社交媒体如WhatsApp和WeChat的帮助。此外,我们还在现场安装了数据记录仪,详细地记录了室内的温度、湿度、灯光的强度等帮助我们研究和评估的数据。

通过与居民的对话和建筑方面的调查,我们抓住了一些关于此项目需要解决的关键问题:单元屋内个人隐私的缺失;储藏空间的不充裕;不理想的日光照射和自然通风等等。在寻找解决方案的过程中,我们的项目团队利用了图纸、实体模型、计算机建模技术的帮助。这其中包括3D数字模型、电脑环境模拟、虚拟现实扫描技术等。通过虚拟现实扫描技术所获取到的室内环境及空间信息,更是在极大程度上协助了我们与居民们一起探讨、解决问题的过程。

设计介入

相较于与单元业主的合作而言,项目更主要的目的和挑战,是与单元租户合作的过程,这也是为了确保我们能最直接的与单元的实际用户进行沟通。为了避免租金上涨、单元条件高档化等有可能出现的后果,我们在项目中的介入一定要做到适度和灵活,同时不对现有单元结构进行改变。

这些条件和约束将我们的设计侧重点放在了适用于项目既存空间的尺度化方案上,例如带有储物空间的高架床和高架床下方可临时供家中孩子学习的空间;可转换为儿童床的饭桌;可用于工作或学习,同时有助于将日光映射进室内的储物单元;以及将散热类电气远离儿童的壁橱等。窗帘在所有设计标准中的可选性旨在为个人提供对隐私与日光之间需求平衡的掌握空间。

在长达数月的合作过程中,所有参与方都密集地获取了许多他人的知识与想法。一些

During the months-long co-creation process, all participants had intensive exchanges of knowledge and ideas. Some families became more acutely aware of the implications of substandard environmental performance with children development and adverse health; some shared their own experience and gave advice to other participants; and some even defended their designs when neighbors questioned certain decisions during casual visits. The community social workers learnt several design solutions for challenges commonly faced by SDU occupants and improved their skills in sharing the knowledge with other families.

As researchers and designers, we have learnt to propose home improvement solutions in careful consideration of the stringent spatial constraints, households' live-work schedules, users' personal aspirations and challenging environmental factors such as the elevated humidity generated by insufficient natural ventilation and the high intensity of household activities. We also learnt that, regrettably, like in many informal settlements around the world, the tenants who live in Hong Kong's SDUs often lack security of tenure and are easy targets for displacement and evictions.

WORKING WITH SDUS - KEY DESIGN AND FABRICATION PRINCIPLES:
1 — Durability and Simplicity
Interventions have to withstand greater wear and tear as these items are usually used round the clock, serve multiple purposes, and by all members of the family. High-quality materials should to be employed and moving parts kept simple to minimize risks of mechanical failure.

2 — Multi-functional and Space-saving
Most of the projects completed are multi-functional to align with the intensive use of space in a compact area. Basic functions of furniture-scaled constructions – sleeping, dining, living, studying, are reconceived to adapt the overpopulated shared space.

家庭深刻意识到了居住空间内环境绩效的不达标对孩子的成长和健康所带来的影响, 大家互相交流经验, 在互相串访的过程中既提出问题, 又给出答案。

对于很多单元住户经常遇到的日常问题, 社区合作方从这次项目中学到了有效的设计解决方法。作为调研者、建筑师, 我们也从这次项目中学会了如何在照顾居住者生活工作习惯和个人意愿的前提下, 在极其有限的空间内通过解决一系列问题——如因自然通风不畅所导致的湿度上升、高强度的日常家务活动等——来完成针对家居生活质量的改进工作。此外, 我们还很遗憾地得知, 正如世界上多数寮屋居民的情况一样, 多数居住在香港这些隔断单元内的居民都不具有其所寄居土地的使用权, 这导致他们常常变成被要求搬迁甚至被驱逐的目标。

隔断单元项目中设计与建造的主要原则:
1 — 耐用性与简洁性
通过新设计所投入到日常使用中的家居元素或设备, 一定要具备耐用的特点, 保证满足使用频繁、一物多用、多人共用的需求。同时, 应尽量适用高品质的建造材料, 分解、拆卸的部件越少越好, 以此降低出现故障的几率。

2 — 多功能且节省空间
项目中大多数完成的部分都具有多功能的特点, 以此来应对狭小空间对功能和使用频率的需求。单元内为日常生活基本需求——

3 — Easy Assembly, Transportation and Disassembly

Recognizing the greater mobility of SDU families, whether due to displacement or eventual allotment of public housing, components must be lightweight and transportable, and more importantly, must be designed to be assembled and disassembled with low requirements on skills and tools.

4 — Digital Customization

CNC fabrication techniques were adapted to increase material efficiency and reduce labor time. This creates an archive of designs to be further developed for mass production while allowing for customization to adapt to the critical dimensional constraints in SDUs

.

By actively entering this community, the team recognized that occupants subsist, not only on the relatively low rents, but on the life chances that the geography and networks of social capital can provide. As in many other informal settlements throughout the globe, the residents form self-help communities, mobilize locational resources and draw on interpersonal networks to increase accesses to livelihood opportunities, advance in social inclusion and improve living conditions.

The interdisciplinary understanding on the complexities would not have been observed without the Home Improvement program, designed and conducted under an architectural knowledge framework on the city, environment, artefacts and the people. Through the collaborative research and design project, the team exposed additional hidden issues in SDU of structural risks, health, and social security. To extend the project's contributions from one home at a time to a widespread impact in the community, we are currently developing long-term projects such as peer empowerment networks, online open-source solution platforms, and housing policy recommendations. ■

如睡觉、吃饭、起居、学习——所设置的功能性家具元素，均以满足空间内密集人口的使用需求为前提，进行排布与设计。

3 — 搭建、运输、拆卸的便捷

鉴于居民较高的流动性，项目中所用到的元素、设备一定要便于运输，同时搭建简单，拆卸方便，不需要操作者拥有较高的技术和繁复的工具。

4 — 数字化定制数控机床技术的应用

这种应用使得材料的建造更加高效，在满足了隔断单元房需求的同时，也为各类产品在未来的量产化打下了原型基础。

项目团队还在项目结束后揭示了隔断单元房所存在的一些列问题，如结构隐患、健康隐患、社会保障漏洞等。项目进行期间频繁、定期的到访，也使项目团队意识到，比当地居民们的租金更低的，是他们所处地理位置等因素所给他们带来的极低的生活机会、社保渠道等。如世界上其他非正规居住区一样，这里的居民通过社区内部的各方有限资源，为自己创造着生活成本，提高着自己的生活质量。

通过这次在建筑知识框架下所实施的房屋改进项目，我们看到了多个跨学科的领域是如何有机的交流与合作的。为了能让这些帮助到个体的措施进而得以更广泛的应用，我们目前已经开始着手一些目标更加长远的项目，如互许网络、在线开源平台、住房政策建议等。■

Sponge City
is a Form
of Survival Art

Interview with **Yu Kongjian**, professor of the Peking University School of Architecture and Landscape Design and founder of Turen Design

海绵城市是
一种生存的艺术

北京大学建筑与景观设计学院教授、土人设计创始人**俞孔坚**教授专访

Does eco-landscape design have a development model with "Chinese characteristics?"

The systematization of landscape design as a discipline is the product ofindustrialization and urbanization, and the result of a need for people and theenvironment to work together. In the US, industrialization and modern urbandevelopment have had a longer history, and so has the discipline. In Chinameanwhile, urban wisdom is built on a rich history of agricultural engineering:constructs such as irrigation, water management, vertiginous rice paddyconstruction, and resilient cities, to name a few types. It is our special source ofwisdom in planning today's cities and developing a Chinese style of landscapedesign.

Landscape design is a discipline that studies the relationship between man and nature. The relationship between man and nature in the agricultural age is based on the awe and adaptation of man to nature. The era of industrial civilization and the era of agricultural civilization have totally different values. Nowadays, in the eraof ecological civilization, it is actually a return to agricultural civilization and a return to spiral. While ecological civilization reflects on industrial civilization, it is also a rediscovery of agricultural civilization.

Therefore, China's agricultural civilization provides nutrition for the realization of the ecological civilization conceptof our time.

Most of Turen Design's inspiration comes from the wisdom of Chinese agriculturalcivilization, but its technical side comes from science and industry. Sponge City isbased on Chinese agricultural civilization, and has plentiful Chinese characteristics. Our design makes extensive use of Chinese agricultural land and irrigationtechniques to explore the creation of landscapes in ways that use minimalengineering. Chinese techniques including mullberry fish ponds and the Qiangtangsystem have plenty to offer to contemporary landscape design.

Landscape design is local by nature. Local things can only be resolved locally, andevery place has its own characteristics. But these differences still have a commonlaw, that is, respect for nature, something we call the art of survival. For example, ifyou live in northern China, you will need to dig caves, build courtyards, dig pits andstore water, given the Loess plateau environment. When you come to the south,the humid conditions impact on house-building, and you need to drain water away,with vertical and horizontal canals. Different places have different adaptationmethods. Sponge City is an adaptation strategy, and in itself the art of survival.

How do you view sustainable ecology?

Sustainable ecology is actually about meeting human needs with minimal input,using the simplest method, causing the minimal damage to nature. It does notdeplete natural resources and deplete capacity of natural systems. Repair is part ofdesign. How to repair a damaged natural system is also a consideration forlandscape design. In fact, landscape design is related to the lay of the land, andharmony among those who live there. A landscape should be at one functional andbeautiful.

You have said that many domestic landscape design projects are notdesigned by designers but by city mayors, and that may not change forsome time to come. So how do you implement your ideas in practice?

Since Chinese designers cannot design independently, they must to train theirmayors in what good design means. To be effective, Chinese designers must carryout top-level design and realize their design philosophy by educating influentialpeople. This is the practical problem that Chinese designers are currently facing.Designers are themselves weak and needs to implement the good ideas by way of the state machine. This has been my experience during the past few years.

The concept of environmental sustainability is popular at the moment in China. Do you think there are any misunderstandings in understanding and operation inpractice?

Sustainable design is actually about discussing costs of consumption, the extent ofenergy consumption, and any damage caused to the environment. But there are noquantitative standards for sustainability. Designed work tends to last longer, causeless damage to the environment, and be more sustainable. We never export ourproblems at Turen. For example, Sponge City solves rainwater issues on the spot,instead of draining rainwater into pipes, a step that would need extra energy. Wechoose not to alter local conditions if we can. The best is if plants can use localwater, strengthening sustainability. ■

景观生态设计是否存在"有中国特色"的发展模式?

　　景观设计学科的体系化是工业化和城市化进程的产物,是人与环境协调的需要。欧美在工业化和现代城市建设发展较早,所以学科发展也相对较早。但中国有丰厚的农业文明和基于农业文明的城市建设智慧,像是灌溉、理水、造田、韧性城市的营造等等,都是我们发展具有自己特色的当代城市和景观设计的智慧源泉。

　　景观设计学是研究人与自然关系的一个学科。农业时代的人与自然的关系,是建立在人对自然的敬畏和适应基础上的。而工业文明时代与农业文明时代有完全不同的价值观。如今到了生态文明的时代,实际上就是对农业文明的一种回归,是螺旋式上升的回归。生态文明在对工业文明进行反思的同时,也是对农业文明的一次再发现。所以中国农业文明恰恰为我们这个时代的生态文明理念的实现提供了营养。

　　土人的设计灵感大部分来源于中国农业文明的智慧,但它的科学精神来源于西方的工业文明,具有理性的科学的分析。比如"海绵城市"概念,实际上就是在中国农业文明基础上提出来的,是有中国特色的。我们的设计大量利用中国农业的造田、灌溉技术,探讨如何用最小的工程量来营造景观,我们有桑基鱼塘,有陂塘系统,这些都给当代景观设计提供了一些经验。

　　景观设计是有地方特色的,因为当地的事情只有当地人了解,并且在当地解决。所以各地有各自的特色。但不同特色又有一个共同规律,就是尊重自然,我们或许可以把将它叫做生存的艺术。比如在中国北方生存,就需要挖窑洞,建四合院,挖坑塘蓄水,黄土高原必须将水留下来;来到南方,环境潮湿,就需要将房子架起来,必须将水排掉,所以河渠纵横。不同的地方有不同的适应方法。海绵城市就是一种适应策略,它本身就是一种生存的艺术。

您如何看待可持续生态?

　　可持续生态实际上就是如何用最小的投入、最简单的方法、对自然最小的破坏来满足人类的需要,不会耗尽自然资源,耗尽自然系统的承载力。这当中,修复也是设计的一部分。如何修复被破坏了的自然系统,也是景观设计需要考虑的。景观设计可以说是关乎土地的设计,让土地上所有人和物和谐起来,使景观具有功能,同时又是美的。

您曾说过国内很多环境设计其实不是设计师而是市长设计的,并且可能在相当长的一段时间内无法改变这个现状。那您在实践中是怎么将自己的理念落实的呢?

　　既然中国设计师不能够独立地设计,那么就必须培养市长,让市长懂得什么是好的设计。中国的设计师要发挥作用,必须进行顶层设计,通过教育有影响力的人来实现我们的设计理念。这是中国设计师目前面临的实际问题,你必须认识到设计师的弱小,需要通过国家机器来把好的理念贯彻下去。这是我这些年来最核心的体会。

环保可持续的概念在国内炙手可热,您认为它在实践中是否存在认识和操作上的误区?

　　可持续设计实际上就是探讨设计耗材、耗能是更多了还是更少了,给环境带来的破坏更多了还是更少了。但可持续没有定量标准,设计的作品持续时间更长,对环境的破坏更小,应该是更具有可持续性。土人的设计里从来就不把土方运出去,比如海绵城市就地解决雨水的问题,不需要把雨水排到管子里头去消耗更多的能量,不改变当地的土壤,植物能用这个水,这就增强了可持续性。■

Three Strategies to Build Sponge Cities

构建海绵城市的
三大策略

The concept of "sponge city" is a reflection on the pattern of industrialized city construction. It underlines the symbiosis between people and water, and emphasizes the use of systematic methods and integrated ecological technology to solve water-related problems in the city. Meanwhile, new strategies are proposed for the adaptation of the city's architecture and infrastructure construction to floods; in other words, these are strategies that adapt to the course of nature.

Compared with conventional water conservancy and rainwater management as well as urban infrastructure and construction projects, the concept of "sponge cities" is characterized by a series of distinctive features. First, this concept places its emphasis on integral ecosystem values. Second, it emphasizes the necessity to solve water-related problems on the spot rather than transferring these problems to other sites. Third, it calls for decentralized non-governmental projects rather than centralized autocratic projects. Fourth, it advocates the action of "slowing down" instead of "speeding up", favoring reservoir detention over flood discharge.

Fifth, it stresses the importance of elastic responses instead of rigid confrontation.

In the specific planning, designing and engineering process, the "sponge" philosophy can be embodied in three different strategies: consumption, deceleration and adaptation. These are three strategies which need to be combined in most cases, forming the basic model of "consume and eliminate the reservoir detention of the flood from the very beginning, decelerate the speed of the water and consume the energy produced during the process, and make the back end of the system flexible and adaptive".

By **YU Kongjian** (TUREN Design)
Translation: **Zhu Ruoxi**
作者：**俞孔坚**（土人设计）
翻译：**朱若曦**

FLOOD ADAPTATION STRATEGY: JINHUA YANWEIZHOU PARK

Yiwu River and Wuyl River confluence in Yanwel Eyot, and this is how and where Wujiang River (Jinhua River) comes into being. There are floodplains with a total acreage of 26 hectares by the head of the eyot, some of which are left with numerous pits and stone piles as the consequence of sand excavation, demonstrating a fragmented landform. There are still dense vegetation and wetlands remaining in the other parts of the floodplains. They are affected by monsoon climate and are flooded each year. There forms a community of plants, among which Poplar and Psalms are the dominant species. It is the only existing river floodplain habitat in the center of Jinhua City, and it provides shelter for a variety of birds and creatures, including the iconic local bird species – the egrets.

For TUREN design, this is an experimental project that befriends the flood, with the aim to establish a flexible waterscape that can adapt itself to floods. They planned to use the eyot which had not been enclosed by high flood embankments then as an inundation region; they knocked down the hard flood prevention banks within the park, and transformed the river bank into a multi-level submerged terraced planting area, so as to increase the flood flowing cross section of the river course and to slow the flow down. Terraced fields are widely planted with local vegetation which can survive seasonal flooding, while retaining walls of the terraced fields are designed to act as an accessible walkway network. The river banks of these terraced fields can be used simultaneously for detention and filtration of rainfall flood coming from the land, and can thus prevent pollution of the river.

The pedestrian network built on the adaptive terrain, vegetation and adaptive ecological flood embankment is also a system compatible with floods.

The "Bayong Bridge" which runs across two rivers and four banks is built at the flood level indicating the probable water level of a flood that might happen once-in-two-centuries, while the trestle bridge and the park trails system are built respectively at the flood levels indicating the water level of floods which are once-in-half-century/20-years/a-decade/a-year. The various intensities of different floods are also taken into consideration when the group designed the structures. They are designed to be built at the water levels that are to be reached once in 20/200 years. Moreover, the structures are designed to be submergible, so as to ensure that they can be well preserved during the submersion and quickly restored afterwards.

CONSUMPTION STRATEGY: HARBIN QUNLI NATIONAL WETLAND PARK

Harbin Qunll Storm Water Park (now listed as a national wetland park) is located in Harbin Qunll New District. Located on low-lying plains and with an annual rainfall of nearly 600mm concentrated in the summer, waterlogging caused by rains has always been a serious local problem. Drawing lessons from the dike-pond technology of the traditional agriculture practiced in the Delta Regions in China, TUREN design employs the balancing technology of land filling and excavating to create a series of puddles of different depth as well as mounds of different heights along the periphery of the sites, forming a "sponge belt" spotted with blue and green.

Urban rainwater can be collected in this "belt", and after filtration, precipitation and purification, the rainwater enters into the low-lying wetlands of the core area. In the ponds there are local aquatic and hygrophyte plant communities, while the hills are closely planted with Betula platyphylla, a special tree species from the northeastern part of China. Trestle bridges are also built to connect the hills. Based on this overall layout, a pedestrian network that traverses the hills and bubble-like wetlands is established. Platforms above water are set over the ponds while scenery pavilions are laid out on the hills, creating rich and varied spatial experience for visitors.

DECELERATION STRATEGY: LIUPANSHUI MINGHU WETLAND PARK

The city of Liupanshui is a third-tier city in China. It has nearly 600,000 inhabitants, most of whom are densely populated in limestone valleys. Shuicheng River runs through the city; however, it has lost the capacity of self-regulating since its canalization and induration during the 1980s, resulting in a series of problems such as seasonal rainfall floods and droughts, severe water pollution, as well as extinction and poisoning of upstream habitats.

The key strategy adopted by TUREN Design hereby is to decelerate the water flow coming from the slopes by using three specific methods. By removing dikes made of concrete, reconstructing the river bank, recovering the vegetation in the river course, and constructing aeration low head dam along the river, they attempt to slow down the river flow. With the construction of terraced wetlands, the surface runoff down the hillside slows down; consequently, the flood peak is reduced while the seasonal rainwater can be regulated. Low weirs are constructed according to the landform of the valleys, forming a series of ponds, which are connected to each other through subsurface constructed wetlands, functioning as regions of deceleration and filtration. ∎

"海绵城市"概念是对工业化城市建设模式的反思，它强调人、水共生，强调用系统的方法和整合的生态技术，解决城市中与水相关的各种问题，同时针对城市的建筑与基础设施建设如何适应洪涝提出新的策略，即与自然过程相适应的策略。

相对于常规的水利和雨洪管理、城市基础设施及建筑工程，"海绵城市"概念有以下几个特点：一，强调完全的生态系统价值观；二，强调就地解决水问题，而非将其转嫁给异地；第三，呼吁分散式的民间工程，而非集中式的集权工程；四，主张慢下来而非快起来，重滞蓄而非排泄；第五，强调弹性应对，而非刚性对抗。

在具体规划设计和工程上，"海绵"的哲学可以体现为三种策略：消纳、减速与适应。这三种策略在更多情况下需要被组合运用，形成"源头消纳滞蓄、过程减速消能、末端弹性适应"的基本模式。

洪涝适应策略：金华燕尾洲公园

义乌江和武义江在燕尾洲这里交汇而成婺江（金华江），洲头共26公顷的河漫滩，其中部分因采砂留下坑凹和石堆，地形破碎；另一

部分尚存茂密植被和湿地，受季风性气候影响，每年受水淹没，形成了以杨树、枫杨为优势种的群落，是金华市中心唯一留存的河漫滩生境，为多种鸟类和生物提供庇护，包括当地具有标志意义的白鹭。

对土人设计来说，这是一个与洪水为友的实验性工程，目的是建立一个与洪水相适应的水弹性景观。他们将尚没有被防洪高堤围合的洲头设计为可淹没区，同时将公园范围内的防洪硬岸砸掉，把河岸改造为多级可淹没的梯田种植带，以增加河道的行洪断面，减缓水流速度。梯田上广植适应于季节性洪涝的乡土植被，梯田挡墙为可进入的步行道网络。梯田河岸同时将来自陆地的雨洪滞蓄和过滤，避免对河道造成污染。

建立在适应性地形、植被和适应性生态防洪堤上的步行网络也是一个与洪水相适应的
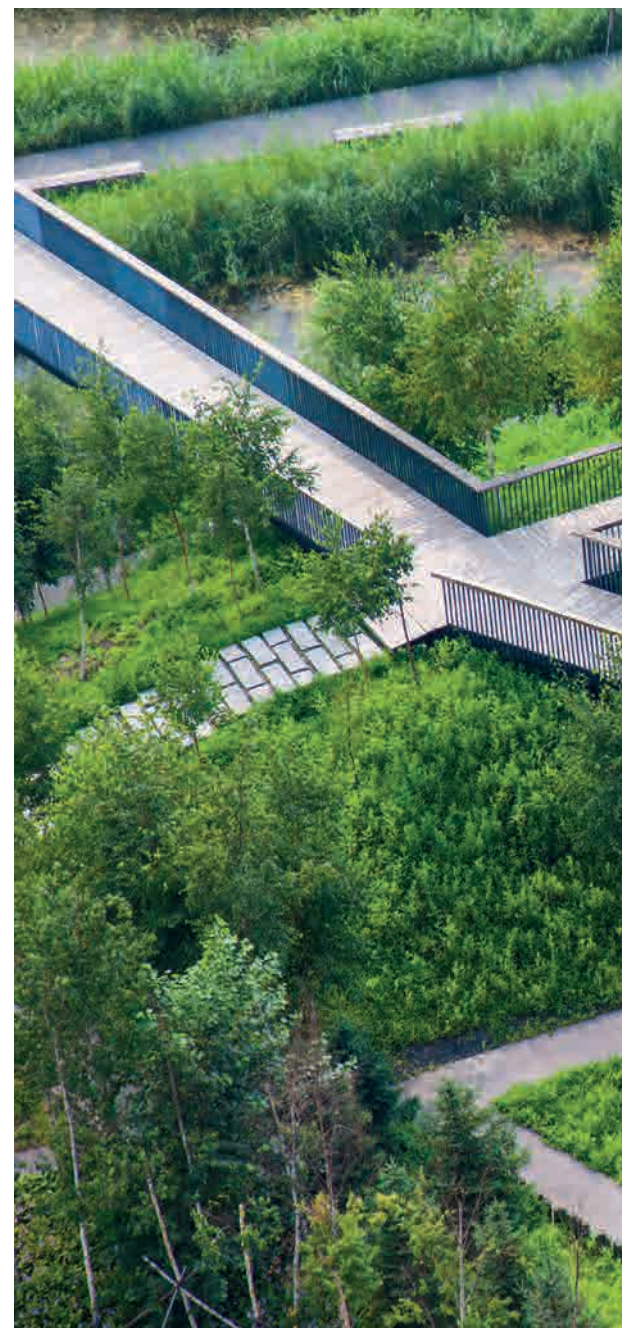
系统。跨越两江四岸的"八咏桥"蜿蜒于200年一遇的洪水位之上，底下的栈桥和公园步道系统则分别在50年一遇、20年一遇、10年一遇及1年一遇的洪水水位上。构筑物的设计也充分考虑了不同强度的洪水风险，设计在20年和200年一遇的水位之上，且作了可淹没的设计，保证在淹没之后能保存完好并迅速恢复使用。

消纳策略：哈尔滨群力国家湿地公园

哈尔滨群力雨洪公园（现已列为国家湿地公园）位于哈尔滨市群力新区。当地处于低洼平原地带，年降雨量近600毫米，集中在夏季，所以雨涝是一大问题。土人设计借鉴了中国三角洲地带传统农业中的基塘技术，沿场地四周，通过挖填方的平衡技术，创造出一系列深浅不一的水坑和高低不一的土丘，形成一条蓝绿相间的"海绵"带，收集城市雨水，使其经过滤、沉淀和净化后进入核心区的低洼湿地。水泡中为乡土水生和湿生植物群落，山丘上密植具有东北特色的白桦林，再通过高架栈桥连接山丘。在此整体格局基础上，建立步道网络，穿越于丘陵和泡状湿地之间。水泡中设临水平台，丘陵上有观光亭塔，创造出丰富多样的空间体验。

减速策略：六盘水明湖湿地公园

六盘水市是中国的一个"三线"城市，有近60万的人口，集中分布在石灰岩谷地。水城河穿城而过，但从20世纪80年代起就已被渠化和硬化，失去了自我调节能力，导致季节性的雨洪和干旱问题、水体污染严重、上游的栖息地消失并被毒化等问题。土人设计在此采用的关键策略是减缓来自山坡的水流，并通过三种具体方法来实现：拆除混凝土河堤，恢复滨河及河道内的植被，沿河建造曝气低堰，让河水慢下来；建立梯田式湿地，减缓山坡下来的地表径流，削减洪峰，调节季节性雨水；利用山谷地形构筑低堰，形成一系列陂塘，陂塘之间通过潜流湿地连接，起到减速和过滤作用。■

Urbanization and Health in China

中国城镇化与健康

By **Xinhu Li** et al.
作者：**李新虎**等

中国是世界上人口最多的国家，近年也经历了历史上最大规模的移民风潮。快速城镇化给地方和国家的公共健康带来了持续深远的影响，现在已经到了一个紧要关头，需要我们对城镇化、环境变化与公共健康之间的相互作用关系有系统化的认识，并针对国家、地方、个人三个层面分别提出解决方案。

在《中国城镇化与健康：在国家、地方及个人层面上的思考》一文里，我们审视了近年来中国对城镇化、城市环境变化与人体健康之间相互关系的相关研究，并依据系统化认识，从上述国家、地方及个人三个不同的层面，总结出我们在试图提升全体国民福祉健康时所面临的挑战和机遇。

城镇化和城市扩张带来城市环境以及居民生活方式的变化，这些变化可单独或协同作用，导致人体健康问题。中国已经经历了一个流行病学的转变，从传染病转到慢性病，所用的时间远远短于世界上其他很多国家。环境风险因素，尤其是空气污染和水污染，是导致中国人口发病及死亡的一个主要因素。此外，老龄化、食品支持体系、外来人口与本地居民在公共服务方面的差异化待遇，也是中国城市健康所面临的问题。

就此，我们提议：从国家层面上而言，中央政府应完善现有环境政策和食品安全法规，并对医疗健康体系和人口政策作出调整；在地方层面上，地方政府应在城市规划阶段就对健康生活加以综合考虑，改善当地食品供应，并加强环境监测与管理；在个人层面上，应鼓励城市居民接受健康生活行为的再教育，鼓励他们为自己的健康负责并参与环境监控及管理。■
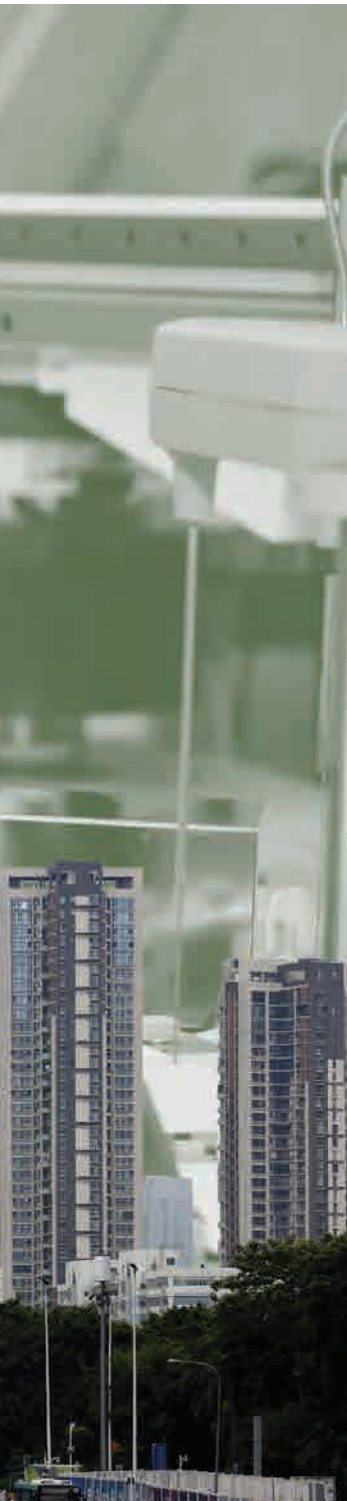
China has the biggest population in the world, and has been experiencing the largest migration in history - its rapid urbanization has profound and lasting impacts on local and national public health.

The paper "Urbanization and Health In China, Thinking At The National, Local And Individual Levels" authored by Xinhu Li, Jinchao Song, Tao Lin, Jane Dixon, Guoqin Zhang and Hong Ye, provides a comprehensive review of recent studies which have examined the relationship between urbanization, urban environmental changes and human health in the PRC, expounding on the challenges and opportunities for promoting health and well-being at national, local, and individual level.

Urbanization has brought about environmental changes, as well as transformation in residents' lifestyle. China has undergone an epidemiological transition, shifting from infectious to chronic diseases in a much shorter time frame than many other countries. Environmental risk factors, particularly air and water pollution, are a major contributing source of mortality in the country. Furthermore, aging population, food support system, and disparity of public service between the migrant workers and residents are important contributions to China's urban health.

Based on the found results, the proceedings present solutions at three different levels. At the national level, the central government could improve current environmental policies, food safety laws, and make adjustments to the health care system and to demographic policy. At the local level, local government could incorporate healthy life considerations in urban planning procedures, make improvements to the local food supply, and enforce environmental monitoring and management. At the individual level, urban residents should be encouraged to take responsibility for their health and to participate in environmental monitoring and management. ■

What do Chinese New Towns Reveal?
中国的新型城市揭示了什么?

By **Michele Bonino, Francesca Governa**,
Maria Paola Repellino and **Angelo Sampieri**

The research was born from the emergence of an incredible number of new towns in China. In the early 21st century, the government announced its decision to build twenty new cities every year for the next twenty years; in total,approximately four hundred new cities were to be designed and built before 2020 (Shepard, 2015; Fang and Yu, 2016;Wakeman, 2016).

New towns are not a novelty: they have an established history, a theoretical framework, and wellknown experiences (Hall, 1988; Hall and Ward, 1998; Wakeman, 2016). Building new planned settlements in China is one of the strategies of "city making", at least since the midtwentieth century. The satellite towns built between 1950 and 1980 were part of a policy of "industrialisation without urbanisation" (Pow, 2012; Ren, 2013).

After the 1970s,with the advent of economic reforms and the opening up of the market, new towns became one of the tools to not onlyimplement economic development strategies, but also attract businesses and investments as well as promote real estateto overcome public housing provisions and invest in special economic zones (Cao, 2015). The main features of the transformation of China "away from state socialism" (Ma, 2002; Yeoh, 2010) are a shift to a stateregulated marketeconomy, the growing role of local governments in fiscal administration and economic management, industrial manufacturing development triggered to a great extent by the global market, and the "commodification" of land andhouses.

This institutional, economic and political transformation was boosted by the dynamics of urbanisation in which"the relationship between the central city and its suburbs [shifted] from one characterized by scattered industrialsatellite towns with a vast rural area for vegetable cultivation, to one of suburban new towns and a globalizing centralarea that formed a unified global city region" (Wu, 2016, p. 1139). New towns thus become part of a new, emergingspace; they not only acted as a multifunctional "planned support" for the market, but also as the new centres of the spatial reconfiguration of regional urban systems based on the global cityregions model (Xu and Yeh, 2010; Shen and Wu, 2017).

A man looking at plans and projects exhibited in an observation tower in the middle of the construction sites of Zhaoqing New Area, Zhaoqing, 2017.
肇庆新区建设工地中间的一座观景塔上，一名男子正在查看展示的方案和项目，2017年
©Samuele Pellecchia, 2017

Although Chinese new towns are part of this physical, institutional, political, economic, local and globalframework, they are less well-known and difficult to include in a discourse, tradition and process that has already takenplace. Providing atlases and definitions, or identifying characteristics and superimposing models, does not help toclarify an ambiguity that is partly constitutive and partly contingent: new towns have blurred boundaries, they are developing, they escape any sure fire hypothesis. All we can do is examine them in an open way in order to understand not what they are, but what they do. What role does a new town play in the incredible urbanisation process of which itis part? What can help us understand this process? What does it reveal?

To answer these questions, the research has primarily investigated three new towns under construction: Tongzhou New City in Beijing; Zhaoqing New Area near Zhaoqing in the Guangdong, and Zhengdong New District in Zhengzhou, Henan. Tongzhou New City means revisiting Beijing, its logic of expansion and decentralisation. The district isdesignated to become a multifaceted service hub and to accomodate the new administrative centre of the Beijing Municipality.

Tongzhou will be a new town for more than two million inhabitants. Actually, more than a confined andlocalised new town, Tongzhou New City being superimposed on a multilayer space, inserted in the JingJinJi supercity and strictly related to Beijing development. Zhaoqing New Area means revisiting the Pearl River Delta after studies concentrating on its densification and saturation. Like Tongzhou, Zhaoqing will double in size and population, and theadministrative centre of the city will shift. The new area — or at least the area earmarked in the 2012 masterplan to covera 115 km² surface which until then had been chiefly agricultural — will accommodate 600,000 new inhabitants before 2030.

However, the numbers differ radically if we consider the seamless urbanisation extending east along the Xi Jiang River from Zhaoqing to Foshan and Guangzhou, occupying all the flat land available. Zhengdong New District meansonce again examining the optimisation of an inland area believed to be crucial for the Rise of Central China Plan(RCCP) adopted by the central government in 2004.

The new city was announced and designed in 2001 as an addition to Zhengzhou, capital of Henan: a million new inhabitants and, again in this case, a doubling of the surface

Tongzhou New City viewed from the top of a tower, Tongzhou, Beijing, 2017.
从北京一座塔楼顶部俯瞰通州新城，2017年。
©Samuele Pellecchia, 2017

area (morethan 150 km²), numerous buildings and residential compounds, the new CBD and, above all, the new highspeed trainstation.

In fact, Zhengdong is part of the reinforcement of the infrastructure system in China which in recent years hasled to the construction of a new airport, a new subway, new railways and stations for highspeed trains, as well as afourth ring road connected to the main Beijing Guangzhou road along which Zhengzhou is a crucial intersection.The masterplans displayed in exhibition halls, and hung here and there in the new cities of Tongzhou, Zhaoqing and Zhengdong refer to a physical space that acts only as a purely technical support: strict zoning socially and physically separates residential, shopping, working and leisure spaces.

The designed space of Chinese new towns challenges everyprinciple of hierarchy, density, proximity, mixité, compatibility and incompatibility of9 functions, social relationships,uses and practices due to the way in which these principles have been developed and studied within compact and scattered twentieth century morphologies. Space in Chinese new towns is not defined and designed based on modernurbanity models

nor does it involve only the reproduction of the ingredients of a uniform and unifying global urbanity. At the same time, physical and social frameworks move beyond the traditional idea of the city as a bounded anduniversally replicable settlement and reflect the differentiated, varied and multiscalar nature of contemporary urbanreality (Brenner and Schmidt, 2015).

Exploring these places means trying to rediscuss traditional narratives and possibly chip away at them. How doesTongzhou affect Beijing? How does it decentralise and rebalance? How does Zhaoqing contribute to the saturation of the Pearl River Delta? How can we say that Zhengdong enhances the centrality of Zhengzhou, of Zhongyuan? And yet, in a sort of enlarged exploded diagram, the narratives and representations of Chinese urban expansion seem to beincapable of recognising distances and differences, save the ones involving scale and measure: in China everything isbigger, but if we change our lens, we basically always see the same objects. Revisiting Beijing, the Pearl River Deltaand Zhengzhou is a way to get a better understanding of what these new towns do in these spaces, how they affect themand how they change them (if they do).

这项研究源于中国数量惊人的新型城市的出现。在21世纪初，中国政府宣布将在未来20年内每年新建20座城市；到2020年前，总共将设计和建造大约400座新城。新型城市并不是什么新鲜事：它们有既定的历史、理论框架和众所周知的经验。至少从20世纪中叶以来，建立新的规划定居点是中国"造城"战略之一。1950年至1980年之间建造的卫星城是"未城市化的工业化"政策的一部分。20世纪70年代以后，随着经济改革和市场开放的到来，新型城市不仅成为实施经济发展战略的工具之一，也成为吸引企业和投资，以及促进房地产克服公共住房限制、投资经济特区的工具之一。

中国"脱离国家社会主义"的转型的主要特点是：向受国家管制的市场经济转变；地方政府在财政管理和经济管理方面的作用日益增强；工业制造业的发展在很大程度上是由全球市场引起的；土地和住房的"商品化"。这种制度、经济和政治上的转变是由城市化的动力推动的，"中心城市与郊区之间的关系从一个分散的工业卫星城和广大的蔬菜种植区，转变为一个郊区的新型城市和一个全球化的中心区域，形成了一个统一的全球城市区域"。新型城市因此成为新的新兴空间的一部分；它们不仅是市场的多功能"计划支持"，而且是基于全球城市区域模式的区域城市系统空间重构的新中心。

尽管中国的新型城市是这种实体、体制、政治、经济、地方和全球框架的一部分，但它们并不那么为人所知，也很难被囊括进已经发生的话语、传统和进程中。提供地图集和定义，或确定特征和叠加模型，并不能帮助澄清那种半是根本特征、半是依情况产生的晦昧不明：新型城市边界模糊，它们正在发展，它们逃避任何必然的假设。我们所能做的就是以开放的方式来审视它们，不是为了了解它们是什么，而是为了了解它们的作用。新型城市在中国不可思议的城市化进程中扮演了什么角色？什么能帮助我们理解这个进程？它揭示了什么？

为了回答这些问题，本研究主要考察了三个正在建设的新型城市：北京市通州新城；广东省肇庆附近的肇庆新区；以及河南郑州市郑东新区。

It also allows us to rediscuss any old categories which are perhaps no longersuited to describing contemporary cities. By adopting this approach, Chinese new towns become an object of study as well as a specific viewpoint with which to examine contemporary urbanisation and tackle the fact that we need to radically rethink the vocabulary, conceptualisations and even the epistemology of the urban (Amin and Thrift, 2017).

Chinese new towns are neither very exemplary nor new. When viewed from the point of view of the relationship theycreate with their environment, new towns do however appear more interesting than when observed within theirboundaries. This is not due to any original traits they may have when compared to the external environment, but ratherto the way in which their contradictory assertion pries open a world, and with it a language of description. Considered thus, yes, new towns are new. They oblige us to radically rethink how to interpret and create cities, whether in China orelsewhere. ■

考察通州新城也就意味着重新审视北京，审视其扩张和去中心化的逻辑。该地区被指定为全方位的服务中心和北京市新的行政管理中心。它将成为容纳200多万居民的新型城市。实际上，通州新城不仅仅是一个封闭和本地化的新型城市：它是在多层空间上新一层的叠加，嵌入京津冀地区，与北京的发展紧密相关。

考察肇庆新区意味着在集中研究了珠江三角洲的致密化和饱和度之后，对其重新进行考察。与通州一样，肇庆的面积和人口也将翻番，行政中心也将转移。这个新区——或者至少是在2012年总体规划中划定的覆盖面积为115平方公里的区域——截至2030年将容纳60万新居民，而该地区在2012年之前还主要是农业用地。然而，如果我们考虑到从肇庆到佛山和广州沿着西江河向东延伸的无缝城市化，占据了所有可用的平坦土地，那么这些数字就完全不同了。

郑东新区意味着要再次审视这个在2004年通过的"中部地区崛起规划"中被认为至关重要的内陆地区的优化。2001年，河南省宣布并设计了这座新型城市，作为对省会郑州的补充：新居民100万，面积再翻一番（超过150平方公里），几栋建筑物和住宅区，新的中央商务区，最重要的是新的高铁车站。事实上，郑东新区是加强中国基础设施体系的一部分。近年来，中国的基础设施体系带来了新机场、新地铁、新铁路和高铁车站的建设，以及连接京广公路主干道的四环路。郑州是这条主干道上的关键交汇点。在通州、肇庆、郑东各新区展览厅里展出或到处悬挂的总体规划，都是纯粹作为技术支持的物质空间：严格的社会和实体区划将住宅、购物、工作和休闲空间分隔开来。

中国新型城市的设计空间是对所有功能、社会关系、使用和实践中的层次、密度、邻近性、混合性、兼容性和非兼容性等原则的挑战，因为这些原则是在紧凑和分散的20世纪城市形态中发展起来并加以研究的。中国新型城市的空间不是基于现代城市模式来定义和设计的，也不是对统一的全球城市要素的再现。同时，实体和社会框架超越了城市作为一个有边界的、可复制的定居点的传统概念，反映出当代城市现实的差异性、多样性和多尺度性。

探索这些地方意味着试图重新讨论传统的叙述方式，甚至可能逐步消除它们。通州对北京有什么影响？它如何去中心化和再平衡？肇庆如何导致珠江三角洲的饱和？为什么说郑东新区提高了郑州、或者说中原的中心地位？然而，在某种被放大的分解图中，中国城市扩张的叙述和表现似乎无法确定距离和差异，除了涉及规模和尺度的叙述和表现之外：在中国，所有的东西都比较大，但是如果我们转换视角，我们看到的基本上都是一样的东西。重新审视北京、珠江三角洲和郑州，可以更好地了解这些新型城市在这些空间里发挥

了什么作用，它们如何影响并改变这些空间（如果有所改变的话）。这种重新审视还让我们得以重新讨论那些可能已不再适合描述当代城市的旧类别。通过采用这种方法，中国新型城市既是研究的对象，又成为考察当代城市化的一个具体视点，要求我们从根本上反思城市的词汇、概念，甚至是认识论的问题。

中国的新型城市既不是很典型也不是很新颖，但从它们与周围环境的关系来看，新型城市确实比在其边界内观察到的更有趣。这并不是由于它们与外部环境相比可能具有的任何独特特征，而是因为它们相互矛盾的主张揭示了一个世界的方式，同时带来了一种用来描述这个世界的语言。因此，新型城市确实是新的。它们迫使我们彻底反思如何解读和打造城市，不管是在中国还是在其他地方。■

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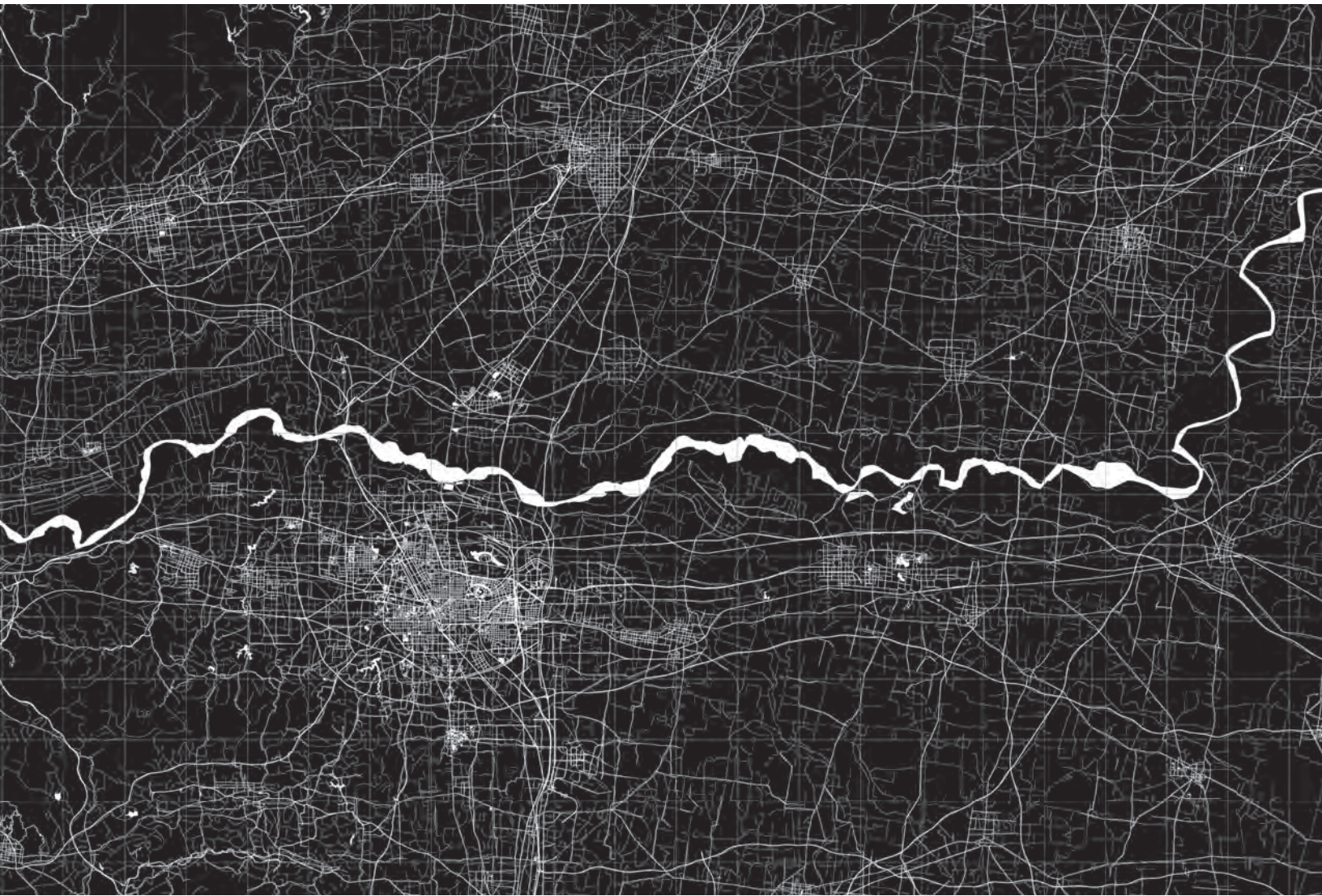
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Notes on Urban Villages in Shenzhen
深圳城中村研究

As the outcome of a collision and fusion between rapid urbanization and urban-rural dynamics of change set in motion since the reform era, urban villages are breeding grounds for alternative lifestyles in contemporary times, a socio-spatial legacy that deserves further investigation. We reprint an excerpt from URBANUS's publication Village/City City/Village, to provide a brief premise to the issues abating these unique urban formations, and an alternative perspective to address them. The cause for the formation of urban villages is simple.

A large amount of agricultural land was taken over by cities during the rapid urbanization course of the late 20th century and farmer groups became new corporations. In 1992 all such villagers became city residents; most of their land was acquired for urban development, yet a small portion they formerly owned was returned for housing and commercial use. That which was converted to residential function is the subject of this study.

城中村是中国城市快速发展与计划经济时代城乡二元体制冲突并融合的产物，它已经成为国内城市研究的一个热点议题，我们在此选取了URBANUS都市实践在《村·城城·村》一书中对深圳城中村的部分研究成果，对城中村的概念、形成、存在的问题及可能的对策略作阐述。

1979年，改革开放的总设计师邓小平画了一个圈，这个圈成为328km²的深圳特区。被圈进去的行政村有91个，除原有住宅用地外，农用土地的绝大部分（96%）被征用作城市建设用地，一小部分返还作村集体的工商发展用地和新宅基地。城市通过以极为低廉价钱征用农村土地，投入一定开发成本"几通一平"变为城市建设用地，之后有偿转让，迅速积累了庞大的土地基金用于城市开发，于是这些村落和仅剩下的4%用地就被包围在以"深圳速度"所进行的城市建设之中。

被城市包围的农村组织于1992年基本都转变为股份公司，村民成为城市居民和股份公司股东。在失去农用土地之后，原村民的收入来源，一部分来自于股份公司对工商用地经营（工业厂房或商住楼开发）产生利润的分红，一部分则来自于私房出租。平均超过村民14倍以上的外来人口的涌入，产生了对廉租住房的巨大需求，原村民纷纷在新宅基地中突破240m²自用住宅的限制，兴建、扩建、重建更大、更密的住宅以供出租，于是形成了所谓的城中村。

城中村呈现出与城市反差强烈的形态风貌和结构特征，受到各界的普遍关注和相对一面倒的批评

Urban villages have been long regarded as scars of the city

These are the new neighborhoods of ex-villagers, which differ drastically from the original settlements currently sites of high rise buildings. Urban villages have been long regarded as scars of the city. Politically, they are considered as a sort of time bomb, as they feature seemingly unsolvable problems: high density, poor accessibility, insufficient public spaces and community service facilities, lack of order and safety, to name a few in a long list.

These problems have led city officials and urban planners to the idea of complete demolition and reconstruction, which, according to our analysis, instead, will generate further and obvious complications: urban space would be overloaded; its cost and reinvestment unsustainable, with the existing urban context and city life heavily damaged - ex-villagers would expect their unlawful and low quality properties to become legitimate ones and for the value of their property to double instantly, with social fairness in the distribution of wealth being sacrificed in the process.

We realizes that urban villages are an inevitable outcome of China's urbanization process, they are a kind of basic housing typology in the contemporary city. While white-collar workers start to enjoy their middle-class life style, these low-income urban residents need also find their place in the city. Instead of complete demolition, we are trying to discover new methods - inject positive public spaces and functions, redefine the villages' own identities, hence upgrade their living conditions, as well as preserve a culture beneficial to the sustainable development of the city. ■

城中村实际上主要是指城市中的原村民在新宅基地范围内(小部分超出范围侵占城市用地)自发建设的以出租为主要目的的新私房群落。城中村有别于现在已基本被高楼大厦所代替的原村落,也不是城市中的农村 。

由于实质上是城市化的例外和"飞地",享受不到与其他96%被征用为城市建设用地所得到的"国民待遇",城中村呈现出与城市反差强烈的形态风貌和结构特征,受到各界的普遍关注和相对一面倒的批评。普遍认为的城中村问题包括形象丑、密度高、环境差、卫生糟、治安乱、公共空间不足、社区配套和市政设施缺乏、消防不符合规范等。面对城中村的现实,深圳市政当局近年来都在进行规划研究和探索,鉴于积重难返的诸多问题,多数官员和规划师都倾向于采用推倒重来的改造方法。然而,根据我们的空间模式分析,这种方法却会导致城市空间不堪重负、成本和再投入巨大等问题,更不用说已有的城市脉络和生活会被强行割裂,过程中城市利益的分配也会带来社会不公平问题。

"城中村"模式是解决城市底层人群生存的一种现实方式,它实际上是中国城市化进程中任何一个城市都会包含的内容。尽管存在着各种由于外界和自身而导致的问题,城中村却也毋庸置疑地为深圳的开放、包容、多元、活力发挥了相应的作用,因此不应简单地将之拆除了事。相反,应积极寻找另一种可能,通过植入积极的公共空间、公共功能等方式,适度挖掘城中村产业的地方特色,以此来提升城中村的民生条件,并创造一个有益于整体社会的良性文化。■

文化视觉

Zhang Weiming

Visualize Me

Taobao Village · Smallacre City

淘宝村·半亩城

By **Drawing Architecture Studio:** Li Han, Hu Yan, Zhang Xintong, Ji Jiawei, Liu Liyuan, Yuan Ruizhe and Ye Zichen

作者：**绘造社**— 李涵 / 胡妍 / 张欣桐 / 季嘉为 / 刘力源 / 苑瑞哲 / 叶子辰

摄影：© 高长军

Taobao Village · Smallacre City is a large panorama created by Drawing Architecture Studio (DAS, founded by architect Li Han and designer Hu Yan in Beijing) for the exhibition of Building A Future Countryside at the Chinese Pavilion of the 16th Venice Architecture Biennale. Inspired by Broadacre City proposed by Frank Lloyd Wright in the 1930s, DAS projects the realistic scenarios of Taobao Village in China onto the utopian plan of Broadacre City, combines the status quo of the very Chinese countryside and classic American avant-garde architectural design, and mixes the underlying folk wisdom with the top elite thinking.

Taobao Village refers to an administrative village in which at least 10% of village households actively engage in e-commerce on the platform of Taobao, the most popular e-tailer in China, and a total annual e-commerce transaction volume is at least RMB 10 million ($1.6 million). Such a village usually specializes in production and sale of one product category, e.g. garment, snack, handicraft, toy, car accessories, and etc. Taobao Village is a new model for rural economy that is explored together by the e-tailing corporation and Chinese farmers. To a certain degree, it has helped a large number of displaced farmers start a business on their return home and become a new type of farmers.

Wright's concept of Broadacre City was never realized. Nevertheless, the family-centered dispersed development pattern advocated in Broadacre City has grown vigorously nowadays in China in the form of Taobao Village. As a typical model spontaneously developed from the bottom up, Taobao Village doesn't rely on innovations in spatial models, but shows more vitality, originality, and sustainability than the utopian concepts by architects.

While the gigantic Broadacre City is measured with the acre, Taobao Village · Smallacre City is planned according to the mu, a unit of land area used in China. The basic planning unit in the panorama is half mu – about 300 square meters. As such, this is also where the name of the panorama originates. ∎
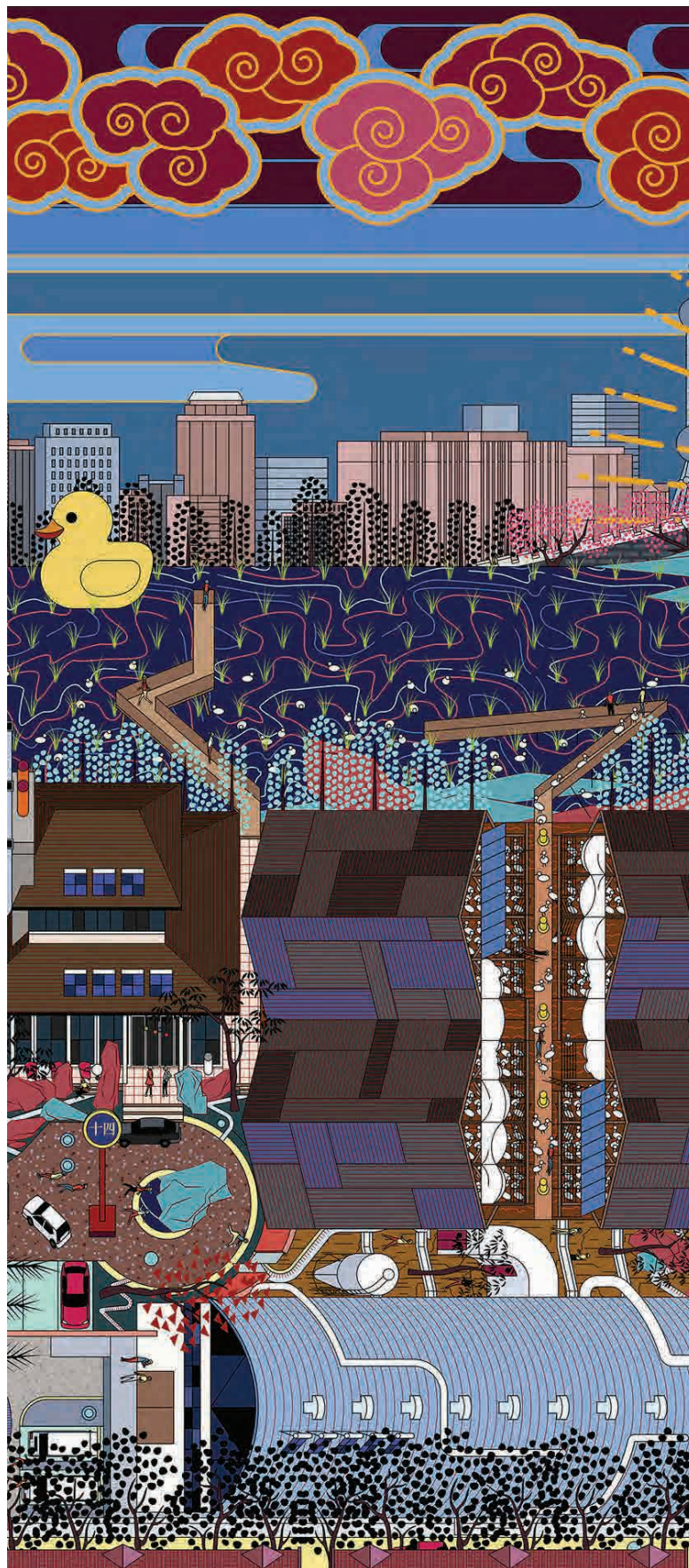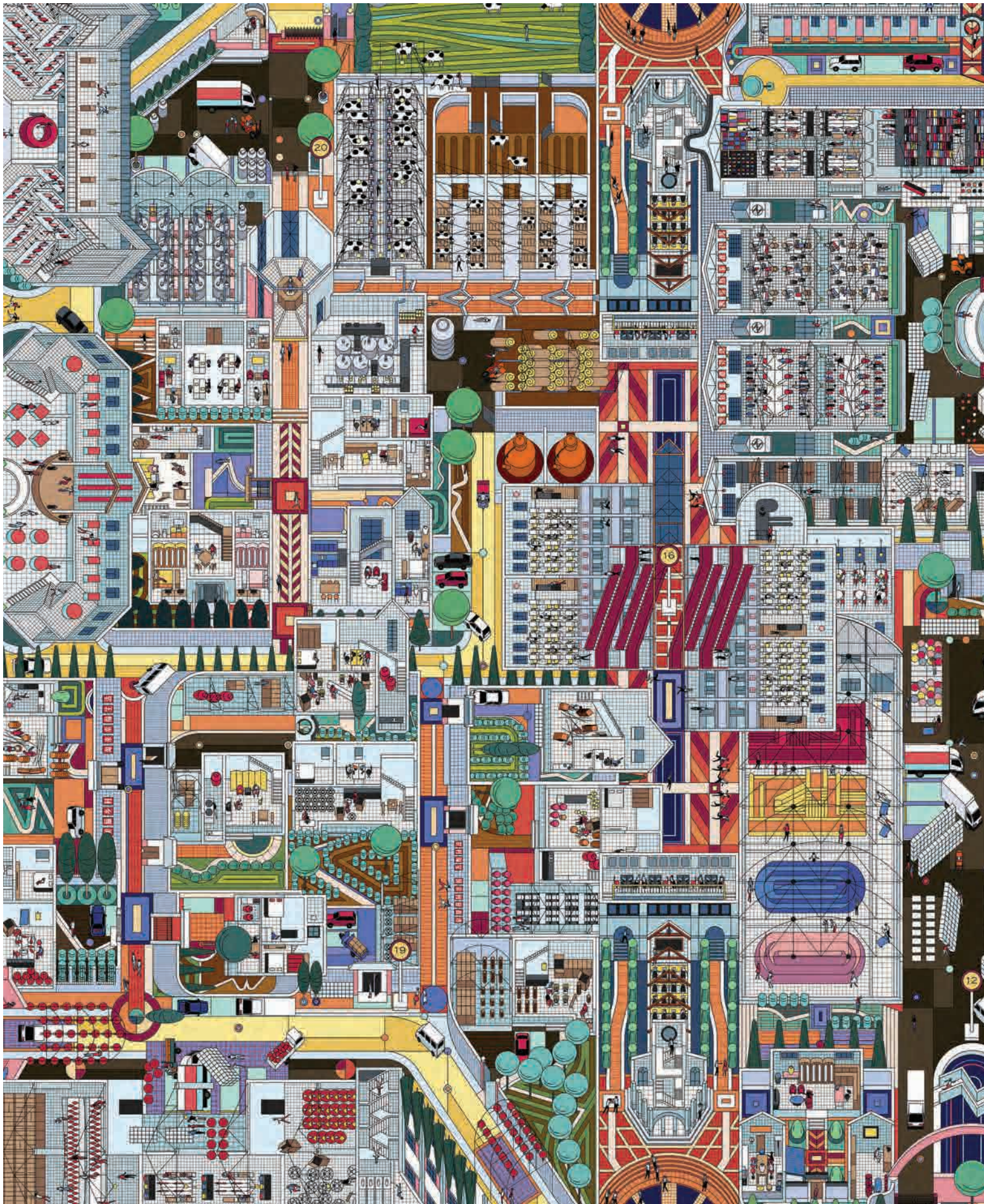
《淘宝村·半亩城》是绘造社(由建筑师李涵和设计师胡妍创立于北京)为第16届威尼斯国际建筑双年展中国国家馆主题展览"我们的乡村"特别创作的大型全景图。受到美国建筑大师赖特《广亩城》的启发,绘造社将"淘宝村"现实的场景投放到《广亩城》乌托邦的平面上,把极具中国特色的乡村现状与美国经典的建筑先锋设计相结合,让底层民间智慧和顶层精英思想混搭。

"淘宝村"是指在淘宝平台上活跃网店数量达到当地家庭户数10%以上、电子商务年交易额达到1000万元以上的村庄。这些村庄通常各自专攻生产和销售某一类产品,比如服装、零食、工艺品、玩具、汽车用品等。"淘宝村"是互联网电商和中国农民共同探索出来的一种农村经济新模式。它在一定程度上让大量背井离乡的农民工返乡创业,成为新型农民。

赖特的"广亩城"构想从未得以实现,但"广亩城"所倡导的以家庭为中心的分散发展形态,却以"淘宝村"的形式,在当下的中国大规模涌现。作为自下而上自发形成的典型模式,"淘宝村"不依赖于空间模型的创新,却比建筑师构想的乌托邦更具有活力、创造性和可持续性。

《广亩城》尺度巨大,计量单位是以英亩为单元。《淘宝村·半亩城》以中国的亩为单位,最后得到以半亩(300平方米)为基本单元的规划,此画的名称也源于此。

《淘宝村·半亩城》由互为镜像的两个正方形画面构成,左右两侧的平面功能流线对称一致。右侧正方形描绘建筑的外观,呈现包括中式、欧式、美式、以及简陋的工业建筑等各种风格,其中更有一些山寨赖特名作的建筑,堪称混杂了今日中国乡村各种民间欲望的建筑样式大集合。左侧正方形描绘建筑的内部,以更为抽象图解化的形式描绘"淘宝村"内在的生产消费运行逻辑。内外不同的画法也暗示了全球化与地域化、实体空间与虚拟世界的辩证关系。■
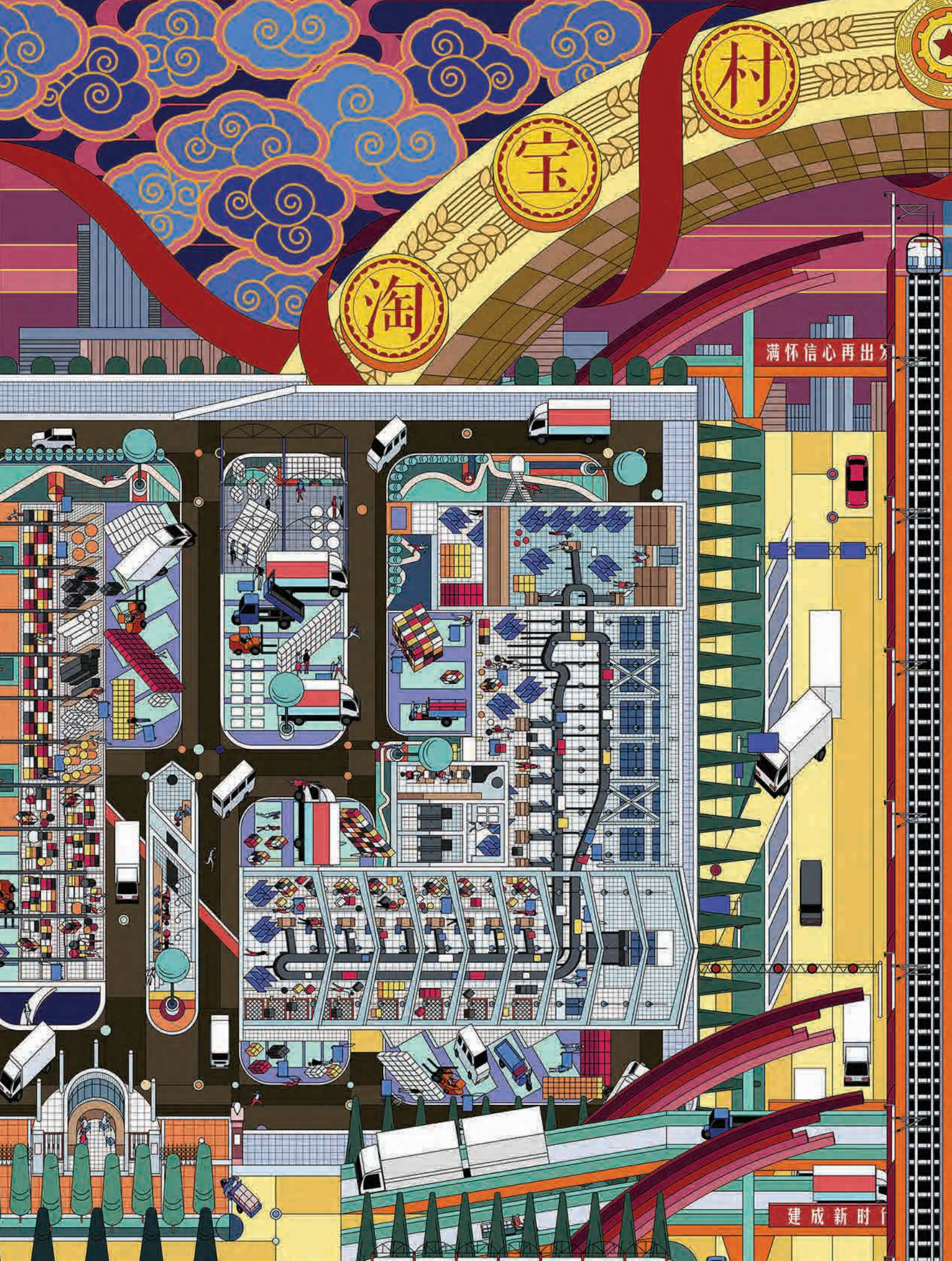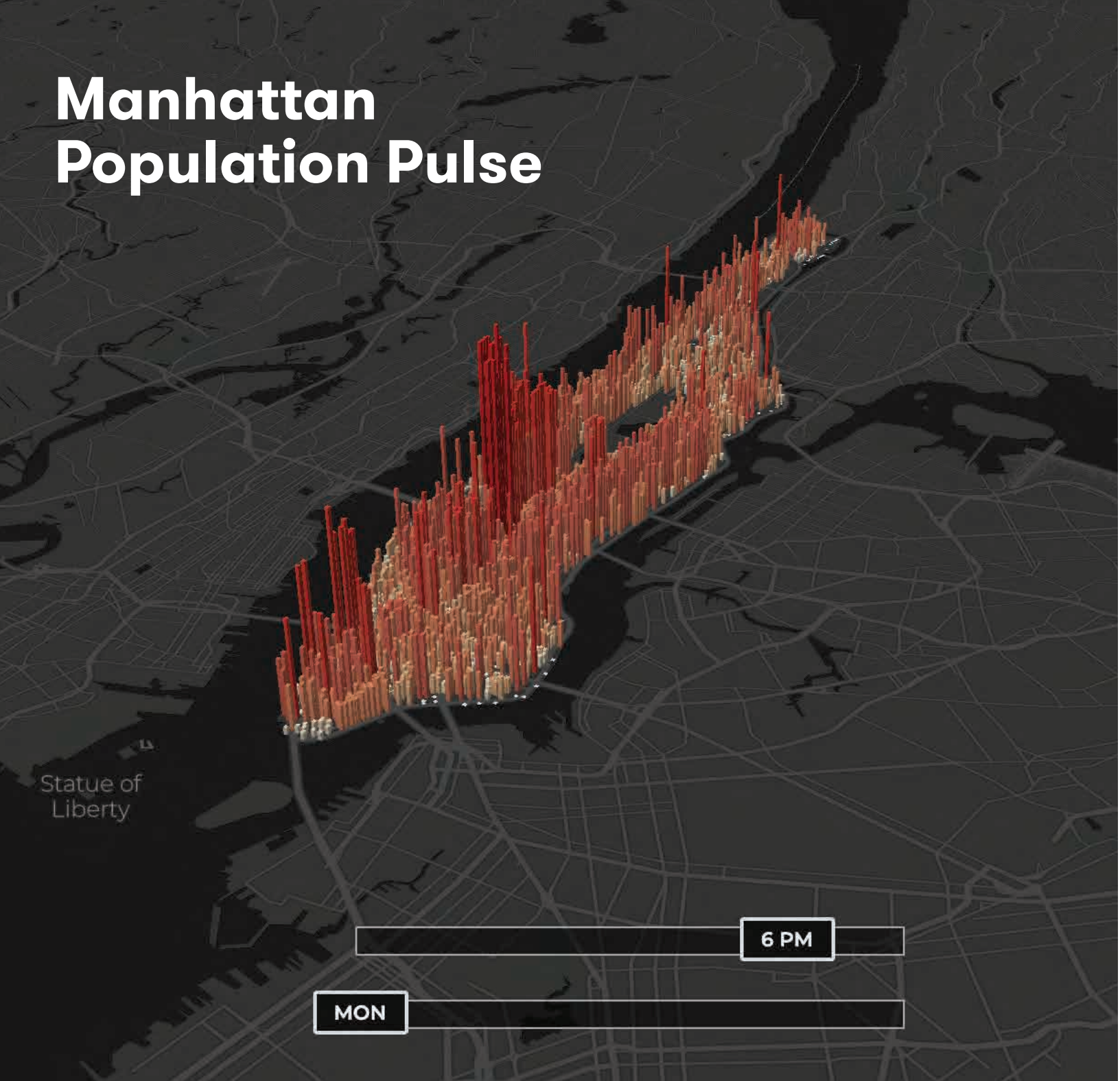
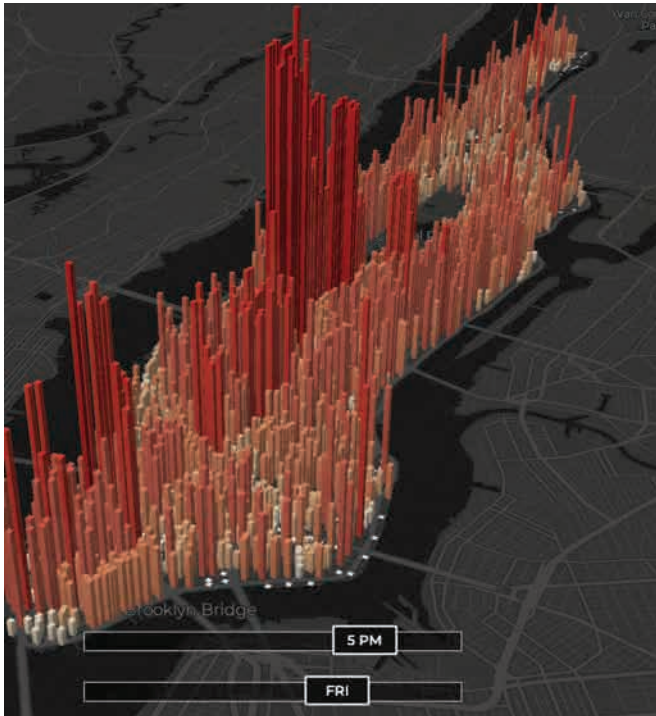# Manhattan Population Pulse

Statue of
Liberty

6 PM

MON

In cities around the world, offices and storefronts of downtown core areas are densely filled-up with people during workdays, sometimes leading to strenuous office hours. Nowhere is this phenomenon as pronounced as in Manhattan, which swells to an incredible four million people during work hours. This dramatic shift in population on a daily basis is made possible by Manhattan's unparalleled carrying capacity, or its ability to facilitate an inflow of millions of people who come for all sorts of reasons.

The visualization you see here is a model of the dynamic population of Manhattan, block-by-block and hour-by-hour for a typical week in late Spring. The population estimates are the result of a combination of US Census data and a geographic dispersion of calculated net inflows and outflows from subway stations, normalized to match population daytime and nighttime estimates provided by a study from NYU Wagner.

This animation, published by Visual Capitalis on June 22, 2018 has been created by Justin Fung, and is a dramatic, eye-opening look at the "pulse" of America's largest city.

Design, Development, Data
 & Modelling: **Justin Fung**
Design, Layout inspiration:
Oak Ridge National Laboratory,
Map engine: **Mapbox GLKS**
Graphing engine: **D3.js**
Github: **@citrusvanilla**

设计、开发、数据和建模：**Justin Fung**
设计、版面灵感：橡树岭国家实验室，
乌尔比察设计
地图引擎：地图盒子**GLKS**
绘图引擎：**D3.js**
Github：**@Citrusvanilla**

曼哈顿人口
脉冲

在世界各地的城市里，市中心核心区的办公区和商业店面在工作日里人满为患，有时会导致办公时间人在这里举步维艰。这一现象在曼哈顿最为明显，在工作时间段集中在这里的人数会增加到令人难以置信的400万。
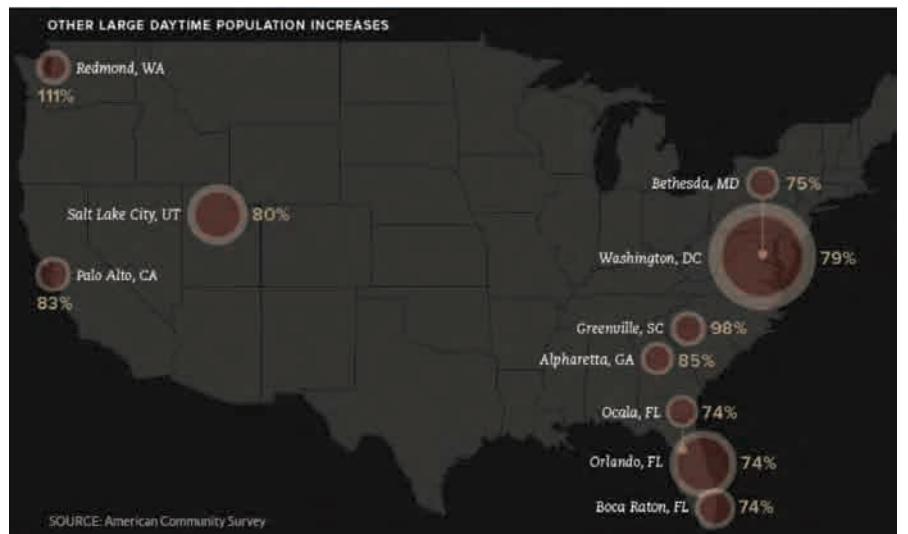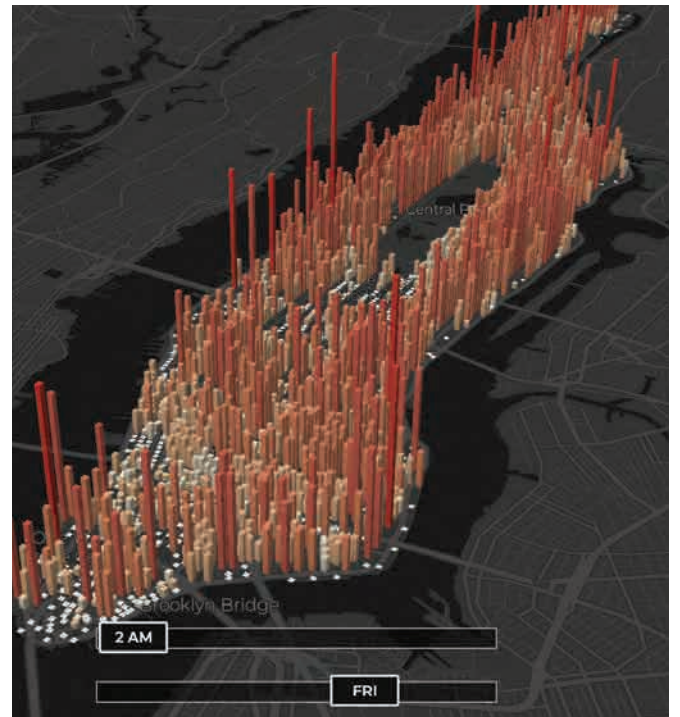
这种每天都要面对的人口的急剧变化之所以可能，是因为曼哈顿无与伦比的承载能力，或者说它有能力促进数以百万计因各种原因而来的人口的流入。

这里呈现的是曼哈顿人口动态的模型，是在晚春时节选择了一周，按街区、分时段一一描绘的。人口估计结合了美国人口普查数据和计算出的地铁站净流入和流出的地理分布的结果，根据纽约大学瓦格纳学院的一项研究，将标准化，使其与白天和夜间的人口估计数相匹配。这部视觉由Justin Fung创作，由"视觉资本"于2018年6月22日发表。它是对美国最大城市"脉冲"的一个戏剧性的、令人大开眼界的观察。

Project Website:
项目网站：
manpopex.us

Visual Capitalist website:
视觉资本网站：
visualcapitalist.com

Serial Innovators

对话创新者

Yang Mingjie: Design Faultlines in China Need to be Repaired slowly

Interview by **Lin Nan**
Photo by **YANG DESIGN**

Yang Mingjie, Founder of YANG DESIGN and Yangshe, Forbes China's most influential industrial designer, visiting professor at Tongji University.

YANG DESIGN 及羊舍创始人，福布斯中国最具影响力工业设计师，同济大学客座教授。先后在浙大与国美研究生工业设计专业学习七年，获德国WK基金会全额奖学金赴德完成工业设计硕士学位，后任职于慕尼黑西门子设计总部。囊获了包括德国红点、iF、日本GOOD DESIGN、美国IDEA、亚洲最具影响力设计银奖在内的上百项大奖。

2005年创办工业设计顾问公司YANG DESIGN，2013年创办杨明洁设计博物馆，2015年创办生活方式品牌"羊舍"。融合了德意志逻辑思考与中国人文精神的设计理念，也使得杨明洁成为众多国际顶尖品牌的合作伙伴，项目涉及生活方式、家居家电、交通工具、智能硬件、空间装置等多个领域。

杨明洁：设计并非只是商业的工具

文: 林楠
图: **YANG DESIGN**

How has the experience of working for Siemens affected your current practice?

When I started at the Siemens Design Center, there were more than 100 designers. Siemens has a lot of products to develop and undertakes a wide range of projects. The design projects I was involved in at Siemens were technical, such as the design of LG's home theater system, Siemens-Fujitsu's computer equipment and Siemens mobile phones. I learned how to design for a multinational company and how to design the brand identity of a product from the brand level up.

What is the difference between designing for Chinese companies and designing for Siemens?

The German design system is very mature, in terms of standardization, modularity, and sustainability. These design principles are not really factored in by Chinese companies yet. The design environment in China is improving however, as people have learned to accommodate external changes, but standardization and modularity are still not standard. If a company has a system-based product, the standardization and modular design are very important, as they not only solve the systemic brand identification problem, but also improve the management of the product development system, including packaging and transportation, raw material procurement, assembly and even scrapping. In recycling, all production systems are closely related to industrial design.

How do you view the gap between the two?

The gap is technical, industrial, and measurable. China has not experienced the first and second industrial revolutions in a complete sense, or formed a corresponding industrial base, leading to a faultline in Chinese industrial design of one or two hundred years. Only recently, with enterprise transformation becoming an important part of the country's economic transformation and development, has industrial design started receiving more attention.

One of the consequences of this design faultline is shanzhai (unbranded backstreet goods) and people's indifference towards intellectual property rights in China. Shanzhai production reversed the process of innovation. In the long run, it meant losing the ability to innovate from source. In the West, it is often a material or process innovation that brings about new design language, such as the synthetic panel fixtures used by the US military to protect wounded legs during World War II, used by the Eames in furniture design in their series of classic synthetic panel furniture. What we see in China is often the end result: superficial, symbolic design flooding the market.

Can this faultline be repaired, or does it have to be simply tranversed?

It can only be repaired slowly. The design faultline is only a small factor. A bigger problem is cultural. China's aesthetic culture has sunk to rock bottom. The Song Dynasty was the peak period of Chinese aesthetics. It continued until the Ming Dynasty and began to fall in the Qing Dynasty.

Chinese shanzhai and outsourced production prevailed for a long time. And then came the Internet technology revolution. When these two factors were combined, we saw many unique phenomena that only existed in China. For example, enterprises that produced and sold cheap shanzhai products developed rapidly. The loss of culture, morality, and aesthetics caused by this design faultline cannot be easily recovered by technical means such as the Internet. Rather, the Internet unscrupulously amplifies the problem. From this point of view, I am not sure that technological advancement can make the future a better place.

Why have you taken up philanthropic projects in recent years?

My mentor, Professor Dieter Zimmer, taught me how to judge good design. The first method is observing; the visual level. Decide what is visually pleasing and works well. Second, at the user or functional level, you should consider durability, friendly human-computer interaction, reasonable ergonomics, generality. Thirdly, at the production level, what can produced in a limited time and given cost control, in line with modular and standardized design principles.

Fourth, at the owner level, the product should reflect the identity and values of the owner. This involves identification with the brand. The fifth and highest level is the social level, which involves the principle of sustainable development. Good design should radiate a positive social influence.

We are working with the One Foundation to do charity projects based on the social dimension. These projects can be divided into two categories, one is products that consumers can buy freely, such as private cars and mobile phones; the other is public service products, products for vulnerable groups, such as disaster relief tents for the One Foundation, water purification facilities, water purification cups, and community centres for kids.

After doing a lot of industrial design, why did you develop Yang House?

Yang House is a free and independent designer brand. I hope that with this brand and Yang House Creation, I will make an effort to repair the faultlines I talked about earlier. We strive to abandon excessive materialistic and symbolic surface forms in our designs and try to reconstruct an aesthetic value to life. Yang House has developed a series of works, such as the "paper imprint" storage series, "bamboo light" floor lamp, carbon fibre smart suitcases and other products. We also founded the Yang House Museum and the Virtual Landscape courtyard in Suzhou.

Can you introduce your exhibit at House Vision last year?

In the CHINA HOUSE VISION Explorer — Future Life Exhibition held in Beijing in September 2018, the venue plan was completed by Kengo Kuma. The curator originally studied the theme of New Gravity and invited 10 people from Japan and China to create an ideal "future home."

I am the only industrial designer who designed a future Green House. Unused energy converts water vapor in the air into water, which is enlarged and visualized by a device. The water droplets constitute an element that is continuously transported, seemingly as a water sculpture. The water droplets are collected in a pool and distributed to a number of green planting containers of different sizes to form a courtyard.

Another focus of this design is emotional communication between people. You can cultivate plants at home or remotely through the Internet, and control the light, temperature, humidity, water level and other data through a mobile app. Family members living in different places can co-cultivate plants, and thereby exchange emotions by way of this slow-growing medium. ∎

在西门子工作的经历对您现在有哪些影响?

我去西门子设计中心的时候那里大概有100多名设计师。西门子有很多自己要开发的产品,另外他们对外也承接不同的设计项目。我在西门子接触的设计项目都是技术类的产品领域,如设计LG的家庭影院系统、西门子-富士通的电脑设备以及西门子手机等。在那里的经历让我学会了如何为一家跨国企业做设计,如何从品牌的层面去设计产品的品牌识别性。

为国内企业做设计和之前在西门子做设计项目有何差别?

德国的设计体系非常成熟,比如标准化、模块化、可持续的设计原则,这些设计原则是中国企业不会过多考虑的。中国的设计环境的确在进步,人们已经意识到设计对于产品外在的改变,但是还没有意识到标准化、模块化在设计体系中的重要性。如果一个企业有成体系的产品,后台的标准化、模块化设计就非常重要,它不光解决系统性的品牌识别性问题,还能提升产品开发体系的管理,比如包装运输、原料采购、组装甚至报废回收等环节,所有生产体系都跟工业设计密切相关。

您如何看待这其中的差距?

差距是技术和产业层面的,是可量化的东西。中国没有在完整意义上经历过第一、二次工业革命,没有形成相应的产业基础,导致中国工业设计长达一两百年的断层。直到近些年,当企业转型成为国家经济转型发展的重要一环时,工业设计才逐步得到多方面的重视。

设计断层造成的后果之一是"山寨",以及国人对知识产权的漠视。"山寨"的过程是由表及里,与创新的过程是逆向的,长此以往便丧失了从源头开始创新的能力。在西方往往是一种材料或工艺的创新带来了一种新的设计语言的诞生,比如"二战"时美军用于保护伤员腿部的合成板夹具,被伊姆斯夫妇用在家具设计上,成就了一系列经典的合成板家具。在中国我们看到的往往是最终的结果,表面化的、符号化的设计充斥着市场。

这种断层能否弥补,还是可以直接跨过?

只能慢慢修复。设计上的断层还只是一小部分,更大的断层是文化上的。中国的审美文化已经跌到谷底。宋代是中国美学的高峰时期,一直持续到明代,到了清代就开始下行。

中国山寨与代工盛行,又赶上了互联网技术革命,两者相加,就出现了很多唯中国才有的独特现象,比如靠生产和销售廉价山寨产品的企业迅速发展。断层所导致的文化、道德与审美的丢失并不能靠互联网这样的技术手段轻易挽回,反倒是借由这个工具急速放大而变得无所顾忌。从这一点来看,技术的进步是否能让未来变得更美好,真不一定。

您这几年为什么做了很多公益项目?

我的导师Dieter Zimmer教授教导了我一个判断设计的体系。首先是观察者层面或者视觉层面,从视觉上来说是令人愉悦的,有很好的行为指引;其次是使用者层面或者功能层面,包括耐用、友善的人机交互、合理的人机工学、通用性等;第三是生产层面,在有限的时间和成本控制下,可以被生产出来,符合模块化、标准化的设计原则;第四是拥有者层面,产品能够体现主人的身份认同和价值观,这涉及到品牌的识别性;第五个也是最高的层面,是社会层面,它涉及到可持续发展的原则,一个优良的设计应该向公众传播一种正面的社会启迪。

我们和壹基金合作做公益项目正是基于社会层面。这些项目可以分成两大类,一类是消费者能够自由购买的产品,比如私人汽车、手机;另一类是公共服务类产品、针对弱势群体的产品,比如我们为壹基金陆续设计了救灾帐篷、净水设施与净水杯、壹乐园。

e-Bike · 智能电动单车
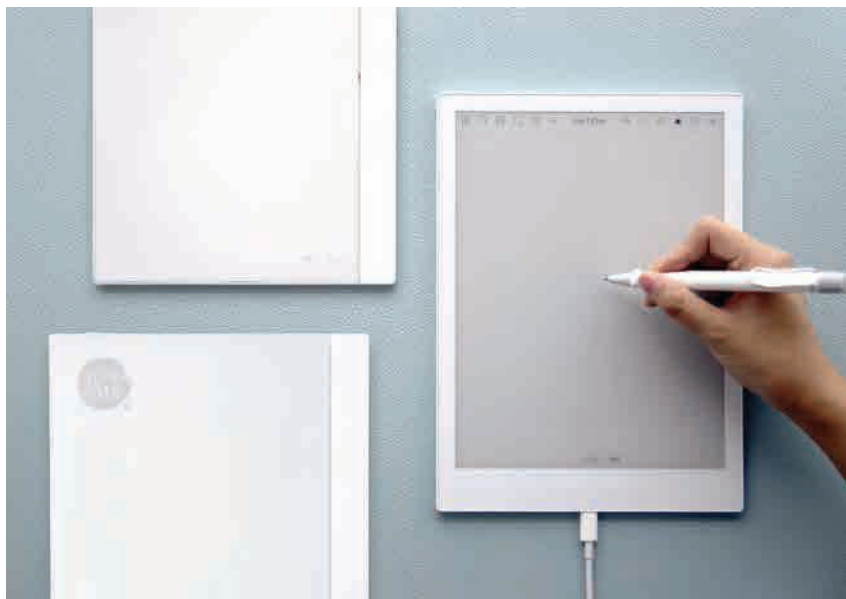
在做了众多工业设计服务后,为什么要做"羊舍"这样一个品牌?

羊舍是自由独立的设计师品牌。我希望借助这个品牌以及"羊舍造物计划",尽一己之力,修复先前谈到的断层。我们努力在设计中舍弃过度物欲和符号化的表面形式,尝试着重新构建一种生活美学价值。羊舍已经陆续开发了多个系列作品,比如"和纸的印迹"收纳系列、"竹之光"落地灯等等,还有羊舍碳纤维智能旅行箱等产品。我们还在苏州创办了羊舍造物博物馆与"虚山水"庭院。

介绍下去年您在House Vision大展上的设计作品?

2018年9月在北京举办的"CHINA HOUSE VISION 探索家——未来生活"大展,场馆规划是由隈研吾完成的,策展人原研哉以"新重力"为主题,邀请了10位来自中日两国的建筑师和设计师,与10家企业共同打造理想中的"未来之家"。

我是其中唯一一位工业设计师,设计了一个名叫"绿舍"的未来之家。利用剩余能源将空气中的水蒸气转换为水,通过一个装置将这个过程放大与可视化,滴滴答答的水珠构成了一个个微小要素不断被运送,所形成的风景就像水的雕塑一般呈现出来。水滴汇集到圆形的水池,再分配给若干个大小不一的绿植栽培容器,一起构成了一座庭院。
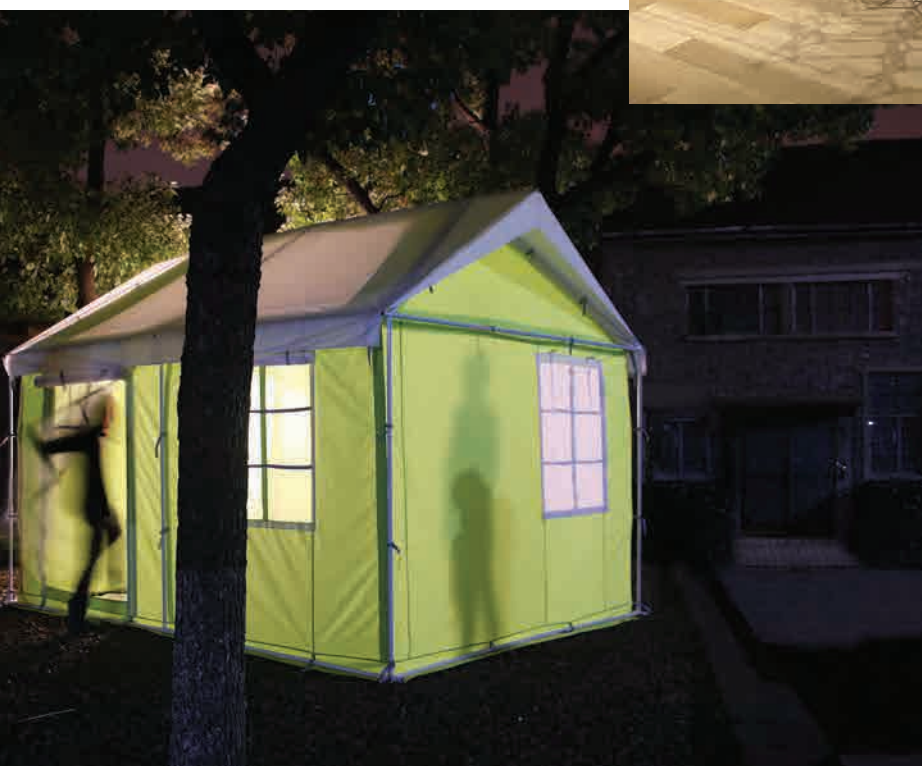
这个设计的另一个重点是希望促进人与人的情感交流。在植物生长过程中,你既可以在家中亲自栽培,也可以通过互联网远程栽培,通过手机APP进行光照、温度、湿度、水位等数据的控制。身处异地的家人可以通过共同栽培植物这种缓慢生长的媒介物来共享生活、交流情感。■

ONE Foundation disaster relief tent
壹基金救灾帐篷
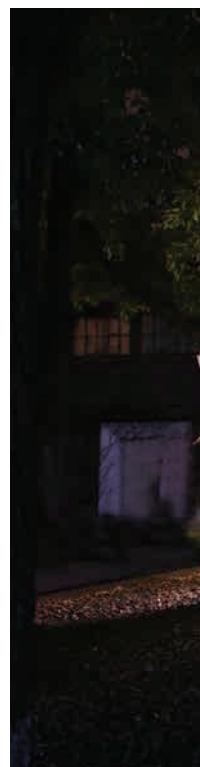
Hermes spring/summer launch
爱马仕春夏季发布会

Singapore Expecting a Smarter Street Lighting System by 2022

Singapore's Land Transport Authority (LTA) has started implementing energy-efficientLight Emitting Diodes (LED) for street lights since 2013, and has been extending this technology to all street lights island-wide for a more sustainable lighting system. Based on findings from trials, which LTA conducted for medium-powered and high-powered LED lightings, LED street lights are about 25% more energy-efficient thancurrent street lighting. In addition, LED lighting is more reliable and requires lessfrequent replacement. This helps conserve energy and reduce maintenance andmanpower costs.

Since 2014, LTA has installed LED lighting for approximately 4,000 streetlights and 25,000 streetlights in Central will have been replaced by LED lights by the end of 2019. Streetlights in all other areas will be replaced with LED lighting by 2022. LTA has also developed a Remote Control and Monitoring System (RCMS) to allowstreet lighting to be more responsive to inclement weather. With the RCMS, LTA canremotely switch streetlights on and off in response to varying street lighting needs.The RCMS also enables LTA to have a more responsive and efficient maintenanceregime as it features automated fault detection and alert capabilities.

Besides the RCMS, the Government Technology Agency will leverage LTA's smartlighting infrastructure to test the feasibility of deploying a shared network for lowbandwidth wireless sensors. As part of Singapore's Smart Nation initiative,interconnected lampposts were envisioned to be a key part of national sensorcommunications network.

新加坡用路
灯组网构
建智慧城市

Illustration by LAVA BEIJING

2014年，新加坡将"智能城市2015"升级为"智慧国家2025"，计划在全国范围内建设智慧城市，有望建成世界首个智慧国。这是全球第一个智慧国家蓝图。在智慧城市的规划和实施方面，新加坡的举措之一是利用路灯智能化升级组网，搭建城市共享基础设施。

在新加坡大力发展"智慧国家2025"的背景下，新加坡陆路交通部(LTA)提出对公共照明进行"智能化＋LED"升级改造的方案，计划将全国110,000套原有的高压钠灯改造成含智能控制系统的LED智能路灯。改造后，可以直接降低能耗和维护费用，提升运营效率，实现按需照明。

该项目是新加坡实施"智慧国家2025"的重要部署，政府部门将依托全岛的路灯网络来部署未来的智慧城市应用，包括计划安装近60万个各种智慧城市传感设备。路灯通讯网络不仅要保证路灯控制的高可靠性、稳定性和安全性，还要对接未来10多年的城市长远规划部署。
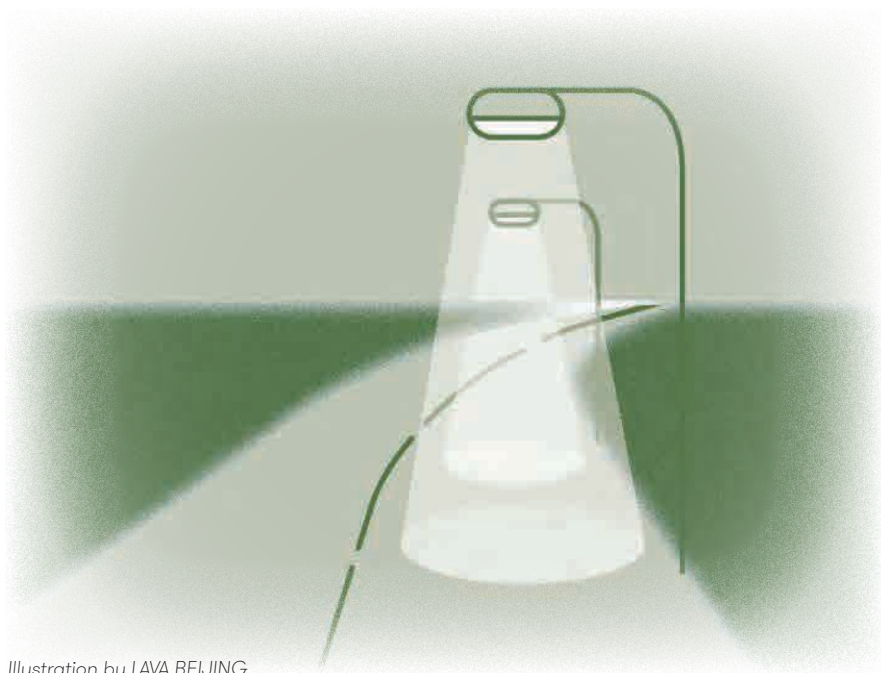
COLLAB: a Digital Tool for Inclusive Participation
COLLAB：包容性参与的数字工具

Collab is a prototype built by Sidewalk Labs and Toronto's Digital Public Square to help communities break through barriers and help people participate from anywhere, and more frequently.

Collab is ready for testing "as many time as you like" since May 2019, and can be tried out from anyone with an Internet connection. The developers will be analyzing the input from people who use the website, strongly caring for user's privacy, with the hope that in the future it could be utilized by organizations such as a neighbourhood association or public space nonprofit, to make more inclusive community decisions.

Collab invites you to choose and propose events that you'd like to see happen in public spaces, review trade-offs based on your choices, and then compare your choices to others.

Your screen opens with a digital square, and the user is welcome to choose an event idea for the Plaza: from art classes, to pop-up playgrounds, live music, Virtual Reality games screening, to farmer's markets to health fairs: many event ideas are already packaged, and new ones can be customized by the user and be added to the data base upon verification by the developers.

"Based on what we learn, we hope that Collab will eventually grow to an open-source tool available for everyone to use in their communities on the issues that matter to them. […] Our hope is that Collab users will not only understand where their individual contributions fit into the community's decision, but feel more trust in civic processes overall" said Ariel Kennan, Director of Civic Innovation @SidewalkLabs in a recent post on Medium. Try it out at: collab.sidewalklabs.com !

Collab是由"人行道实验室"和多伦多"数字公共广场"合作制造的一个原型，目的是帮助突破社区障碍，使人们不受地域限制更多地参与活动。

自2019年5月以来，Collab已准备好"随您测试多少次"，任何能连上互联网的人都可以试用。开发者在充分保护用户隐私的前提下，分析该网站用户的输入内容，希望它将来能被社区协会或公共空间非营利组织等组织采纳，用于做出更具包容性的社区决策。

Collab邀请您选择并提出您希望在公共场所进行的活动，我们将根据您的选择进行权衡，然后将您的选择与其他人的进行比较。您的屏幕上会出现一个数字广场，欢迎用户选择广场的活动创意，从艺术课程、弹出式游乐场、现场音乐、虚拟现实游戏放映、农贸市场到健康博览会。许多活动创意已经进行组合，新的创意可以由用户定制，并在开发人员验证后添加到数据库中。

人行道实验室公民创新主管阿里尔·凯南在最近一篇《Medium》的推文中说："根据我们所了解到的，我们希望Collab最终能成为一个开源工具，每个人都可以在自己的社区里用它来解决他们关心的问题……我们希望Collab用户不仅能理解他们的个人贡献在社区决策中的地位，还能从整体上感受到对公民进程的更多信任。"

试用地址：collab.sidewalklabs.com

Sidewalk Labs is designing a district in Toronto's Eastern Waterfront to tackle the challenges of urban growth, working in partnership with the tri-government agency Waterfront Toronto and the local community. This joint effort, called Sidewalk Toronto, aims to make Toronto the global hub for urban innovation.
https://sidewalklabs.com

Digital Public Square is a not-for-profit built by the founders of the DPS project at the University of Toronto, whose mission is to rethink and redesign the way technology is used to support communities worldwide.
https://digitalpublicsquare.org

人行道实验室正在多伦多东部滨水区对一个区域进行设计，与政府机构"滨水多伦多"和当地社区合作，应对城市发展的挑战。这项名为"多伦多人行道"的联合行动旨在使多伦多成为全球城市创新中心。
https://sidewalklabs.com

数字公共广场是由多伦多大学DPS项目创立者建造的非营利性平台，其使命是反思并重新设计用于支持全球社区的技术途径。https://digitalpublicsquare.org

SERIAL INNOVATORS

Creative Senses

创意资讯

2019 Bi-City Biennale of Urbanism—Architecture (Shenzhen) to be Unveiled

深圳双年展12月即将开幕，期待"城市交互"

The eighth edition ofShenzhen Bi-City Biennale of Urbanism — Architecture,the only biennialexhibition in the world based exclusively on urbanism and urbanisation, will launch in Shenzhen on 15 December 2019.

Themed around "Urban Interactions", this edition is curated byarchitect and Director of MITSenseable City LabCarlo Rat, CAE Academician Meng Jianmin and famous curator/art critic Fabio Cavallucci.

The exhibition consists of two sections: "Eyes of the City" and "Ascending City". It's scheduled to open at the Futian Railway Station and the surrounding areas, the main venue, in Shenzhen in December 2019. At the same time, nine sub-venues will be set up in other districts of the cityto interconnect with the main venue, completing an organically interactive network throughout the city.

"Urban Interactions" explores the engagements between cities, city and inhabitant, and between urban dwellers. The significance of such interactions lies not only in its innovative application value, but also in the fact that it has triggered multilevel philosophical reflection. The new relationships derived from virtual-real space, HCI and cross-regional mega-city community will certainly turn into a new forefront that human beings are to face in the future.What kind of new relationship will be iterated between the "interactive cities" of Shenzhen and Hong Kong is one of the questions to be studied in this exhibition. Starting from the Great Bay Area, it can be further extended to the global cyberspace, asking how technological innovation and urban space are going to deeply entangle with each other.

第八届深港城市\建筑双城双年展（深圳）将于2019年12月在主展场深圳福田高铁站及周边区域开幕。届时，分布深圳各区的9个分展场也将与主展场联动，形成遍布全城的有机交互网络。本届双年展主题为"城市交互"，由建筑师/麻省理工学院可感知城市实验室负责人卡洛·拉蒂、中国工程院院士孟建民、著名策展人与艺术评论家法比奥·卡瓦卢奇三人担任总策展人。

"城市交互"是对城市与城市、城市与人、城市中人与人之间关系的探讨，它们的联动和交错不仅带来了创新性应用价值，也从不同层面上引发了哲学思考。作为粤港澳大湾区中"交互城市"的典型案例，深圳与香港的关系将是展览重点研究内容之一。展览包含"城市之眼"和"城市升维"两个板块，将从不同角度探讨城市空间与科技创新之间不断发展的关系。

"城市之眼"板块由卡洛·拉蒂和华南-都灵联合实验室（由华南理工大学和都灵理工大学共同成立）联合策划，旨在探索人工智能将如何影响城市建筑和人们日常生活。展览将收集各种设想和建议，来思考未来我们究竟想要建设什么样的数字增强型城市。遵循"开源策展"的原则，策展团队还将邀请建筑师、设计师和思想家作为特邀嘉宾，一同讨论未来的数字增强城市。

The "Eyes of the City" section is jointly curated by Carlo Rat and the South China - Torino Lab (formed by South China University of Technology and Politecnico di Torino). It aims to investigate how Artificial Intelligence is going to impact architecture as well as people's daily life in the city.The exhibition will collect design hypotheses and suggestions — imaginative, ironic, practical, visionary—so as to reflect on what kind of digitally-augmented city we want to build tomorrow. This section will also include projects selected through an international Open Call.

The "Ascending City" section is curated by the team headed by Meng Jianmin and Fabio Cavallucci, bringing together prestige architects, artists, filmmakers, writers and museum advisors, aswell as interdisciplinary professionals. This section consists of 3 sub-sections, "Empowering Citizens in Progressive Cities," "Urban Alchemists" and "Daily Sci-Fi," corresponding to the viewpoints of the city's users, creators and visionary thinkers respectively.Liu Cixin, a sci-fi writer and author of The Three-Body Problem, Cai Guo-Qiang, a contemporary artist, and Wlodek Goldkorn, a Polishwriter, served as academic consultants and will be specially involved in 2019 UABB (Shenzhen).

The main venue of 2019 UABB is located in Futian Railway Station and surrounding area.Futian CBD, where the high-speed railway station is located, served as the main venue for the 3rd and 4th editions of UABB (Shenzhen) in 2009 and 2011 respectively. ∎

"城市升维"板块由孟建民及法比奥·卡瓦卢奇团队策展,借鉴了科幻小说中的"升"与"降"概念,将其视为一种思考方式和方法论。由"未来市民""城市炼金师""科幻现实"三个子板块构成,分别对应城市使用者、城市创造者和有远见的城市思想者的视角。科幻作家刘慈欣、当代艺术家蔡国强、波兰作家罗德克·戈德克恩将担任特邀学术顾问。

本届深双主展场选址福田高铁站及周边区域。福田站是我国第一座将高铁引入城市中心区的地下综合工程,也是全世界列车通过速度最快的地下火车站。这里是连接深圳和香港最重要的交通枢纽。高铁站所处的福田中心区,曾在2009年和2011年分别作为第三届及第四届深双的主展场。高铁站及周边区域的空间将根据展览主题"城市交互"进行设计和改造,使展场成为链接中心城区各部分的纽带。

在主展场之外,深双也将继续延展至9个本地实践案例分展场,深双固有的公共教育品牌"深双学堂"也将继续给市民带来一系列丰富多彩的免费课程和活动,包括论坛、讲座、工作坊、戏剧、音乐表演、市集等。∎

For exhibition details and activity calendar, please see: www.szhkbiennale.org

更多详情及展览活动日程可见: www.szhkbiennale.org
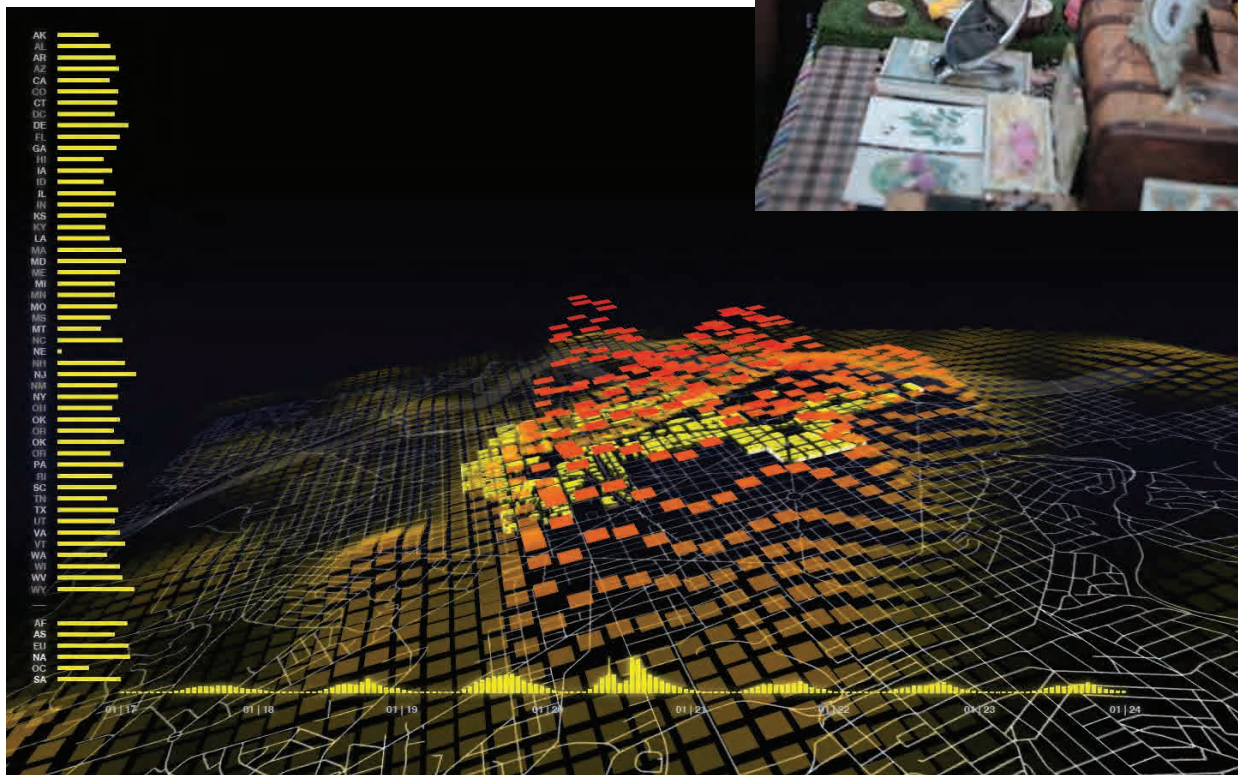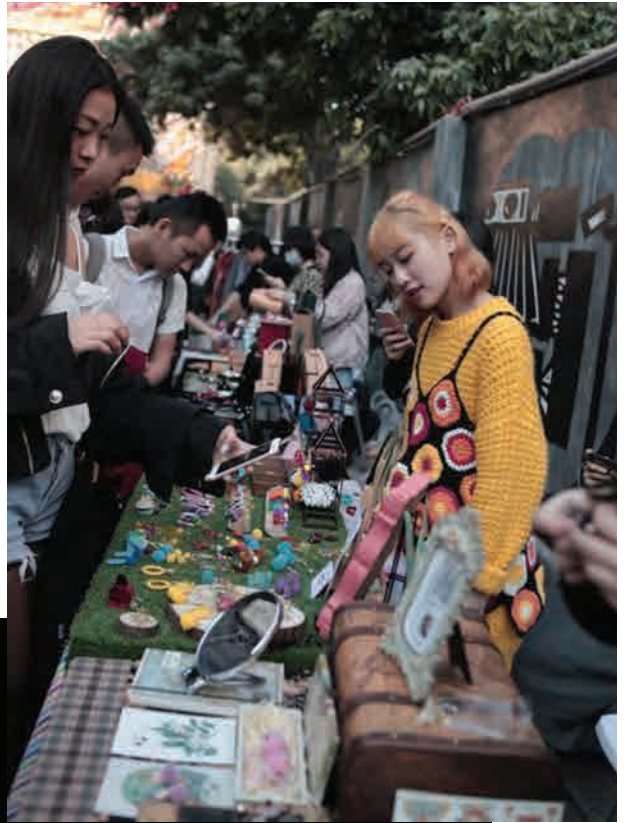
市场的主导意识形态支持并证实了这样一种观点，即空间可以根据其质量进行详尽的定义，还可以按数量精确计量：根据价值规律和营利行为的要求，空间成为一种可以被估价和拥有的商品。不过，空间远不止这些。

空间是社会关系的一种积极形式，是社会关系的一个组成方面，也是一系列关系本身。空间之所以重要，是因为它不是社会生活的惰性容器，而是其表现形式和事件的不可分割的整体。空间让相遇有了形式，因为它是社会关系的一个结构化的系统。这就是为什么，在同一时间，可以通过空间比较来表达价值观和思想。人们离得有多远，有多近，如何解读这种距离，如何应对并象征化距离的各种层面及形式，这些都相当重要。同样重要的是，人们把东西放在高或低的位置，就像他们"放置"理想和愿望一样，他们通过使用特殊的隐喻来判断行为和个人。

空间，作为一种位置间关系的系统，是表达社会关系以及使其"发生"的最普遍手段。

一 斯塔夫罗斯·斯塔夫里德
斯摘自《公共空间：作为集体公
共空间的城市》
2016年Zed Books公司初版

The dominating ideology of the market supports and corroborates the idea that space can be exhaustively defined in terms of its qualities and accurately measured as quantity: the law of value and the practices of profit making demand that space becomes one more merchandise which can be evaluated and owned. Nevertheless, space is a lot more than that.

Space is an active form of social relations, a constituent aspect of social relations and a set of relations itself. Space matters because it is not an inert container of social life but an integral part of its manifestations and its events. Space gives form to encounters because it is a structured system of relations. That is why, at the same time, it is possible to project expressively values and ideas through spatial comparisons. It matters a lot how far away and how near people are, how they can interpret their distances and how they can handle and symbolize various levels and forms of proximity. And it is equally important that people place things high or low, in the same way as they 'place' ideals and aspirations and that they judge acts and individuals by employing special metaphors.

Space as a system of relations between positions is the most pervasive means to express social relations as well as to make them 'happen'.

2030

Sustainable Cities and Communities
可持续城市与社区

UNESCO

United Nations
Educational, Scientific and
Cultural Organization
联合国教科文组织

ICCSD

International Center
for Creativity and
Sustainable Development
国际创意与可持续发展中心