

威尼斯建筑双年展中国国家馆展览 | 技术变革下的中国收缩城市

北京城市实验室BCL 2023-06-02 18:01 Posted on 安徽

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编者按

清华大学建筑学院龙瀛课题组受邀参加2023第18届威尼斯国际建筑双年展中国国家馆展览，展位设置在意大利威尼斯军械库中国国家馆。本届双年展将于2023年5月20日-11月26日对公众开放。我们以“技术变革下的中国收缩城市”（Shrinking cities in China shaped by disruptive technologies）为主题，结合已有实证研究成果、影像视频以及摄影作品，作品聚焦三个收缩城市（数字游牧的鹤岗，拥抱科技发展的黑河，以及机器换人的东莞高埗镇），对居民、城市规划师和专家学者进行访谈，讨论城市收缩和技术变革对人们日常生活带来的影响以及城市空间规划的变革现实，进一步发掘城市收缩所带来的喜悦与无奈，并探讨技术变革下，未来人口流失的收缩城市如何通过技术重塑人居环境，抓住其智能转型的机遇，达到与自然的共生平衡。本次展览由清华大学建筑学院研究员、长聘副教授、博士生导师龙瀛担任参展人，博士生张业成、博士后李文竹作为参展团队成员，敬请关注~

【关于展览】

威尼斯建筑双年展于1895年首次举行，所包含的国际视觉艺术双年展与国际建筑双年展隔年交替举办，一般分为国家馆与主题馆两部分。2005年，中国首次以“国家馆”的身份亮相威尼斯艺术双年展。本届双年展总主题“未来实验室 The Laboratory of the Future”，总策展人加纳-苏格兰建筑师 Lesley Lokko。主展馆展览共有89个来自全球各地的参与者，其中一半以上来自非洲或非洲侨民，作品共同指向可持续和更环保的未来。

本届中国国家馆展览以“更新·共生”为主题，由中国文化和旅游部主办、中国对外文化集团有限公司承办，策展人为上海交通大学设计学院院长阮昕教授。中国国家馆聚焦全球普遍关注的城乡可持续发展议题，用近年来中国城乡更新的代表案例和前沿探索，展现当代中国城乡发展的解决方案和未来愿景，向世界讲述一个生活、建

筑、城市与自然更新共生的中国故事。

第 18 届威尼斯建筑双年展
中国国家馆 策展主题

China Pavilion of the 18th International Architecture Exhibition La Biennale di Venezia

更新·共生

Renewal: a symbiotic narrative

创造宜居永续的人居环境是“未来实验室”的核心目标。中国的建筑师在过去四十年来，不断借助城乡更新的实验，探索着人与人、人与城市、城市与自然的和谐共生。“更新·共生”作为展览主线，讲述在高密度环境中塑造宜居的中国故事。40余幅如同“卷轴”般的廊柱，在中国馆内徐徐展开中国叙事：以百变群像讲述高密度环境下的人居传奇，以上海故事展现更新在高密度大都市中带来的宜居生活，以技术革新畅想人与自然共生的神奇未来。这个独特的中国故事，引发对中国乃至世界人居环境蜕变的思索。答案是否就藏在建筑的密度之中？未来城市是属于现代主义的塔楼、还是传统的院落，或是二者的共生？抑或是虚拟现实和新能源带来的其它可能？参观者在“观画”、“展读”、“凝视”与“漫步”中寻求属于自己的答案。

Creating a liveable and yet sustainable built world is at the core of “The Laboratory of the Future”. Over the past forty years, Chinese architects have undertaken a diverse range of experiments in urban and rural renewal, exploring a symbiotic world where different people can better communicate, share, and co-exist, where cities and people are interdependent, and where more space is provided for nature. The theme of the exhibition – “Renewal: A Symbiotic Narrative” – tells of Chinese experiments and lessons in shaping liveability in high density environment. The stories unfold across more than 40 scroll-like columns. These “scrolls” are arranged in three chapters: the plurality of practice in “density” among China’s contemporary architects and artists, the artifice of Shanghai’s liveability in high-density mega metropolis via “knots, lines and interfaces”, and virtuality and reality of nature in the future city. Through this unique Chinese narrative, we seek free discourses on the recent and emerging transformations in the built environment: where are we going and what is at stake? Do conclusions lie in the architectural enigma of density? Will the future city feature modernist towers, or traditional courtyards, or a symbiosis of the two? Or, will other possibilities be brought about through VR technology, clean and renewable energy? Visitors are encouraged to come up with their own answers by “viewing”, “unfolding”, “contemplating”, and “strolling” in the China Pavilion.

Theme of the China Pavilion



透过“密度”的映射，讲述一个生活、建筑、城市与自然共生的中国故事。

Through the prism of “density”, we tell of China’s unique symbiotic renewal of life, architecture, city and nature.

展览包含室内和室外两部分，室内展陈分为三个章节。第一章节“宜居·传奇·百变群像”，讲述中国建筑师们持续在更新中追求宜居的人居环境：人与人的共生，创造了动态的栖居、市井空间的回归、文化内核的介入；人与城市的共生，创造了穿楼而过的地铁、城市活力的织补与迭代；人与自然的共生，创造了乡村家园的再现以及地方感的重塑。第二章节“宜居·更新·上海故事”，讲述建筑师们在上海这个“螺蛳壳”内以精明的更新手段，延续着海纳百川的城市精神；以点、线、面的组合描绘一

幅城市生活百景图：“点”表达城市中固定的居住者与移动的快递骑手的互动，展现上海的便利性；“线”勾勒大都市中的疏旷，捕捉上海的闲适性；“面”描绘城市界面的变幻，呈现上海的适应性。第三章节“共生·未来·自然复兴”，展望后工业时代的人类城市，借助新能源、电动化、虚拟现实等技术革新，人居环境的变化或与生态的复兴迎来新的共生平衡。室外展区将通过“数学模式”展现两种截然不同的空间组织和用地方式，为观众提供相应的“生活方式”体验，并引发人们关于院落与塔楼土地利用效率和宜居性的思考。

三大展览板块

1 宜居 传奇 百变群像 LIVEABILITY wonder | Portraits of Plurality

Diversity of density practice of China' s contemporary architects and artists

2 宜居 更新 上海故事 LIVEABILITY renewal | Stories of Shanghai

Artifice of Shanghai' s liveability in "density" through "knots, lines and interfaces"

3 共生 未来 自然复兴 SYMBIOSIS future | Nature Rejuvenation

Virtuality and reality of landscape in the city

**Immerse in density prism, wander along Shanghai's streets,
and envision a rejuvenated urban ecology.**

Contents/Narratives

【参展板块】

共生·未来 | 自然复兴

随着中国人口拐点的出现，以及愈加宜居的高密度人居环境，我们或将迎来一个自然复兴的未来。展望后工业时代的人类城市，借助新能源、电动化、虚拟现实等技术革新，人类密度的变化或与自然的复兴迎来新的共生平衡。高密度宜居能否将大自然的蓬勃力量带回到人们面前？流逝的都市和历史如何追忆和再现？清洁能源的时代如何带来更加宜居、高效、共享、公平的城市？

【参展信息】

第18届威尼斯国际建筑双年展中国国家馆

项目名称：技术变革下的中国收缩城市

参展人：龙瀛

团队成员：张业成 李文竹

清华大学建筑学院龙瀛课题组、北京城市实验室

支持课题：国家自然科学基金面上项目（52178044）

China Pavilion of the 18th International Architecture Exhibition La Biennale di Venezia

Project Name: Shrinking cities in China shaped by disruptive technologies

Exhibitor: Ying Long

Team: Yecheng Zhang, Wenzhu Li

Research group led by Ying Long, School of Architecture, Tsinghua University

Beijing City Lab

Funded by: General Program of National Natural Science Foundation of China
(NO.52178044)

城市的发展正如生命轮回，或活力四射、快速增长、或悄然无声、黯然消褪。聚焦当下，新技术发展与人们生活方式的改变，共同推动收缩城市转型。展望未来，新技术与城市空间的结合将为中国城市可持续发展提供更多可能。

The development of a city is similar to the cycle of life, characterized by vibrant and rapid growth or quiet decline and fading away. Currently, the development of new technologies and changes in people's lifestyles are driving the transformation of shrinking cities. Looking towards the future, the integration of new technologies and urban spaces will create more opportunities for sustainable development in Chinese cities.

【关于收缩城市】

不同于传统认知，城市不一定是增长的，收缩的城市大量存在。团队已有研究表明，2000-2020年间，全球近乎一半的城市都经历了人口的缓慢流失；六普、七普期间，中国的收缩城市数量已经达到266个，占比约50%。人口的流失为城市带来了显著的变化，除经济下行及产业衰退外，城市内部空间的变化也非常显著，以城市空置最为突出。一方面，局部人口收缩最终传导为城市空间质量的下降，形成恶性循环；另一方面，城市空置也蕴含着大量的机遇，绿色基础设施的广泛出现为城市增添了自然的生机。回顾历史，技术的发展不断重塑并推动着人类城市文明的演进，当下第四次工业革命同样以一系列颠覆性技术改变并影响着收缩城市的未来。针对已经到来的人口拐点，作品尝试从科技发展的背景下回答以下问题：人们都在逃离收缩城市吗，有没有人反向奔赴？人口流失的收缩城市，是否还有逆转希望？收缩城市是否有可能提供新的机会？

【关于展览内容】

结合已有实证研究成果、影像视频以及摄影作品，作品聚焦三个收缩城市（数字游牧的鹤岗，拥抱科技发展的黑河，以及机器换人的东莞高埗镇），对居民、城市规划师和专家学者进行访谈，讨论城市收缩和技术变革对人们日常生活带来的影响以及城市空间规划的变革现实，进一步发掘城市收缩所带来的喜悦与无奈，并探讨技术变革下，未来人口流失的收缩城市如何通过技术重塑人居环境，抓住其智能转型的机遇，达到与自然的共生平衡。

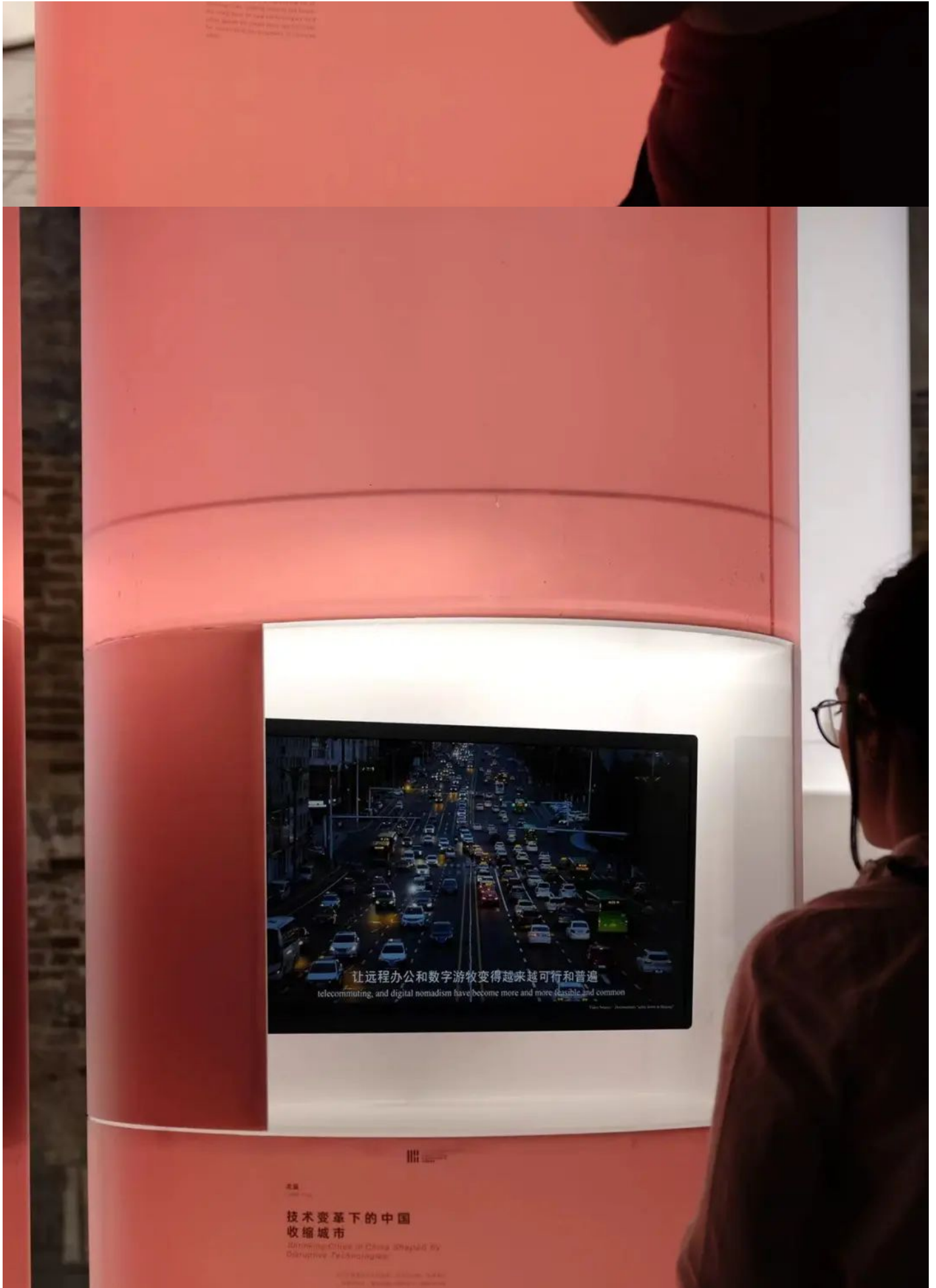
展览现场

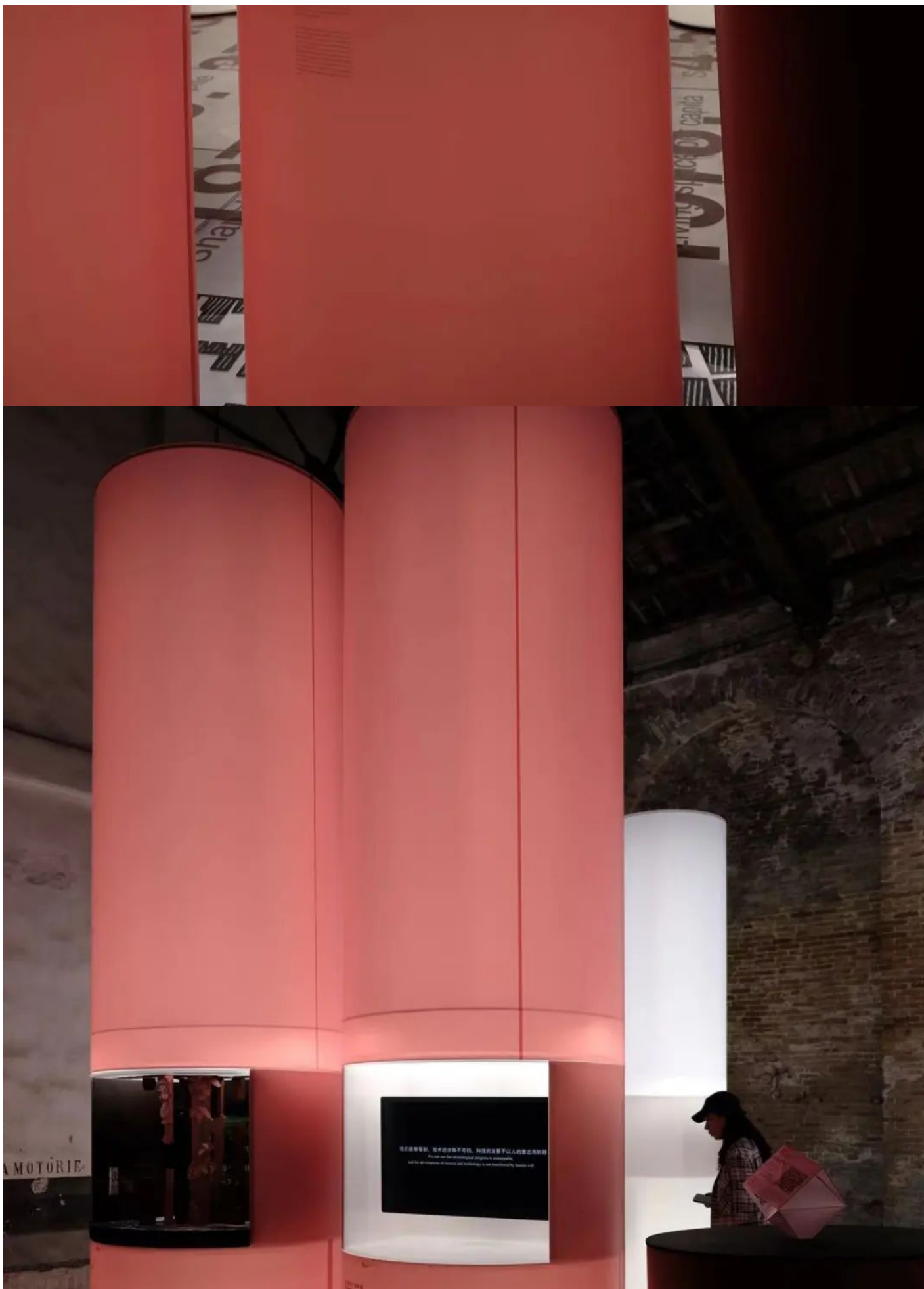


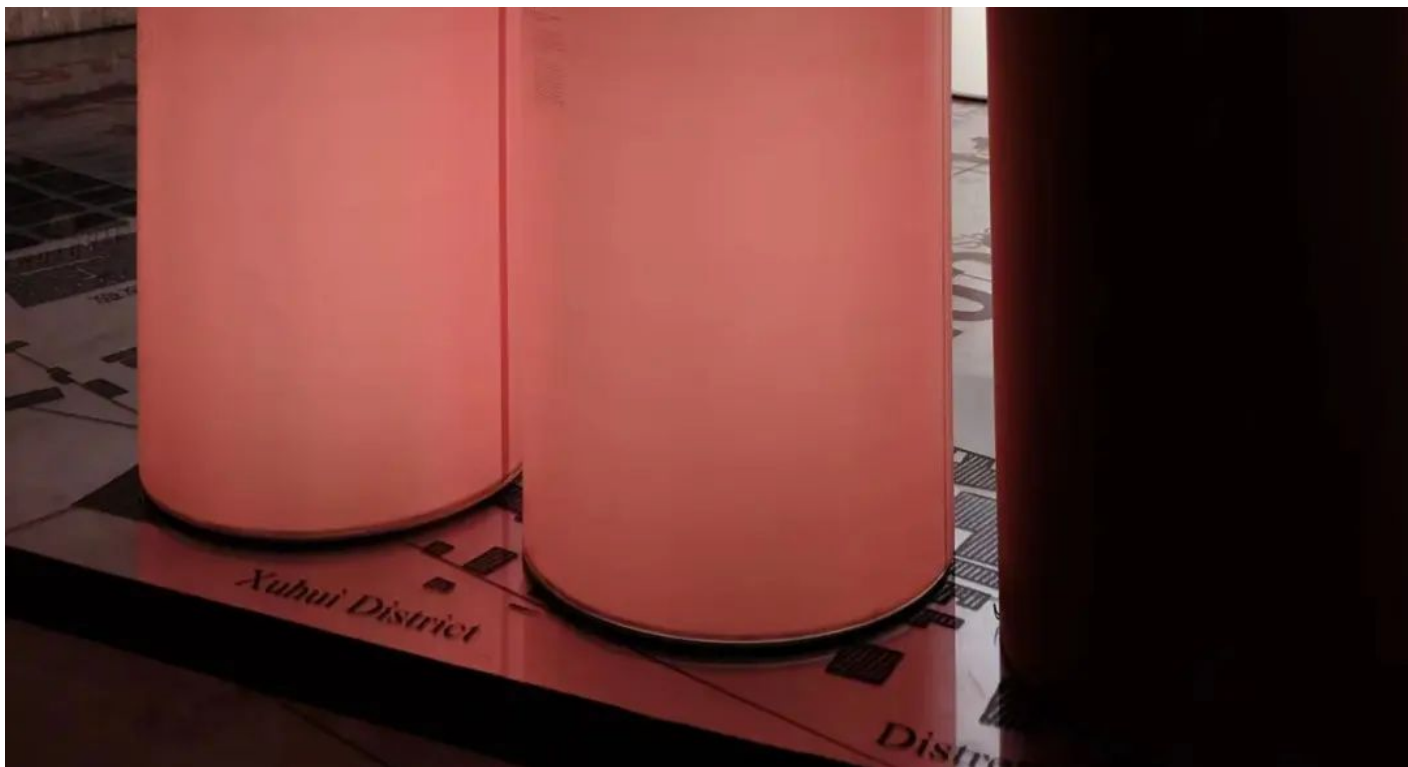


报道显示，到鹤岗买房的人从事工作多是直播带货、
游戏开发等创意工作，属于数字游牧一族。
Reports show that people who buy houses in Hegang are mostly engaged in creative
work such as live broadcast and game development, belonging to digital nomads

技术变革下的中国
收缩城市
Zhenxing Cities in China shaped by
Digital Technologies







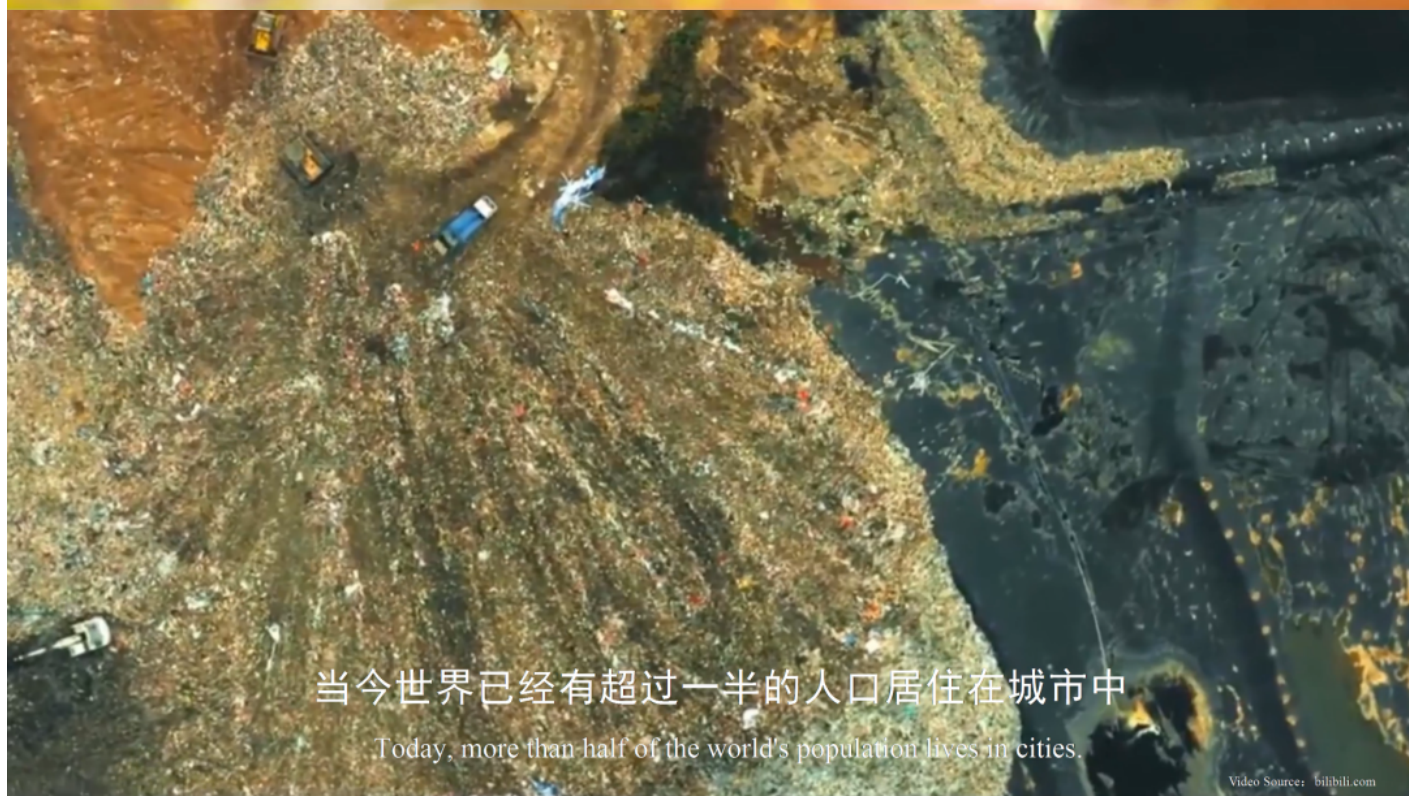
展览内容





凝聚了人们对生活的向往与未来的希望
Embodying their aspirations for a better life and hope for the future.

Video Source: bilibili.com



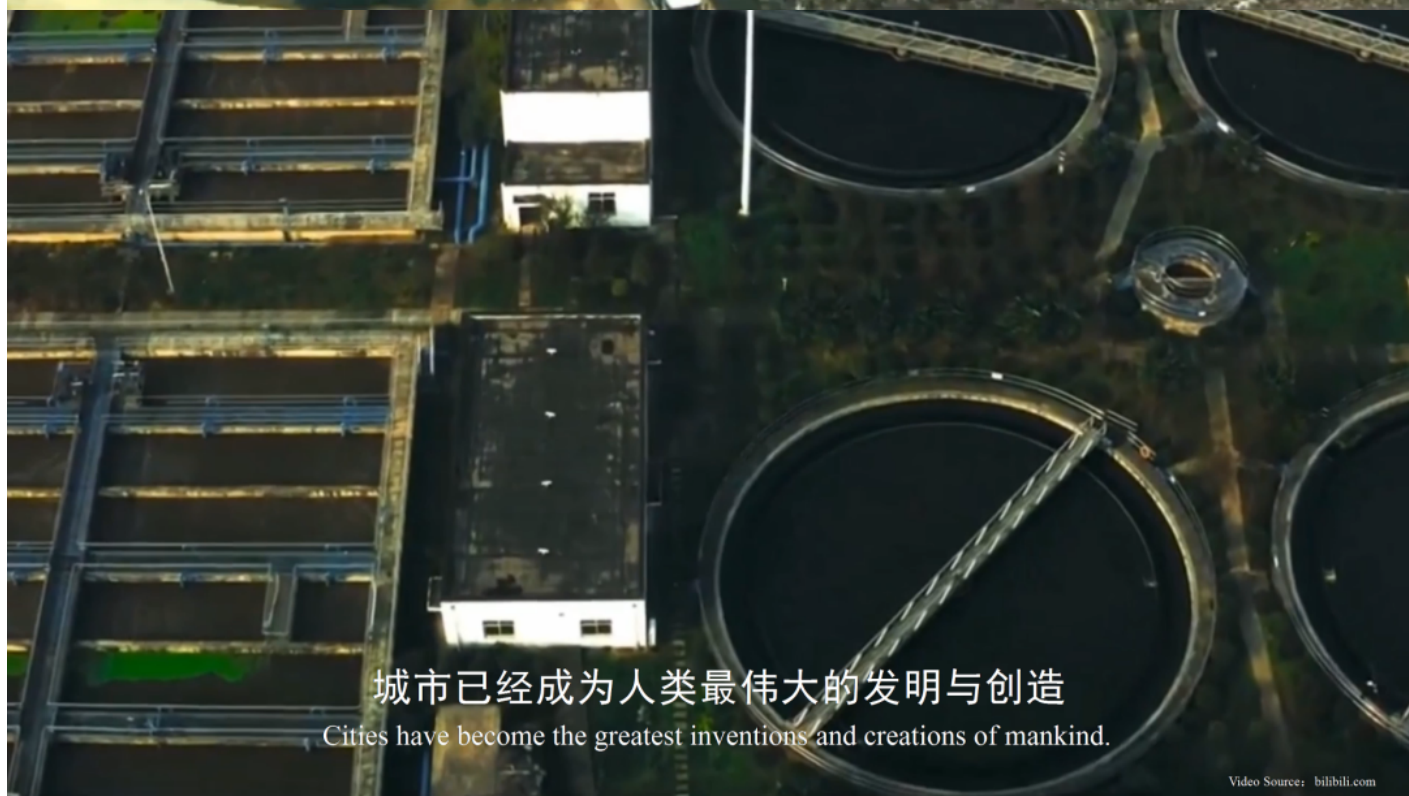
当今世界已经有超过一半的人口居住在城市中
Today, more than half of the world's population lives in cities.

Video Source: bilibili.com



预计到2050年，将会有超过三分之二的人口在城市中
By 2050, more than two-thirds of the population is estimated to live in cities.

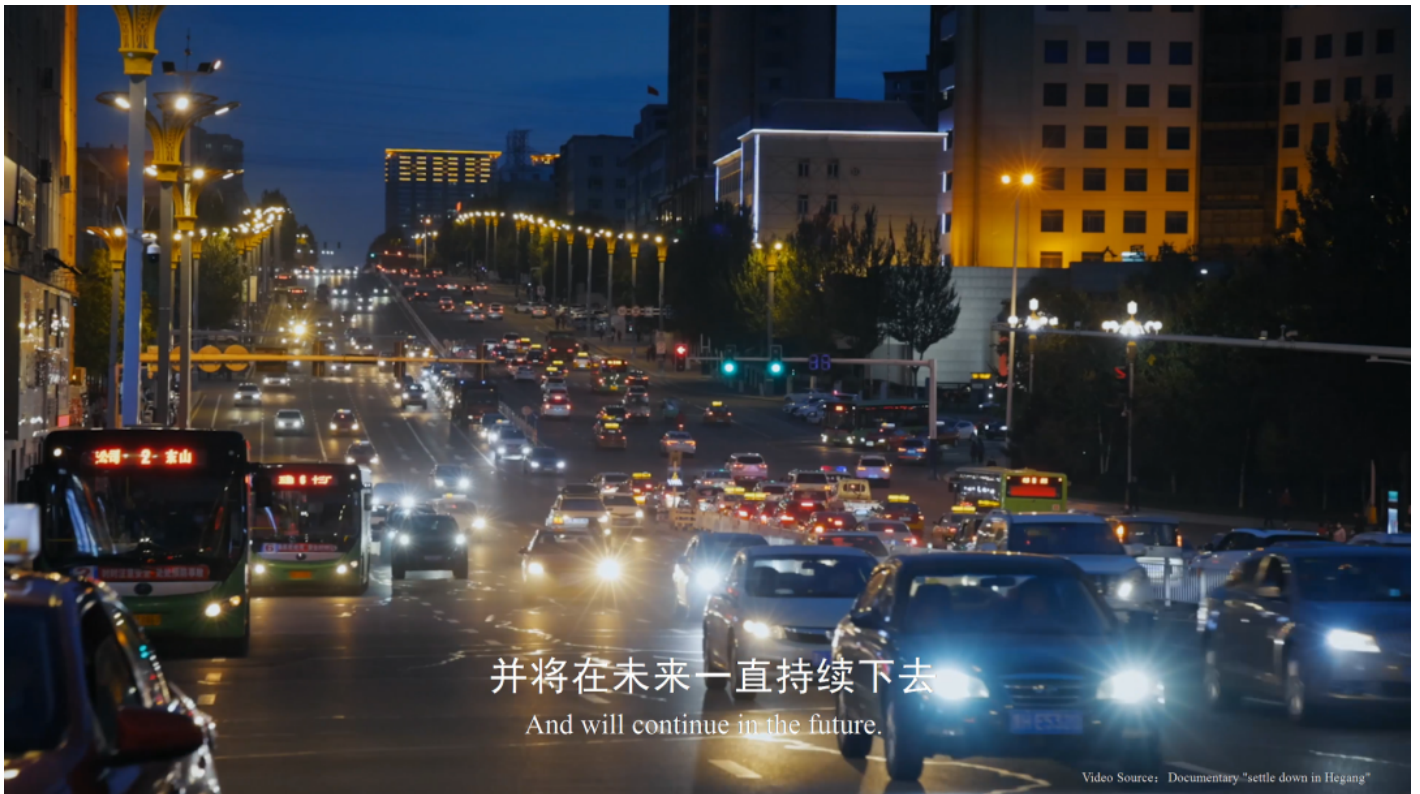
Video Source: bilibili.com



城市已经成为人类最伟大的发明与创造
Cities have become the greatest inventions and creations of mankind.

Video Source: bilibili.com





并将在未来一直持续下去
And will continue in the future.

Video Source: Documentary "settle down in Hegang"

我们的研究见证了越来越多的人向大城市集聚的同时
Our research has witnessed that more and more people
are gathering in large cities.

也有大量城市走向收缩

While numerous cities are shrinking.

人们都在逃离收缩城市吗，有没有人反向奔赴？

Are people leaving shrinking cities in this context? Is anyone heading in the opposite direction?

收缩城市，是否还有逆转希望？

Is there any hope for reversing population loss in shrinking cities?

是否有可能提供新的机会？

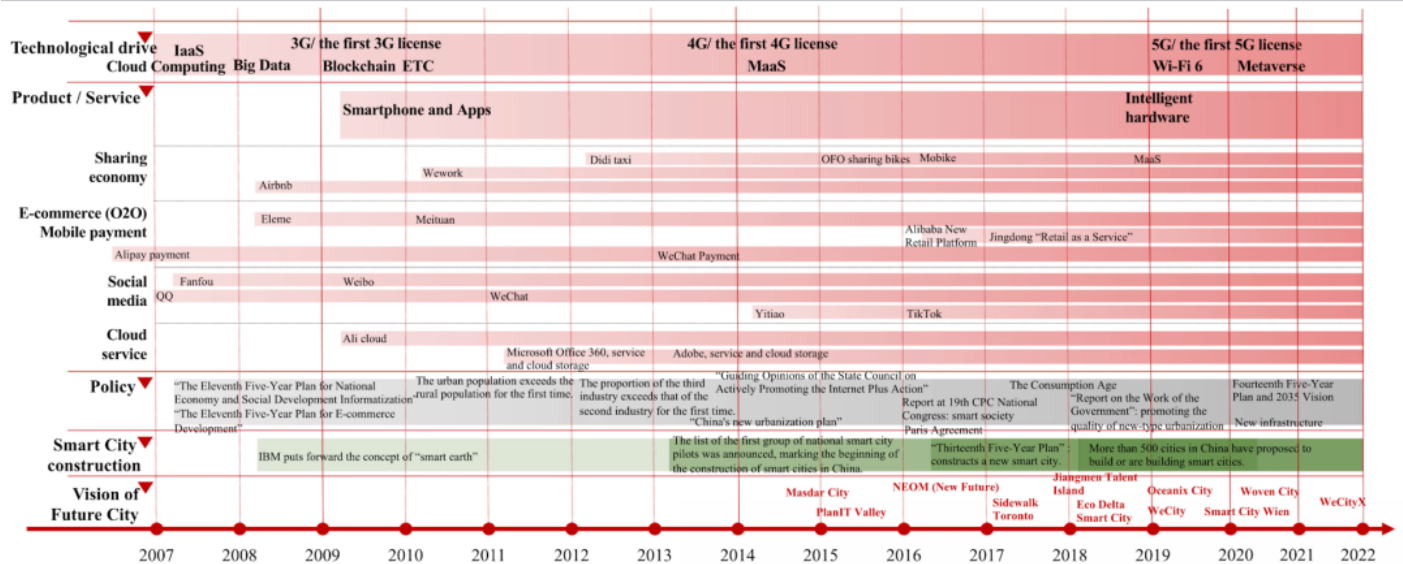
Can shrinking cities possibly offer new opportunities?



要回答这些问题，我们更需要了解当下的科技发展。

To answer these questions, we need a better understanding of the current technological developments.

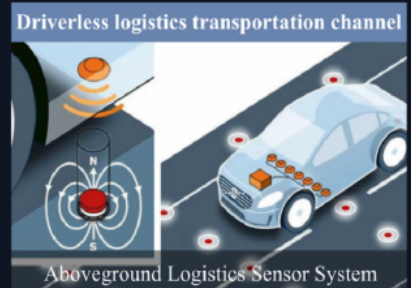
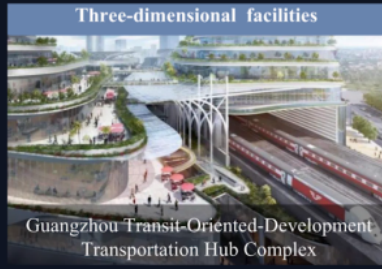
Image Source: baidu.com



第四次科技革命的背景下，中国的城市正在进入一个新的发展时期

In the context of the fourth industrial revolution, Chinese cities are entering a new phase of development.

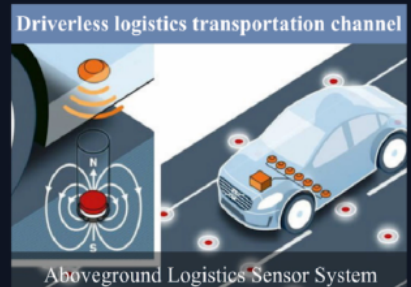
Image Source: WeSpace 2.0 - Future Urban Space 2.0, 2022.07.



大数据、人工智能、机器人、无人驾驶、云计算等方兴未艾

Big data, artificial intelligence, robotics, autonomous driving, cloud computing, and other emerging technologies have had a profound impact on everyone's daily lives.

Image Source: WeSpace 2.0 - Future Urban Space 2.0, 2022.07.



非常深刻地影响到了每个人的日常生活

which have deeply affected everyone's daily life.

Image Source: WeSpace 2.0 - Future Urban Space 2.0, 2022.07.



鹤岗：数字游牧
Hegang: Digital Nomads



黑河：拥抱科技
Heihe: Embracing Technology



高埗：机器换人
Gaobu: Machine Replacement

分别是数字游牧的鹤岗，拥抱科技发展的黑河，以及机器换人的东莞高埗镇
Hegang, a digital nomad; Heihe, which embraces technological development; and Gaobu Town, Dongguan,
where machines replace labor.

Image Source: sohu.com



首先来到鹤岗

First, let's take a look at Hegang

Video Source: Documentary "settle down in Hegang"



鹤岗 Hegang

鹤岗市作为中国曾经的四大煤矿之一
As one of China's former four major coal mines

Video Source: Documentary "settle down in Hegang"



鹤岗 Hegang

近年来因为资源枯竭，人口流失严重
Hegang has suffered from serious population loss in recent years due to the depletion of resources

Video Source: Documentary "settle down in Hegang"



2010到2020年，常住人口减少了16.7万人，流失率达到了16%
From 2010 to 2020, the resident population decreased by 167,000, with a population loss rate of 16%

Image Source: Photo by Ying Long



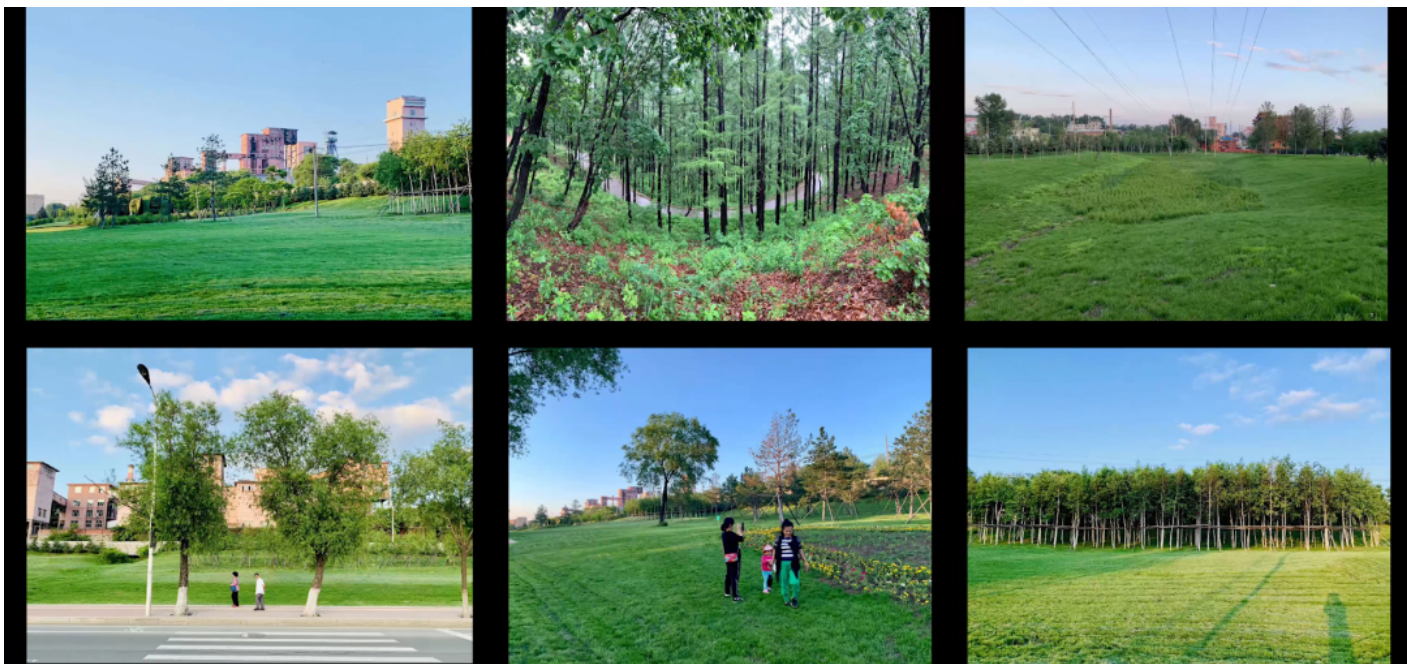
鹤岗从百万人口俱乐部的名单中被移除
Hegang was removed from the list of club cities with a population of one million

Image Source: Photo by Ying Long

鹤岗的结构性人口流失，离开的主要是受到教育的年轻人
with the loss of educated young people being the main reason for the structural population decline.

但鹤岗在2022上半年的GDP增速为11%
在黑龙江省排名第三

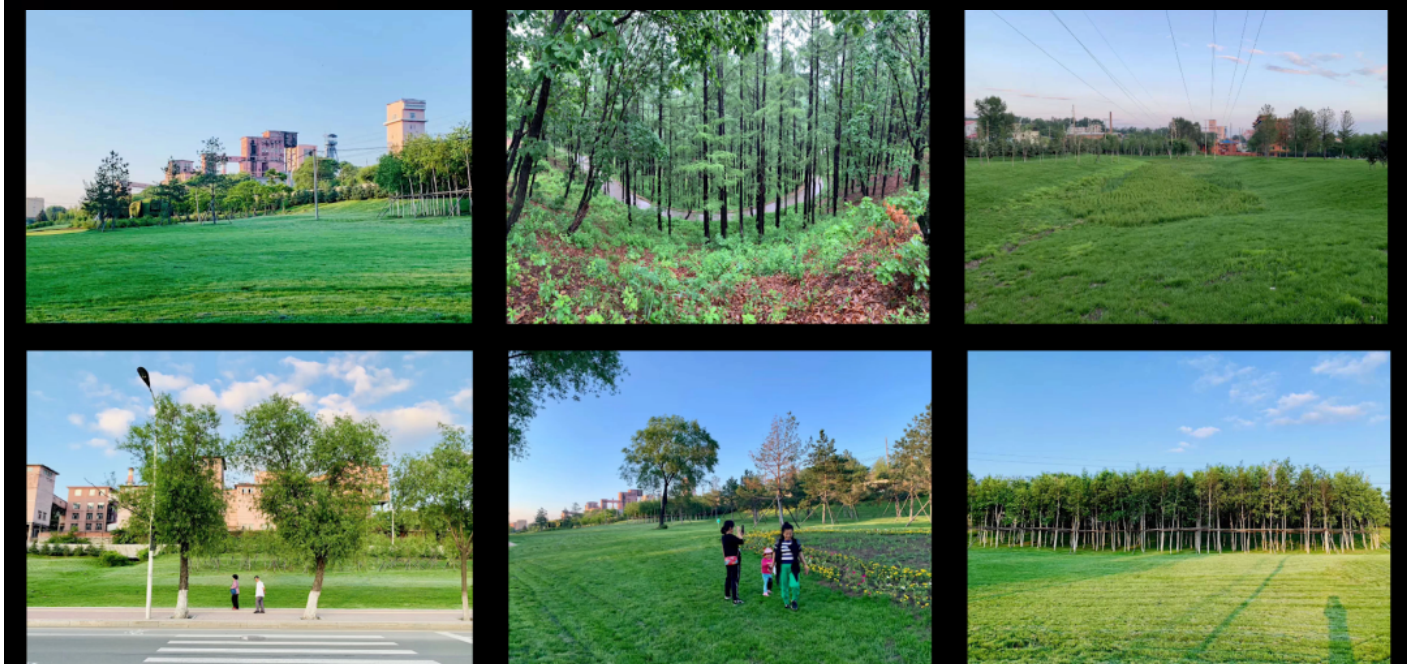
However, Hegang's GDP growth rate in the first half of 2022 was 11%,
ranking third in Heilongjiang Province.



除了经济发展，近年来人居环境质量也大幅度改善

In addition to economic development, the quality of human settlements has also been greatly improved in recent years.

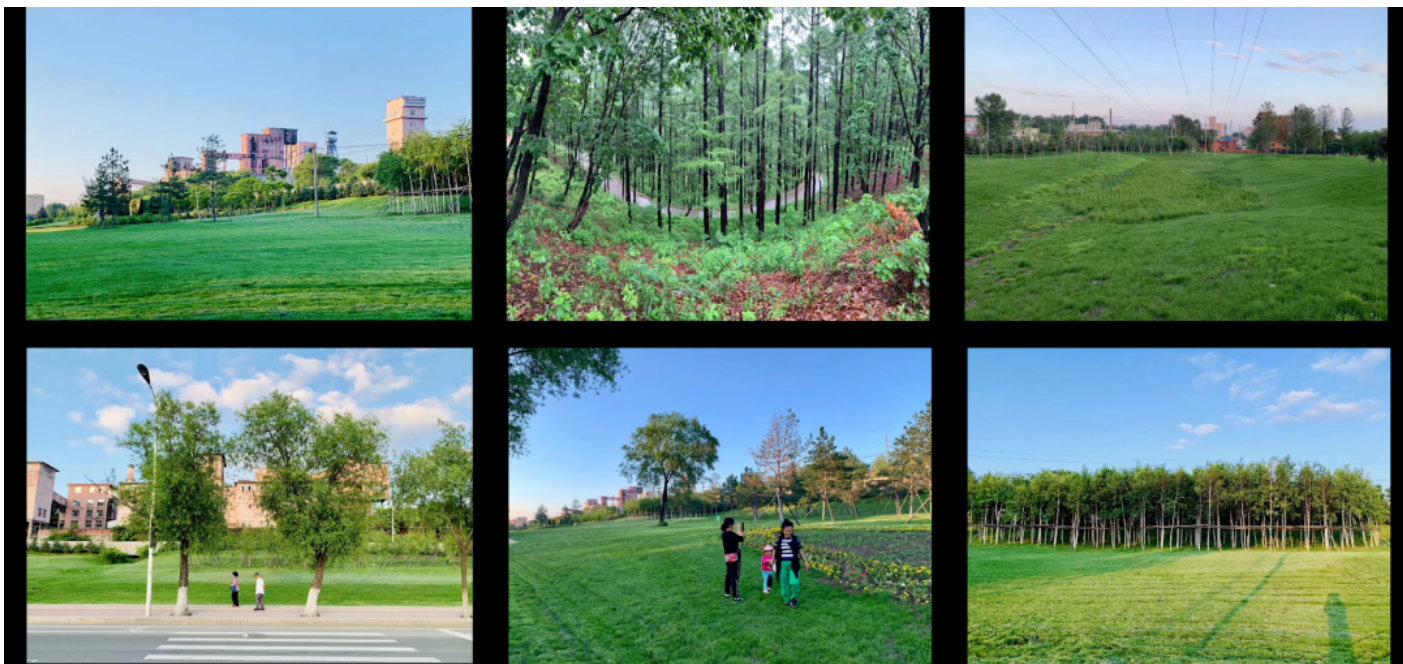
Image Source: Photo by Ying Long



一些棚户区拆除后，建成了各种绿色基础设施

After the demolition of some shanty building areas, various green infrastructures have been built

Image Source: Photo by Ying Long



为未来某个时间的再次腾飞作准备
to prepare for the economic take-off again in the future

Image Source: Photo by Ying Long



李北方
鹤岗居民

但是我觉得鹤岗这些年变化是挺大的
But I think Hegang has changed a lot over these years.

Source: Documentary "Settle down in Hegang"







李北方
鹤岗居民

现在车不会落灰了
Now the cars are dust-free

Video Source: Documentary "settle down in Hegang"



李北方
鹤岗居民

环境上好了很多
The environment is much better

Video Source: Documentary "settle down in Hegang"



李北方
鹤岗居民

我知道的就有两个矿山改成了公园
I know those two mines are changed into parks

Video Source: Documentary "settle down in Hegang"



这几年，鹤岗也成为了年轻人迁徙的胜地
In recent years, Hegang has also become a popular destination for young people to migrate

Video Source: Documentary "settle down in Hegang"





不少是棚户区改造后建设的新房，其中很多位于城市的外围
with many new houses built after the transformation of shanty towns, mostly located on the city's outskirts.

Image Source: Courtesy Ying Long

报道显示，到鹤岗买房的人从事工作多是直播带货、
游戏开发等创意工作，属于数字游牧一族。

Reports show that people who buy houses in Hegang are mostly engaged in creative
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是否意味着，类似鹤岗这样的低房价城市有望成为新时期的“三线”呢？
Does it mean that low-priced cities like Hegang are expected to become "third-tier cities" in the new era?

Video Source: Documentary "settle down in Hegang"



下面来到黑龙江省的另一个城市，黑河。
Continuing our journey, we arrive at Heihe, another city in Heilongjiang Province.

Image Source: baidu.com





黑河与俄罗斯的布拉戈维申斯克市隔江相望
Heihe is situated across the river from Blagoveshchensk, a Russian city



这两年中俄黑龙江大桥大桥已经通车，带来了新的发展机遇
In the past two years, the China-Russia Heilongjiang Bridge has been opened to traffic, which has brought new development opportunities.

拥抱科技——新兴技术在黑河的渗透：

Embrace Science and Technology——The Infiltration of Emerging Technologies in Heihe



黑河的特殊之处在于，多年来一直在拥抱新兴科技，支持地方经济发展

The special aspect of Heihe is its support for local economic development through the embrace of emerging technologies over many years.

ImageSource: Beijing City Lab

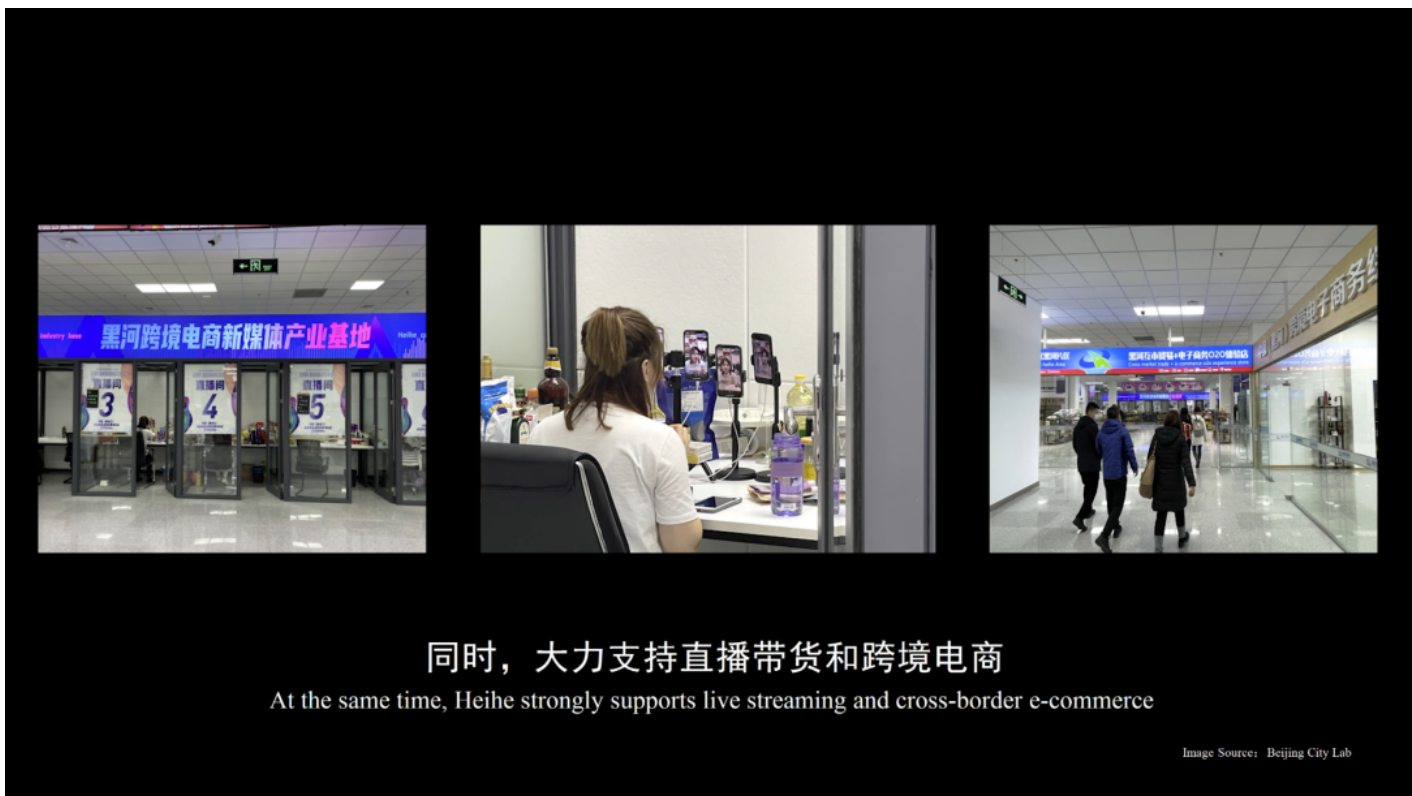


如18年获评了中国黑河汽车寒区试验基地

For example, in 2018, it was awarded the title of the China Heihe Automobile Cold Zone Test Base

Image Source: baidu.com







上百个主播在线上进行俄罗斯商品的销售
and hundreds of anchors sell Russian goods online

Image Source: Beijing City Lab



上百个主播在线上进行俄罗斯商品的销售
and hundreds of anchors sell Russian goods online

Image Source: Beijing City Lab

在城市外围和农村，也有很多科技赋能的故事
There are also many stories of technological empowerment in
the outskirts of cities and rural areas.



如在农村空置住房中养殖木耳
Such as cultivating auricularia auricula in vacant rural houses

Image Source: baidu.com



利用氢气球在松林中的打塔人
using hydrogen balloons to beat towers in pine forests

Image Source: baidu.com



机械化支持的蓝莓种植业，以及自动化大面积耕种的农场
mechanically supporting the blueberry planting industry, and automated large-scale farming farm.

Image Source: baidu.com





2010-2020年间人口增加了两百多万人
the population of Dongguan increased by more than two million people from 2010 to 2020

Image Source: baidu.com



这期间，高埗镇是东莞33个街镇唯一出现人口负增长的收缩城镇
During this period, Gaobu Town was the only shrinking town with negative population growth among the 33 towns in Dongguan

Image Source: baidu.com





其根源在于东莞最大工厂高埗裕元鞋厂的衰落

Its root lies in the decline of the largest factory in Dongguan, Gaobu Yuyuan Shoes Factory,

Image Source: baidu.com



是过去几十年制造业劳动密集型发展的一个缩影

which is a microcosm of the labor-intensive development of the manufacturing industry over the past decades.

Image Source: baidu.com



高峰时期有员工近10万人

At its peak, there were nearly 100,000 employees

Image Source: baidu.com



如今差不多只剩下了1.2万人，闲置厂房也已出租
but now it only has about 12,000 employees, with idle factories being rented out.

Image Source: baidu.com

背后的原因有几个方面，包括劳动力成本的快速上涨，z时代对流水线工作的就业观，当然最值得讨论的是机器换人时代的到来。

There are several reasons for this, including the rapid rise of labor costs, the employment view of assembly line work in the Z era, and of course, the arrival of the era of machines replacing people



2019年
再造新优势——
珠江三角洲城市化如何
响应“机器人”

中山大学中国区域协调发展与乡村建设研究院

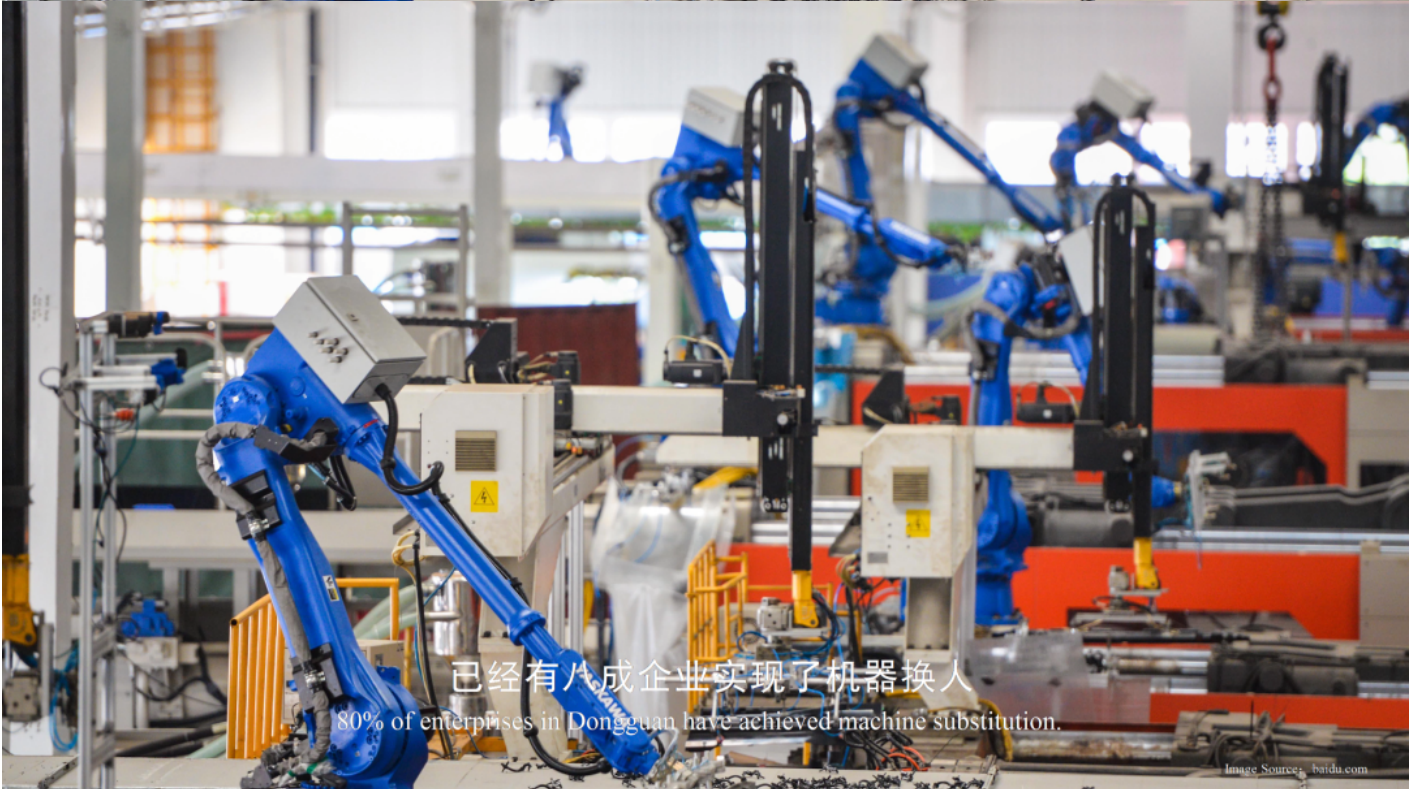
Image Source: baidu.com



早在2014年，东莞就开始推动机器换人的行动计划

As early as 2014, Dongguan began to promote the action plan of machines replacing people

Image Source: baidu.com





高埗紧随其上，累计投入近亿元实施技术改造

Gao Bu followed closely, and invested nearly 100 million yuan in implement technical transformation

Image: Getty Images - iStock.com



促进传统产业升级，并降低了用工需要

which promoted the upgrading of traditional industries and reduced the need for employment.

Image: Getty Images - iStock.com

如上回顾了三个人口流失的收缩城镇，在科技变革背景下发生的故事，

As mentioned above, the story of three shrinking towns with population loss,

鹤岗远程办公的数字游牧一族，

including the digital nomads telecommuting in Hegang

黑河积极拥抱新兴科技的方方面面，

the active embrace of emerging technology in Heihe

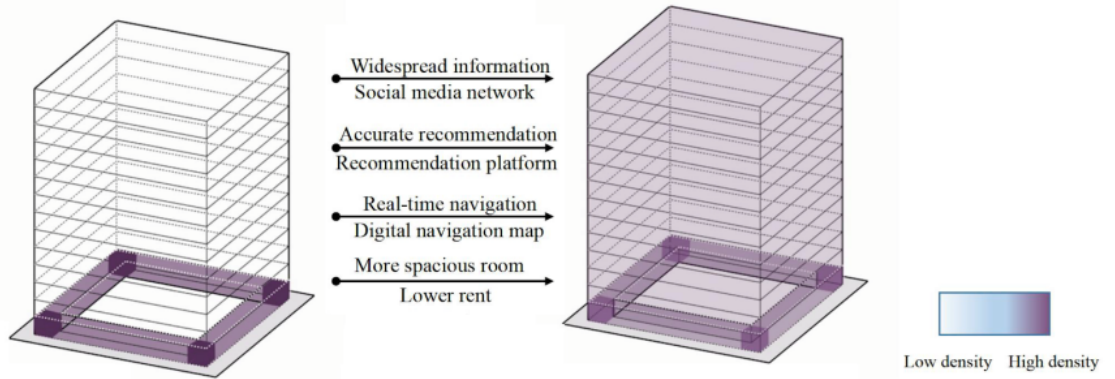
以及东莞高埗镇的机器换人

除了这些人口流失的中小城市在充分借力科技革命，

In addition to these small and medium-sized cities with population loss taking full advantage of

the scientific and technological revolution,

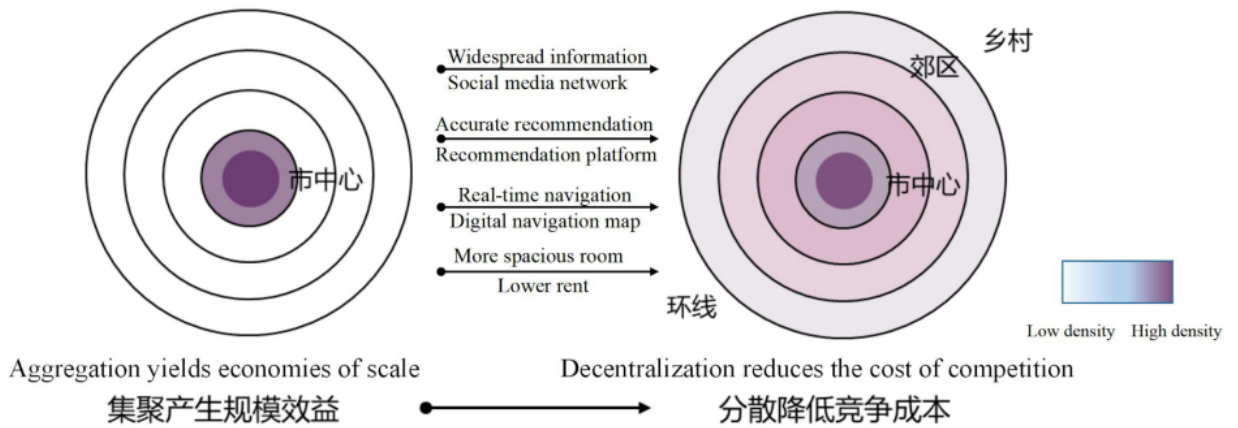
向上 Upward
渗透 From ground floor space to upstairs space, from high visibility to low visibility



一线大城市，也受到了技术变革的深刻影响，
 the first-tier cities have also been deeply influenced by technological changes,

Image Source: Beijing City Lab

向外 Outward
渗透 from the city center to the city periphery, from agglomeration to dispersion



并增加了被访问的机会
 and increasing the chances of being visited.

Image Source: Beijing City Lab

我们能够看到，技术进步势不可挡，科技的发展不以人的意志而转移

We can see that technological progress is unstoppable,
and the development of science and technology is not transferred by human will.


人口向大城市的集聚趋势，看起来也不可对抗

The trend of population gathering in big cities also seems irresistible.

管理收缩远比管理增长要复杂得多

Managing contraction is much more complicated than managing growth.





让一些小城市，多了一些选择
作为新时代的角落和沿边之地，让年轻人进可攻退可守。
Increase the choices available in small cities
As a corner of the new era and a place along the border,
young people can enter, attack and retreat.

Video Source: Documentary "settle down in Hegang"

第18届威尼斯国际建筑双年展中国国家馆

项目名称：技术变革下的中国收缩城市

参展人：龙瀛

团队成员：张业成 李文竹

清华大学建筑学院龙瀛课题组，北京城市实验室

支持课题：国家自然科学基金面上项目（52178044）

China Pavilion of the 18th International Architecture Exhibition La Biennale di Venezia

Project Name: Shrinking cities in China shaped by disruptive technologies

Exhibitor: Ying Long

Team: Yecheng Zhang, Wenzhu Li

Research group led by Ying Long, School of Architecture, Tsinghua University

Beijing City Lab

Funded by: General Program of National Natural Science Foundation of China (NO.52178044)



【展览开幕式】

▲ 中国国家馆展览现场

来自策展团队、承办方、支持方等各方代表及参展建筑师、艺术家等欢聚一堂，共同庆祝中国国家馆开馆。



▲ 开馆活动现场观众



▲ 策展人阮昕院长发言

中国国家馆策展人阮昕在发言中介绍，中国馆展览以“更新·共生”为主题，通过“宜居·传奇·百变群像”、“宜居·更新·上海故事”、“共生·未来·自然复兴”三个章节，用近40年来变化中的人居环境映射，从城市、自然与人民的视角，讲述一个独特的中国故事。



▲ 参展艺术家代表庄子玉发言



▲ 中国对外艺术展览有限公司总经理张颖琳发言



▲ 策展人阮昕与中国对外艺术展览有限公司总经理张颖琳共同宣布中国国家馆正式开馆

【关于展览内容】

此外，本届中国国家馆展览还将开设线上展厅。观众可通过手机扫码，进入云展厅观展（或点击文末“阅读原文”查看）。



18th International Architecture Exhibition
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第18届威尼斯国际建筑双年展
中国国家馆

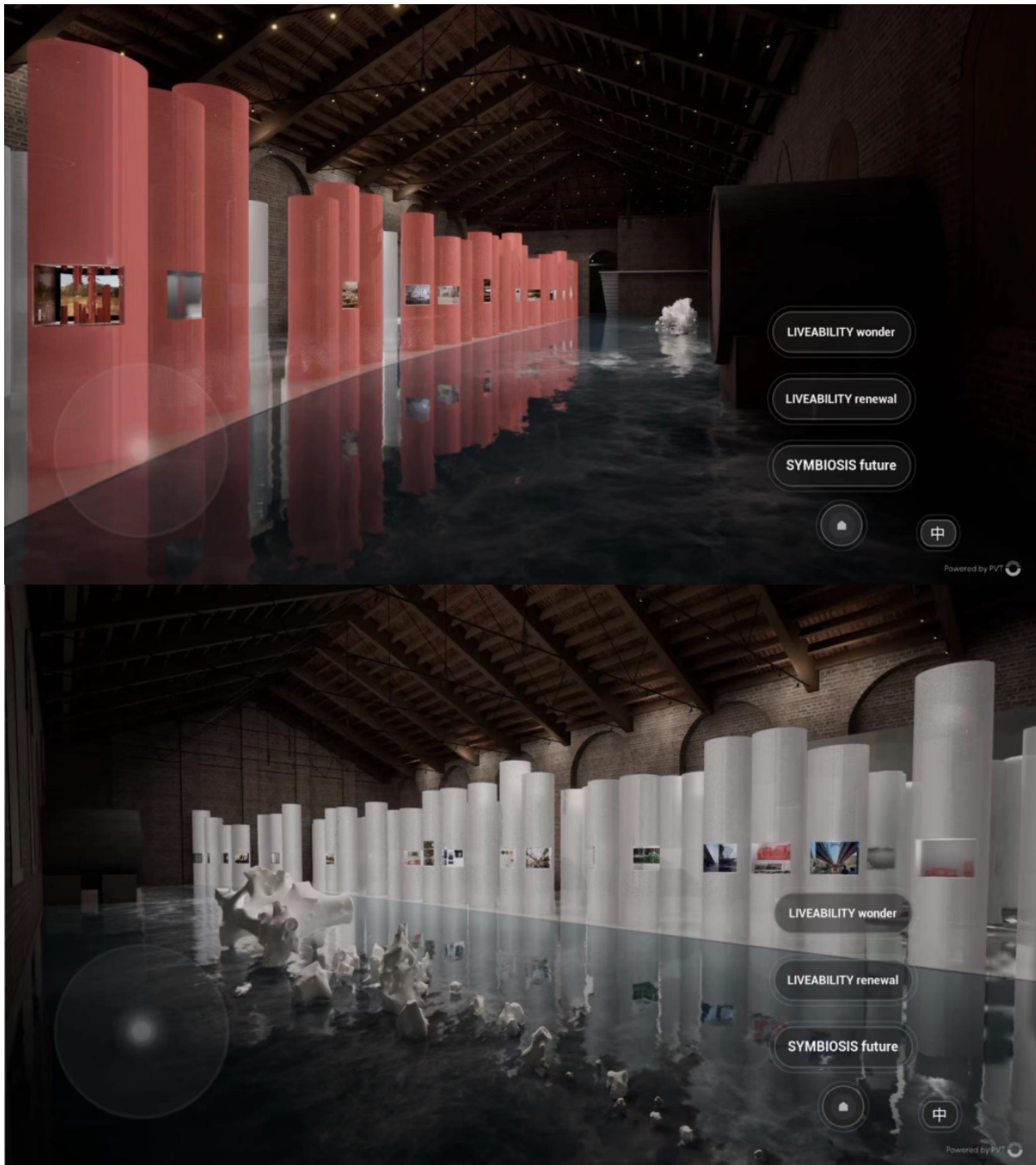
云展览入口

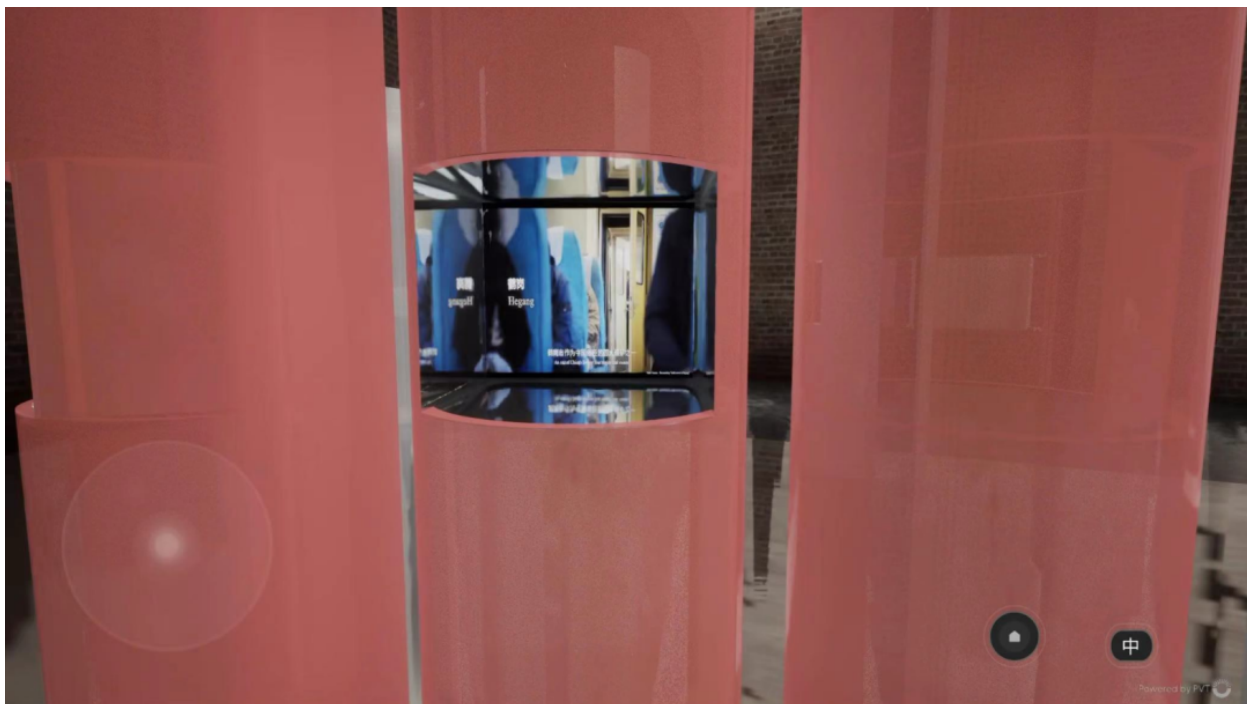
/ Entrance
to the
Cloud
Exhibition



云展览技术执行：
黄华青、徐航、李迪
云展览技术支持：
虚幻引擎
深圳潮向数字科技
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Cloud Exhibition Implementation:
HUANG Huaqing, XU Hang, LI Di
Cloud Exhibition Technical Support:
Unreal Engine
Shenzhen AIRT Digital Technology
Paraverse Technology





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展览时间：2023年5月20日至2023年11月26日

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<https://www.beijingcitylab.com/projects-1/15-shrinking-cities/>

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