



WORLD BEST PRACTICES 全球最佳范例

ASIA-PACIFIC EDITION 亚太版



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Construction

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Upgrade Green Building and Accelerate Green City Development

— The Fifteenth IGBC and International Green Model City Forum Productively Held in Shenzhen

升级绿色建筑，推动城市绿色发展

—— 第十五届国际绿建大会暨范例新城论坛在深圳举行 (P014-P042)

The Ninth Regional 3R Forum in Asia and the Pacific
Calls for Stronger Actions towards Circular Economy

第九届亚太区域 3R 论坛呼吁加强循环经济行动 (P044-P052)



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WORLD BEST PRACTICES 全球最佳范例 — ASIA-PACIFIC EDITION 亚太版 —

国际视野 绿色平台 高端受众 成功典范

读者群与发行网络：联合国有关机构和国际组织负责人及专家，国内外政府官员、城市市长和商界精英、规划建设、城市管理、建筑与住房、低碳环保、交通等行业的企业家和专业人士。杂志纸质版赠阅、订阅和电子版订阅并重，此外进入深圳等地上千个商务场所、银行网点、休闲会所和高尔夫球场的展示终端，供高端顾客传阅，并可在手机等移动终端上阅读。

最佳范例甄选：本杂志面向全社会甄选人居与城市相关的最佳范例，城市、企业和个人均可申报。由杂志命名后向全球推广。由本杂志总结报道的汶川县水磨镇灾后重建范例经验等已成为可持续重建经典，体现了中国灾后重建的巨大成就和奇迹，广为传播。

杂志理事会：依托本杂志平台，由城市政府、人居环境领域的企业、科研院校等单位和社会各界人士自愿组成的服务联盟。理事会旨在为理事单位提供国内外交流合作及创新创业和提升发展的综合平台，加强能力建设，实现互惠多赢的目标。理事会不定期举行活动。

广告营销：本杂志以高端的国际化定位、前瞻性和实用性相结合的行业资讯以及高端读者群，为广大城市和企业提供了一个塑造绿色品牌、促进产品营销的独特超值的平台。

欢迎订阅 发布广告 加入理事会 提升品牌

Congratulations and Keep Moving 加油 祝贺 期待

这个夏天迟迟而至，似乎再次提醒着人们气候变化的紧迫性。3月初本刊编辑部应邀出席第九届亚太区 3R 论坛，主办国泰国所倡导的自足经济（Sufficiency Economy）让人联想到一度饱受诟病的中国自给自足的小农经济，以及巴塞罗那智慧城市的“自给自足的城市”理念（Self-sufficient City）。安徽界首市何市长的演讲让人对这个名不见经传的县级市在循环经济方面的成果印象深刻。随着去年来对塑料污染的全球反击，国家层面和公众层面我们都看到了越来越多鼓舞人心的行动。加油！👊👊

4月初，第二届国际绿色范例新城论坛在深圳成功举办。开幕致辞中指出，深圳国家可持续发展议程创新示范区、雄安新区和粤港澳大湾区三大国家战略规划都把生态文明、绿色发展、智慧高效当做主导方向，刚性约束，其中不少指标、策略都和范例新城完全一致；论坛分享了北京副中心、浏阳经开区、西安经开区、章丘绿波城在绿色规划管理中的探索实践；菲律宾奎松市和一批规划设计机构签约加入了范例新城倡议。祝贺！

6月，《河北雄安新区启动区控制性详细规划》公示。其中路网密度、道路红线宽度、人均日生活用水量、绿色出行率等主要指标都和范例新城一致。我们也及时在线提交了建议，希望新区规划能结合国际经验，更趋完善。

今年以来，范例新城标准也全面应用于“飒飒奖”城市与社区的评估之中，多用数据说话，更加科学、透明，对申报城市或项目的指导也更精准。

在本刊付印之际，正值世界环境日，第十四届全球人居环境论坛年会进入了90天倒计时。合作伙伴们全力以赴，各项工作有序推进。一届关注数字时代可持续城市与人居环境、富有非洲特色的高层次国际盛会渐次浮出水面。期待！👏👏

This summer's belated arrival seems to remind people once again of the urgency of climate change. In early March, the editorial department of WBPM was invited to attend the Ninth Regional 3R Forum in Asia and the Pacific. The Sufficiency Economy advocated by the host country Thailand is reminiscent of once much-maligned China's self-sufficient small-scale peasant economy, as well as the "Self-sufficient City" concept of Barcelona Smart City. The speech by Mr. He, Jieshou City, Anhui Province, made people impressed with the outcomes of the circular economy in this unknown county-level city. With the global counterattack against plastic pollution

last year, we have seen more and more inspiring actions at the national and public levels. 👊👊

In early April, the 2nd International Green Model City Forum (IGMC Forum) was successfully held in Shenzhen. In the opening session, it was pointed out that the three state-level super strategic plans of Shenzhen National Innovation Demonstration Zone for Sustainable Development Agenda, Xiongan New District and Guangdong-Hong Kong-Macao Greater Bay Area all regard ecological civilization, green development and high efficiency as the principal direction with rigid instructions. Many of their indicators and strategies are consistent with those of the IGMC. The forum shared the practical exploration of green planning and management of Beijing Sub-center, Liuyang National Economic & Technological Development Zone, Xi'an Economic & Technological Development Zone and Zhangqiu Green Wave City. Quezon City, Philippines and a few planning and design institutions signed up to join the IGMC Initiative. Congratulations!

In June, the "Controlled Detailed Planning of the Start-up Area of Xiong'an New District of Hebei" and the "Control Plan of the Starting Area of Hebei Xiong'an New District" were disclosed. Among them, road network density, street red line width, per capita daily water consumption, green mobility rate, household garbage, sewage treatment rate and some other indicators are all consistent with the IGMC Standards. We also submitted suggestions online in time, hoping that the new district planning can be combined with international experience and become more refined.

Since the beginning of this year, the IGMC Standards have also been fully applied to the evaluation of cities and communities of Sustainable Cities and Human Settlements Awards (SCAHSAs). Thus the awards evaluation becomes more data-based, more scientific and transparent, and more instructive in guiding cities and projects that are submitted for the application.

On the occasion of this new issue to be published, just at the time of the World Environment Day, the 14th Annual Session of Global Forum on Human Settlements (GFHS 2019) entered a 90-day countdown. The partners have been devoting every effort to the preparatory work which is in full swing. We look forward to a high-level international event with African characteristics and fruitful discussions on sustainable cities and human settlements in the digital era. 👏👏



- Observance of Urban October 2019 -
The 14th Global Forum on Human Settlements (GFHS 2019)

第十四届全球人居环境论坛年会

Date: September 5th – 6th, 2019 时间：2019 年 9 月 5 日—6 日

Theme: Sustainable Development of Cities and Human Settlements in the Digital Era

主题：数字时代城市与人居环境的可持续发展



▲ Venue: United Nations Conference Center in Addis Ababa (UNCC-AA), Ethiopia
地点：亚的斯亚贝巴·联合国会议中心，埃塞俄比亚

GFHS 2019 旨在为全球的利益相关者提供一个高级别的对话与合作平台，探讨数字革命为可持续城市与人居环境带来的机遇与挑战，分享可持续城市与人居环境的创新政策、策略、技术与范例；促进非洲地区充分利用后发优势建设包容的绿色智慧城市，发展数字经济，促进“一带一路”倡议背景下的务实合作；促进世界城市运动的开展，籍此为 2020 年 2 月将在阿布扎比举行的世界城市论坛的成果做出务实贡献；加强宣传与能力建设，促进城市创新，培育新型伙伴关系，加速有效的行动，推动实现可持续发展目标 11 和《新城市议程》。相关国家政要、联合国等国际组织高级官员、领袖城市市长、跨国企业负责人、知名专家学者将出席会议并发表演讲，会议代表预计为 500 人。

GFHS：国际平台成就国际品牌 International Platform Creating International Brand



▲ 2018 可持续城市与人居环境奖颁奖嘉宾和获奖者集体合影

联合主办：

全球人居环境论坛（GFHS）
联合国非洲经济委员会（UNECA）
国际电信联盟（ITU）
世界城市运动（WUC）

协办支持：

世界和平联盟（UPF）
世界一带一路组织（GOBA）
世界区块链联盟（GBA）
中国城市发展研究会（CRSUD）等

主要议题：

GFHS2019 将深入讨论或涉及的议题包括：

- 智慧与可持续的城市
- 可负担住房与可持续人居环境
- 非洲数字技术、创新与可持续性
- 可持续的城市基础设施投融资
- 可再生能源、气候行动与城市弹性
- 智慧规划设计与国际绿色范例新城倡议
- 世界城市运动：连接全球可持续发展议程与私营部门地方行动
- 区块链技术与智慧城市管理
- 装配式建筑与绿色智慧社区
- 家庭价值观与幸福城市等

活动内容：

为期 2 天的会议活动包括开幕式、主旨演讲、高层对话、专题论坛、“可持续城市与人居环境奖”盛典、闭门会议、展览展示、项目考察等活动。主要会议提供中英文同传服务。

可持续城市与人居环境奖盛典（SCAHS 2019）：

城市（区、镇）、景区、社区、特色小镇、建筑、规划设计、绿色技术、绿色出行、个人包括少儿均可申报“飒飒奖”。

参与合作：

欢迎相关机构和专业人士报名参会，申报“飒飒奖”，申请演讲机会，申办论坛，和国际社会分享创新技术和成功经验，合作共赢。



更多信息请浏览论坛官网：www.gfhsforum.org

联系人：陈新（女士） 电话：0755-83288289 手机：1894831309

E-mail: kim.chen@gfhsforum.org



前沿资讯 FRONTIER INFORMATION



008 前沿 · 国际 Frontier · International

010 前沿 · 中国 Frontier · China

专题报道 SPECIAL REPORT



014 升级绿色建筑，推动城市绿色发展
—— 第十五届国际绿建大会暨范例新城论坛在深圳举行
Upgrade Green Building and Accelerate Green City Development
— The Fifteenth IGEBG and International Green Model City Forum Productively Held in Shenzhen

嘉宾对话 Dialogue



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IGMC Initiative Promoting High-quality Sustainable Development of Chinese Cities

嘉宾演讲精选 Speech Excerpts



023 全球人居环境论坛秘书长、中国城市发展研究会
可持续城市专业委员会会长吕海峰
Lu Haifeng, Secretary General of Global Forum on
Human Settlements, President of Sustainable City
Committee of China Research Society of Urban
Development



033 深圳蕾奥规划设计咨询股份有限公司
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Jiang Juntao, Deputy General Manager and Chief
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执行院长白翰
Bai Han, Professor of Shandong Jiaotong
University, Executive Dean of Shandong Zhengqu
Institute of Traffic Engineering

会议活动 CONFERENCE



044 第九届亚太区域 3R 论坛呼吁加强循环经济行动
The Ninth Regional 3R Forum in Asia and the Pacific
Calls for Stronger Actions towards Circular Economy



签约市长集体合影 Signing group photo of Mayors
市长和市政府签署了《亚洲市长关于实现亚洲城市清洁的
水、土地和空气的印多尔 3R 宣言》。
Mayors and city authorities signed the Indore 3R
Declaration of Asian Mayors on Achieving Clean Water,
Clean Land and Clean Air in Cities in Asia.

最佳范例 BEST PRACTICES



054 庇护所计划：联合国人居署与凯谛思的九年伙伴关系
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人物视界 FIGURE



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佐哈利·安努亚先生
A Brief on the "Sustainable Petaling Jaya City 2030"
— Exclusive Interview with Mr. Johary Bin Anuar,
Deputy Mayor, Petaling Jaya City Council, Malaysia



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中国城市发展研究会可持续城市专业委员会
Special Committee of Sustainable Cities of China Research Society of Urban Development
深圳美好城市研究院
Shenzhen Better City Institute

中国办公室 China Office

地 址：深圳福田区福虹路世贸广场 C 座 701 室
Address: Suite 701, Block C, World Trade Plaza, Fuhong Road, Shenzhen, China
Tel: 0755-83288289 83288296 Fax: 0755-83288619
地 址：北京市海淀区三里河路 9 号住建部南附楼 2308 室 100044
Address: Suite 2308, South Annex Building, MOHURD, No. 9 Sanlihe Road, Haidian District, Beijing 100044
Tel: 010-57811456

美国办公室 USA Office

地 址：美国纽约市曼哈顿滨水广场 20-E 室
Address: 10 Waterside Plaza, Apt 20-E New York, 10010
E-mail: gfhhs@gfhforum.org

网 址 <http://www.gfhforum.org>

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○ Wang Dehui Consultant to China Environmental Assessment Center, Ministry of Environmental Protection of the PRC, Former Deputy Director-General of the Nature and Ecology Conservation Department, Concurrently Director of China Implementing CBD Office, SEPA

○ Taj Hamad Vice Chairman of Global Forum on Human Settlements, Secretary General of the World Association of Non-Governmental Organizations (WANGO)

○ Ralph Wahnschafft Independent Consultant on Sustainable Development Policies

○ Kirstin Miller Executive Director of Eco-City Builders

○ Victor Fersht Executive Secretary of Best Practices Magazine Promotion Centre

○ Zhang Keke Deputy Director of PKU-HKUST Shenzhen-HongKong Institution, Executive Dean of Shenzhen-HongKong Research Institution, President of the Council for the Shenzhen-HongKong Technology Cooperation

○ Lu Haifeng Secretary General, Global Forum on Human Settlements and President of Shenzhen Better City Institute

○ Chen Keshi Professor, Doctorial Tutor of Peking University; Director of Chinese Urban Design Research Centre of Peking University

○ Kuang Jianwei Deputy President of China Research Society of Urban Development (CRSUD)

○ Zhang Bailin Chair of Shenzhen Association of Circular Economy

○ Hou Baizhen Professorial and Senior Urban Planner, Proprietor of Urban Planner Magazine

○ Zhou Guozhong Director-General of UN HABITAT World Best Practices Magazine Asia-Pacific Office

○ Yang Xiaohong Assistant Director, Housing Project Working Committee, Urban and Rural Well-off Development Promotion Center, Deputy Secretary General, Global Forum on Human Settlements

○ Lin Yaoyu Doctor for Urban and Rural Planning, Associate Professor of Urban Planning and Management Department, Shenzhen Graduate School, Harbin Institute of Technology, Vice President of Shenzhen Better City Institute

○ Wang Shaofeng Consultant, Educational, Scientific and Cultural Committee, Global Forum on Human Settlements (GFHS), Honorary President, The Hong Kong Institute of Confucianism

○ Fan Zhigang Landscape Planning Export, Senior Corporate Training Instructor

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第四届联合国环境大会 在肯尼亚内罗毕召开

2019年3月11日至15日，第四届联合国环境大会在肯尼亚内罗毕联合国环境署总部召开，来自170多个国家，包括环境部长、科学家、学者、商界领袖和民间社会代表在内的4,700多名代表出席会议。大会主题是“寻求创新解决办法，应对环境挑战并实现可持续消费与生产”。

会议的一个关键重点是需要保护海洋和脆弱的生态系统。部长们通过了一系列关于海洋塑料垃圾和塑料微粒的决议，其中包括承诺在联合国环境署建立一个多利益相关方平台，推动采取紧急行动，持久专注地消除垃圾和塑料微粒。在峰会期间，安提瓜和巴布达、巴拉圭和特立尼达和多巴哥加入了联合国环境署的清洁海运倡议，使加入联盟的国家总数达到60个，其中有20个国家来自拉丁美洲和加勒比地区。

会议期间发布第六期《全球环境展望》报告。该报告由来自70多个国家的250名科学家和专家共同撰写。报告指出，除非我们大幅度加强环境保护力度，否则到本世纪中叶，亚洲、中东和非洲的城市和地区，数百万人有可能过早死亡。报告也拉响警报，表明淡水系统中污染物的抗生素耐药性问题可能在2050年成为人类的主要死因，而内分泌干扰物会影响男性和女性的生育能力以及儿童的神发育。

欧盟通过最严“禁塑令”，2021年 28国将禁用一次性塑料制品

欧盟议会以压倒性投票通过禁塑法令，明确从2021年起禁止使用一次性塑料产品，以试图阻止塑料垃圾进入海洋。此次禁塑法令再一次让全球关注海洋生态问题。

立法要求，到2025年塑料制品可以减少至少25%。根据禁令，饮料瓶和其他塑料必须单独收集，在2025年前回收率达到90%。

塑料废弃物对海洋和生态环境的污染日益严重。在日常生活中，塑料餐具、薄塑料袋、塑料棉签、吸管等一次性塑料用品随处可见。据欧盟的统计，所有废弃物中塑料废弃物所占比例高达85%，其中约一半是一次性产品。只有不到三分之一的塑料废弃物被收集和重复使用，其余大部分都留在垃圾场或环境中。

另外，超过80%的海洋垃圾是塑料。欧盟调查结果显示，欧洲水域每年有15万吨塑胶垃圾入海，而全球海域塑胶垃圾则达到800万吨。塑料残留物存在于海洋物种中——例如海龟、海豹、鲸鱼和鸟类，还存在于鱼类和贝类中，严重影响海洋生物系统的同时，也被端上人类的餐桌，成为人类食物链中的一部分。一位欧洲议会议员称，如果再不采取行动，“2050年时海洋中的塑胶会比鱼还多！”



首届联合国人居大会召开 聚焦全球城镇化挑战

5月27日-31日，首届联合国人居大会在肯尼亚首都内罗毕的联合国人居署总部召开。此次大会以“创新让城市和社区生活更美好”为主题，旨在为全球城镇化面临的挑战找到创新、可持续的应对之策。

联合国副秘书长、人居署执行主任迈穆娜·穆赫德·谢里夫在开幕式上说，首届联合国人居大会的召开得益于世界众多国家对多边主义和可持续城镇化的坚持与承诺。全球城镇化势头日益增强，人居大会将直面城镇化进程中的挑战，并为应对这些挑战提出创新解决办法，推动可持续发展。

她说，预计到2050年全球70%的人口将生活在城市，而一些国家城镇人口不断增长将导致住房、交通、能源、就业、教育和卫生等诸多问题。她呼吁世界各国把可持续城镇化放在国家发展进程中的重要位置。

联合国秘书长古特雷斯在开幕式上发表视频致辞。他说，首届联合国人居大会的目的是探讨提升城市和社区生活质量的办法。“好的城市规划和管理能引领我们实现具有包容性、可持续性和低排放的发展。”

共有113个国家派代表参加了本届人居大会，其中一半以上是部长或副部长级的代表，此外，2250名代表中还有60多名市长。



全球仍有1亿多人处于重度饥饿状态

4月2日，联合国多家机构与合作伙伴共同发布《2019年全球粮食危机报告》。该报告显示，2018年，全球仍有53个国家的大约1.13亿人遭遇重度饥饿，比2017年的1.24亿略有下降。

冲突、气候变化与经济波动仍是导致粮食不安全的主要原因。报告指出，2018年共有21个国家和地区的近7400万人因冲突或安全局势动荡而陷入饥饿，占到全球总人数的三分之二。其中大约3300万人居住在非洲的10个不同国家，另有超过2700万人居住在西亚和中东的7个国家。

报告指出，尽管重度饥饿的人口数量略有下降，但过去三年来，全球面临粮食危机的总人数始终维持在1亿以上，且波及的国家范围正在扩大。此外，还有42个国家的1.43亿人距离重度饥饿仅有一步之遥。

报告建议通过终止冲突、增强女性权能、为儿童提供营养和教育、改善乡村基础设施，以及加强社会保障，来建立坚实稳定且具有抵抗力的“零饥饿”世界。



全球增长2019年放缓至3.3%

4月9日，国际货币基金组织发表的《世界经济展望》报告预测全球经济的70%在2019年将出现增长减缓。全球增长在2018年放缓至3.6%，预计2019年将进一步降至3.3%。目前对2019年的增长预测相对于今年1月的预测下调了0.2个百分点，反映了一些主要经济体（包括拉丁美洲、美国、英国、加拿大和澳大利亚）预期增长减缓。



报告表示，2020年之后，全球增长预计将稳定在3.5%左右的水平，主要驱动因素是中国和印度的增长及其在全球收入中权重的增加。新兴市场和发展中经济体的增速将稳定在5%，尽管各国之间会存在较大差异。新兴亚洲的增长步伐仍将快于其他地区。低收入国家也将呈现类似的趋势，其中一些国家（特别是大宗商品进口国）将快速增长，但其他国家的人均增长水平与发达经济体的差距将进一步拉大。WBPM

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国务院总理李克强：加强污染防治和生态建设，大力推动绿色发展



2019年3月5日至15日，十三届全国人大二次会议在北京召开。国务院总理李克强在作政府工作报告时说，加强污染防治和生态建设，大力推动绿色发展。绿色发展是构建现代化经济体系的必然要求，是解决污染问题的根本之策。要改革完善相关制度，协同推动高质量发展与生态环境保护。

持续推进污染防治。巩固扩大蓝天保卫战成果，今年二氧化硫、氮氧化物排放量要下降3%，重点地区细颗粒物（PM2.5）浓度继续下降。加强固体废弃物和城市垃圾分类处置。企业作为污染防治主体，必须依法履行环保责任。

壮大绿色环保产业。加快火电、钢铁行业超低排放改造，实施重污染行业达标排放改造。推进煤炭清洁化利用，加快解决风、光、水电消纳问题。加大城市污水管网和处理设施建设力度。促进资源节约和循环利用，推广绿色建筑。改革完善环境经济政策，加快发展绿色金融，培育一批专业化环保骨干企业，提升绿色发展能力。

加强生态系统保护修复。推进山水林田湖草生态保护修复工程试点，持续抓好国土绿化、防沙治沙、水土流失治理和生物多样性保护。深化国家公园体制改革。绿色发展人人有责，贵在行动、成在坚持。我们要共同努力，让人民群众享有美丽宜居环境。

第二届“一带一路”国际合作高峰论坛在京举行，成果丰硕

4月25日至27日，第二届“一带一路”国际合作高峰论坛在北京成功举行。这场盛会是我国2019年最重要的主场外交。



论坛的主题是共建“一带一路”、开创美好未来。论坛期间举行了高峰论坛开幕式、领导人圆桌峰会、高级别会议、12场分论坛和1场企业家大会。包括中国在内，38个国家的元首和政府首脑等领导人，以及联合国秘书长和国际货币基金组织总裁共40位领导人出席圆桌峰会。来自150个国家、92个国际组织的6000余名外宾参加了论坛。

论坛期间，习近平主席出席高峰论坛开幕式并发表主旨演讲，全程主持了领导人圆桌峰会，同与会各国领导人举行了双边会见。在习近平主席的亲自主持和引领下，与会各方就共建“一带一路”深入交换意见，普遍认为“一带一路”是机遇之路，就高质量共建“一带一路”达成广泛共识，取得丰硕成果。

一是确立高质量共建“一带一路”目标，指明合作方向；二是构建全球互联互通伙伴关系，推动联动发展；三是取得丰硕务实成果，体现互利共赢；四是搭建地方及工商界对接新平台，拓展合作机遇；五是完善“一带一路”合作架构，打造支撑体系；六是发挥元首外交引领作用，深化双边关系。

国务院办公厅印发《“无废城市”建设试点工作方案》

近日，国务院办公厅印发《“无废城市”建设试点工作方案》（以下简称《方案》）。

《方案》指出，“无废城市”是以创新、协调、绿色、开放、共享的新发展理念为引领，通过推动形成绿色发展方式和生活方式，持续推进固体废物源头减量和资源化利用，最大限度减少填埋量，将固体废物环境影响降至最低的城市发展模式，也是一种先进的城市管理理念。开展“无废城市”建设试点是深入落实党中央、国务院决策部署的具体行动，是从城市整体层面深化固体废物综合管理改革和推动“无废社会”建设的有力抓手，是提升生态文明、建设美丽中国的重要举措。

《方案》强调，要以习近平新时代中国特色社会主义思想为指导，全面贯彻党的十九大和十九届二中、三中全会精神，深入贯彻习近平生态文明思想和全国生态环境保护大会精神，坚持绿色低碳循环发展，以大宗工业固体废物、主要农业废弃物、生活垃圾和建筑垃圾、危险废物为重点，实现源头大幅减量、充分资源化利用和安全处置。

《方案》提出，在全国范围内选择10个左右有条件、有基础、规模适当的城市，在全市域范围内开展“无废城市”建设试点。到2020年，系统构建“无废城市”建设指标体系，探索建立“无废城市”建设综合管理制度和技术体系，形成一批可复制、可推广的“无废城市”建设示范模式。



大湾区港澳广深城市定位落定

2月18日，备受关注的《粤港澳大湾区发展规划纲要》（以下简称《规划纲要》）正式发布。作为粤港澳大湾区建设的纲领性文件，《规划纲要》首次对湾区四座中心城市的定位予以明确，并在基础设施互联互通、产业升级发展和对外开放深化等方面提出了一系列指导要求。

《规划纲要》指出，以香港、澳门、广州、深圳四大中心城市作为区域发展的核心引擎，增强对周边区域发展的辐射带动作用。中山大学粤港澳发展研究院首席专家、副院长陈广汉指出，与长三角城市群的单中心和京津冀城市群的双中心相比，粤港澳的显著特点是多中心发展。



根据《规划纲要》，香港将巩固和提升国际金融、航运、贸易中心和国际航空枢纽地位，强化全球离岸人民币业务枢纽地位、国际资产管理中心及风险管理中心功能，打造更具竞争力的国际大都会。

澳门将建设世界旅游休闲中心、中国与葡语国家商贸合作服务平台，打造以中华文化为主流、多元文化共存的交流合作基地。

广州将全面增强国际商贸中心、综合交通枢纽功能，培育提升科技教育文化中心功能，着力建设国际大都市。

深圳则要发挥作为经济特区、全国性经济中心城市和国家创新型城市的引领作用，努力成为具有世界影响力的创新创业之都。

海南 2030 年起全面禁止销售燃油汽车

3 月 5 日，海南省政府正式对外发布了《海南省清洁能源汽车发展规划》，《规划》中提出“2030 年起，海南全面禁止销售燃油车”。由此，海南省成为我国第一个提出清洁能源化目标并给出时间表的省份。

《规划》围绕 2030 年实现“绿色智慧出行新海南”的总体发展目标，提出了 2020 年、2025 年、2030 年三个阶段性目标。

这份《规划》提出了六方面重点任务和七项保障措施，从能源、环保、经济等方面深入分析了海南全域推广应用清洁能源汽车的可行性，并从构建、完善清洁能源汽车应用环境出发，提出了六个方面的具体措施。

同时，海南省交通运输厅也提出，到 2020 年新能源汽车在全省交通运输行业的应用要初具规模。到 2020 年底，海南省将累计推广新能源汽车 3 万辆以上，建设充电桩 2.8 万个以上。



浙江 2019 年城镇生活垃圾总量增幅控制在 1% 以内

浙江今年将加强推进城镇生活垃圾分类处理，将城镇生活垃圾总量年增幅控制在 1% 以内。



浙江省住建厅要求，2019 年浙江 11 个设区市城区分类收集覆盖面将达到 85% 以上，县以上建成区分类收集覆盖面达到 55% 以上。同时，启动 200 个省级高标准垃圾分类示范小区创建、200 个商业街（居住小区）“定点定时”投放清运试点。

在垃圾处理方面，浙江将启动 15 个县（市、区）生活垃圾分类投放、分类收集、分类运输和分类处置系统建设，新建成 16 座垃圾焚烧和餐厨处理设施，新增日处理能力 5000 吨以上。WBPM

SPECIAL REPORT

专题报道

2019 年 4 月 3-4 日，以“升级绿色建筑，助推绿色发展”为主题的“第十五届国在深圳隆重召开，国内外 5000 多名政府官员与行业精英出席大会。作为大会的重要组成部分，“国际绿色范例新城论坛”成功举办。本刊记录了会议盛况及部分嘉宾的演讲摘要，以飨读者。

Themed as “Upgrade Green Building and Accelerate Ecological Development”, the Fifteenth International Conference on Green and Energy-Efficient Building & New Technologies and Products Expo (IGEBC) was convened in Shenzhen from April 3rd to 4th, 2019, and over 5,000 government officials and industrial elites attended the event. As an important part of the Conference, the International Green Model City Forum (IGMC Forum) was successfully held. We hereby share the summary of the Conference and some speech excerpts.



▲ 第十五届国际绿色建筑与建筑节能大会暨新技术与产品博览会开幕式

Opening ceremony of the Fifteenth International Conference on Green and Energy-Efficient Building & New Technologies and Products Expo (IGEBC)

Upgrade Green Building and Accelerate Green City Development

— The Fifteenth IGEBC and International Green Model City Forum Productively
Held in Shenzhen

升级绿色建筑，推动城市绿色发展

—— 第十五届国际绿建大会暨范例新城论坛在深圳举行

又到四月最美时！以“升级绿色建筑，助推绿色发展”为主题的“第十五届国际绿色建筑与建筑节能大会暨新技术与产品博览会”（简称“国际绿建大会”）于2019年4月3日至4日在“绿色先锋城市”、“国家可持续发展议程创新示范区”——深圳隆重召开。

国内外500多位建筑节能领域的权威专家和众多行业领先企业代表进行了专题研讨和经验分享，共有5000多名政府官员与行业精英出席大会，交流互动，以合作创新推动中国城市绿色发展。中国工程院院士、2018年度国家最高科学技术奖获得者钱七虎，国务院参事、住房和城乡建设部原副部长、中国城市科学学会理事长仇保兴，住房和城乡建设部总工程师陈宜明，广东省住房和城乡建设

From April 3rd to April 4th, 2019, the Fifteenth International Conference on Green and Energy-Efficient Building & New Technologies and Products Expo (IGEBC) with the theme of “Upgrade Green Building and Accelerate Ecological Development” was convened in Shenzhen – China’s “Pioneering Green City” and “National Innovation Demonstration Zone for Sustainable Development Agenda”.

More than 500 experts in building energy conservation from home and abroad and representatives of leading enterprises in multiple industries were invited to share their insights at seminars. Over 5,000 government officials and industrial elites attended the event, working together to facilitate the green



▲ 中国工程院院士钱七虎
Qian Qihu, Academician of Chinese Academy of Engineering



▲ 中国城市科学学会理事长仇保兴
Qiu Baoxing, President of Chinese Society for Urban Studies



▲ 住房和城乡建设部总工程师陈宜明
Chen Yiming, Chief Engineer of Ministry of Housing and Urban-Rural Development



▲ 深圳市市长陈如桂
Chen Rugui, Mayor of Shenzhen Municipal People's Government

厅党组书记赵坤，深圳市人民政府市长陈如桂，中国工程院院士、清华大学建筑节能研究中心主任、教授江亿等领导和嘉宾出席开幕式并讲话。作为大会的重要组成部分，“国际绿色范例新城（IGMC）论坛”于4日上午成功举办，积极呼应大会主题，探讨结合范例新城倡议与标准推动新时代我国城市高质量可持续发展。住建部、环保部有关专家、中铁置业、中建、中国建筑科学研究院、雅克设计集团、深圳蕾奥规划设计等企业负责人、相关城市政府官员、全球人居环境论坛高级代表出席并发表演讲。

国际绿建大会开幕式上，深圳市市长陈如桂介绍：目前深圳市绿色建筑总面积已达到近1亿平方米，有一千多个项目获得了绿色建筑的评价标识，居全国前列。他表示，这场高规格的盛会必将对我国生态文明建设、绿色发展产生重大而深远的影响。住房和城乡建设部总工程师陈宜明向与会代表简单回顾了绿建大会十五年来的发展历程。他介绍，中国绿色建筑每过五年都会开启一个新的发展阶段，从实践探索到理论升华，这些变化总结了十多年来我们国家

development of Chinese cities in an innovative way. A number of guests addressed the opening ceremony, including Qian Qihu, Academician of Chinese Academy of Engineering and laureate of 2018 State Preeminent Science and Technology Award, Qiu Baoxing, Counselor of the State Council, Former Vice Minister of Ministry of Housing and Urban-Rural Development and President of Chinese Society for Urban Studies, Chen Yiming, Chief Engineer of Ministry of Housing and Urban-Rural Development, Zhao Kun, Secretary of Party Leadership Group of Department of Housing and Urban-Rural Development of Guangdong Province, Chen Rugui, Mayor of Shenzhen Municipal People's Government and Professor Jiang Yi, Academician of Chinese Academy of Engineering and Director of Building Energy Research Center, Tsinghua University. As an important part of IGEBC, the International Green Model City (IGMC) Forum was successfully held on the morning of April 4th to echo the theme of the Conference through discussion

绿色建筑发展取得的成绩。钱七虎院士作了题为“利用地下空间、助力发展绿色建筑与绿色城市”的重要演讲。他在演讲中表示，世界已然迎来绿色发展时代，而中国绿色发展正在进入世界先进行列。利用地下空间发展绿色建筑能够有效实现对土地的多重利用，从而满足节约土地的需求。仇保兴理事长在主旨报告中指出：绿色建筑的根本是尊重传统文化、尊重自然环境，尊重普通老百姓的长远利益。做到对全生命周期的“四节一环保”是绿色建筑的原则，通过绿色建筑的大发展将为我国生态文明建设奠定坚实的基础。



▲ 中国环境保护部自然生态保护司原副司长兼“中国履行生物多样性公约办公室”主任、中国环境保护部环境工程评估中心专家组长王德辉主持论坛开幕式

Wang Dehui, Former Deputy Director-General of the Nature and Ecology Conservation Department, SEPA & Director of China Office for "Implementation of the Convention of Biological Diversity", Head of Experts Group of Environmental Engineering Assessment Center, Ministry of Environmental Protection of the PRC, chaired the IGMC Forum's opening ceremony

本届国际绿色范例新城论坛由中国城市发展研究会可持续城市专业委员会、深圳市美好城市研究院承办，《全球最佳范例》杂志、深圳范例新城投资管理有限公司协办，并且得到了全球人居环境论坛（GFHS）的大力支持。出席论坛的专家包括中国环境保护部自然生态保护司原副司长兼“中国履行生物多样性公约办公室”主任、中国环境保护部环境工程评估中心专家组长王德辉、全球人居环境论坛（GFHS）秘书长吕海峰、济南市章丘区政协主席赵立元、中国建筑科学研究院建筑设计院副总建筑师曾宇、深圳大学建筑与城市规划学院教授牛慧恩、深圳蕾奥规划设计咨询股份有限公司总规划师蒋峻涛、中央美术学院教授李凤禹、四川省大卫建筑设计有限公司董事长刘卫兵等，来自湖南长沙、山东济南、青岛等市的范例新城合作伙伴与试点项目政府官员出席会议并演讲交流。

本届论坛通过开幕致辞、专题演讲、嘉宾对话等形式展开，重点介绍了国际绿色范例新城（IGMC）倡议及其标准3.0的最新进展，通过北京城市副中心、浏阳经开区、西安

on how to apply the IGMC Initiative and Standards to the high quality and sustainable development of Chinese cities in the new era. At the forum, speeches were delivered by experts from the Ministry of Housing and Urban-Rural Development and the Ministry of Environmental Protection, principals of China Railway Real Estate Group, China State Construction Engineering Corporation, China Academy of Building Research, Apce Design Group and LAY-OUT Planning Consultants Co., Ltd, government officials from related cities as well as senior representatives of Global Forum on Human Settlements (GFHS).

At the IGECB opening ceremony, the Mayor of Shenzhen Chen Rugui introduced Shenzhen as a city possessing nearly 100 million square meters of green constructions and over 1,000 projects with green building labels, which is leading Chinese cities. He was sure that the high-level event would have a huge impact on China's ecological civilization and green development. Chen Yiming, Chief Engineer of Ministry of Housing and Urban-Rural Development, briefly reviewed the history of IGECB over the past 15 years. He said that every five years IGECB would embark on a new phase of development and formulate theories based on practice, and its evolution represented what the country had achieved in developing green building over the last ten-odd years. The academician Qian Qihu gave an important speech entitled To Develop Green Building and Green Cities by Utilizing Underground Space. He mentioned that the world was embracing the times of green development and China is becoming one of the world leaders in this regard. Developing underground space for green building is an effective way to diversify the uses for land and to save land resources. Qiu Baoxing, President of CSUS, pointed out in his keynote report that the fundamental aspect of green building was to respect traditional culture, natural environment and people's long-term interests, and the principle was to save energy, land, water and materials as well as to protect the environment in the whole life cycle. He believed that the development of green building could form the solid foundation of China's ecological civilization construction.

This year's IGMC Forum was hosted by the Sustainable City Committee of China Research Society of Urban Development and Shenzhen Better City Institute, co-hosted by the World Best Practices Magazine and Shenzhen International Green Model City Investment and Management Co., Ltd. and was greatly supported by GFHS. The experts present at the forum included Wang Dehui, Former Deputy Director-General



▲ 嘉宾对话 Dialogue session



▲ 全球人居环境论坛秘书长、中国城市发展研究会可持续城市专业委员会会长吕海峰致开幕辞

Lu haifeng, Secretary General of Global Forum on Human Settlements, President of Sustainable City Committee of China Research Society of Urban Development, delivered a speech at the opening ceremony

经开区、济南章丘区的绿色实践探索及范例新城试点项目经验分享，探讨结合 IGMC 倡议及其标准更加有效地规划和管理城市空间发展，评估城市与社区的可持续性，改善人居环境，创造和提升房屋和土地价值，提升城市竞争力，推动新时代中国城市高质量可持续发展，同时为粤港澳大湾区“建设富有活力和国际竞争力的一流湾区和世界级城市群，打造高质量发展的典范”做出贡献。

吕海峰秘书长做了题为《国际绿色范例新城倡议：催生改变，共建绿色幸福城市》的报告。他说，城市或城市群是人类聚居和生产的主场，也是应对和解决全球气候变化、环境恶化、贫富分化三大挑战的主战场。当前城市发展呈现两大趋势：一个是绿色低碳，一个是数字智能；一个是碳基，一个是硅基。二者将会高度融合，重塑我们的城市与社区。深圳国家可持续发展议程创新示范区、雄安

of the Nature and Ecology Conservation Department, SEPA & Director of China Office for "Implementation of the Convention of Biological Diversity", Head of Experts Group of Environmental Engineering Assessment Center, Ministry of Environmental Protection of the PRC, Lu Haifeng, Secretary-General of GFHS, Zhao Liyuan, CPPCC Chairman of Zhangqiu District (Ji'nan), Zeng Yu, Deputy Chief Architect in Architectural Design Institute, China Academy of Building Research, Niu Huien, Professor in the School of Architecture & Urban Planning at Shenzhen University, Jiang Juntao, Chief Planner of LAY-OUT Planning Consultants Co., Ltd, Li Fengyu, Professor at Central Academy of Fine Arts and Liu Weibing, President of Sichuan David Architectural Design Co., Ltd. Also, IGMC partners and government officials responsible for IGMC pilot projects from Changsha, Ji'nan, Qingdao and other cities attended the forum to contribute their observations.

The IGMC Forum, consisting of an opening speech, keynote speeches and a dialogue session, highlighted the latest progress of the IGMC Initiative and the IGMC Standards 3.0. Experience on green development and IGMC pilot projects was shared by the Sub-center of Beijing, Liuyang National Economic & Technological Development Zone, Xi'an Economic & Technological Development Zone and the Zhangqiu District of Ji'nan, exploring how to use the IGMC Initiative and the IGMC Standards 3.0 as a tool to plan and manage urban space more effectively, to assess urban and community sustainability, to improve human settlements, to create and enhance housing and land value and to increase cities' competitiveness so as to facilitate the quality and

新区和粤港澳大湾区这三大国家级的超级城市或城市群规划纲要无一不是把绿色发展与数字智能当做主要方向，浓墨重彩，并落实到约束性指标，其中许多指标、策略和范例新城完全一致。作为可持续发展目标 11 的伙伴关系倡议，范例新城以“安全、可持续性、公平、个性、繁荣、幸福的城市和人居环境”为愿景，把幸福作为最高价值，为中国城市高质量可持续发展提供了可资借鉴的综合性策略、评估标准与技术支持，期待建立更广泛的伙伴关系，共同谱写绿色幸福城市交响曲。

据全球人居环境论坛有关负责人介绍，从 2019 年起，“可持续城市与人居环境奖”中城市与社区的评审将采用范例新城标准 3.0 体系，这将拓宽 IGMC 标准的应用范围，也进一步提升该奖项的权威性和系统性。

本届论坛成果丰硕，通过深入的技术研讨和经验分享为城市可持续发展提供了有益的建议和指导，对范例新城标准在项目规划实施中的具体运用提供了借鉴，同时促成了一系列务实合作，中国建筑科学研究院建筑设计院、雅克设计集团、思朴（北京）国际城市规划设计有限公司、四川省大卫建筑设计有限公司等多家知名企业与深圳范例新城投资管理有限公司签署了战略合作协议，加盟国际绿色范例新城倡议。

国家住建部去年 12 月正式发布了新版的《绿色建筑评价标准》，绿色建筑发展也将进入质量时代。作为国内最具规模和影响力的绿色建筑与建筑节能行业盛会，本届国

sustainable development of Chinese cities in the new era as well as to build the Guangdong-Hong Kong-Macao Greater Bay Area into a world-class city cluster with dynamism and international competitiveness and into a model of high quality development.

Secretary-General Lu Haifeng made a report entitled International Green Model City Initiative: Catalyze Change, Jointly Build Green and Happy Cities. According to his report, cities or city clusters are the main place for humans' living and production and also the main battlefield to fight against climate change, environmental deterioration and wealth polarization. At present, the major trends in urban development are green, low-carbon, digital intelligence as well as carbon-based and silicon-based technology, which will fully combine to reshape our cities and communities. Green development and digital intelligence are two top priorities with concrete obligatory indicators in the planning outlines of three state-level zones, including Shenzhen National Innovation Demonstration Zone for Sustainable Development Agenda, Xiongan New District and Guangdong-Hong Kong-Macao Greater Bay Area. Many of their indicators and strategies are totally in line with those of the IGMC Initiative. As the SDG 11 partnership initiative, the IGMC's vision is to make cities and human settlements "safe, sustainable, fair, unique, prosperous and happy", with happiness as its highest value. The initiative provides a comprehensive strategy,



▲ 演讲嘉宾合影 Group Photo of the Speakers at the IGMC Forum



▲ 范例新城倡议战略合作签约仪式 Signing Ceremony of IGMC Strategic Partnership

际绿建大会通过 2 场全体会议、多场新品发布会及 54 场专题研讨，对升级和加快发展绿色建筑、绿色生态城区以及相关绿色技术面临的挑战和历史机遇进行了权威、全面的探讨。会议同期还举办了绿色建筑领域知名度很高、专业性很强的“国际绿色建筑与建筑节能新技术与产品博览会”，全面覆盖整个绿色建筑“产业链”，参展企业 300 余家。“国际绿色范例新城”展位因独特的设计创意和前沿理念，获得了广泛关注和好评。

（中国城市发展研究会可持续城市专业委员会供稿）

图片来源：第 15 届绿建大会 & 本刊编辑部

assessment standards and technical support for the quality and sustainable development of Chinese cities. It embraces extensive partnerships to jointly build green and happy cities.

According to GFHS, in 2019, the IGMC Standards 3.0 will begin to be used to assess cities and communities for the Sustainable Cities and Human Settlements Award, which will expand the applicability of the IGMC standards and make the Award more authoritative and systematic.

The IGMC Forum was fruitful. Through technical discussion and experience exchanges, constructive advice and instruction were provided for urban sustainability and the application of the IGMC standards to project planning and implementation. Meanwhile, a range of practical cooperation was agreed on. For example, a number of well-known enterprises signed

strategic cooperation agreements with Shenzhen IGMC Investment Management Co., Ltd to join the IGMC Initiative, such as the Architectural Design Institute of China Academy of Building Research, Apce Design Group, SPD Planning Design Corporation and Sichuan David Architectural Design Co., Ltd.

In December, 2018, the Ministry of Housing and Urban-Rural Development of China published the new edition of Assessment Standard for Green Building, which indicates that green building is entering a time of quality development. As an influentially big event of green and energy-efficient building in China, this year the IGEBC held two plenary sessions, a number of product unveilings and 54 authoritative symposiums with full discussion on the challenges and opportunities for upgrading and accelerating the development of green building and ecological cities as well as the advancement of related green technology. At the same time, being the very famous and professional exposition in the green building sector, the International New Technologies and Products Expo for Green and Energy-Efficient Building was held and attracted over 300 exhibitors, representing the whole industry chain of green building. The exhibition booth of International Green Model City drew wide attention and was well received thanks to its creative design and leading ideas. 

(This report is provided by Sustainable City Committee, China Research Society of Urban Development.)

Photo source: the 15th IGEBC & WBPM

嘉宾对话 Dialogue

IGMC Initiative Promoting High-quality Sustainable Development of Chinese Cities

国际绿色范例新城倡议助推中国城市高质量可持续发展



主持人：吕海峰 Chair: Lu Haifeng

全球人居环境论坛秘书长、中国城市发展研究会可持续城市专业委员会会长
Secretary General of Global Forum on Human Settlements, President of Sustainable City Committee of China Research Society of Urban Development

IGMC 倡议与标准同中国生态文明建设和绿色发展的方针政策相一致，与中央城市工作会议精神相一致，与几大国家超级城市或城市群战略规划相一致，为中国城市转型提质与高质量可持续发展提供了可资借鉴的综合性策略、评估标准与技术支持。欢迎各位专家围绕所提出的问题各抒己见，展开讨论，集思广益。



李敏泉 Li Minquan

雅克深圳设计总监、重庆大学城市科技学院客座教授
深圳市美好城市研究院总规划师

Director of Shenzhen Branch, APCE Design Co., Ltd., Visiting Professor of City College of Science and Technology, Chongqing University, Chief Planner of Shenzhen Better City Institute

主持人：您认为范例新城标准有哪些类别、策略与方法来强化与提升城市个性特色，对于国内城市有什么启示？

李敏泉：我从4个方面谈一下对《范例新城标准3.0》6项基本原则之一的“个性”的理解。我认为可概括为“一风三公”：“一风”指风貌，包括物态，生态和文态。我们不仅要考虑物质性的空间内容，也应高度重视生态方面和人文方面；“三公”指公共空间、公共艺术和公共设施。对于公共空间的理解，我们不应拘泥于传统概念。公共空间不仅指广场，也应包含公共厕所这些细小的业态形式。对于公共艺术的认识也需提升，传统的“三建”指雕塑、壁画和浮雕，现在的新“三建”指环境装饰、多媒体运用和艺术活动。另外，随着现代城市的发展，例如轨道交通的快速发展对城市公共设施的需求越来越高，也应予以重视。建议范例新城标准进一步充实、丰富与发展。



牛慧恩 Niu Huien

深圳大学建筑与城市规划学院教授
深圳市蕾奥规划设计咨询股份有限公司总规划师

Professor of College of Architecture and Urban Planning, Shenzhen University, Chief Planner of LAY-OUT Planning Consultants Co., Ltd.

主持人：范例新城标准将可持续规划与设计作为18个类别的核心，所推崇的关键策略是“多中心的、紧凑型城市和公交导向型发展（TOD）模式”、土地利用方面倡导混合功能与“小街区、密路网、开放社区、便利慢行”的模式，深圳城市的规划发展是否体现了这些策略？又有哪些新的策略或动态？

牛慧恩：深圳的多中心特点突出，从80年代特区规划，到96版的城市总规，空间结构的特点叫做组团结构，从2010年实行的总规和在编的总规，改称为多中心网络结构。深圳空间结构的特点和国际绿色范例新城标准强调的多中心的概念是非常吻合的，城市规划充分尊重了深圳自然地形地貌的特点，多中心的结构一方面能够有效的缓解城市的交通压力，同时，市民也可以很好地与大自然接触，多中心会是深圳规划贯彻始终的特色。建议IGMC标准考虑城市不同发展阶段的特点，进行分类指导。



刘卫兵 David Liu

四川省大卫建筑设计有限公司董事长、教授级高级建筑师
Professor-level Senior Architect, President of Sichuan David Design Co., Ltd.

主持人：今年，在“可持续城市与人居环境奖”社区评审内容方面，除了常规的空间规划设计、生态环境、公共服务之外，还将在经济、社会、文化三个方面对社区进行要求和引导，这对于促进社区高质量可持续发展有哪些促进作用？

刘卫兵：设计付诸实施，规划引领设计。国际绿色范例新城标准为中国城市从数量型增长向质量型可持续发展转变提供了可资借鉴的综合性策略。同时，我也呼吁重视城市历史文化的保护工作，留住城市的魂。



李凤禹 Li Fengyu

恩朴（北京）国际城市规划设计有限公司总裁、中央美术学院教授
Professor of Central Academy of Fine Arts
President of SPD Planning Design Corporation

主持人：您怎么看国内城市的公共空间现状？贵司在国内绿色公共空间、包括口袋公园设计方面有哪些心得体会分享？

李凤禹：目前，中国的公共空间存在几个方面的问题：1. 行政化和模式化：中国的公共空间存在于一种威权化之下，缺乏对生活真正的关注；2. 主题化：我们的效果图多是描述一个非常感人的画面，我们的公园广场呈现出来的是一种虚假的繁荣；3. 套路化、模式化：公共空间缺乏对生活、对生命本质的思考及生态、生产、生活、生命、生机一系列组合的体现。

由此，我们需要加强对公共空间的设计，我认为需要从以下方面着手：1. 尺度：需要从人的尺度、交往的尺度去创造公共空间；2. 温度：城市温度，需要包容，需要分享；3. 趣味度：设计增加趣味性，增加有趣的内容；4. 交互度：分享生活，加强交互，减少城市孤独感；5. 参与度：所有利益相关者的共同参与。



崔元星 Cui Yuanxing

国际绿色范例新城专家委员会委员、深圳市专家工作联合会特聘专家、深圳市盛世立业产业控股集团总裁
Member of "International Green Model City" Expert Committee, Specialized Expert of Shenzhen Expert Working Group, President of Shenzhen Shengshi Liye Group

主持人：您认为国内特色小镇在绿色低碳方面发展怎样？范例新城倡议及标准对特色小镇可持续发展有什么促进作用？

崔元星：在新形势下，城市可持续发展面临着巨大的挑战和机遇，需要所有利益相关者的共同参与。国际绿色范例新城倡议的推广和发展需要前瞻性的政府、企业和社会力量共同努力，推动城市更绿色、更可持续的发展。建议 IGMCI 标准强化产业经济方面的内容，更好地指导特色小镇发展。



嘉宾演讲精选 Speech Excerpts

International Green Model City
国际绿色范例新城

International Green Model City Initiative: Catalyze Change, Jointly Build Green and Happy Cities

国际绿色范例新城倡议： 催生改变，共建绿色幸福城市

A Speech at the Opening Ceremony of International Green Model City Forum of the 15th International Conference on Green and Energy-Efficient Building by Lu Haifeng, Secretary General of Global Forum on Human Settlements, President of Sustainable City Committee of China Research Society of Urban Development

—— 第十五届绿建大会·国际绿色范例新城论坛开幕式致辞
全球人居环境论坛秘书长、中国城市发展研究会可持续城市专业委员会会长吕海峰

阳春时节，欣欣向荣。我们相聚在粤港澳大湾区的中心城市深圳，出席“第十五届绿建大会·国际绿色范例新城论坛”。这也是范例新城倡议大家庭与老朋友的年度聚会。在此，我谨代表全球人居环境论坛、中国城市发展研究会可持续城市专业委员会等机构向各位表示热烈欢迎！向绿建大会主办方对本论坛的支持表示感谢！

首先我想和大家简要分享国际绿色范例新城倡议和标准的基本内容。

On this vigorous spring day, we meet here in Shenzhen, the center of the Guangdong-Hong Kong-Macao Greater Bay Area, for the International Green Model City Forum of the 15th IGEBC, which is also an annual gathering of the IGMCI family and old friends. Hereby, on behalf of the Global Forum on Human Settlements, the Sustainable City Committee of China Research Society of Urban Development and other related organizations, I would like to extend a



▲ 吕海峰 Lu Haifeng

全球人居环境论坛（GFHS）于2011年4月在联合国总部发起了“国际绿色范例新城（简称“范例新城”或“IGMC”）倡议”，并与时俱进，不断完善。作为一个联合国支持的、创新的绿色低碳城镇发展行动计划，IGMC倡议旨在以IGMC标准作为评估和指导可持续城市发展的先进的规划工具，通过提供创新概念、综合策略和方法、认证监测系统和解决方案，包括实施试点项目，结合其它方法，改变我们对城市和人居环境的规划、开发、融资、治理和管理方式，建设人人共享的可持续城市和人居环境，促进中国城市从数量型增长向质量型可持续发展转变，推动在地方层面贯彻《2030年可持续发展议程》、《巴黎气候协定》和《新城市议程》。

《IGMC标准3.0》是评估和指导可持续城市发展的先进工具，植根于《2030年可持续发展议程》和《新城市议程》，与新型城镇化规划与中央城市工作会议精神一致，其愿景基于6项基本原则：安全、可持续性、公平、个性、繁荣与幸福，通过贯穿“空间规划与开发、基本服务、环境、经济、社会和文化”这六个维度的18个科学细分的类别予以落实。这18个类别又分别从“定义和目标、策略方法、主要指标、评分系统和最佳范例”等方面进行了深入阐述。标准有英文和中文两个版本。

《IGMC标准3.0》是由中外知名专家在总结中外城市规划建设发展规律和众多成功经验的基础上编制的一套行之有效的策略文件包括评估认证系统，也吸收融合了国际上生态城市、精明增长、新城市主义等理论与实践的精华，具有普遍的指导意义和参考价值。该标准于2016年10月在厄瓜多尔基多市举行的联合国“人居三”大会上发布。

基于《IGMC标准3.0》，我们开发了IGMC全球在线评估认证系统中英文版，www.igmci.org，利用在线方式开展评估认证，让复杂事情简单化，人人可以使用。

warmest welcome to all of you and express my sincere gratitude to the IGECB organizers for their support.

First of all, I want to brief you on the basics of the IGMC Initiative and Standards.

The International Green Model City (IGMC) Initiative was launched by Global Forum on Human Settlements (GFHS) at the headquarters of the United Nations in April 2011. The Initiative never stops improving itself to keep up with the times. As a UN-supported and innovative green low-carbon action plan for urban development, the IGMC initiative motivates forward-looking governments, businesses and the civil society to work together in order to build sustainable cities and human settlements for all, to facilitate transformation of Chinese cities from quantity-driven growth to quality-oriented sustainable development and to promote the implementation of the 2030 Agenda for Sustainable Development, the Paris Climate Agreement and the New Urban Agenda at the regional and local levels.

The IGMC Standards 3.0, an advanced tool to assess and guide sustainable urban development, is rooted in the 2030 Agenda for Sustainable Development and the New Urban Agenda, and accords with the spirit of China's national new urbanization planning and the Central Urban Work Conference. Its vision is based on six basic principles: Safety, Sustainability, Equity, Identity, Prosperity and Happiness, and is carried out through six dimensions of spatial planning and development, basic services, environment, economy, society and culture. Furthermore, the 18 categories are further elaborated in terms of definitions and aims, key strategies and methodologies, key indicators, scoring systems and best practices. It is written in both English and Chinese.

The IGMC Standards 3.0 is a feasible document created by well-known experts from home and abroad on the basis of the rules and experience drawn from many successful cases of urban planning and development across the world, absorbing the theoretical and practical essence of international eco-cities, Smart Growth and New Urbanism, which offers universal guidance for reference. It was released at Habitat III which was held in Quito, Ecuador in October 2016.

Based on the IGMC Standards 3.0, we have developed the IGMC global online assessment and certification system (Chinese and English versions): www.igmci.org. Online assessment and certification makes things easier and is accessible to everyone.

So far, more than 20 cities, zones and enterprises across the globe have joined the IGMC Initiative,

目前已经有加拿大温哥华市、南非开普敦市、中国贵阳市、长沙浏阳经开区、西安经开区、碧桂园、观澜湖、蕾奥规划等20多个国际国内知名城市（园区）与企业加入了IGMC倡议，部分项目列入试点。

接下来我向大家汇报过去的一年范例新城方面所做的工作：

在基本建设方面，我们圆满完成了继2017年开始的范例新城在线评估认证系统和范例新城概念动画短片的设计制作，并正式上线发布。范例新城动画短片于去年世界城市日在位于曼谷市的联合国亚太经社理事会成功首映。大家刚到的就是这部科普短片。该片以标准3.0为指导，讲述了一位名字叫飒飒、居住在中国南方一个滨海城市的小朋友一家三口的生活故事，通过郊野、中心区、街道、社区、家庭等多样化场景，描绘了呼吸甜美的城市、行云流水的城市、便利宜居的城市以及智慧幸福的城市，勾勒出未来绿色幸福城市的样貌。在线评估认证系统为城市利益相关者评估城市与社区的可持续性提供了便利。

培训教育方面，我们在曼谷联合国亚太经社理事会举办的2018全球人居环境论坛年会上举行了范例新城培训会，同期举行了范例新城主题分论坛。去年11月18日，在北京举办的中国城市创新论坛上，我做了题为“国际绿色范例新城倡议：促进我国城市高质量可持续发展”的演讲。

such as Vancouver (Canada), Cape Town (South Africa), Guiyang (China), Liuyang National Economic & Technological Development Zone, Xi'an Economic & Technological Development Zone, Country Garden, Mission Hills and LAY-OUT Planning. Some of them have also been on the list of IGMC pilot projects.

Next, I am going to tell you what IGMC has done over the past year.

In terms of basic construction, kicking off in 2017, the IGMC global online assessment and certification system and the introductory animation film of IGMC were completed and released last year. The animation film premiered at the UN ESCAP in Bangkok on World Cities Day last year, the one you watched just now. Inspired by IGMC Standards 3.0, the film was produced based on the life of the SaSa family of three who lives in a Southern Chinese city. It displays what a future greener city should look like in terms of ecological environment, transport and mobility, CBD, neighborhood and smartness. The film therefore envisions a beautiful city with clean air, a well-connected city with unimpeded traffic flow, a livable city with convenient facilities, and a smart city filled with happiness. As for the online assessment and certification system, it makes it more convenient to assess the sustainability of cities and communities.



▲ 范例新城短片场景：未来社区的阳台菜园
IGMC animation film—balcony garden of future community

在市场推广方面，去年我们和恒大集团签署了包括范例新城在内的战略合作协议。在有关各方认可范例新城理念的基础上，蕾奥公司在西安经开区有关项目的招投标中胜出，范例新城标准成功导入经开区汽车小镇控规和城市设计之中，落地实施。接下来蕾奥公司蒋总会和大家重点分享。菲律宾奎松市市长上个月签署承诺函——加入了范例新城倡议。至此，国内外城市（园区）一共达到了 13 个。今天又将有几家在全国很有影响力的规划设计企业加盟 IGM C 倡议，更多的城市与企业今年也将陆续加入范例新城大家庭。

在试点建设方面，我们和浏阳经开区管委会就《试点现状评估报告》和编制《试点可持续行动规划》建议方案进行了多次讨论，最后于去年 5 月底在长沙召开的联席会议上原则达成一致，决定尽快实施。第 31 期全球最佳范例杂志以及由中国社科院主管的、本月即将出版的《中国城市年鉴》也对浏阳经开区试点工作做了报道。

在标准应用推广方面，新的《中国城市年鉴》将全文刊登《范例新城标准 3.0》”城市版的全部 112 个指标体系与评分系统，这是该标准在国内国家级权威媒体上首次发布。从 2019 年起，“可持续城市与人居环境奖”评审中，城市与社区将采用《范例新城标准 3.0》体系，这将拓宽 IGM C 标准的应用范围。全球人居环境论坛何莲副秘书长接下来会给大家介绍。

下面我想结合几个案例对当今城市规划发展趋势做一些分析与建议，供大家参考，也为接下来的发言交流暖场。

众所周知，我们正面临着气候变化、环境恶化、贫富分化的严峻挑战。人们越来越难以忍受垃圾围城、雾霾锁城、污水绕城、汽车堵城、房价炒城的困扰。物种大量消失、冰川日渐融化、北极熊无地自容的困境大多数人不会感同身受，如同温水煮蛙，熟视无睹，但全球日益增加的极端性天气，比如去年的超强台风“山竹”则让人至今心有余悸。当天深圳近 2 万棵树木被摧毁，家家闭户，困守屋内，任风雨咆哮肆虐，无可奈何。气候变化就在今天，在我身边。巴黎协定提出的 2 度目标已经不够，新的目标是 1.5 度。联



▲ 超强台风“山竹”袭击深圳
Horrible super typhoon Mangkhut slammed into Shenzhen

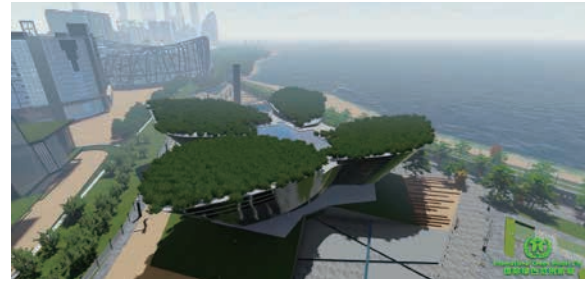
With regard to education, we organized the IGM C training and held the IGM C sub-forum during the 2018 Annual Session of GFHS at the UN ESCAP in Bangkok. In addition, on November 18th last year, I delivered a speech entitled “The IGM C Initiative: Promote the High Quality and Sustainable Development of Chinese Cities” at the China Urban Innovation and Development Forum in Beijing.

For the sake of publicity, last year we signed an IGM C strategic cooperation agreement with the Evergrande Group. On the basis of the IGM C philosophy, LAY-OUT won the project bidding of the Xi'an Economic & Technological Development Zone to apply the IGM C Standards to the regulation and planning of the Auto Town in the Zone. Later, Mr. Jiang, Deputy General Manager of LAY-OUT, will tell us about it. Last month, Mayor of Quezon, the Philippines signed a letter of commitment to be the 13th city (zone) to join the IGM C Initiative. Today, a few more influential planning and design enterprises in China will join us too. This year, we will see more cities and enterprises become a member of the IGM C family.

As regards the development of pilots, we had a lot of discussion with the Administration Committee of the Liuyang National Economic & Technological Development Zone about the “Assessment Report on the Pilots' Status” and the composition of the “Sustainable Action Planning of Pilots”. Finally, we reached an agreement on the principles at the joint meeting held in Changsha in May last year, and decided to implement them as soon as possible. The work of the Liuyang National Economic & Technical Development Zone has been covered in the issue No. 31 of World Best Practices, and in The Almanac of China's Cities to be published this month.

As for promotion and application, the new edition of The Almanac of China's Cities will publish the full text of the IGM C Standards 3.0, including the 112 indicators and the rating system. It will be the first time for the Standards to appear in a state-level authoritative publication. Besides, in 2019 the IGM C Standards 3.0 will begin to be used to assess cities and communities for the Sustainable Cities and Human Settlements Award, which will expand the applicability of the Standards. Deputy Secretary-General of GFHS He Lian will talk about it later.

Now, I would like to share with you some cases as well as my analysis and advice on the trends of urban planning and development for your reference, which are also a lead-in for the following discussion.



▲ 范例新城短片场景：未来的宜居城市
IGM C animation film—future livable city

联合国报告指出，当温升从 1.5℃发展到 2℃，气候变化的影响很可能从量变到质变，在升温 2℃的情境下，全球 99% 的珊瑚礁都将退化；若将目标调整为 1.5℃，人类将避免大量因气候变化带来的损失与风险。此外，每年倾泻到海洋中的 800 万吨塑料垃圾，已经出现在地球最深处的马里亚纳海沟，不断断裂的塑料微小颗粒已经进入海洋生物的身体中，进入到人类的肠胃和排泄物中，细小微粒还会像 pm2.5 一样进入我们的血液、乃至细胞之中，此症目前仍然无解。

上个月世界环境大会期间，联合国环境署发布的《全球环境展望 6》警告称，地球已受到极其严重的破坏，如果不采取紧急且更大力度的行动来保护环境，地球的生态系统和人类的可持续发展事业将日益受到更严重的威胁。淡水系统中污染物的抗菌素耐药性问题可能在 2050 年成为人类的主要死因，而内分泌干扰物会影响男性和女性的生育能力以及儿童的神经发育。世界拥有向更可持续发展道路迈进所需的科学、技术和资金，但公众、企业和政治领导人尚未在这些领域投入足够的关注和支持，他们仍在坚持一些过时的生产和发展模式。

面对全球危机挑战，国际国内，改变都已经或正在发生。2015 年是一个转折点，联合国会员国先后通过了《2030 年可持续发展议程》、《巴黎气候协定》与《新城市议程》，并在全球范围逐步贯彻落实。欧盟去年 11 月提出到 2050 年将实现“碳中和”，同时创造繁荣并提高生活质量。

城市或城市群是人类聚居和生产的主场，也是应对和解决上述顽症的主战场。当今城市发展呈现两大趋势：一个是绿色低碳，一个是数字智能；一个是碳基，一个是硅基。二者将会高度融合，重塑我们的城市与社区。范例新城的愿景提出“建设安全、可持续性、公平、个性、繁荣、幸福的城市 and 人居环境”，把幸福作为最高价值，就是顺应和引导这两大趋势，要在地方层面贯彻落实《2030 年可持续发展议程》、《新城市议程》与《巴黎气候协定》，因而是实现全人类可持续发展目标的重要途径，也是实现中华民族伟大复兴的中国梦的应有之义。这是范例新城倡议和标准的使命与价值所在。

As is known to us all, we are confronted with serious challenges, such as climate change, environmental deterioration and wealth polarization. Our citizens are plagued by loads of garbage, heavy smog, ubiquitous sewage, traffic congestion and soaring housing price. But most people are indifferent or even turn a blind eye to the fact that many species are disappearing, glaciers are melting, polar bears are losing their habitat and extreme weather is multiplying globally. I still remember that the horrifying super typhoon Mangkhut slammed into Shenzhen last year, destroying nearly 20,000 trees and forcing people to confine themselves indoors, who were helpless in front of the severe rainstorm. Climate change is happening right before our eyes at the very moment. The Paris Agreement suggests to limit warming to 1.5 degrees because 2 degrees is still too high. The UN reported that if warming rose from 1.5 degrees to 2 degrees, the situation would be totally different because 99% of the coral reefs in the world would degrade while limiting temperature rise to 1.5 degrees could avoid huge losses and risks caused by climate change. What's worse, eight million tons of plastic is dumped into the ocean each year and has reached the Mariana Trench, the deepest spot on Earth. The tiny plastic particles were sucked up by marine creatures and were also found in human intestines, stomach and excreta. Just like PM 2.5, they can be absorbed into our blood and even cells, which is incurable at present.

During the UN Environment Assembly last month, the UN Environment released the Global Environment Outlook-6, warning that the earth had been severely damaged and the ecological system and human sustainable development would be increasingly threatened if no emergency and stronger action was taken. The antibiotic resistance of pollutants in fresh water systems might be the main cause of human deaths by 2050. Endocrine disruptors will affect the fertility of men and women and also children's neurodevelopment. Although the world has the science, technology and funding to move towards a more sustainable path, the public, businesses, and political leaders have not invested enough attention or support in these areas, and they are still sticking to some outdated patterns of production and development.

In the face of global crisis and challenges, international and domestic changes have been taking place. 2015 was a turning point because the UN member states adopted the 2030 Agenda for Sustainable Development, the Paris Agreement and the New Urban Agenda, and are determined to implement them on a global scale. The EU put forward the target in

2017年11月全球25个城市市长在波恩先行承诺：为抗击气候变化，2050年之前将使各自城市实现净零碳。这些城市包括非洲的安卡拉、开普敦，欧洲的巴塞罗那、哥本哈根、巴黎、伦敦，美洲的纽约、波特兰、洛杉矶、温哥华、基多，澳洲的墨尔本等，共覆盖1.5亿人口，其中温哥华与开普敦已经加入范例新城倡议。我们也期待能有中国城市站出来承诺实现净零碳，范例新城愿意提供支持。全球人居环境论坛每年都有一批可持续发展先锋城市与企业参会，其中的佼佼者被授予“可持续城市与人居环境奖”，他们的成功经验激励着同行业不断采取行动。

国内来看，十八大以来，生态文明已经从理论上升为五位一体的重大国策，十九大进一步强化，绿色发展、全面协调可持续发展一步步落地成为硬约束，全方位贯彻到生产、生活、生态环保和城乡规划建设中来。因此，我们看到了系列重大变革和趋势：国土空间规划改革，多规合一；山水林田草海统筹，生态无界；水土气碳全面治理，铁腕治污；绿色经济高速增长，绿色健康生活逐步



范例新城的愿景提出“建设安全、可持续性、公平、个性、繁荣、幸福的城市 and 人居环境”，把幸福作为最高价值，就是顺应和引导这两大趋势，要在地方层面贯彻落实《2030年可持续发展议程》、《新城市议程》与《巴黎气候协定》，因而是实现全人类可持续发展目标的重要途径，也是实现中华民族伟大复兴的中国梦的应有之义。

The vision of the IGMC is to build cities and human settlements that are characterized by “safety, sustainability, equality, identity, prosperity and happiness”. Taking happiness as the highest value means to follow and lead the two major trends of urban development. Therefore, to implement the 2030 Agenda for Sustainable Development, the New Urban Agenda and the Paris Agreement at the local level is an important way to achieve the goal of sustainable development for all mankind, and also an indispensable part of the Chinese dream to realize the great rejuvenation of the Chinese nation.



November last year to achieve “carbon neutrality” by 2050, while creating prosperity and improving the quality of life.

Cities or city clusters are the main place for human settlements and production, and also the main battlefield to fight against the above-mentioned chronic problems. Today, the two major trends in urban development are “green and low-carbon” and “digital intelligent”, meaning one is “carbon-based” and the other is “silicon-based”, which will fully combine to reshape our cities and communities. The vision of the IGMC is to build cities and human settlements that are characterized by “safety, sustainability, equality, identity, prosperity and happiness”. Taking happiness as the highest value means to follow and lead the two major trends of urban development. Therefore, to implement the 2030 Agenda for Sustainable Development, the New Urban Agenda and the Paris Agreement at the local level is an important way to achieve the goal of sustainable development for all mankind, and also an indispensable part of the Chinese dream to realize the great rejuvenation of the Chinese nation. That is the mission and value of the IGMC Initiative and Standards.

In November 2017, the mayors of 25 cities around the world promised in Bonn to achieve net zero carbon by 2050 in order to combat climate change, including Ankara and Cape Town in Africa; Barcelona, Copenhagen, Paris and London in Europe; New York, Portland, Los Angeles, Vancouver and Quito in America and Melbourne in Australia. They cover a population of 150 million. Besides, Vancouver and Cape Town have joined the IGMC Initiative. We also look forward to having Chinese cities stand up and promise to achieve net zero carbon, and the IGMC can give them support. Every year, a number of pioneering cities and enterprises of sustainable development attend the annual forum of GFHS and the best ones of them will receive the “Sustainable Cities and Human Settlements Award”. Their successful experience has inspired the industry to take action.

In China, since the 18th National People’s Congress (NPC), ecological civilization construction has become one of the major national policies. The 19th NPC went further to make binding policies for achieving green, all-round and coordinated development in production, life, environmental protection and urban-rural planning. So we have seen a series of major reforms and new trends. For example, multiple regulations for spacial planing of land have been integrated as one; mountains, waters, forests, fields, grasslands and seas are coordinated to form a systematic ecosystem; tough measures have been taken to deal with water, land, air pollution as well

风行。这既是国际国内大势所趋，环境所迫，也是人心所向，前景所在。去年12月住建部发布了新版的《绿色建筑评价标准》，最大变化就是：绿色建筑评价应在建设工程竣工验收后进行。以前设计阶段凭图纸就可以获得绿建认证的做法成为过去。本届绿建大会“升级绿色建筑、助推绿色发展”也指明了“绿而更绿”的趋势。下面我分析三个重要案例：深圳、雄安新区和粤港澳大湾区。等下曾宇副总建筑师还将和大家分享北京副中心绿色新理念的实践探索。这几大国家超级战略的规划纲要中都把生态文明、绿色发展、智慧高效当做主方向，刚性约束，其中不少指标、策略和范例新城完全一致。

去年2月，国务院批准深圳市以创新引领超大型城市可持续发展为主题，建设国家可持续发展议程创新示范区，形成可操作、可复制、可推广的有效模式，对超大型城市可持续发展发挥示范效应，和太原、桂林这两个不同类型的城市一道，为中国落实2030年可持续发展议程提供实践经验。深圳将在可持续发展竞赛中再度先行先试，这对于提升深圳城市的环境质量、包容性、竞争力与幸福指数有积极意义。深圳的可持续发展创新示范区探索与范例新城倡议促进在地方层面贯彻《2030年可持续发展议程》目标策略完全一致，可以相互促进，相得益彰。由于时间关系我就不具体展开了。



▲ 深圳建设国家可持续发展议程创新示范区启动仪式
Launching Ceremony of Shenzhen National Sustainable Development Agenda Innovation Demonstration Zone

雄安新区是首都之翼，千年大计，规划目标是“到2035年，基本建成绿色低碳、信息智能、宜居宜业、具有较强竞争力和影响力、人与自然和谐共生的高水平社会主义现代化城市”，把绿色低碳放在首位，信息智能紧随其后。38个指标中的中25个都可以在范例新城指标体系中找到，指标值也很接近。规划提出：“要坚持以资源环境承载能力为刚性约束条件，以水定城，以水定人”，这是生态足迹的概念；“注重街区、邻里空间设计，形成尺度宜人、亲切自然、全龄友好的社区环境。”这是小街区、社会包容的策略；“终端能源消费全部为清洁能源”，这

as carbon emission; green economy is growing fast and the eco-friendly life style is trendy. All these are in accord with the international and domestic trends and situations, and in line with people's interests as well as future development. In December last year, the Ministry of Housing and Urban-Rural Development published a new version of the Green Building Evaluation Standards. The biggest change is that it requires green building evaluation to be carried out only after the construction project is completed, and green building certification cannot be issued just on the basis of design drawings anymore. The theme of the IGEBG this year -- “Upgrade Green Building and Accelerate Ecological Development”-- also revealed the trend to be “green and greener”. Next, I will analyze three important cases: Shenzhen, the Xiong'an New Area and the Guangdong-Hong Kong-Macau Greater Bay Area, and then the deputy chief architect Mr. Zeng Yu will share with you the practical exploration of new green concepts for the Beijing Sub-center. In these cases, the planning outlines of the state-level super strategies all regard ecological civilization, green development, intelligence and high efficiency as the principal direction with rigid instructions. Many of their indicators and strategies are consistent with those of the IGMC.

In February last year, the State Council approved Shenzhen to establish the National Innovation Demonstration Zone for Sustainable Development Agenda to strive for innovation-driven sustainable development, forming an effective model that could be applied, duplicated and promoted in megacities. Together with two different types of cities, Taiyuan and Guilin, Shenzhen will provide practical experience for China to implement the 2030 Agenda for Sustainable Development. Also, Shenzhen will continue to be a pioneer in sustainable development to enhance its environmental quality, inclusiveness, competitiveness and happiness index. Shenzhen's National Innovation Demonstration Zone for Sustainable Development Agenda totally accords with the IGMC's aims and strategies to implement the 2030 Agenda for Sustainable Development at the local level, and they are complementary to each other. But I will not elaborate on it for the sake of time.

The Xiong'an New Area is the propeller for Beijing. The goal of its planning is to “build a high-level modern socialist city with strong competitiveness and influence, which is green, low-carbon, information-intelligent and livable and where man and nature coexist harmoniously”. Obviously, green and low carbon comes first, followed by information-intelligence. Of its 38

是净零碳策略；“构建社区、邻里、街坊三级（分别是15、10、5分钟）生活圈”，这是混合功能、便利宜居的概念；“科学规划路网密度，起步区路网密度达到10 – 15公里/平方公里，合理设计道路宽度”，这是密路网的策略；“设置适宜骑行、步行的慢行系统，与机动车空间隔离”，这是慢行城市的策略；“起步区绿色交通出行比例达到90%”，这将让大部分私家车远离城区通勤；“建设区雨水年径流总量控制率不低于85%”，这是绿色基础设施与海绵城市策略；“最终实现原生垃圾零填埋”，这是零废弃物策略。这些概念策略也都是范例新城大力推崇的，都是以人为本，不是以资本本。

《粤港澳大湾区发展规划纲要》指导思想中提出：“建设富有活力和国际竞争力的一流湾区和世界级城市群，打造高质量发展的典范。”基本原则提出“实行最严格的生态环境保护制度，坚持最严格的耕地保护制度和最严格的节约用地制度，推动形成绿色低碳的生产生活方式和城市建设运营模式，为居民提供良好生态环境，促进大湾区可持续发展。”，一连三个“最”。战略定位提出建设“宜居宜业宜游的优质生活圈”，把优质生活直接作为战略目标；发展目标中提出：2022年“绿色智慧节能低碳的生产生活方式和城市建设运营模式初步确立，居民生活更加便利、更加幸福”，强调“城市建设运营模式要绿色智慧节能低碳”，明确把“幸福”作为发展目标，这在国内还不多见。还提出“建成智慧城市群”，“探索未来城市发展模式”。规划第七章“推进生态文明建设”很精彩，水土气全面防治，陆海统筹，保障餐桌和人居环境安全；在应对气候变化方面要“实施近零碳排放区示范工程，力争碳

indicators, 25 can find their counterparts with similar value in the IGMC indicator system. The planning for Xiong'an proposes a number of requirements: “to adhere to the rigid constraints of resource and environmental carrying capacity as well as water conservation”, which is about ecological footprints; “to pay attention to the spatial design of neighborhoods to create a community that is friendly to all ages with well-proportioned space and pleasant environment”, which represents the strategies of small communities and social inclusiveness; “to ensure 100% clean energy for end-use energy consumption”, which means the net zero carbon strategy; “to build a three-tier neighborhood within 5, 10 and 15 minutes of walk”, which embodies the concept of mixed-use and convenient communities; “to scientifically design the road network’s density in the starting area at 10-15 km/km² with reasonable road width”, which is the road narrowing strategy; “to build a slow traffic system for cyclists and pedestrians and separate them from vehicles”, which is called the slow traffic strategy; “to increase the percentage of green transportation in the starting area to 90%, which can keep a majority of private cars away from the urban commute; “to maintain the control rate of the total annual rainfall runoff in the construction area up to 85%”, which demonstrates the strategies of green infrastructure and sponge cities; “to realize zero landfill of primary garbage”, which is called the zero garbage strategy. These concepts and strategies are also strongly advocated by the IGMC because they are people-oriented instead of capital-based.

The Guangdong-Hong Kong-Macao Greater Bay Area Development Plan aims at “building a first-class bay area and a world-class city cluster with dynamism and international competitiveness to create a model of high-quality development.” The fundamental principle of the Plan calls for “carrying out a most stringent system to protect the ecological environment, to preserve farmland and to save land resources, promoting a green and low-carbon mode of production, living as well as urban construction and operation, and creating an excellent ecological environment for residents, so as to facilitate the sustainable development of the Greater Bay Area. That shows the great determination of the Plan. The strategic positioning of the Greater Bay Area is to build “a quality circle for life, business and tourism, with quality life as its strategic goal. The development goal of the Area is to “basically establish a green and low-carbon mode of production, living as well as urban construction and operation so that residents can live a more convenient and happier life”, emphasizing that “urban construction and operation should be green,

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IGMC 倡议与标准同中国生态文明建设和绿色发展的方针政策相一致，与中央城市工作会议精神相一致，与几大国家超级城市或城市群战略规划相一致，为中国城市转型提质与高质量可持续发展提供了可资借鉴的综合性策略、评估标准与技术支持。

the spirit of the Central Urban Work Conference and the strategic planning of several super cities or city clusters of national importance, which also provide comprehensive strategies, assessment standards and technical support for the transformation and high-quality sustainable development of cities in China.

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排放早日达峰，建设绿色发展示范区”，近零碳排放示范区概念开始导入，这在几年前大家想都不敢想；在资源循环利用方面“实行生产者责任延伸制度”，谁的孩子谁抱走，资源环境的成本将会记入产品成本，生产者和消费者都要买单。这些都是高质量、绿色幸福湾区的发展方向。

因此，我们再也不能按照过去的做法：只片面地关心经济指标与GDP，忽视生活质量与幸福感，土地分区大尺度，绿色低碳当点缀，规划设计不精细或者执行不到位，资源利用低效，以牺牲环境为代价。如果仍然沿袭这些做法，项目规划之时就已落后，建成之时就已被抛弃。绿色低碳必须下真功夫，生活质量必须作为城市的主要目标与生产、生态统筹考量，充分运用数字智能技术进行城市与资源管理。世界城市日的理念是“更好的城市，更好的生活”。可持续发展目标11的第一个关键词就是“包容性”，确保人人获得适当、安全与负担得起的住房和基本服务。政府在这方面的作用十分关键，规划设计的引领作用也十分突出。联合国人居署前执行主任华安·克洛斯说过“城市需要能够在城市规划和设计方面发挥主导作用的政治机构。一旦做到这一点，投资、就业机会创造、市民基本服务质量提升将接踵而来”。看看现在国内的抢人大战，如果一个城市没有持续的优质生活和幸福指数，即便是吸引来的人才也迟早会挥手离去。

闻道有先后，知行贵合一。青山孕绿水，弄潮正当时。绿色低碳的幸福城市建设需要系统科学的标准评估诊断，需

intelligent, energy-efficient and low-carbon. There are few other places in China to view happiness as one of their development goals. The Plan is also ambitious to “build a smart city cluster” and “explore a development mode for future cities”. The seventh chapter of the Plan is very informative about ecological civilization construction, involving the prevention and treatment of water, air and land pollution, the coordination of land and ocean as well as food and human settlement safety. To tackle climate change, we should “implement the demonstration project of near-zero carbon emission zones, struggle to achieve the carbon emission peak and establish a demonstration zone of green development”. The concept of near-zero emissions now has been introduced though it was unbelievable a few years ago. In terms of resource recycling, extended producer responsibility is applied. Manufacturers should take responsibility for the whole life cycle of their products, so any costs of environmental resources will be added to the product costs, which will be paid by producers and consumers. These are all the directions for building a quality, green and happy bay area.

Therefore, we are not supposed to follow the old path any more. We can't just care about economic indicators and neglect the quality of life and happiness; we can't waste land by randomly dividing it into huge areas and undermine the importance of green and low-carbon development; we can't allow crude planning design, inappropriate execution, the inefficient use of resources and the sacrifice of environment. Otherwise, any project will be outdated even in the planning stage and be abandoned after completion. **To be green and low-carbon requires painstaking efforts. The quality of life must be the major goal of urban development and should be taken into consideration together with production and ecology, and also digital intelligent technology can be fully applied to urban and resource management, just like what the theme of World Cities Day says, “Better City, Better Life”.** The first key word of Goal 11 of the Sustainable Development Goals is “inclusiveness”: to ensure suitable, safe and affordable housing and basic services for all. To achieve that, the government will play a very critical role with planning and design taking the lead. According to Joan Clos, Ex-Executive Director of UN-HABITAT, cities need political institutions which can play a leading role in urban planning and design so that investment, job opportunities and the improvement of the quality of basic citizen services will come as a result. Now cities in China are fiercely competing for talents, but if they fail to constantly offer a high-quality happy life, people will leave soon or later.



▲ 范例新城短片场景：红飘带绿道
IGMC animation film—red ribbon greenway

要综合的策略和高水平的顾问团队咨询服务，需要志同道合的朋友圈交流借鉴，需要专业平台与供应链支持，中小城市、园区需求更是迫切。IGMC 倡议与标准同中国生态文明建设和绿色发展的方针政策相一致，与中央城市工作会议精神相一致，与几大国家超级城市或城市群战略规划相一致，为中国城市转型提质与高质量可持续发展提供了可资借鉴的综合性策略、评估标准与技术支持。欢迎有兴趣的城市、园区、企业加盟范例新城倡议大家庭，共同谱写绿色幸福城市交响曲，尽到我们这代人应尽的职责。

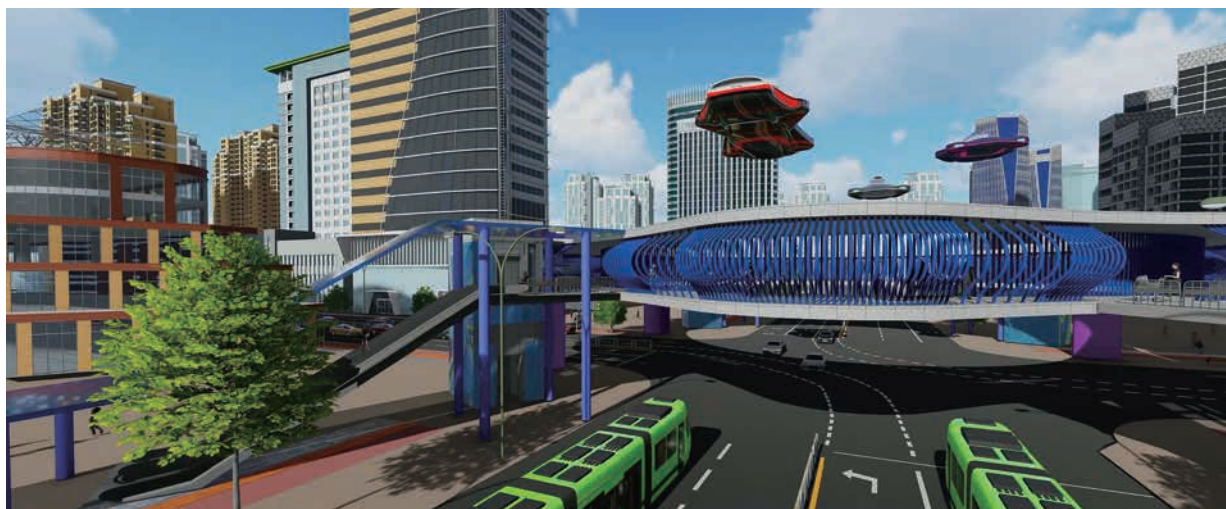
最后，借这个机会，我和大家分享 2019 全球人居环境论坛年会的信息。今年的论坛年会计划于 9 月 5 日 -6 日在位于埃塞俄比亚首都亚的斯亚贝巴的联合国会议中心举办，主题为：数字时代城市与人居环境的可持续发展。绿色智慧城市、智能家居、智能建筑、智慧交通、智能规划设计将成为热议议题。会议由全球人居环境论坛与联合国非洲经济委员会、国际电信联盟和世界城市运动联袂主办，同期举行“可持续城市与人居环境奖”盛典。联合国人居署、环境署与联合国非洲经委会等国际组织的高级官员、埃塞俄比亚等国家的政要将出席会议。IGMC 倡议和标准也将是大会的重点议题，欢迎各位继续关注参与。

Whenever you learn something, what matters is to put it in practice, and now it is high time to strive for green development. The construction of green, low-carbon and happy cities requires systematic and scientific assessment and diagnosis, comprehensive strategies, advice given by a top consulting team, experience shared by others in the industry as well as the support of a professional platform and supply chain. Medium and small cities and zones are even

in greater need of these. The IGMC Initiative and Standards are consistent with the principles and policies of China's ecological civilization construction and green development, the spirit of the Central Urban Work Conference and the strategic planning of several super cities or city clusters of national importance, which also provide comprehensive strategies, assessment standards and technical support for the transformation and high-quality sustainable development of cities in China. Cities, zones and enterprises are welcome to join the IGMC family to build green and happy cities together and to fulfill the responsibilities of our generation.

With this opportunity, I want to share with you that the 2019 Annual Session of Global Forum on Human Settlements is scheduled to take place from September 5th to 6th at the United Nations Conference Center in Addis Ababa, Ethiopia. The theme is "sustainable development of cities and human settlements in the digital era". Green smart cities, smart homes, smart buildings, smart transportation and intelligent planning and design will become hot topics. The session will be co-hosted by GFHS, the United Nations Economic Commission for Africa (UNECA), the International Telecommunication Union (ITU) and the World Urban Campaign (WUC). At the same time, the ceremony of "Sustainable Cities and Habitat Environment Awards" will be held. Concerned national dignitaries, senior officials from UN and other international organizations, mayors, heads of multinational corporations, well-known experts and scholars will attend the conference and contribute to its deliberations and outcome. The IGMC Initiative and Standards will also be the focus of the conference. Please stay tuned and participate in this important meeting.

WBPM



▲ 范例新城短片场景：未来城市绿色出行 IGMC animation film—green mobility of future city

编者按 EDITOR'S NOTE

西安经济技术开发区成立于 1993 年，2000 年被国务院批准为国家级开发区。具有“西安城市中核 + 新兴产业高地”的复合优势，重点发展汽车、高端装备制造、军民融合、总部经济和现代金融业、消费品制造、战略性新兴产业、现代服务业、能源加工业等八大“千亿级”产业集群，加快建设具有国际竞争力的一流开发区，为西安市实现“聚焦三六九、振兴大西安”的奋斗目标和国家中心城市建设提供强力支撑。

西安经济技术开发区管委会高度重视产城融合、绿色发展，2018 年经开区与全球人居环境论坛进行互动交流，积极吸收借鉴国际绿色范例新城标准理念和指标体系，并率先在泾渭新城汽车小镇控规和城市设计中展开实践探索。深圳蕾奥规划设计咨询股份有限公司与深圳范例新城投资管理公司密切协作，圆满完成了设计任务，并于 11 月 14 日向管委会领导进行了汇报，获得好评。这一探索对于国内其它的开发区具有积极的借鉴意义。蒋峻涛总规划师的演讲重点介绍了导入范例新城标准的汽车小镇指标体系，供读者参考。

Exploration and Practice of Importing IGMC Standards into Auto Town of Xi'an Economic & Technological Development Zone

范例新城标准导入 西安经开区汽车小镇控规设计的探索与实践

Jiang Juntao, Deputy General Manager and Chief Planner, LAY-OUT Planning Consultants Co., Ltd.
深圳蕾奥规划设计咨询股份有限公司副总经理总规划师蒋峻涛



▲ 蒋峻涛 Jiang Juntao



在概念规划基础上，提出新的策划思路，以创建国际绿色范例新城为目标进行细化分解，构建“六个最”目标体系：最舒适的城市空间、最完善的服务配套、最生态的景观环境、最经济的运行方式、最公平的社会管理、最特色的地域文化。



西安经济技术开发区汽车小镇地处泾渭新城，占地 289.97 公顷，有华邑庄、车张村 2 个村庄，总人口 3685 人。汽车小镇地理位置优越，到西安咸阳国际机场约 30 分钟，1 小时内可到达西安市内所有高铁站。

本次规划研究范围：以吉利新能源汽车项目的整车工厂区为起点，西起渭东路，东至马船路东侧的规划道路，长约 3.8 公里，北起纬一路，南至纬三路，宽约 1.3 公里，总面积 4.73 平方公里。



▲ 2018 年 11 月 14 日，西安经开区汽车小镇导入 IGMC 标准汇报交流会
The exchange meeting on applying the IGMC Standards to the Auto Town of Xi'an Economic & Technological Development Zone, November 14, 2018

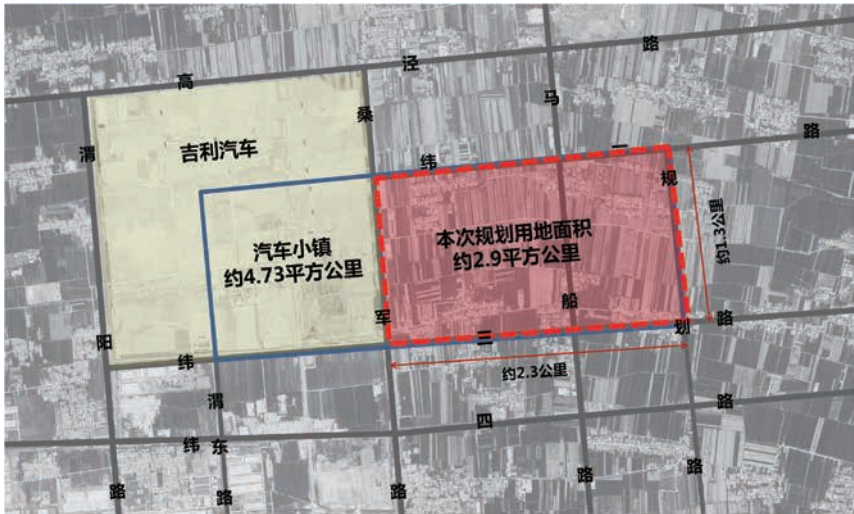
本次规划范围：为纬一路以南、桑军路以东、纬三路以北、规划路以西，宽约 1.3 公里，长约 2.3 公里，规划面积约 2.9 平方公里。

本次规划方案立足泾渭新城的发展基础，深入剖析区域的发展要求，以国际绿色范例新城标准作为规划建设的技术标准，以产城融合为核心抓手，建立目标体系、运营体系、管控体系。

1、目标体系：在概念规划基础上，提出新的策划思路，以创建国际绿色范例新城为目标进行细化分解，构建“六个最”目标体系：最舒适的城市空间、最完善的服务配套、最生态的景观环境、最经济的运行方式、最公平的社会管理、最特色的地域文化。

2、运营体系：从实际开发建设角度提出运营建议，充分考虑实际操作、市场需求、公共投资的匹配关系，以公共投资撬动市场投资，实现开发建设有序化、运营主体多元化、综合效益最大化。

3、管控体系：以创建国际绿色范例新城六大目标为框架构建控制和评价两方面指标体系，其中，控制指标主要指控规和城市设计形成的二合一指标体系，包括强制性指标和引导性指标。

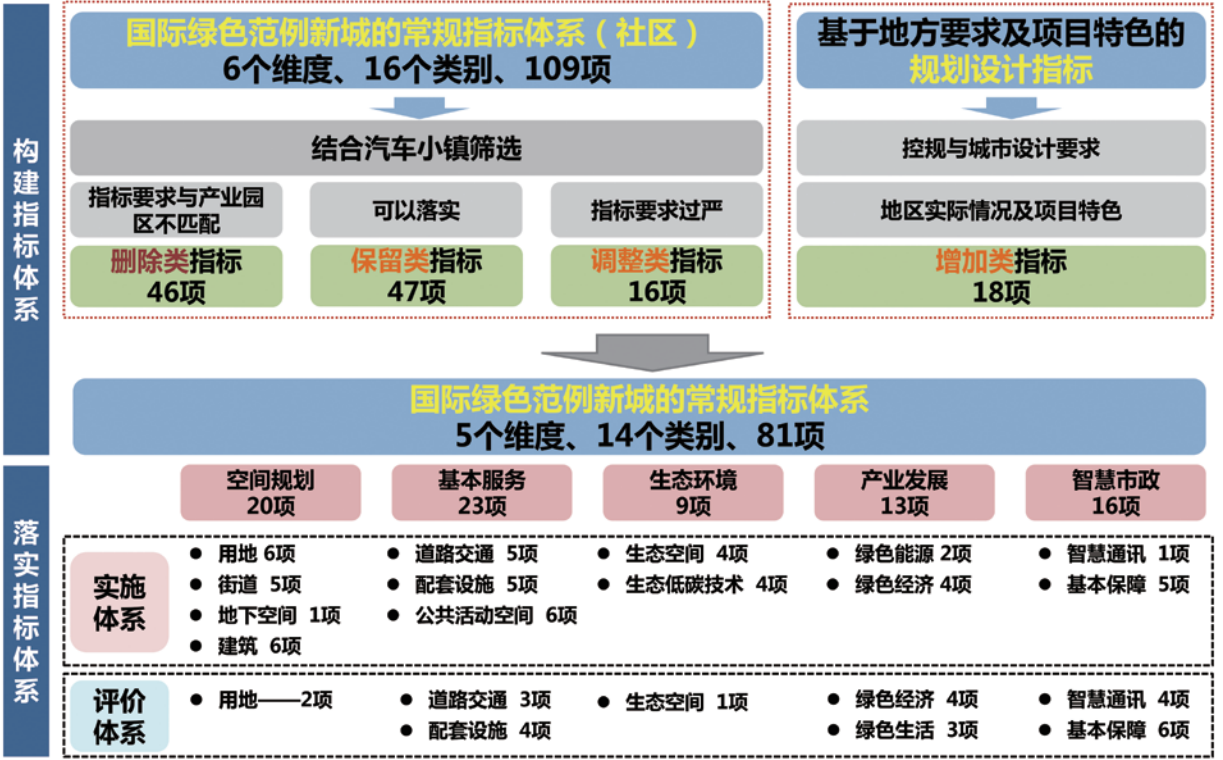


因地制宜，建立适合产业园区的国际绿色范例新城指标体系

国际绿色范例新城的常规指标体系（社区）包含 6 个维度、16 个类别，共计 109 项，本次规划方案因地制宜，既有继承，也有调整补充，精简为 5 个维度 14 个类别，共 81 项指标，其中保留类指标 47 项，删除类指标

46 项，调整类指标 16 项，增加类指标 18 项，建立更为适合产业园区的国际绿色范例新城指标体系。81 项指标又分为实施体系和评价体系两大类，分别为 54 项与 27 项，如下图所示：

构建指标体系



具体五个维度分解介绍如下：
维度一：空间规划，共 20 项指标（其中实施体系 18 项，评价体系 2 项）

实施体系（18项，保留5项，调整6项，新增7项）					
类别	序号	内容	序号	内容	
用地6项	1	1.1.8用于经济用途的建筑面积≥40%，单一功能街区的比例≤10%	2	1.1.10人均住房建筑面积≥25平方米	
	3	1.2.2用于街道网络（包括停车）的土地面积比例≥25%，并设计为大众公共空间	4	1.1.12 80%的街区面积≤10公顷，70%的街区面积≤8公顷（除去西侧两块公园绿地面积）	
	5	1.1.13街道长度≥10公里/平方公里，道路交叉口≥20个公里/平方公里（除去西侧两块公园绿地面积）	6	1.1.14最大的街道宽度≤80米，支路宽度≤20米	
街道5项	7	1.1.18不属于进入受限的邻里（开放社区）	8	1.1.15生活区的繁华临街段百分比≥50%，每100平方米街区临街段的平均入口数≥1个步行入口（繁华临街段理解为首层通透度）	
	9	区分街道类型，分为生活、商业、交通、景观四类，为保证生活氛围，商业型、生活型街道占比≥25%	10	生活型、商业型街道贴线率≥50%	
	11	生活型街道宽高比控制在0.75≤D/H，商业型街道宽高比控制在0.5≤D/H			
地下空间1项	12	1.1.17建筑地下空间的开发利用率≥40%（除去产业园区）			
建筑6项	13	居住建筑色彩以白、米白、浅米黄色色调为主；公共建筑色彩以黄、褐色等暖色调为主；特色公共建筑的主体外立面色彩与周边建筑相协调；工业建筑外立面以浅蓝色、灰色等中高明度、低艳度的色调为主。所有建筑的辅助色彩可多样，面积占立面比例应小于20%	14	建设项目沿城市道路、开放空间等城市公共界面不得出现三个及三个以上相邻成排高层建筑采用同一建筑高度，且相邻高度差须大于等于9米	
	15	居住地块内部形成公共活动空间至少一处，中心区商业地块与开放空间的联系通道至少一条	16	主要建筑风格采用现代风格，且该类风格比重（建筑面积占比）≥75%	
	17	1.3.2根据建筑类型和用途，建筑物能效符合相关国家的标准或中国标准（GB/T51161-2016）	18	1.3.4新建建筑物的预制建筑构架比例≥50%	

评价体系（2项，保留1项，新增1项）		
类别	序号	内容
用地2项	1	1.1.2属于填充式或毗邻建成区的开发，符合紧凑型 and 邻接的特点
	2	建成区人口密度至少为1万人/每平方公里，工作岗位的密度至少为7500个/每平方公里

“空间规划”调整和新增内容（调整 6 项，新增 8 项）

调整6项				
体系	类别	调整前内容	调整后内容	调整原因
实施体系	用地	1.1.12 90%的街区面积≤2公顷，70%的街区≤1.5公顷	80%的街区面积≤10公顷，70%的街区面积≤8公顷（除去西侧两块公园绿地面积）	功能需求与地块指标要求不一致，产业功能需大尺度地块，路网密度相应降低
		1.1.13街道长度≥18公里/平方公里，道路交叉口≥80个公里/平方公里	街道长度≥10公里/平方公里，道路交叉口≥20个公里/平方公里（除去西侧两块公园绿地面积）	
		1.1.14最大的街道宽度≤45米，支路宽度≤20米	最大的街道宽度≤80米，支路宽度≤20米	
	街道	1.1.15 繁华临街段的百分比≥80%，每100平方米街区临街段的平均入口数≥5个步行入口	生活区的繁华临街段百分比≥50%，每100平方米街区临街段的平均入口数≥1个步行入口（繁华临街段理解为首层通透度）	按照西安市相关实践经验进行调整
	地下空间	1.1.17建筑地下空间的开发利用率≥60%	建筑地下空间的开发利用率≥40%（除去产业园区）	小镇为产业园区，地下空间开发需求较小
	建筑	1.3.4新建建筑物的预制建筑构架比例，≥30%=1；≥40%=2；≥50%=3	1.3.4新建建筑物的预制建筑构架比例≥50%	依据西安市相关规划，确定实施指标

新增8项			
体系	类别	新增内容	新增原因
实施体系	街道	区分街道类型，分为生活、商业、交通、景观四类，为保证生活氛围，商业型、生活型街道占比≥25%	按照城市设计相关要求，对街道类型、贴线率、宽高等进行重点控制
		生活型、商业型街道贴线率≥50%	
		生活型街道宽高比控制在0.75≤D/H，商业型街道宽高比控制在0.5≤D/H	
	建筑	主要建筑风格采用现代风格，且该类风格比重（建筑面积占比）≥75%	按照城市设计相关要求，对建筑风格、色彩、天际线、公共活动空间、屋顶形式等进行重点控制
		居住建筑色彩以白、米白、浅米黄色色调为主；公共建筑色彩以黄、褐色等暖色调为主；特色公共建筑的主体外立面色彩与周边建筑相协调；工业建筑外立面以浅蓝色、灰色等中高明度、低艳度的色调为主。所有建筑的辅助色彩可多样，面积占立面比例应小于20%	
		建设项目沿城市道路、开放空间等城市公共界面不得出现三个及三个以上相邻成排高层建筑采用同一建筑高度，且相邻高度差须大于等于9米	
		居住地块内部形成公共活动空间至少一处，中心区商业地块与开放空间的联系通道至少一条	
评价体系	建筑	建成区人口密度至少为1万人/每平方公里，工作岗位的密度至少为7500个/每平方公里	提升土地利用效率



▲ 范例新城短片场景 IGMC animation film

维度二：基本服务，共 23 项指标（其中实施体系 16 项，评价体系 7 项）

实施体系（16项，保留10项，调整5项，新增1项）				
类别	序号	内容	序号	内容
道路交通5项	1	1.1.5距公交站500米半径范围的覆盖率达100%	2	2.1.5在邻里中保护步行者免受汽车伤害的设施比例为100%
	3	2.1.7新建住宅配建停车位应100%预留充电设施建设安装条件；新建的大于2万平方米的商场、宾馆、医院、办公楼等大型公共建筑配建停车场和社会公共停车场，具有充电设施的停车位应不少于总停车位的10%，同时还需按照总车位数量的30%预留相应配电容量		
	4	2.1.4社区专用和连接的步道以及自行车道的长度都为≥5公里 / 平方公里	5	停车位≥90%为地下停车。
配套设施5项	6	1.1.7建筑入口800米范围内至少毗邻六种设施的住宅单位百分比≥90%（托儿所、零售、诊所、活动中心、餐馆、银行等）	7	1.1.11住房多样性（至少包括如下不同房型中的三类：出租公寓、有产权的公寓、商住两用房、出租住房、低收入住房、商品住房等）
	8	5.1.7无障碍基础设施的比例≥50%	9	5.1.9生活片区800米半径范围内有一个或多个诊所或小型医院
	10	5.1.11 1000米半径范围内有小学，500米半径范围内有幼儿园		
公共活动空间5项	11	1.2.1用于公共开放空间（含街道和公共服务设施）的土地面积比例≥40%	12	1.2.4有证据显示提供便利设施、促进社会互动并使所有市民方便进入的公园具有良好的景观设计
	13	1.2.5 居住建筑入口800米半径范围内的人均绿地面积≥9平方米	14	1.2.6 规划范围内人均公共绿地面积≥12平方米
	15	1.2.7 人均公共休闲设施用地（主题公园、绿地）面积≥1.5平方米	16	6.1.2 对于新开发项目，创造一个或多个新的文化街道或街区

评价体系（7项，保留5项，调整2项）				
类别	序号	内容	序号	内容
道路交通3项	1	2.1.6建立了智能化交通管理系统	2	2.1.2规划范围内，使用公共交通的上班族比例≥50%，使用公共交通、共享汽车、拼车、骑自行车或步行的上班族比例合计≥80%
	3	2.1.3规划范围内居民，平均通勤时间，≤30分钟=2；≤20分钟=3		
配套设施4项	4	5.1.2基本社会保险覆盖率≥95%	5	5.1.4生活在贫民窟或非正规住区的人口比例为0%
	6	5.1.10义务教育普及率≥98%	7	6.1.3居民对文化设施的满意度指数≥90%

“基本服务”调整和新增内容（调整 7 项，新增 1 项）

调整7项				
体系	类别	调整前内容	调整后内容	调整原因
实施体系	道路交通	2.1.7充电桩的比例占社区停车位总数不小于10%	新建住宅配建停车位应100%预留充电设施建设安装条件；新建的大于2万平方米的商场、宾馆、医院、办公楼等大型公共建筑配建停车场和社会公共停车场，具有充电设施的停车位应不少于总停车位的10%，同时还需按照总车位数量的30%预留相应配电容量	按照西安市相关规定，将指标细化
		※2.1. 4社区专用和连接的步道以及自行车道的长度都（单位：公里 / 平方公里）。≥7=2；≥10=4	社区专用和连接的步道以及自行车道的长度都为≥5公里 / 平方公里	小镇生活区及游览区占比较小，指标相应降低
	配套设施	5.1.7无障碍基础设施的比例≥90%	无障碍基础设施的比例≥50%	参考其他城市实施情况，将指标相应降低
		5.1.11800米半径范围内有托儿所和小学	1000米半径范围内有小学，500米半径范围内有幼儿园	结合相关指标要求
	公共活动空间	*1.2.6社区内人均公共绿地面积≥1平方米	规划范围内人均公共绿地面积≥12平方米	按照相关标准适当提升指标
评价体系	道路交通	2.1.3平均通勤时间，≤40分钟=2；≤30分钟=3	规划区内的居民，平均通勤时间，≤30分钟=2；≤20分钟=3	小镇规模较小，且与南侧生活区临近，通勤时间可相应减小

新增1项			
体系	类别	新增内容	新增原因
实施体系	道路交通	停车位≥90%为地下停车	增加停车位相关控制要求，并符合西安市规范控制要求

维度三：生态环境，共 9 项指标（其中实施体系 8 项，评价体系 1 项）

实施体系（8项，保留5项，调整2项，新增1项）				
类别	序号	内容	序号	内容
生态空间4项	1	3.1.2 社区所有植物中本土植物的比例≥80%	2	3.1.5 光环境控制符合各自国家标准的覆盖率≥99%
	3	绿地面积比例≥15%	4	小镇核心区域应建立至少一条联系地块与外部景观的廊道
生态低碳技术4项	5	2.2.5至少有一个公共建筑和一个住宅建筑是净能源试点建筑	6	*3.2.5透水性路面的百分比≥60%
	7	3.2.6 总的年径流量控制率≥70%	8	3.2.7新建商业开发项目多层裙房绿色屋顶覆盖比例须大于等于20%，并应采用藤本植物、悬挂植栽等实现建筑垂直绿化

评价体系（1项，新增1项）		
类别	序号	内容
生态空间1项	1	进行当地生物资源普查，建立保护生物多样性的物种清单

■ “生态环境”调整和新增内容（调整2项，新增2项）

调整2项				
体系	类别	调整前内容	调整后内容	调整原因
实施体系	生态空间	绿地面积比例≥30%	绿地面积比例≥15%	小镇已满足，考虑到其它产业区该指标难以满足，该指标可降低
	生态低碳技术	3.2.7多层建筑屋顶绿化覆盖率大于等于20%	3.2.7新建商业开发项目多层裙房绿色屋顶覆盖比例须大于等于20%，并应采用藤本植物	借鉴西咸相关规范，细化指标

新增2项			
体系	类别	新增内容	新增原因
实施体系	生态空间	小镇核心区域应建立至少一条联系地块与外部景观的廊道	考虑生态系统的完整性，与周边生态要素相协调
评价体系	生态空间	进行当地生物资源普查，建立保护生物多样性的物种清单	保证生物多样性

维度四：产业发展，共 13 项指标（其中实施体系 6 项，评价体系 7 项）

实施体系（6项，新增6项）		
类别	序号	内容
绿色能源2项	1	至少有一项新能源产业或绿色环保产业
	2	至少有一处以新能源/新材料为主导的研发基地
绿色经济4项	3	特色旅游服务功能核心承载区，建设用地面积不小于10ha
	4	生产性服务业用地面积不小于规划区总面积的5%
	5	至少有1所与规划区主导展业相关联的特色院校
	6	至少有一个与主导产业相关的品牌旗舰店/展示大楼

评价体系（7项，保留5项，调整1项，新增1项）				
类别	序号	内容	序号	内容
绿色经济4项	1	6.2.2研发支出占当地GDP的比重≥2%	2	6.2.4高科技、信息通信技术和创新产业增加值占地方GDP的比重≥50%
	3	1.1.9规划范围内的就业率（就业人数除以居民人数）在0.5到0.9之间	4	有一个服务于产业园区事务、安全和就业方面的管理实体
绿色生活3项	5	6.2.1接受高等教育的人口比例≥20%	6	*5.2.2社区财务报表按时披露并接受审计
	7	*※5.2.3公共规划和管理具有强大的社区参与，其参与过程的运作是定期的和民主的		

“

以创建国际绿色范例新城六大目标为框架构建控制和评价两方面指标体系，其中，控制指标主要指控制规和城市设计形成的二合一指标体系，包括强制性指标和引导性指标。

”

“产业发展”调整和新增内容（调整 1 项，新增 7 项）

调整1项				
体系	类别	调整前内容	调整后内容	调整原因
评价体系	绿色经济	1.1.9所在通勤区的就业率（就业人数除以居民人数）在0.5到0.7之间	1.1.9规划范围内的就业率（就业人数除以居民人数）在0.5到0.9之间	小镇以产业为主，就业人口较多

新增7项			
体系	类别	新增内容	新增原因
实施体系	绿色能源	至少有一项新能源产业或绿色环保产业	考虑产业的绿色发展
		特色旅游服务功能核心承载区，建设用地面积不小于10ha	对小镇的旅游服务能力进行重点控制
		生产性服务业用地面积不小于规划区总面积的5%	对小镇的产业服务能力进行重点控制
		至少有1所与规划区主导展业相关联的特色院校	增强小镇的科研性、创新性
		至少有一处以新能源/新材料为主导的研发基地	
		至少有一个与主导产业相关的品牌旗舰店/展示大楼	激发小镇的品牌效应
评价体系	绿色经济	有一个服务于产业园区事务、安全和就业方面的管理实体	对小镇的管理、运行进行重点控制

维度五：智慧市政，共 16 项指标（其中实施体系 6 项，评价体系 10 项）

实施体系（6项，保留6项）				
类别	序号	内容	序号	内容
智汇通讯1项	1	2.3.1社区宽带覆盖率为100%		
基本保障5项	2	3.2.3 对100%的基础设施和建筑物强制实施抗震防灾涉及和施工，已达到各自国家标准	3	3.2.4 人均常规避难区面积≥3m²
	4	3.3.3 饮用水供应覆盖率为100%	5	3.3.5 按照各自的国家标准收集和处理工业和生活废水的比例为100%
	6	2.4.1 固体废物至少按下面类别中的3 类分类收集，包括可回收、不可回收、堆肥、有害物等		

评价体系（10项，保留10项）				
类别	序号	内容	序号	内容
智汇通讯4项	1	2.3.2每1000人中联网的智能手机数量≥1000部	2	2.3.3 建立了一个由移动终端包括电脑和智能于机接入的、包括日常生活服务在内的智慧社区管理服务平台
	3	2.3.4 公共服务和公共安全体系的智慧社区管理整合到规划运营过程之中	4	2.3.5为公共服务、小汽车和自行车共享、在线购物和送货等提供互联网支付
基本保障6项	5	2.4.2 固体废物定期安全收集、无害化处理率达到100%	6	3.3.2 水消费用水表计量的比例为100%
	7	3.3.4 饮用水质量应符合各自的国家标准或世卫组织饮用水标准	8	3.3.3 饮用水供应覆盖率为100%
	9	3.3.1 人均每天生活用水量，≤120升=2；≤100升=4	10	3.3.6 非传统水源（再生废水、咸水、雨水）利用比例，≥30%=1；≥50%=2；

Experience Sharing on Construction of Green Wave Demonstration City in Zhangqiu

章丘绿波示范城市建设经验分享

Bai Han, Professor of Shandong Jiaotong University, Executive Dean of Shandong Zhengqu Institute of Traffic Engineering
山东交通学院教授、山东正衢交通工程研究院执行院长白翰



▲ 白翰 Bai Han

近年来，随着经济、社会的高速发展，章丘区机动车保有量持续增长，交通拥堵问题日益严峻。为改善章丘城区人居环境，提升城市竞争力和可持续性，章丘区政府联合山东交通学院和山东正衢交通工程研究院，主要从规划引领、管理保障、科技应用等几部分开展工作，着力打造章丘绿波示范城。

一、章丘简介

章丘处在省会城市群经济圈核心圈层，济青高铁、胶济客专及正在规划的济临高铁贯穿境内，济青高速、济潍高速、济莱高速、经十东路横贯东西，济南遥墙国际机场距城区40公里，从明水城区出发可以实现10分钟上高铁、15分钟上高速、30分钟到机场。

章丘是千年古县、龙山文化的发现地和命名地，城子崖遗址、西河遗址、洛庄汉墓、危山汉墓、焦家遗址5处遗址入选“全国十大考古新发现”。章丘融山泉河湖城于一体，境

内有连绵数十公里的章丘国家森林公园、世界最美星空七星台景区、济南最大自然湖--白云湖国家湿地公园、全球生态低碳景区--绣源河国家级水利风景区，特别是城区有6处泉群列入济南72名泉，百脉泉与趵突泉齐名，被誉为天下奇观。章丘荣获国家卫生城市、国家园林城市、中国优秀旅游城市、国家环保模范城市、国家生态市。

二、规划引领

为了章丘绿波示范城能够更好的建设，章丘区政府成立了专门办公室，联合山东交通学院和山东正衢交通工程研究院编制了首个《章丘城区交通组织规划》。规划过程历时12个月，经过3次专家会讨论，最终形成章丘区交通组织规划方案。

交通组织规划方案形成后，章丘区政府积极组织落地实施，严格按照交通组织规划方案进行交通组织改造提升，先后改造交叉口30处，对堵点、乱点、安全隐患点进行全排查整治，对重点商圈和景区实施微循环组织，积极建设公共停车场17处，加强智慧停车系统建设和违停执法力度，着重打造了双山大街交通组织示范路，应用先进技术实现全城绿波控制。

三、管理保障

为了更好的打造章丘绿波城，前期章丘交警加强对交通、车辆的管理工作，有效预防和减少恶性交通事故的发生，严厉打击交通违法行为。

贯彻“科技服务于应用”的方针，加强中队业务指导，依托国道智能交通体系建设，探索完善监控发现取证、卡口实时预警、指挥中心扁平指挥、民警精准拦截“四位一体”路面勤务运行机制。在指挥中心成立情报研判小组，发挥查缉布控系统各模块功能，实现精准勤务。

按照“全覆盖、零容忍、重时效、保安全”的要求，切实强化源头的治理，实行24小时勤务机制，强化责任落实，实现网络化管理，积极开展路面交通秩序整治。实行辖区中队包片、民警包路段、切实提高路面见警率和管事率，落实交通秩序的“包保责任制”，确保辖区内道路交通安全有序。

三、科技应用

在规划的指引下，绿波示范城建设过程中创新应用了多种先进控制技术和理念。

1、逆向可变车道控制

通过巧妙的渠化设计和精准的信号配时控制，使左转车辆借用出口最内侧车道左转，提高左转通行能力。

2、导向可变车道控制

通过路面标线与可变车道导向标志，控制车道功能的变化，根据不同时段各方向车流量大小不同，可变车道标志可变为不同导向，使道路利用率得到有效提高，提高整个交叉口的通行能力。



3、可靠绿波控制

在传统绿波控制的基础上，通过科学的周期选择、合理的设计停车，保证多数路口绿波协调，提高绿波可靠性。

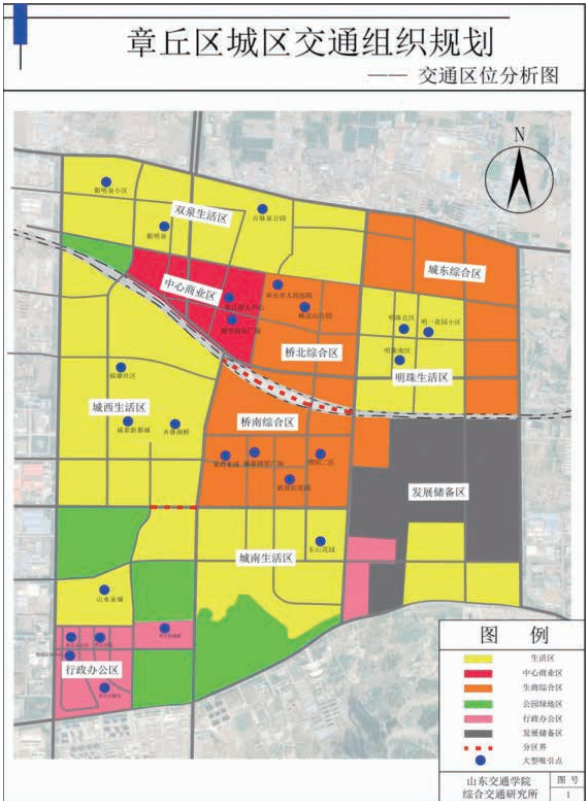
4、方案选择式自适应控制

通过对交通流量进行聚类分析，构建精细化配时方案库。由检测器对现场交通流量进行采集，再由信号机通过协议选取与此流量强度相匹配的协调控制方案。

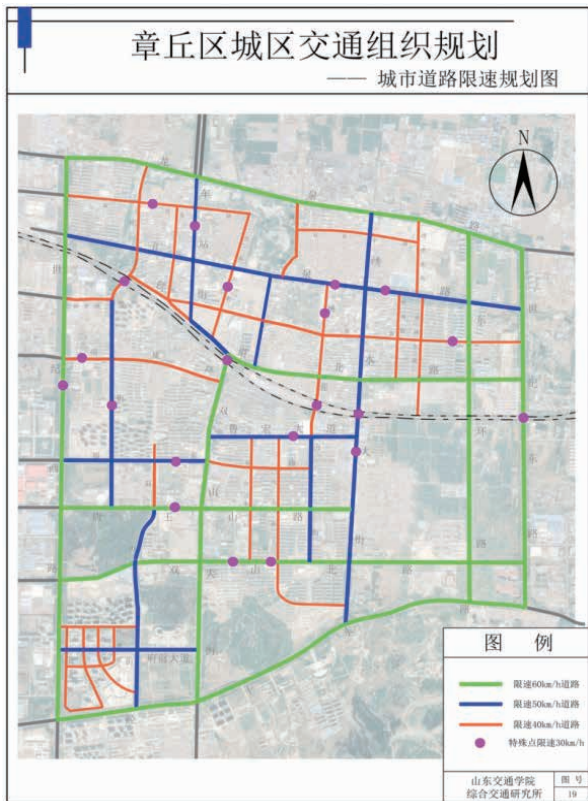
5、感应绿波控制

绿波协调控制与感应控制的有效结合，在保证原有绿波协调效果不变的前提下，单点配时随自身流量情况发生相应变化，提高绿波稳定性。

章丘城区规划示意图



▲ 交通区位分析图



▲ 现状道路断面示意图



6、绿波实时推送控制

绿波运行时由信号机根据协议，选取与此时交通流量相匹配的绿波速度，诱导驾驶员安全、有序、高效的通过绿波路段。

四、案例分析

双山大街是章丘市南北方向的重要干道之一，改造前道路基础设施不完善，机非混行严重，单点时空资源存在较大的挖掘空间；信号配时不合理，协调控制效果不佳。在经过基础设施全面改造提升后，从以下几个方面进行了深度优化。

- 1、为提升双山大街与双山北路交叉口东口左转通行能力，在路口东口使用逆向可变车道控制；
- 2、为提高双山大街与福康路南口车道利用率，将南口内侧第二条车道设置为导向可变车道；
- 3、为提高整条道路绿波协调的稳定性，在协调控制方案制定时采用可靠绿波控制技术；
- 4、在保证绿波效果和稳定性的同时，为了应对流量的随机变化，整条道路利用视频检测设备采取感应绿波控制；
- 5、为增加绿波的可视化程度，同时提高绿波利用率，双山大街采取绿波速度实时推送控制；
- 6、为保障主流线车辆在交叉口群内行驶畅通，减少在

交叉口群内滞留时间，避免拥堵，双山大街交叉口群采取立体协调控制；

7、为防止距离较近交叉口间因车辆排队过长出现溢流现象，双山大街两处交叉口采取瓶颈控制。

优化后，利用实测数据与互联网数据两类数据对优化效果进行评价。实测数据显示平均行程时间下降33.6%，平均停车次数减少3次；互联网数据显示高峰拥堵指数平均下降20%，行车速度平均提升17%。

五、结语

绿波示范城建成后，全城行车速度平均提升20%，行程时间平均降低30%，道路通行能力提高，汽车油耗降低，尾气排放总量降低，改善了城市整体面貌，提高了人居环境舒适度。WBPM



▲ 路段渠化改造

▲ 隔离护栏改造

CONFERENCE

会议活动

2019年3月4日—6日，第九届亚太区域3R（减量、再利用、再回收）论坛在泰国曼谷市成功举办。本届论坛由泰国自然资源与环境部、日本环境部和联合国区域发展中心共同组织，主题为“3R作为实现自足经济的方式——对可持续发展目标的影响”，汇集了来自40个国家的500多名参会者，共同探讨3R和资源效率如何对实现循环经济发挥的关键作用。

The Ninth Regional 3R (Reduce, Reuse, Recycle) Forum in Asia and the Pacific was successfully and productively held on 4 - 6 March 2019, Bangkok, Thailand. The Forum, co-organized by the Ministry of the Natural Resources and Environment (MONRE), Kingdom of Thailand, the Ministry of the Environment, Japan (MOEJ) and the United Nations Centre for Regional Development (UNCRD) of Division for Sustainable Development Goals (DSDG) / UNDESA, focused on the overall theme of "3R as a way for moving towards sufficiency economy - Implications for SDGs", and brought together more than 500 participants from 40 countries to address how 3R and resource efficiency could play a critical role in achieving circular economy.



▲ 第九届亚太区域 3R 论坛开幕式 Opening ceremony of the Ninth Regional 3R Forum in Asia and the Pacific

The Ninth Regional 3R Forum in Asia and the Pacific Calls for Stronger Actions towards Circular Economy

第九届亚太区域 3R 论坛呼吁加强 循环经济行动

2019 年 3 月 4 日—6 日，第九届亚太区域 3R（减少原料、重新利用、物品回收）论坛在泰国曼谷市成功举办。本届论坛由泰国自然资源与环境部、日本环境部和联合国区域发展中心共同组织，主题为“3R 作为实现自足经济的方式——对可持续发展目标的影响”，汇集了来自 40 个国家的 500 多名参会者，共同探讨 3R 和资源效率如何对实现循环经济发挥关键作用。

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▲ 开幕式 Opening Ceremony



▲ 泰国自然资源与环境部部长素拉沙·甘乍那拉上将
H.E. General Surasak Karnjanarat, Minister, Ministry of Natural Resources and Environment, Thailand



▲ 日本环境部部长秋元司先生
Mr. Tsukasa Akimoto, State Minister, Ministry of the Environment, Japan (MOEJ)



▲ 联合国副秘书长兼亚太经社理事会执行秘书
阿尔米达·萨尔西娅·阿里沙赫巴纳女士
Ms. Armida Salsiah Alisjahbana, Under-Secretary-General of the United Nations and Executive Secretary of United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP)



▲ 联合国区域发展中心主任远藤和重先生
Mr. Kazushige Endo, Director, United Nations Centre for Regional Development (UNCRD)



▲ 泰国皇太后基金会副秘书长素哇·吉拉潘在会上发表题为《通过自足经济哲学实现自然资源和环境管理》的演讲
Suvat Chirapant, Deputy Secretary General of Chaipattana Foundation delivered a speech of "Natural Resources and Environmental Management through Sufficiency Economy Philosophy" at the Forum

出席本届论坛的重要嘉宾包括泰国自然资源与环境部部长素拉沙·甘乍那拉上将，日本环境部部长秋元司先生，联合国副秘书长兼亚太经社理事会执行秘书阿尔米达·萨尔西娅·阿里沙赫巴纳女士，联合国区域发展中心主任远藤和重先生，孟加拉国工业部部长、国会议员努尔·马吉德·马哈穆德·胡马云阁下，马尔代夫环境与能源部部长侯赛因·哈桑阁下，尼泊尔城市发展部部长穆罕默德·伊斯蒂亚克·拉伊阁下，以及市长、知名专家、非政府组织负责人和商界领袖等。全球人居环境论坛秘书长吕海峰先生也应邀参加了论坛，并对“亚太区域塑料废弃物状况草案一问题、挑战和循环经济机遇”的政府间磋商做出了贡献。

会议期间，参会的市长和市政府签署了《亚洲市长关于实现亚洲城市清洁的水、土地和空气的印多尔 3R 宣言》。大会在通过了《曼谷 3R 宣言——通过 3R 和循环经济防止塑料废弃物污染》后，圆满落幕。



▲ 签约市长集体合影 Signing group photo of Mayors

The distinguished guests present include H.E. General Surasak Karnjanarat, Minister, Ministry of Natural Resources and Environment, Thailand, Mr. Tsukasa Akimoto, State Minister, Ministry of the Environment, Japan (MOEJ), Ms. Armida Salsiah Alisjahbana, Under-Secretary-General of the United Nations and Executive Secretary of ESCAP, United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP), Mr. Kazushige Endo, Director, United Nations Centre for Regional Development (UNCRD), H.E. Mr. Nurul Majid Mahmud Humayun, Member of Parliament, Minister, Ministry of Industries, Bangladesh, H.E. Mr. Hussain Rasheed Hassan, Minister, Ministry of Environment and Energy, Maldives, H.E. Mr. Mohammad Istiyak Rai, Minister, Ministry of Urban Development, Nepal, and mayors, well-known experts, head of NGOs and business leaders. Mr. Lu Haifeng, Secretary General of Global Forum on Human Settlements (GFHS) was also invited to the Forum and contributed to the Governmental Consultation on the "DRAFT State of Plastics Waste in Asia and the Pacific - Issues, Challenges and Circular Economic Opportunities".

In the meantime, the participating mayors and city authorities signed the Indore 3R Declaration of Asian Mayors on Achieving Clean Water, Clean Land and Clean Air in Cities in Asia. The Forum was productively concluded by reaching the Bangkok 3R Declaration Towards Prevention of Plastic Waste Pollution through 3R and Circular Economy.



▲ 参观考察 Site visit

The Bangkok 3R Declaration — Towards Prevention of Plastic Waste Pollution through 3R and Circular Economy

曼谷 3R 宣言 —— 通过 3R 和循环经济防止塑料废弃物污染

我们，作为亚太国家¹的代表、市政府的代表、国际组织、非政府组织、私营部门和行业团体，以及 3R、循环经济和废气物管理领域的专业人士，在 2019 年 3 月 4 日—6 日在泰国曼谷举办的第九届亚太区域 3R 论坛上相聚。

重申我们对于实现《2030 年可持续发展议程》和强调的可持续发展目标（SDGs）的承诺：包括目标 14：保护和可持续利用海洋和海洋资源以促进可持续发展，及其目标 14.1：预防 and 大幅减少各类海洋污染，特别是陆上活动造成的污染，包括海洋废弃物污染和营养盐污染。

We, the representatives of Asia-Pacific countries¹, city government representatives, international organizations, non-government organizations, private sector and industry groups, and professionals in the field of 3R, circular economy and waste management, having met at the Ninth Regional 3R Forum in Asia and the Pacific, held in Bangkok, the Kingdom of Thailand, from 4 to 6 March 2019.

Reaffirming our commitments towards achieving the 2030 Agenda for Sustainable Development and the

¹ 阿富汗、澳大利亚、孟加拉国、不丹、文莱达鲁萨兰国、柬埔寨、密克罗尼西亚联邦、印度、印度尼西亚、日本、基里巴斯、大韩民国、老挝人民民主共和国、马来西亚、马尔代夫、马绍尔群岛、蒙古、缅甸、尼泊尔、巴基斯坦、帕劳、菲律宾、俄罗斯联邦、索莫亚、新加坡、所罗门群岛、斯里兰卡、东帝汶、泰国、汤加、图瓦卢、瓦努阿图和越南。

¹ Afghanistan, Australia, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, Federated States of Micronesia, India, Indonesia, Japan, Kiribati, Republic of Korea, Lao People's Democratic Republic, Malaysia, Maldives, Marshall Islands, Mongolia, Myanmar, Nepal, Pakistan, Palau, the Philippines, the Russian Federation, Somoa, Singapore, Solomon Islands, Sri Lanka, Timor-Leste, Thailand, Tonga, Tuvalu, Vanuatu and Viet Nam.



重申我们对于实施与可持续发展目标 12 一致的可持续消费和生产十年框架计划（10 YFP）的承诺：包括所有强调的目标，其中要求根据商定的国际框架，在其整个生命周期内实现对化学品和所有废弃物的无害化环境管理，并大大减少其向空气、水和土壤的释放，以尽量减少对人类健康的不利影响，并通过预防、减少、再循环和再利用，大幅度减少废弃物的产生，实现可持续管理和自然资源的有效利用。

指出联合国环境规划署关于海洋垃圾的倡议，特别是“保护海洋环境免受陆基活动影响全球行动计划（GPA）”，其目的是通过预防或减少固体废弃物的产生和改善其管理，包括收集、处理、处置和回收垃圾，从而大大减少流入海洋和沿海环境的垃圾量。

强调实施 3R 政策和计划的重要性，包括必要的基础设施发展，以实现《河内 3R 宣言》的可持续 3R 目标，该宣言为实现资源节约和零废弃物社会提供了共同的区域愿景和框架。

指出马尔代夫 3R 论坛（2015 年）的成果是当 3R 和资源效率被纳入宏观经济和发展政策的前提下，3R 作为一个经济产业能够为许多城市环境和发展问题提供有竞争力的解决方案，包括塑料废弃物问题。



underlined Sustainable Development Goals (SDGs), including Goal 14 which calls for the conservation and sustainable use of oceans, seas and marine resources for sustainable development and its Target 14.1 which calls for the prevention and significant reduction of marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

Reaffirming our commitments to implement the 10-Year Framework of Programmes (10 YFP) on Sustainable Consumption and Production Patterns in line with SDG 12, including all its underlined Targets which call for inter alia achieving the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment, and substantially reducing waste generation through prevention, reduction, recycling and reuse, and achieving sustainable management and efficient use of natural resources.



Noting the United Nations Environment Programme initiative on marine litter, in particular the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA), which aims to reduce significantly the amount of litter reaching the marine and coastal environment by the prevention or reduction of the generation of solid waste and improvements in its management, including collection, treatment, disposal, and recycling of litter,

Underscoring the importance of implementing various 3R policies and programmes, including necessary infrastructure development, to achieve the Sustainable 3R Goals of the Ha Noi 3R Declaration (2013-2023) which provides a common and regional vision and framework for moving towards a resource efficient and zero waste society,



▲ 下一届 3R 论坛将在俄罗斯莫斯科市举办
The next 3R Forum will be held in Moscow, Russia

指出《阿德莱德 3R 宣言》的目标是根据《2030 年可持续发展议程》（2016 年），推动亚太区域循环经济发展，以实现资源节约型社会，包括加强各国之间和国家内部之间的协调，逐步采用和实施循环经济规划；通过生产者延伸责任制（EPR）、环境友好型设计、低排放技术、生态预算以及权衡当前经济条件下提供的财政激励和投资，实现一整套的价值链方法、战略和工具，以减少、再利用和回收在生产、消费和其他生命周期中的自然资源。

肯定原始沿海和海洋环境作为可持续旅游业发展的重要手段和资源的作用，从而维护亚太国家特别是小岛屿发展中国家（SIDS）的经济安全。

考虑到塑料废弃物的不当管理对生物多样性、水和空气质量，包括旅游业和社会经济产生的重大影响。

指出塑料废弃物污染的挑战已经成为世界性的关键问题，尤其是海洋中的塑料垃圾在洋流中穿越大陆，因此成为所有国家共同关注的问题。

强调塑料废弃物污染已成为亚太区域，包括小岛屿发展中国家（SIDS）的城市和沿海环境的一个关键问题，而且大多数塑料并未真正降解，而是分解成若干较小的颗粒，在未来数百年仍将对沿海和海洋环境造成一系列的影响，包括持久性有机污染物（POPs）的生物积累，如多氯联苯、滴滴涕、六氯环己烷和其他源自摄食或食物链（鱼到鱼或鱼到人）的塑料物。

重申东亚峰会（EAS）领导人关于打击海洋微塑料的承诺，包括通过陆地和海洋活动改善和提升塑料废弃物的无害化环境管理和资源效率，支持 2018 年 11 月举行的东盟首脑会议上通过的“东盟 +3 海洋微塑料合作行动倡议”，旨在加强与海洋微塑料战斗的合作。

指出 2019 年 3 月 5 日，泰国曼谷举行的东盟海洋垃圾治理部长级特别会议的成果支持《海洋治理东盟行动框架》。该框架包括四个优先领域，即：1) 政策支持和规划，2)

Noting the outcome of the Maldives 3R Forum (2015) that 3R as an economic industry offers competitive solutions to many urban environment and development issues, including issues of plastic waste, provided 3Rs and resource efficiency are integrated into macroeconomic and development policies.

Noting the objectives of the Adelaide 3R Declaration towards the Promotion of Circular Economy in Achieving Resource Efficient Societies in Asia and the Pacific under the 2030 Agenda for Sustainable Development (2016) which calls among other things the need for strengthening coordination among countries and within countries to progressively adopt and implement circular economy plans, a whole-of-value chain approach, strategies and tools to reduce, reuse, and recycle natural resources in production, consumption and other life cycle stages, enabled by extended producer responsibility (EPR), environmentally friendly design, low emissions technology, ecological budgeting, financial incentives and investments, taking into account the prevailing economic conditions.

Recognizing the role of pristine coastal and marine environment as significant means and resources for sustainable tourism development, thereby safeguarding the economic security of Asia - Pacific countries, especially Small Island Developing States(SIDS).

Taking into account the fact that improper management of plastic wastes have considerable impacts on biodiversity, water and air quality, economy including tourism industry and society.

Noting the challenges of plastic waste pollution have become critical issues world-wide, especially where marine plastic litter in marine crosses continents in ocean currents, thereby the shared concern for all countries.

Underscoring that plastic waste pollution has become a critical concern in the urban and coastal marine environment of the Asia-Pacific region, including the small island developing states (SIDS), and that most plastics do not truly degrade but break down into numerous smaller particles and remain hundreds of years into the future causing a range of impacts in coastal and marine environment, including bio-accumulation of hydrophobic persistent organic pollutants (POPs) like PCBs, DDTs, HCHs and others from the plastics through ingestion or food-chain (fish to fish and fish to people).

Reaffirming the commitment of East Asia Summit (EAS) Leaders' Statement on Combating Marine Plastic Debris which include improving and promoting



研究、创新和能力建设, 3) 公众意识, 教育和宣传, 以及 4) 私营部门的参与。

肯定 3R 和循环经济发展方法的多重效益的重要性, 并通过节约资源、环境、能源和成本效益来预防和减少塑料废弃物。

重申亚太区域 3R 论坛为促进亚太地区的 3R 和循环经济政策做出了贡献。

我们自愿承诺:

1. 明确现有法律、机构和条例的差距, 并进一步加强进行中的 3R 和可持续废弃物管理行动和措施, 以解决塑料废弃物问题, 包括一次性塑料;

2. 制定有效的 3R 政策和计划, 包括基础设施的发展, 以提高再利用和再回收, 实现塑料的循环经济, 防止流入沿海和海洋环境;

3. 为新的和可持续的商业模式提供各种创新的解决方案, 促进供应链的绿化和增加多用途替代品, 包括一次性塑料产品的替代品, 如可重复使用的、环保可生物降解的产品, 以及塑料产品的生态设计;

4. 支持生物替代品的必要研发和发展计划, 促进环境友好型生物经济带来的新的可持续商业和就业机会, 同时影响消费者绿色采购的行为;

5. 加强国际协定、政策和合作, 通过减少一次性塑料, 促进塑料废弃物再循环成为资源、可回收材料和废弃物转化为能源等, 以有效减少塑料废弃物污染和影响;

6. 遵守有关环境质量、生态系统、健康和安全的敏

the environmentally sound management of plastic waste and resource efficiency through land - and sea - based activities, and welcome ASEAN+3 Marine Plastics Debris Cooperative Action Initiative to enhance cooperation on combating marine plastic debris, adopted by ASEAN related Summits held in November 2018.

Noting the outcome of the Special ASEAN Ministerial Meeting on Marine Debris, held on 5 March 2019 in Bangkok, Thailand, which welcomed the ASEAN Framework of Action on Marine Debris. The Framework comprises four priority areas namely; 1) Policy Support and Planning 2) Research, Innovation and Capacity Building 3) Public Awareness, Education and Outreach, and 4) Private Sector Engagement.

Recognizing the importance of multiple benefits of 3R and circular economic development approach through savings of resource, environment, energy and cost-effectiveness towards prevention and reduction of plastic waste.

Reaffirming that the Regional 3R Forum in Asia and the Pacific has contributed to promote 3R and circular economy policies in Asia and the Pacific region.

Express our voluntary commitments to:

1. Identify gaps in the existing laws and institutions and regulations, and further reinforce the ongoing 3R and sustainable waste management actions and measures towards the issue of plastic waste, including single-use plastics;

2. Develop effective 3R policies, programmes,

感区域保护、沿海和海洋环境、濒危物种, 以及土地使用管控方面的法规和标准, 促进和实施环境友好型废弃物收集、隔离、运输、回收和最终处置;

7. 推动各种提高公众意识的计划和活动, 以禁用一次性塑料作为首要任务; 创造有效的塑料用后经济, 并探索变废为宝的方法, 以助推向循环经济过渡;

8. 促进分享区域内海洋垃圾有效管理的知识和最佳范例, 并支持为此建立区域知识中心;

9. 考虑调动专用资金和投资, 用于具有成本效益的塑料废弃物管理技术和回收设施, 目的是保护当地环境和生态系统, 包括沿海和海洋环境, 从而促进国际旅游发展, 增加政府的财政收入和当地的就业机会;

10. 按照《泗水 3R 宣言》(2014 年) 和“东盟 +3 海洋微塑料合作行动倡议”的要求, 促进多层次合作和伙伴关系, 如公私伙伴关系 (PPP), 以实施各种 3R 计划来防止和妥善管理塑料废弃物, 包括海洋废弃物; 对此, 加强区域合作, 以解决一次性塑料制品问题, 包括其对沿海和海洋生态系统的不良影响;

11. 认识到监测海洋垃圾的重要性, 因此, 需要探索、制定和统一计算海滩垃圾的方法 (这些计数在国际上被称为海洋垃圾物的合理指标, 用于知情决策)。

12. 重视 3R 和循环经济的重要性, 对此, 私营企业和工业部门可以发挥重要作用, 将 3R 纳入其业务运营和解决方案的主流方面, 如企业社会责任 (CSR) 和生产者延伸责任制 (EPR), 以应对亚太国家面临的许多可持续性挑战。

我们决心在亚太区域实施必要的 3R 和循环经济的政策和措施, 以防止包括海洋垃圾在内的塑料废弃物污染。

图片来源: 联合国区域发展中心泰国 3R 论坛

including infrastructure development in order to upscale the reusing and the recycling towards circular economic utilization of plastics, and to prevent leakage into the coastal and marine environment;

3. Support various innovative solutions for new and sustainable business models which would promote greening the supply chain and multi-use alternatives, including alternatives to single-use plastics products such as reusable, environmentally friendly biodegradable products, and eco-design of plastic products;

4. Support necessary research and development programmes on bio-based alternatives which would promote environment friendly bio-economy bringing in new sustainable business and employment opportunities while influencing consumer behavior towards green procurement;

5. Strengthen international agreements, policies, and cooperation towards efficient reduction and impacts of plastic waste pollution by reducing single-use plastics, promoting plastic waste recycle as resources, recyclable materials and waste-to-energy, among others;

6. In conformity with pertinent regulations and standards governing environmental quality, eco-systems, health and safety, protection of sensitive areas, coastal and marine environment and endangered species, and land-use control, promote and implement environmentally friendly waste collection, segregation, transportation, recycling and final disposal;

7. Promote various public awareness programmes and campaigns in order to discourage the use of single-use plastics as a first priority; build an effective after-





use plastic economy and explore ways to utilize end-of-life plastics as a valuable resource, which would help to make a transition towards circular economy;

8. Promote sharing of knowledge and best practices on the effective management of marine litter in the region and support the establishment of a regional knowledge hub for the purpose;

9. Consider mobilizing dedicated funds and investments for cost-effective plastic waste management technologies and plastics waste recycling facilities with an objective to protect the local environment and ecosystem, including coastal and marine environment which will in return attract international tourism resulting in increased government revenue generation and local employment opportunities;

10. Promote multilayer collaborations and partnerships such as the public-private-partnerships (PPP), as called upon by the Surabaya 3R Declaration (2014) and ASEAN+3 Marine Plastics Debris Cooperative Action Initiative, in order to implement various 3R programmes towards the prevention and proper management of plastic waste, including the marine debris; to this regard, strengthen regional

cooperation in addressing the issues of single-use plastic products, including their detrimental impact on coastal and marine ecosystem;

11. Recognize the importance of monitoring marine litter, and thereby, explore, develop and harmonize methods on counting beach litter items (such counts are internationally accepted as a reasonable indicator of the composition of marine litter towards informed decision making);

12. Attach significance of 3R and circular economy, and to that regard, the important role the private, business and industry sectors can play in mainstreaming 3R in their business operations and solutions, as Corporate Social Responsibility (CSR) and Extended Producer Responsibility (EPR), to many sustainability challenges faced by the Asia-Pacific countries.

Express our resolve to implement necessary 3R and circular economy policy and measures in Asia and the Pacific to prevent plastic waste pollution, including marine littering. 

Image source: UNCRD Thai3R

BEST PRACTICES

最佳范例

The Shelter Program:
Celebrating Nine Years of the UN-Habitat and Arcadis Partnership
庇护所计划：联合国人居署与凯谛思的九年伙伴关系

Why Can Jieshou's Circular Economy Develop Healthily and Rapidly?
--Misunderstanding of Circular Economy and Practice in Jieshou
界首循环经济为什么能健康快速发展？
——循环经济发展的认识误区和界首实践



The Shelter Program: Celebrating Nine Years of the UN-Habitat and Arcadis Partnership

庇护所计划： 联合国人居署与凯谛思的九年伙伴关系

2018年10月30日，凯谛思社区公益项目“庇护所计划”被授予“2018 可持续城市与人居环境奖”（2018 飒飒奖）之“全球人居环境杰出贡献奖”的殊荣。飒飒奖评委会认为，“庇护所计划”是政策制定者和私营部门的全球伙伴关系典范，以促进实施可持续政策，鼓励其他私营企业承担责任、作为合作伙伴促进可持续城市发展。

On the 30th of October, Arcadis Shelter Program was given the “Global Human Settlements Outstanding Contribution Award” of the Sustainable Cities and Human Settlements Awards 2018 (SCAHS 2018). The appraisal committee put emphasis on Arcadis Shelter Program being a global partnership between policy makers and private sector to enable the implementation of sustainable policies, encouraging other private sector companies to take responsibility and work as partners to promote sustainable cities.

“庇护所计划”是(The Shelter program)由凯谛思(Arcadis)全球顾问和工程师团队与联合国人居署(UN-Habitat)共同合作的社区公益项目，它将凯谛思的专业知识与人居署的人道主义目标结合在一起。

2010年以来，通过庇护所计划，凯谛思为人居署在亚洲、非洲、中美洲开展的100多项任务、培训班、研讨会等提供技术支持。1000多名来自各个专业的凯谛思专家参与了该计划，根据人居署的要求，向全球社区提供知识、专业技术和能力建设。

“庇护所计划”有丰富的专业知识支持，具有全球影响力，对世界各地城市居民，特别是城市贫民的生活产生了重大影响。为了更好地履行人居署的使命，造福全人类，凯谛思和人居署继续探索新的强有力的合作方式，庇护所计划也在不断发展壮大。

“庇护所计划”提供技术支持

有凯谛思全球专业人才的技术支持，以及亚洲、非洲和中美洲办事处的本地支持，庇护所计划迄今为止完成了100多项任务、培训课程等活动。过去九年，凯谛思与人居署在25个国家开展合作，包括菲律宾、科摩罗、马达加斯加、马拉维、老挝、柬埔寨、印度尼西亚、蒙古、中国、缅甸、尼泊尔、所罗门群岛、肯尼亚、卢旺达、布基纳法索、塞内加尔、加纳、科特迪瓦、圣多美和普林西比、莫桑比克、海地、牙买加、伯利兹、哥斯达黎加和厄瓜多尔。

“庇护所计划”调动了凯谛思强大的专业知识和技术资源，包括城市规划、建筑、水管理、卫生、饮用水供应、侵蚀控制、生态和废物管理等，来应对这些国家所面临的挑战。应人居署要求，凯谛思为当地提供技术支持，大多关于发展和灾害预防，例如人居署关于弹性城市发展和适应气候变化项目。庇护所计划也为灾害地区提供重建支持，例如海地、尼泊尔地震以及菲律宾台风后的重建工

The Shelter program is the partnership between Arcadis global consultants and engineers and UN-Habitat, the UN agency for human settlements. In the Shelter program the expertise of Arcadis and the humanitarian goals of UN-Habitat are combined.

Since 2010 the partnership has supported UN-Habitat in more than 100 missions, training sessions, workshops and other activities in Asia, Africa and Central America. More than 1000 Arcadis experts from a range of disciplines have engaged in the program, bringing knowledge, expertise and capacity-building skills on request of UN-Habitat to communities all over the world.

Shelter's combination of vast expertise and global reach has had a substantial impact to date on living conditions in cities around the world, especially among the urban poor. The partnership continues to go from strength to strength, as the two organizations continue to explore new and powerful ways to work together to the benefit of UN-Habitat's mission.

Shelter technical support missions

Shelter's over 100 missions, training sessions and other activities to date have been enabled by a combination of Arcadis' global expertise and its local support provided by offices in Asia, Africa and Central America. Over the past nine years, Arcadis has worked with UN-Habitat in the Philippines, Comoros, Madagascar, Malawi, Laos, Cambodia, Indonesia, Mongolia, China, Myanmar, Nepal, Solomon Islands, Kenya, Rwanda, Burkina Faso, Senegal, Ghana, Ivory Coast, Sao Tome e Principe, Mozambique, Haiti, Jamaica, Belize, Costa Rica and Ecuador.

To address urban challenges in those countries, Shelter has deployed a range of skills and expertise from around Arcadis, including urban planning, architecture, water management, sanitation, drinking water supply, erosion control, ecology and waste management. Technical support missions are conducted on request of UN-Habitat. Most missions are on development and disaster prevention, for instance in the programs of UN-Habitat on resilient urban development and climate change adaptation. But when required the Shelter program has also provided support in disaster situations. Examples are the support of the earthquakes in Haiti and Nepal, and after typhoons in The Philippines. A striking example is the development of the Recovery Master Plan for Tacloban after the devastating typhoon in 2013. In three weeks a team of Shelter experts was on the ground for disaster response and within



▲ 2014年塔克洛班灾后重建，菲律宾
Tacloban disaster recovery building back better mission
Philippines 2014

作。2013年，菲律宾塔克洛班市遭受毁灭性台风侵袭，“庇护所计划”为此制定了《塔克洛班市灾害重建总体规划》，专家小组在当地开展了为期三周的救援活动，台风过后的三个月内，就为塔克洛班市制定了重建计划。当时局势非常紧张复杂，该计划需要解决灾民安置问题，要考虑生计、基础设施、服务以及解决无家可归者短期困境并保障其长期安全的所有要素。

与当地社区密切互动是“庇护所计划”工作的重要组成部分。正如一名成员所讲，“‘庇护所计划’的最佳部分就是与当地社区、政府和人居署的利益相关者合作。他们乐于与我们一起工作、学习和分享经验，我感到非常荣幸能够参与这个项目，加入这个富有吸引力和协作精神的团队。”联合国人居署在哪里有办事处，“庇护所计划”就在那里开展活动，“庇护所计划”承诺提供长期支持，并与当地保持良好联系，这都保证了项目能够高效开展。



▲ 2018 庇护所计划技术支持任务，莫桑比克和马拉维
Shelter mission mozambique and malawi 2018

“庇护所计划”城市研讨会

“庇护所计划”的目标之一是落实人居署制定的城市理念和政策，为此，凯谛思的顾问和工程师每天都在为各种公共部门和私营部门客户工作。为了让更多的同事参与人居署的工作，并在日常工作中落实政策，“庇护所计划”已举行了“‘庇护所计划’城市研讨会”。2016年10月，全世界的凯谛思办公室举行了研讨会，为期24小时。在研讨会上，凯谛思的员工接受挑战，要就未来城市和《新城市议程》的实施提供创新想法。

支持世界城市运动

通过“庇护所计划”，凯谛思2010年以来一直为世界城市运动提供赞助支持。世界城市运动是联合国人居署合

three months of the typhoon a plan for the recovery of Tacloban was developed. This plan was developed in a pressure cooker situation for plan for location for refugees, including livelihood, infrastructure, services and all elements which combine the much needed short term solutions for the homeless with a long term safety.

Close interaction with the local communities is an important part of the work in the Shelter program. As one of the participants commented: The best part of the mission was to work with a range of stakeholders from the local community, the government and UN-Habitat. They were truly great to work with, learn from and share the experience with. I felt lucky to be part of an engaging and collaborative team as part of this project. As UN-Habitat is based in the countries where the program is working a long term commitment and excellent local contacts are guarantees for efficient and productive projects.

Shelter Urban Workshops

The implementation of urban ideas and policies developed by UN-Habitat into the “real world” where consultants and engineers of Arcadis are daily working for a wide range of public and private clients is one of the aims of the Shelter program. To engage more colleagues in the work of UN-Habitat and to implement policies in every day practice the Arcadis Shelter Urban Workshops have been developed. In 2016 these workshops started in Arcadis offices worldwide in October in a 24-hour challenge. In the workshops Arcadis colleagues are challenged to provide innovative ideas on cities of the future and the implementation of the New Urban Agenda.



▲ 2018 庇护所计划城市研讨会，曼谷
Shelter Workshop Bangkok 2018

作伙伴筹备联合国第三次人类住区大会（简称“人居三”）的平台，由联合国人居署协调组织，全球热心的合作伙伴推动。“人居三”，也称为联合国住房和可持续城市发展大会，于2016年10月在厄瓜多尔基多举行，是1976年在温哥华召开的人居一和1996年在伊斯坦布尔召开的人居二的延续。人居三会议通过了《新城市议程》来解决可持续城市化和城市未来空间的问题，还为评估世界城市现状，制定解决方案以及重新审视共享的城市未来提供了机会。

此外，作为世界城市运动的重要合作伙伴，凯谛思还担任其指导委员会委员，在人居三的筹备会议中发挥了重要作用。凯谛思支持“城市思想家校园”和“‘庇护所计划’学院”的组织和发展，两者都为践行世界城市运动使命做出了重要贡献。

城市思想家校园

自2014年“城市思想家校园”启动以来，凯谛思积极支持和参与此项活动。“城市思想家校园”是世界城市运动的一项倡议，其目的是汇聚城市学家、哲学家、作家、记者、博客作者、规划师、设计师、城市领导者、决策者、企业家和市场营销人员，在人居三筹备阶段讨论城市化挑战和城市未来。作为关键交流的开放空间，“城市思想家校园”在伙伴之间建立了共识。最重要的是，它有助于完善“我们需要的城市”声明，该声明规定了《新城市议程》的关键原则和途径。

由于活动反馈非常积极，世界城市运动合作伙伴扩大了“城市思想家校园”的概念，并提出了在世界各地推广

World Urban Campaign sponsorship

Through the Shelter program Arcadis has been sponsor of the World Urban Campaign since 2010. Coordinated by UN-Habitat and driven by a large number of committed partners from around the world, The World Urban Campaign is UN-Habitat's partners' platform preparing for the Habitat III conference. Habitat III, also known as the United Nations Conference on Housing and Sustainable Urban Development has been held in October 2016 in Quito, Ecuador and has continued the work started by Habitat I in Vancouver in 1976 and continued in Istanbul in 1996 with Habitat II. The Habitat III conference has addressed sustainable urbanization and the future of urban spaces by creating a New Urban Agenda. It also served as an opportunity to assess the state of the world's cities, to develop solutions, and to revisit a shared urban future.

In addition being a key partner to the campaign, Arcadis serves on its steering committee and played an important role in preparation meetings for Habitat III. The Shelter program also contributes to the Urban Thinkers Campus and the organization of the Shelter Academy, both of which contribute in important ways to the mission of the World Urban Campaign.

Urban Thinkers Campuses

Since the start of the Urban Thinkers Campuses in 2014 the Shelter program actively supports and takes part in these events. The purpose of the Urban Thinkers Campuses, an initiative of the World Urban



▲ 2018 城市思想家校园，卡塔尔 Urban Thinkers Campus Qatar 2018

更多校园的建议。通过这些活动，合作伙伴就影响城市的关键问题协商原则、政策和行动计划。新的校园通过吸收尽可能多的多元群体和视角，进一步强化了“我们需要的城市”的地位。

“庇护所计划”学院

除了支持联合国人居署的项目外，凯谛思还每年组织一次“‘庇护所计划’学院”来进行知识转移，该学院由凯谛思与人居署共同组织。根据人居署的建议，凯谛思邀请城市规划 and 政策的领导者，例如市长和市政规划办公室



▲ 2018 庇护所计划学院，阿姆斯特丹
Shelter Academy 2018, Amsterdam

主任，在荷兰参加城市和气候变化培训项目。整个学院会议期间，参与者根据其所在地区的气候适应和减缓案例，研究制定实施和行动计划，并得到凯谛思专家和研讨会的支持。凯谛思的客户，如阿姆斯特丹和鹿特丹市政厅、荷兰水利委员会、鹿特丹伊拉斯姆斯大学国际住房研究所（IHS），也随时提供案例研究和支

九年合作经验

最初几年，“庇护所计划”重点是鼓励内部参与和建立凯谛思与人居署之间的合作关系。九年后，通过成功开展众多项目和制定影响政策，“庇护所计划”展示了公共私营伙伴关系在解决全球问题的巨大力量，广为赞誉。

凯谛思为“庇护所计划”而自豪，该计划挑战并鼓励其多元和技术熟练的员工共同努力，以满足不断发展的城市需求。伙伴关系的支柱是共享专业知识和相互信任。多年来，“庇护所计划”建立并不断扩大信任和知识共享，以互惠互利的方式吸引其他利益相关者。例如，2015年7月，“庇护所计划”小组与比利时天主教鲁汶大学（KU

was to bring together urbanists, philosophers, writers, journalists, bloggers, planners, designers, city leaders, policymakers, entrepreneurs and marketers to debate and discuss urbanization challenges and urban futures on the run-up to the Habitat III Conference. Staged as an open space for critical exchange, the conference built consensus among partners. Most importantly, it helped to refine “The City We Need” statement, which sets key principles and paths to inform the New Urban Agenda.

Feedback from the event was so positive that the World Urban Campaign partners expanded the Urban Thinkers Campus concept and took proposals for additional campuses to be held worldwide. These events brought partners around the table to negotiate principles, policies, and action planning on key issues affecting cities. The new campuses have further strengthened The City We Need position by engaging as many diverse groups and perspectives as possible.

Shelter Academy

In addition to the support for UN-Habitat projects in missions Arcadis organizes an annual Shelter Academy for knowledge transfer annually. This Academy is organized jointly with UN-Habitat. On recommendation of UN-Habitat leaders in urban planning and policy such as directors of municipal planning offices and mayors are invited by Arcadis to receive a training program in The Netherlands on cities and climate change. Throughout the Academy sessions, participants create implementation and action plans based on case studies on climate adaptation and mitigation in their regions and supported by Arcadis experts and workshops. Arcadis clients, such as Municipalities of Amsterdam and Rotterdam, the Water Board and the International Housing Studies (IHS) Erasmus University Rotterdam, the Netherlands, are also on hand to provide case studies and support.

Experience from over nine years partnership

During the Shelter program's first years, the focus largely was on internal engagement and building the mutual relationship between Arcadis and UN-Habitat. Nine years later, after numerous successful missions and policy-influencing outputs, Shelter is receiving global acclaim for demonstrating the power of public/private partnership in addressing global issues.

Arcadis is proud of Shelter, a program that

“

凯谛思可持续城市化是公司的核心领域，重点关注全公司的社区参与战略，因为这是我们的专长所在。我们与联合国人居署的伙伴关系完全符合我们的雄心壮志，对于吸引和激励内部和外部利益攸关方非常重要。

Arcadis Sustainable urbanization is the main area around which we focus our company-wide community involvement strategy, because it's where our collective expertise can have the greatest impact. Our partnership with UN-Habitat perfectly fits in our ambition and is important to engage and inspire our internal and external stakeholders.

”

Leuven) 在尼泊尔展开合作，“庇护所计划”学院的教育项目聘请了鹿特丹伊拉斯姆斯大学的住房与城市发展研究院（IHS）的专家。

2015年12月，在巴黎举行的联合国气候变化大会上，“庇护所计划”还与私营部门和世界领导人进行了交流。作为合作伙伴大会（GAP）的私营部门代表，“庇护所计划”在2016年基多人居三会议《新城市议程》的通过中发挥了积极作用。

凯谛思首席执行官彼得·奥斯特维尔称，“‘庇护所计划’展示了我们长期致力于知识和专业技能分享，以提高我们员工的技能和专业知识，从而改善生活。”

据凯谛思可持续发展总监乔斯特·斯洛滕介绍，“凯谛思可持续城市化是公司的核心领域，重点关注全公司的社区参与战略，因为这是我们的专长所在。我们与联合国人居署的伙伴关系完全符合我们的雄心壮志，对于吸引和激励内部和外部利益攸关方非常重要。”



challenges and encourages its diverse and skilled people to work together to meet the needs of growing cities. The backbone of the partnership is shared expertise and mutual trust. Over the years, the program has built upon and expanded that trust and knowledge share to engage other stakeholders in mutually beneficial ways. For example, the Shelter mission to Nepal in July 2015 brought in KU Leuven from Belgium as a partner, and the educational program of the annual Shelter Academy engaged The Institute for Housing and Urban Development Studies (IHS) based at the Erasmus University Rotterdam.

The Shelter Program also engaged the private sector and world leaders at the COP United Nations Conference on Climate Change in Paris in December 2015. As representative of the private sector in the General Assembly of Partners the Shelter program manager played an active role in the development of the New Urban Agenda in the Habitat III conference in 2016 in Quito.

Shelter shows our long term commitment to share our knowledge and expertise to improve the quality of life with the skills and expertise of our people, commented Peter Oosterveer, Chief Executive Officer of Arcadis N.V.

According to Joost Slooten Sustainability Director, Arcadis Sustainable urbanization is the main area around which we focus our company-wide community involvement strategy, because it's where our collective expertise can have the greatest impact. Our partnership with UN-Habitat perfectly fits in our ambition and is important to engage and inspire our internal and external stakeholders.



▲ 2018 庇护所计划技术支持任务，老挝 Shelter mission Laos 2018

关于凯谛思 About Arcadis

凯谛思是全球领先的自然和建筑资产设计与咨询公司。通过运用我们深入的市场洞察力和涵括设计、咨询、工程、项目和管理服务等，我们与客户合作，为其自然和建筑资产在整个生命周期内提供卓越和可持续的服务成果。我们有 27,000 名员工，活跃于 70 多个国家，收入达 33 亿欧元。我们支持联合国人居署的知识和专业，以提高世界快速进程中的城市的生活质量。

Arcadis is the leading global Design & Consultancy firm for natural and built assets. Applying our deep market sector insights and collective design, consultancy, engineering, project and management services we work in partnership with our clients to deliver exceptional and sustainable outcomes throughout the lifecycle of their natural and built assets. We are 27,000 people, active in over 70 countries that generate €3.3 billion in revenues. We support UN-Habitat with knowledge and expertise to improve the quality of life in rapidly growing cities around the world.

庇护所计划联系方式：伯特·斯莫尔德斯（庇护所计划负责人）
邮箱：bert.smolders@arcadis.com 脸书：facebook.com/ArcadisShelterProgram
网址：www.Arcadis.com/shelter

Contact address for information on the Shelter program: shelter@arcadis.com or contact: Bert Smolders
(Program Manager Shelter) bert.smolders@arcadis.com

Shelter is on Facebook at: facebook.com/ArcadisShelterProgram, website: www.Arcadis.com/shelter



“庇护所计划”由凯谛思的第一大股东 Lovinklaan 基金会资助。Lovinklaan 基金会董事会成员尼克·贝莱评论说，“‘庇护所计划’完全符合 Lovinklaan 基金会代表凯谛思员工利益的使命。它鼓励全球合作，让我们的员工有机会与最需要他们的社区分享他们的技术和热情。”

“庇护所计划”负责人伯特·斯莫尔德斯表示，2010 年启动以来，庇护所计划已经发展成为一项独特的社区支持计划，因为它专注于无偿提供最有经验的专家的技术支持。该计划涉及多利益攸关方，融合凯谛思、Lovinklaan 基金会和人居署的利益和优势，造福需要专业知识支持的社区。凯谛思员工积极参与该计划，他们的热情证明社会责任是企业文化的重要组成部分，人居署的积极互动也使技术支持任务产生巨大影响。

人居署呼吁私营部门更多地参与城市发展。九年来，庇护所计划一直帮助人居署改善其执行人道主义任务的方式。今天，它被认为是一项最先进的计划，也是公私伙伴关系为解决全球问题作出重大贡献的典范。

The Shelter program is made possible through financial contributions of the Lovinklaan Foundation, the largest Shareholder in Arcadis. Nick Bellew, board member, Lovinklaan Foundation commented that The Shelter program perfectly fits in the Lovinklaan



Foundation's mission to represent the interests of Arcadis' people. It encourages Global collaboration and gives our people the opportunity to share the skills and passion they have with communities that need them most.

According to Bert Smolders, Shelter program manager since the start of the program in 2010, the Shelter program has developed into an unique community support program as it concentrates on providing pro bono technical support by the most experienced experts. It is a multi-stakeholder program in which the interests and qualities of all stakeholders, Arcadis, Lovinklaan Foundation and UN-Habitat are combined for the benefit of communities where the expertise support is required. The enthusiasm of staff of Arcadis to engage in the program is proof of the fact that social responsibility is an important of the culture, and the positive response of UN-Habitat to interact has enabled a great impact in the support missions.

UN-Habitat has called on the private sector for greater involvement and participation in the urban development arena. For nine years, the Shelter program has been helping UN-Habitat to improve the way it carries out its humanitarian mission. Today, it is considered a state-of-the-art program and a leading example of the significant contributions public-private partnerships can make in addressing global issues. 



▲ 界首高新区 Jieshou High-tech Zone

Why Can Jieshou's Circular Economy Develop Healthily and Rapidly?

— Misunderstanding of Circular Economy and Practice in Jieshou

界首循环经济为什么能健康快速发展？ —— 循环经济发展的认识误区和界首实践

界首市位于豫皖边界，是安徽省西北大门，面积 667.3 平方公里，人口 80.2 万，是安徽省 6 个县级市之一，人多地少、资源贫乏是基本市情。2004 年以来，界首市依托再生资源优势，培育了再生金属、再生塑料两大综合利用产业，加速推进了循环经济发展的界首实践。

The city of Jieshou is located at the border of Henan and Anhui Province, is the northwest gate of Anhui Province. It covers an area of 667.3 square kilometers and has a population of 802,000. It is one of the six county-level cities in Anhui Province, numerous people, less land and poor resources are the basic conditions of this city. Since 2004, Jieshou relying on the renewable resources, has cultivated two comprehensive utilization industries of recycled metal and recycled plastic, to accelerate the development of circular economy.



为走出困境，界首市对再生资源产业重新进行把脉问诊，坚持以循环经济理念发展再生资源产业，连续 10 余年划出经济发展上扬线。

In order to get out of the predicament, Jieshou has re-examined the renewable resources industry, adhered to the concept of circular economy to develop the renewable resources industry for more than ten years.



一、界首循环经济发展十年上扬线以及由此生发的四大效益

上世纪九十年代，界首经济位列全省倒数。为走出困境，界首市对再生资源产业重新进行把脉问诊，坚持以循环经济理念发展再生资源产业，连续 10 余年划出经济发展上扬线。2017 年，界首实现地区生产总值 189 亿元，同比增长 11%，增幅居安徽省首位；规模以上工业增加值 147 亿元，增长 13.5%，总量、增幅分别居安徽省第 9 位、第 3 位。第二产业比重由 2006 年的 35.1% 提高到 58.9%。2018 年，界首实现规模以上工业增加值 130 亿元，增长 13.8%，总量、增幅分别居安徽省第 8 位、第 4 位。循环经济不仅支撑了界首经济健康快速发展，还生发出经济、社会、资源、生态等多重效益：

一是经济效益。近年来，界首循环经济产业一直保持高速增长势头，年均产值、税收均增长 40% 以上，循环经济产业对界首工业的贡献率始终保持在 70% 以上。2017 年，界首循环经济产业实现产值 506 亿元、税金 25 亿元，分别是建园之初的 40 倍、60 倍，在资源循环利用产业发展中发挥了示范作用。

二是社会效益。界首循环经济产业已带动 4 万多个家庭致富，使全市农民人均纯收入增加 10% 以上，催生了众多千万富翁和百亿企业，并带动商贸物流、信息通讯等相关产业发展。同时，一大批有爱心、热心公益事业的企业家积极投身“百企帮百村”、关爱留守儿童等活动，带动全市上下形成了“小市大爱”的浓厚氛围。

三是资源效益。界首再生铅循环利用产业每年回收加工利用废旧铅蓄电池 45 万吨，冶炼再生铅 33 万吨，每年可少开采铅矿石约 3000 万吨，节约原煤 11.96 万吨、节水 439 万吨，相当于少建 10 个大型铅矿企业，使我国铅自给能力由 10 年延长至 50 年。再生塑料循环利用产业年加工



▲ 界首市市长何逢阳
在第九届亚太区域 3R 论坛上演讲
He Fengyang, Mayor of Jieshou City, delivered a speech at the Ninth Regional 3R Forum

1. The Development of circular economy for ten-year upward Line and the produced four benefits

In the 1990s, the economy of Jieshou ranked the last in the Anhui province. In order to get out of the predicament, Jieshou has re-examined the renewable resources industry, adhered to the concept of circular economy to develop the renewable resources industry for more than ten years. The economic development's upward line has been drawn up.

In 2017, the region's GDP reached 18.9 billion yuan, 11% increase over the same period last year, ranking first in Anhui Province; the above-scale industrial added value was 14.7 billion yuan, an increase of 13.5%, ranking ninth and third in the gross index and growth rate of Anhui Province respectively. In 2006, the proportion of secondary industry increased from 35.1% to 58.9%. In 2018, the above-scale industrial added value achieved more than 13 billion yuan, an increase of 13.8%, gross index and rate of increase ranked the 8th and 4th respectively in Anhui Province. Circular economy not only supports the economic development of Jieshou healthily and rapidly, but also generates multiple benefits in economy, society, resources, ecology, etc.

Firstly, Economic Benefits. In recent years, the circular economy industry in Jieshou has maintained a high growth momentum. The average annual output value and tax revenue has increased by more than 40%. The contribution rate of circular economy industry to Jieshou industry has remained above 70%. In 2017, Jieshou's circular economy industry realized output value of 50.6 billion yuan and tax of 2.5 billion yuan, respectively 40 times and 60 times higher than when it was built, which played a demonstration role in the development of resources recycling industry.



利用再生塑料 80 万吨，可节约石油 360 万吨，相当于少建 3 个中型化工厂。再生铜、铝循环利用产业年产 20 万吨再生铜、铝，可节约铜、铝矿石 1000 多万吨，大大减少了国家对原生矿产资源的开发，降低了金属冶炼中的能源消耗、水资源消耗和土地资源占用。

四是生态效益。界首市已经建立了覆盖全国的资源回收网络体系，按照目前界首每年回收 1 亿只废旧蓄电池计算，可减少国土占用和污染约 3000 平方公里；每年回收废旧塑料 180 万吨，可减少国土占用和污染 800 多平方公里。如果没有界首发展资源再生产业，每个铅蓄电池都会变成一个现实的污染源，废旧塑料堆积填埋一百年都降解不了，点状污染、片状污染将随处可见。

二、循环经济发展的认识误区及其在界首的成功实践

界首的循环经济发展不是一帆风顺的，而是经历了诸多坎坷与磨练，才实现了凤凰涅槃、浴火重生。在发展循环经济的过程中，我们深切感受到了业内外对循环经济的歧视和偏见。主要的认识误区体现在四个方面：

误区一：发展循环经济必然污染环境。再生资源利用产业发展的初期阶段，由于法律、政策、工艺等多方面的原因，存在小散乱等不规范现象。如上世纪八九十年代，部分界首人在外出“捡破烂”的基础上，开始了对再生资源原始、散乱的再加工。一时间，再生金属产业“村村点火、户户冒烟”，再生塑料产业“家家收购、户户加工”的景象颇为壮观。原始、粗放的经营方式被群众举报、媒体曝光、上级部门注意，也让这一产业从此背上了污染环境的“罪名”。

面对被动局面，界首市积极作为：一是加强环保执法，取缔小散乱企业。二是倡导清洁生产，鼓励企业加大技改投入。目前，全市所有企业锅炉完成“煤改气”，规上企业均达到清洁生产一级以上水平，其他企业均达到二级水

Secondly, Social Benefits. The circular economy industry in Jieshou has brought about more than 40,000 families to become rich. Farmer's per capita net income has been increased by more than 10%. It has spawned many multimillionaires and billions of enterprises, and encouraged the development of related industries such as business logistics, information and communication. At the same time, a large number of caring and public welfare entrepreneurs actively participate in activities such as "100 enterprises to help 100 villages" and caring for left-behind children, which has led to the formation of a strong atmosphere of "big love in small cities".

Thirdly, Resource Efficiency. Recycling industry of recycled lead in Jieshou Recycling utilization of 450,000 tons of waste lead-acid batteries annually, and 330,000 tons of recycled lead from smelting each year. It can mine about 30 million tons of lead ore annually, and save 119,600 tons of raw coal and 439,000 tons of water, which is equivalent to building 10 large lead mining enterprises, and the self-sufficiency in China has been extended from ten years to fifty years. The recycling industry of recycled plastic can process and utilize 800,000 tons of recycled plastic annually, saving 3.6 million tons of petroleum, equivalent to reduce the construction of three medium-sized chemical plants. The recycling industry of copper and aluminium produces 200,000 tons of recycled copper and aluminium annually, which saves more than 10 million tons of copper and aluminium ores, greatly reduces the development of primary mineral resources by the state, and reduces energy consumption, water consumption and land resource occupation in metal smelting.

Fourthly, Ecological Benefits. Jieshou City has established a national resource recovery network system. At the present day, 100 million old batteries are recycled annually, it can reduce land occupation and pollution by about 3,000 square kilometers; 1.8



▲ 第九届亚太区域 3R 论坛期间，界首市签署了《亚洲市长关于实现亚洲城市清洁的水、土地和空气的印多尔 3R 宣言》
Jieshou signed the Indore 3R Declaration of Asian Mayors on Achieving Clean Water, Clean Land and Clean Air in Cities in Asia at the Ninth Regional 3R Forum

平。三是按照生态工业理念发展循环经济，打造中国的卡伦堡。围绕国家生态工业示范园区创建，引导产业转型升级、提质增效。

误区二：循环经济是低端产业。再生资源回收加工初期：回收体系不健全，三轮车是运输工具，小喇叭是营销武器，给人造成低端的印象；初加工环节，装备水平落后，产业规模偏小，且大多数产品处于产业链低端环节，产品附加值低，原始、粗放、高污染的认知在很多人心目中根深蒂固。

面对诸多争议，界首市努力通过自身实践改变大家的认知：一是鼓励产学研紧密合作，走创新发展之路。二是鼓励产业链式发展，打造战略性新兴产业集聚发展基地。三是鼓励两化融合，积极对接中国制造 2025。通过政策引导和项目谋划服务，引导天能集团、康命源等企业加速“机器换人”，推动工业机器人发挥示范作用。

误区三：循环经济规模不经济。有些人看到小散乱企业盈利的假象，认为循环经济规模与效益并不对等。有人认为再生资源企业小打小闹就行了，应对循环经济发展周期的变化，小企业才更容易掉头。一旦上升到企业乃至产

million tons of waste plastic recycled annually can reduce land occupation and pollution by more than 800 square kilometers. Without the Jieshou's development of resource recycling industry, every lead-acid battery will become a real source of pollution. The waste plastic cannot be degraded for 100 years. Point pollution and flake pollution will be seen everywhere.

2. Misunderstanding of circular economy and successful practice in Jieshou.

The development of circular economy is not plain sailing; it has realized the phoenix nirvana and gaining rebirth by experiencing a lot of ups and downs. In the process of developing a circular economy, we deeply feel the discrimination and prejudice from the inside and outside of the industry for circular economy. The main misunderstandings are reflected in four aspects:

The first part of misunderstanding: Developing circular economy will inevitably pollute the environment.

At the initial stage of the development of recycling resources industry, due to the law, policy, technology



业战略发展的高度，规模越大，受关注度就会越高，压力就会越大。

破解这一误区，界首市作了以下努力：一是集团化运作。界首市按照现代企业制度的要求，积极支持和指导 13 家规模小、经营分散、市场竞争力弱的再生铅企业整合为华鑫铅业、华铂科技两家集团公司，两家公司再生铅机械化自动拆解、熔池熔炼冶炼装备和环保水平均达国内一流水平。

误区四：规范的企业不赚钱。国内不少走循环化发展路子的企业，科技创新水平较高，但有的脱离中国实际、片面追求高大上，有的与产业链脱节，只赚吆喝不赚钱、经济效益不高。因此造成规范的企业不赚钱的假象。

面对这一误区，界首市在引导企业规范发展方面作了如下努力：一是规范企业财务行为，让企业在再生资源退税上无后顾之忧。二是规范企业行业准入，不让投机取巧企业有可乘之机。三是主动参与标准制订，用更严格的要求约束企业的发展行为。华鑫集团、华铂科技被国家标准化管理委员会指定为全国再生铅及合金锭标准、全国再生铅铅渣、废水和铅烟铅尘排放 4 项标准制定单位。华翼集团也被指定为 2 项地方标准制定单位。

and so on, it exists small-scale, scattered distribution and non-standard phenomenon. For example, in the 1980s and 1990s, part of Jieshou's people on the basis of going out to collect rubbish, begin to reprocessing original and scattered renewable resources. For a while, recycled metal industry displays the vision of "village ignition, household smoke", recycled plastic industry show the fact of "household acquisition, household processing", the scene is quite spectacular. The primitive and extensive way of operation has been reported by the masses, exposed by the media and noticed by the higher authorities, which have also made the industry with the "crime" of polluting the environment.

Faced with the passive situation, Jieshou City actively acts as follows: Firstly, strengthening environmental protection law and small scattered enterprises banned. Secondly, advocating cleaner production and encouraging enterprises to increase investment in technology field. At present, all enterprises have completed the "coal to gas" transformation of boilers, and all enterprises have reached the level of cleaner production above the elementary level, and other enterprises have reached the level of the second level. Thirdly, developing the circular economy in accordance with the concept of Eco-industry and build China's Karenburg. Being focused on the establishment of national Eco-industrial demonstration park, we should guide industrial transformation and upgrading, improve quality and efficiency.

The second part of misunderstanding: Circular economy is a low-end industry: At the initial stage of recycling the renewable resources, the recycling system is lack of necessary rules and regulations. Tricycles are the transport, and trumpets are marketing weapons, creating a low-end impression for person. In the initial processing stage, the equipment is backward, the industrial scale is small, and most of the products are in the low end of the industrial chain, the added value of the products is low, primitive, extensive and highly polluting perceptions are deeply rooted in many people's minds.

Faced with many disputes, Jieshou strives to change people's perceptions through its own practice. Firstly, we encourage cooperation between production, and keep on the way of innovation and development. Secondly, we encourage the development of industrial chain and build a new strategic industrial agglomeration development base. Thirdly, we also encourage the integration of the two industries and actively dock with Made-in-China 2025. Through policy guidance and project planning services, Tianneng



界首实践表明，只有坚定不移地走环保、创新、规模、规范发展之路，循环经济才能得以健康快速发展。

The practice of the Jieshou shows that only by steadfastly taking the road of environmental protection, innovation, scale and standardized development, can circular economy develop healthily and rapidly.



三、循环经济发展界首实践的关键词

界首实践表明，只有坚定不移地走环保、创新、规模、规范发展之路，循环经济才能得以健康快速发展。

关键词一：环保。第一，循环经济是解决环境污染问题的产业。传统的经济增长一端从地球大量开采资源生产产品，另一端向环境排放大量废水、废气和废渣，表现为“资源—产品—废弃”形式；而循环经济则以“资源—产品—废弃—再生资源”为表现形式，是一种集约化的增长模式。第二，发展循环经济必须坚持环保是第一生命。如果打着循环经济的旗号，仍然采取粗放的方式生产经营，无节制地排放废弃物，循环经济园区将变成“污染集中排放地”。第三，发展循环经济完全能够把对环境的影响控制在国家规范之内。只要坚持园区化管理开发，建立完善科学的监督机制，不断引导企业规范生产和提升装备水平，产业发展对环境的影响就能控制在国家规定的范围之内。



▲ 摄影王东军 photo by Wang Dongjun

Group, Kang Mingyuan and other enterprises will be guided to accelerate the "machine replace the person" and promote industrial robots to play a demonstration role.

The third part of misunderstanding: Circular economic scale is uneconomical: Some people see the false impression of the small scattered enterprises making profits and think that the scale and benefit of circular economy are not equal. Some people think that renewable resources enterprises start small. However, when it comes to the strategic development of enterprises and even industries, the larger the scale, the higher attention will be, and the pressure will be greater.

To solve this misunderstanding, Jieshou has put forward the following efforts: Firstly, collectivized operation. In accordance with the requirements of modern enterprise system, we actively support and guide thirteen small-scale, decentralized and less competitive recycled enterprises and integrate them into Huaxin Lead Industry and Huabo Science and Technology Group. Both two companies have achieved the first-class domestic level in mechanized automatic dismantling of recycled lead, melting and smelting equipment and environmental protection.

The fourth part of misunderstanding: Standardized Enterprises is not profitable.

Many enterprises in China have a high level of scientific and technological innovation, but some of them are divorced from China's real and one-sided pursuit of loftiness. Some of them are disconnected from the industrial chain. They only make slogan and they have no profit, and their economic benefits are not high. Therefore, it creates the illusion that standard enterprises are not profitable.

关键词二：创新。第一，循环经济本身就是创新经济。如界首的循环经济产业，能够将2个饮料瓶变成1件时尚的新衣服、将废弃的易拉罐变成应用于航天装备的泡沫铝，种种变废为宝本身就是一种创新。**第二，循环经济领域科技创新潜力无限。**诸多院士、专家在深入界首的循环经济企业一线调研后，均指出界首循环经济发展尚有较大空间。界首目前正与部分院士团队洽谈在先进技术、先进理念等方面的深度合作，以期增进科技创新的动力。**第三，循环经济是当仁不让的战略新兴产业。**事实上，战略性新兴产业以重大技术突破和重大发展需求为基础，知识技术密集、物质资源消耗少、成长潜力大、综合效益好，是支撑循环经济健康快速发展的关键。

关键词三：规模。第一，产业没有规模就没有生命力。正是因为界首拥有年回收利用废旧蓄电池、废铝材、废塑料260万吨，这一在全国屈指可数的产业规模，才为循环经济发展奠定了坚实基础。**第二，从小散乱到集团化运作为必由之路。**正是由于界首帮助企业摆脱家族式管理，引导企业组船造舰，建立现代企业制度，循环经济产业能够在较短时间内实现由小到大、由无序到规范、由零散到集



Faced with this misunderstanding, Jieshou has made the following efforts in guiding enterprises to standardize their development: Firstly, we standardize the financial behavior of enterprises, so that enterprises have no worries about the tax rebate of renewable resources. Secondly, we standardize the access of enterprises to the industry. Thirdly, we encourage them to actively participate in the formulation of standards, and put more restrictions on the behaviours of enterprises. Huaxin Group and Huabo Technology have been designated by the National Standardization Committee as the four standard-setting units for national recycled lead and alloy ingot standards, national recycled lead slag, waste water and lead fume and dust discharge. Huayi Group has also been designated as two local standard-setting units.

3. Circular economy development become the key words of Jieshou's practice

The practice of the Jieshou shows that only by steadfastly taking the road of environmental protection, innovation, scale and standardized development, can circular economy develop healthily and rapidly.

The first key word: Environmental protection. Firstly, circular economy is an industry that can solve environmental pollution problems. Traditional economic growth exploited a large number of resources from the earth to produce products. At the other end, a large number of waste water, exhaust gas and waste residue are discharged into the environment. However, the circular economy takes "resources-products-waste-renewable resources" as its manifestation, it's an



中。**第三，规模经济的核心在于品牌与质量。**只有明确产业定位，强化产业协同发展，在规模经济中强化质量提升和品牌打造，才能逐步增强行业在全国乃至全世界的核心竞争力。

关键词四：规范。第一，不规范企业的盈利能力来自于内部成本外部化。如果企业依靠给社会制造污染赚钱，污染的成本最终仍会由自己承担，这些无知的冒险行为不会长久。**第二，规范是循环经济企业的生存之本。**树立规范的经营理念，并在市场的诱惑中长期坚持，不偏离轨道，是企业长久发展、持续壮大的法宝。**第三，规范的企业通过把握产业发展周期规律借势发展。**循环经济产业周期规律明显，只有企业自身规范，才能在把握规律中借势发展，从而获得广阔的发展空间，实现自身的发展壮大。

intensive growth model. Secondly, to develop circular economy, we must insist that environmental protection is the first life. If under the banner of circular economy, still adopted the operation of extensive production, and waste was discharged uncontrollably, the circular economy park would become a "centralized pollution discharge place". Thirdly, the development of circular economy can completely control the impact on the environment within the national norms. As long as we adhere to the development of Park-based management,

establish and improve scientific supervision mechanism, and constantly guide enterprises to standardize production and upgrade the level of equipment, the impact of industrial development on the environment can be controlled within the scope prescribed by the state.

The second key word: Innovation. Firstly, circular economy itself is an innovative economy. For example, the circular economy industry of Jieshou can transform two beverage bottles into one fashionable new clothes, and turn the discarded cans into foam aluminum applied to space equipment, it is an innovation to turn waste into treasure. Secondly, there is unlimited potential for scientific and technological innovation in circular economy field. Many academicians and experts have pointed out that there is still much potential for the development of circular economy in Jieshou. At present, Jieshou is discussing with some academician teams in advanced technology, advanced concepts and other aspects of in-depth cooperation, so that it can promote the motive force of scientific and technological innovation. Thirdly, circular economy is a strategic emerging industry. Strategic emerging industries are based on breakthrough of technological and development of demand, intensive knowledge and technology can reduce the consumption of material resources. A great growth potential and comprehensive

benefits are the key to support the healthy and rapid development of circular economy.

The third key word: Scale. Firstly, if industry is without scale, it means the industry has no vitality. Due to Jieshou has 2.6 million tons of waste storage batteries, aluminium scrap and plastic scrap annually, which is a countless industrial scale in the China, laying a solid foundation for the development of circular economy. **Secondly, it is the only way from small scattering to group operation.** Because Jieshou helps enterprises to get rid of family management, guide enterprises to organize shipbuilding and establish modern enterprise system, the circular economy industry can realize in a relatively short time from small to large, from disorder to norm, from scattered to centralized. **Thirdly, the core of economies is the brand and quality.** Only by defining the orientation of industry, strengthening the coordinated development of industry, strengthening the quality improvement and brand building in the scale economy, it can become the core

competitiveness industry in the whole China and even in the whole world.

The fourth key word: Standard. Firstly, the profitability of non-standard enterprises comes from **the externalization of internal costs.** If the enterprises relying on making profit by polluting society, the cost of pollution will ultimately be borne by themselves, and these ignorant ventures will not contain for a long period. **Secondly, standard are the foundation for the survival of circular economy enterprises.** Establishing standard operating concept, and persisting in the temptation of the market for a long time. It is a magic weapon of enterprise's to promote and sustained growth for a long-term. **Thirdly, standardized enterprises develop by grasping the periodic law of the industry.** The cycle law of circular economy industry is obvious, only when enterprises regulate themselves, it can then develop by taking advantage of the law, so that it can gain a broad potential for development and realizing their own development and growth. 



FIGURE

人物视界

Barueri – Intelligent and Connected City
— Exclusive Interview with Mr. Rubens Furlan, Mayor of Barueri, Brazil

巴卢韦利——智能和互联城市
—— 专访巴西巴卢韦利市市长鲁本斯· 弗兰先生

A Brief on the "Sustainable Petaling Jaya City 2030"
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谈《八打灵再也市 2030 年可持续城市规划》
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巴卢韦利—智能和互联的城市

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关于巴卢韦利市

巴卢韦利市是巴西圣保罗州的主要商业中心之一，位于大圣保罗西部，主要经由 Castello Branco 高速公路，距首都圣保罗 26 公里，面积 65.7 平方公里，人口约 26 万。巴卢韦利市服务和产业结构多元，是大圣保罗最大的就业地区之一，具有门类齐全的专业培训机构，如市立技术教育学院、市政学院、大学和技术职业培训机构等。巴卢韦利市是巴西第五位的最佳投资城市，第 13 位最智能城市，并在 2017 互联智慧城市评选中，在经济和治理方面排名第一。

WBPM: 在 2018 年全球人居环境论坛年会上，巴卢韦利市因其致力于建设包容、安全、有活力和智慧的城市，荣获 2018 “全球城市创新范例”，我们再次表示祝

About Barueri

Barueri is one of the main business centers of the State of Sao Paulo, Brazil. It is located in the western region of Greater Sao Paulo, with main access by the Castello Branco highway, 26 kilometers from the capital Sao Paulo. It has an area of 65.7 km², with an estimated population of 267,534. Due to its structure of services and industries, it is one of the largest generators of employment in Greater Sao Paulo, with a privileged structure of professional training: Municipal Schools of Technical Education, Municipal Faculty, colleges and technical vocational training institution. Barueri is the 5th best city to invest in, the 13th most intelligent city in Brazil and a city awarded in this theme of smart city by

贺。巴卢韦利市专注于智能和互联的城市发展，过去几年实现了蓬勃发展，您能否介绍一下最近几年取得的成就？

市长：巴卢韦利市不断投资，加大“巴卢韦利智慧城市”政府品牌建设。政府最近开展了一系列行动，无纸化计划是其中一项，旨在使城市全部实现数字化，以减少纸张、印刷和存储费用，使城市更具可持续性。该项目符合联合国可持续发展目标。

WBPM: “巴卢韦利智慧城市”项目旨在提高政府运营的效率和透明度，以及居民的生活质量，同时实现经济、社会和环境效益。您愿意分享您的智能解决方案和行动吗？

市长：巴卢韦利市拥有创新和技术中心，负责制定城市技术的总体规划。最近政府对数个市内广场进行了现代化改建，在这些广场为市民提供免费的互联网服务。通过这种方式，市民可以用于个人活动或访问在线公共服务平台。关于在线公共服务，我们有一个创新之举，就是在 2018 年 10 月 18 日向公众开放了应用程序“你好！巴卢韦利 (AlôBarueri)”，它是一个市民与监察员办公室可以直接沟通的平台，最具创新性的是使用机器人每周 7 天，每天 24 小时的与人互动。

WBPM: 在促进经济和社会转型的同时，信息技术和数字经济也使城市发展和人居环境发生了全面而深刻的变革，正在重塑我们的城市和社区。您是否愿意分享您的良好经验和举措，以更好地应对城市转型的挑战，同时实现经济、社会和环境效益？

市长：我们正在努力地改善市民生活，例如实现城市卫生系统的现代化，这是一项很大的投资，可以使人们的生活更加方便高效。此外，我们在城市的主要公园—Dom



▲ 巴西巴卢韦利市市长鲁本斯·弗兰先生
Mr. Rubens Furlan, Mayor of Barueri, Brazil

Connected Smart Cities 2017 occupying the 1st place in Economics and governance.

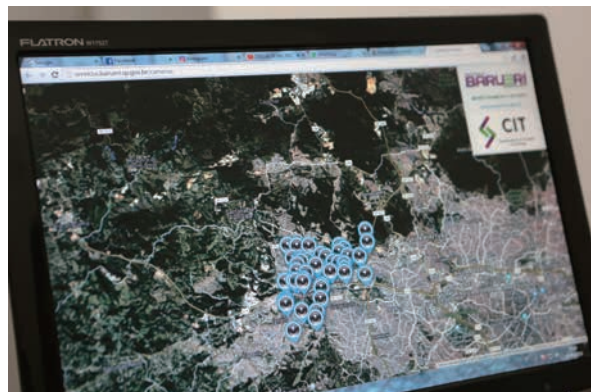
WBPM: During the 2018 Annual Session of Global Forum on Human Settlements (GFHS 2018), the City of Barueri gained the honor of “Global Model of Urban Innovation” of Sustainable Cities and Human Settlements Awards Ceremony (SCAHS) 2018 for its commitment to an inclusive, safe, vibrant and smart city. We like to, again, extend our congratulations. Barueri, a city focused on intelligent and connected city development, has realized vigorous growth over the past few years, would you brief us on the recent achievements in this regard?

Mayor: The city of Barueri has made constant investments so that the government brand, Barueri Intelligent City, will become more and more present in the city. Recent actions include, for example, the paperless Barueri program, which aims to make all city processes a digital process to reduce paper, print and storage expenses, making the city much more sustainable. This project is aligned with the United Nations Sustainable Development Goals (SDGs).

WBPM: The Smart City Barueri project aims to improve the efficiency and transparency of government



▲ “你好！巴卢韦利”——网络解决方案（网站、应用程序和对话）实现市民和市政厅连接
Alô Barueri - WEB Solutions (Site, Application and Chatbot) to connect the citizen to the city hall.



▲ 城市实时监控系统，可以登录以下网址
Live monitoring, can be accessed at:
<https://servicos.barueri.sp.gov.br/cameras> 访问

José 市政公园内安装了摄像头，除了与市政警卫的中央监控相连接，市民也可以通过互联网免费访问，还使用了废物收集电子仪器，实现正确的废弃物处理和 100% 回收。

WBPM: 根据《巴卢韦利市技术总体规划 (2018-2020)》，其所有项目都与 17 个可持续发展目标紧密关联，并且有 20 多个与智慧城市相关的项目。您是否可以列举 1~2 个案例来说明它们是如何与可持续发展目标保持一致的？

市长: 是的，其中一个改善市民日常生活的项目是在城市中央林荫道上设置充电点。在当今的互联世界中，手机是市民的必备。因此，我们希望提供符合联合国可持续



▲ 在市政公园内安装配有认证回收的电子废弃物收集设备
Collector of specific equipment for disposal of electronic waste with certified recycling installed in the Municipal Park of Barueri.

operations, and the quality of life of residents, while achieve economic, social and environmental benefits. Would you like to share your innovative intelligent solutions and actions?

Mayor: The city of Barueri has a Center of Innovation and Technology that develops the Master Plan of Technology of the city. As recent actions in the city, we can mention the creation and modernization of several squares that are equipped to provide citizens with free internet. In this way, the citizen can either use for his personal activities or to access the public services that are available online. In talking about public services online, one of the novelties that we delivered to the population in 18 October, 2018 was Alô Barueri, it is a platform in which the citizen has a direct channel of communication with the Ombudsman's Office, the most innovative being the use of robot to attend the population 24 hours a day and 7 days a week.

WBPM: While promoting economic and social transformation, information technology and the digital economy have also triggered comprehensive and profound changes for urban development and human settlements, which is reshaping our cities and communities. Would you like to share your good experiences and initiatives in better meeting the challenges of this urban transformation, as well as achieving economic, social and environmental benefits?

Mayor: The city of Barueri has serious people who work hard to improve our citizens' daily life. I can mention several actions that contributed to this improvement, such as the modernization of the city's health system, where there was a great investment to make the population more responsive and efficient. In addition, we put in the main park of the city, the municipal park Dom José, technologies such as cameras, which in addition to being linked to our central monitoring of the municipal guard can also be accessed by our citizen through the internet, has free internet and a collector of waste for electronic equipment with the correct disposal of these equipment and its recycling in 100%.

WBPM: The Technology Master Plan (2018-2020) of Barueri, which has all projects are closely aligned with the 17 UN Sustainable Development Goals, and more than 20 projects related to the theme of smart cities. Would you like to take 1 or 2 projects as examples to illustrate how they are aligned with the SDGs?



▲ 通过摄像头进行中央远程监控，从而减少盗窃、抢劫和巡逻成本
Central Remote monitoring via Cameras, resulting in reduced theft, robbery and physical patrol costs.

发展目标的服务，我们认为，这些服务涉及目标 3. 良好健康；7. 可再生能源；9. 创新和基础设施；10. 减少不平等和 11. 可持续城市和社区。

WBPM: 您对巴卢韦利市可持续智慧城市发展的愿景和未来规划是什么？

市长: 我们正在加大技术方面的投资，来加速改善市民的生活，根据获得的信息来做出基于事实的战略决策。我们正在更新我们的技术主管计划，希望将太阳能电池板应用在公共建筑物上，使用清洁能源，降低能源成本，我们相信使用可持续能源将给城市带来更多的福祉。

Mayor: Yes, a project that is sure to impact the citizen's day-to-day life is the cellular charging point on the city's central boulevard. In today's connected world, cell phones are fundamental for the citizen. Therefore, we want to offer this service that is aligned with the UN Sustainable Development Goals, in our view, to items 3 - Quality Health, 7 - Renewable Energies, 9 - Innovation and Infrastructure, 10 - Reduction of Inequalities and 11 - Cities and Sustainable Communities.

WBPM: What is your vision and future plan for sustainable and smart city development of Barueri?

Mayor: I am investing in technology and we have used this technology both to expedite and facilitate the life of the citizen and to have the information needed to strategically make decisions based on facts. We are updating our Technology Director plan and we want to put solar panels on our public buildings to use clean energy, reduce energy costs, and many other benefits we know sustainable energy can bring to the city. WBPM



▲ 城市中央林荫道遍布免费无线网络点
Central Boulevard of the City with points of free wifi in all its extension.



A Brief on the "Sustainable Petaling Jaya City 2030"
— Exclusive Interview with Mr. Johary Bin Anuar, Deputy Mayor
Petaling Jaya City Council, Malaysia

谈《八打灵再也市 2030 年可持续城市规划》
—— 专访马来西亚八打灵再也市副市长佐哈利·安努亚先生

W BPM: 我们感谢八打灵再也市议会和您接受本次专访。在过去的二十年内，八打灵再也市发展迅速。如今，它已经是吉隆坡都市区不可或缺的一部分。八打灵再也确实是一个充满活力的城市，提供了许多很好的商业、投资、就业、教育、娱乐和健康生活的条件。八打灵再也市议会会有一个全面而富有远见的计划，即是到 2030 年成为一个真正可持续发展的城市。您能否介绍一下该计划的主要内容？

佐哈利·安努亚先生：感谢您提供这样一个机会。确实，八打灵再也市在过去十年中经历了飞速增长，市议会

W BPM: We thank the Majlis Bandaraya/City Council of Petaling Jaya and you, Mr. Deputy Mayor, for setting time aside for this exclusive interview. PJ has grown very rapidly over the past two decades. Today, PJ is an integral yet independent part of the Greater Kuala Lumpur Metropolitan Region. PJ is indeed a very vibrant city, offering many good business, investment, employment, education, and recreation opportunities and healthy living conditions. The PJ City Council has comprehensive and visionary plans to achieve a truly sustainable city by 2030. Can you please highlight some the main elements of these plans?

“

市议会制定了《八打灵再也 2030 年可持续战略规划》，其目标是到 2030 年成为一个具备良好治理、和谐和繁荣的可持续和有弹性的城市。

Petaling Jaya City Council has produced the "Petaling Jaya Sustainable Strategic Plan 2030" with a vision to become a sustainable and resilient city with good governance, harmony and prosperous by year 2030.

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▲ 马来西亚八打灵再也市副市长
佐哈利·安努亚先生

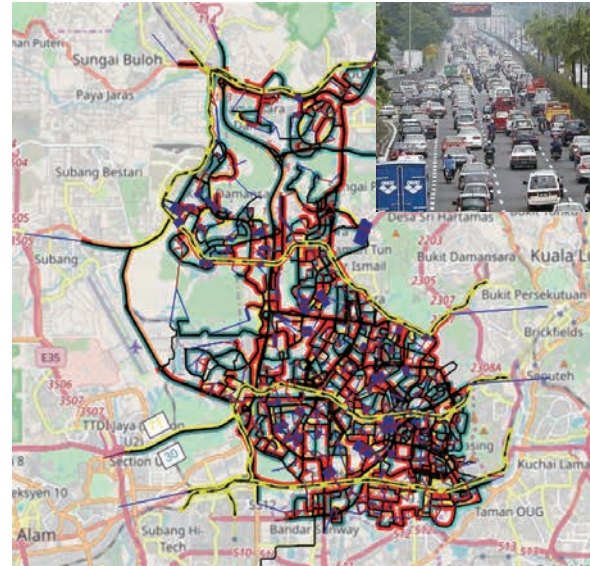
Mr. Johary Bin Anuar, Deputy Mayor
Petaling Jaya City Council, Malaysia



▲ 八打灵再也智慧城市：联合国可持续发展目标的本地化
PJ Smart City: Localizing The United Nation Sustainable Development Goals (SDGs)

正在为子孙后代而不断努力，确保城市的可持续管理。市议会制定了《八打灵再也 2030 年可持续战略规划》，其目标是到 2030 年成为一个具备良好治理、和谐和繁荣的可持续和有弹性的城市。通过这个总体规划，市议会概述了 5 个关键领域，即环境（清洁、绿色和高效），经济（竞争性经济），文化和社区（和谐、安全和关注），人居（可

Mr. Johary Bin Anuar: Thank you for the opportunity for having me here. Indeed, Petaling Jaya has undergone serious rapid growth for the past 10 years and Petaling Jaya City Council are working continuously to make sure Petaling Jaya City is sustainably managed for future generations. Petaling Jaya City Council has produced the "Petaling Jaya Sustainable Strategic Plan 2030" with



▲ 交通拥堵是城市快速发展后亟需解决的一个主要问题
Traffic congestion is one major problem that need to be addressed after facing rapid urban growth.

持续和有弹性的城市)和良好治理(社区参与城市管理)。这五个关键领域正是支持联合国所有的 17 个可持续发展目标。

WBPM: 您能否概述一下城市发展面临的主要挑战和城市可持续发展的优先项?

佐哈利·安努亚先生: 市议会需要解决的主要挑战之一是巴生河流域快速发展带来的严重的交通拥堵。大约 75.4% 的市民仍然使用私人交通工具作为他们主要的出行方式。由此导致了一些严重的问题,例如碳足迹的快速增加和严重的空气污染。为了减少不利影响,市议会于 2014 年制定了《八打灵再也交通总体规划》,以解决拥堵问题并鼓励市民使用公共交通出行,并针对一些具备城市更新高潜力的区域制定了特定区域规划。

WBPM: 在整个亚洲发展中国家,快速的城市化和机动化导致了普遍的交通拥堵和城市空气污染。在您的领导下,八打灵再也应对这一挑战方面取得了巨大进步,所有人都可以免费使用公共交通工具。您能具体介绍一下这个项目吗?

佐哈利·安努亚先生: 八打灵再也城市免费巴士是自 2014 年以来开展的项目服务之一,整个车队拥有 32 辆巴士,涵盖通过主要中央商务区的 6 条路线,如购物中心和例如公寓这样的低成本住宅区。据统计,去年的出行人数达到 460 万,市议会鼓励更多民众和学生使用公共交通作为他们的日常出行方式。由于该计划为学生提供免费的巴士服务,已被联合国教科文组织认可为“持续学习城市奖”的标准之一。

a vision to become a sustainable and resilient city with good governance, harmony and prosperous by year 2030. Through this master plan, the City Council has outlined 5 key areas which are Environment (Clean, Green and Efficient), Economy (Competitive Economy), Culture and Community (Harmonic, Safe and Concerned), Habitat (Sustainable and Resilient City) and Good Governance (Community Involvement on City Management). These 5 key areas are supporting all 17 Sustainable Development Goals provided by the United Nations.



▲ 城市免费巴士对所有人开放,并提供免费 WiFi 连接和残疾人士友好服务
PJ City Free Bus is accessible to all, with free WiFi connections and disabled friendly user

WBPM: Can you please outline some of the key urban development challenges and the City's main sustainable development priorities?

Mr. Johary Bin Anuar: One of the main challenges that the City Council need to address is excessive traffic congestion due to rapid development growth in Klang Valley region. About 75.4% of Petaling Jaya citizen are still using private transportation as their mode of mobility. This problem led to some serious problems such as rapid increase on carbon footprints and severe air pollution. To reduce the impact of this matter, Petaling Jaya City Council produce "Petaling Jaya Transportation Master Plan" in 2014 to address the congestion issues and encourage the citizen to use public transportation, and Special Area Plan at few locations that has high potential for urban regeneration.

WBPM: Throughout developing countries in Asia, rapid urbanization and motorization has led to widespread traffic congestion and urban air pollution. Under your leadership, Petaling Jaya has made great progress in addressing this challenge by making public transport free and accessible to all. Can you please describe your programme?

Mr. Johary Bin Anuar: PJ City Free Bus Service is one of a kind service has operated since 2014 and has a fleet of 32 buses that covers 6 routes through

WBPM: 对于其他城市来说,这是非常有趣和创新的模式。请问一下免费公共交通的成本是多少,经费又是如何解决的?由此获得的对公共环境和健康的益处又是什么?

佐哈利·安努亚先生: 世界上任何公共权力机构的作用是为公民提供最好的公共服务。八打灵再也市议会致力于为城镇提供最好的免费巴士服务。目前,市议会正计划将柴油动力公交车改为纯电动公交车,以减少城市的碳足迹和空气污染。在资金方面,市议会年度预算总额的 5% 用于维持每日运营服务,支持资金也来自公共交通信托基金,每个提交城市开发审批申请的开发商都需要为这个信托基金捐款。

WBPM: 八打灵再也智慧城市项目的主要目标是什么?

佐哈利·安努亚先生: 八打灵再也智慧城市项目(智慧 PJ)是市议会的特别贡献。该项目采用先进的信息技术和地理信息系统,以加强城市各机构间的协调能力,目标是到 2030 年,八打灵再也市成为一个智慧、有弹性和可持续的城市。智慧 PJ 项目的主要框架包括 3 个组成部分,即八打灵再也智能中心大楼和迷你智能中心的开发,仪表板/应用程序的开发以及物联网(IOT)的应用。

《八打灵再也市 2030 年可持续战略规划》的更新版本将通过生成 84 个具有关键绩效指数的仪表板,并将其置于最先进的八打灵再也智能中心来呈现,实现可持续发展目标和《新城市议程》的本地化。八打灵再也智能中心于 2019 年 3 月 14 日启动,作为所有 84 个仪表板的一站式中心。这座建筑是八打灵再也市中心实现愿景的一个重要里程碑。

WBPM: 八打灵再也市已成为一个新的“绿色”城市。您能否与我们分享一些旨在提升城市休闲条件和生态可持续性的地方规划?

佐哈利·安努亚先生: 八打灵再也市议会强调社区可达性的重要性,社区可以轻松地进入到所有的城市公园,以



▲ 市政厅始终支持社区活动和倡议,并通过提供 300 万令吉的特别补助金支持这些活动和倡议,以推动市政厅制定的地方 21 世纪议程计划。
Petaling Jaya City Council is always support community activities and initiatives that support Local Agenda 21 program made by the City Council through a special grant worth RM3 million.

main Central Business Districts such as shopping complexes and Low Cost Housing Areas such as flats and apartments within the city. With the outstanding ridership record of 4.6 million last year, the City Council encourage more people and school students to use public transportation as their daily mode of mobility. This program has been recognized by United Nations Educational, Scientific and Cultural Organization (UNESCO) as one of the criteria of Continuous Learning City Award for providing access for Free Bus Services to school students.

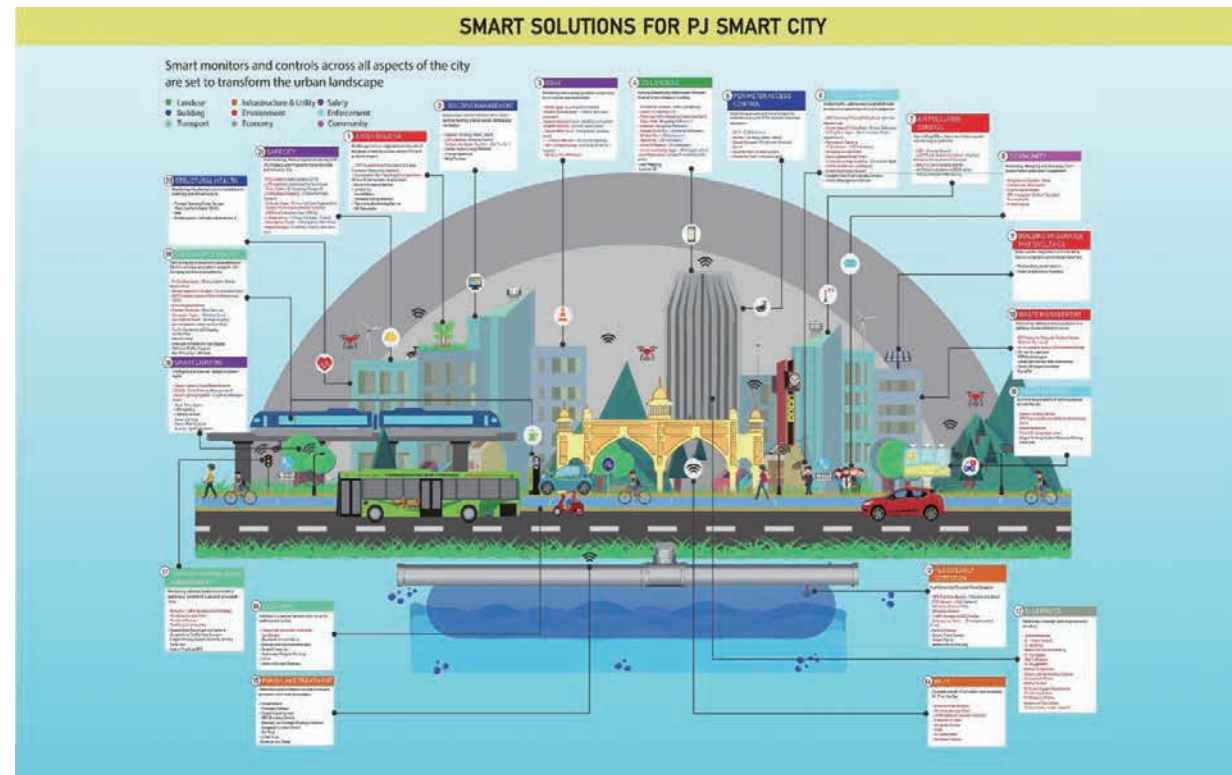
WBPM: This is a very interesting and innovative model which may also be of interest to other cities. What are the costs of providing free public transport, and how are they covered? What are important savings, and public environmental and health benefits?

Mr. Johary Bin Anuar: The role of any Public Authority in the world is to provide the best public services to its citizen. Petaling Jaya City Council is committed to bring the best Free Bus Services in town. Currently Petaling Jaya City Council is planning to shift out diesel powered bus to fully electric powered bus in order to reduce carbon footprints and air pollution within the city. In terms of fundings, 5% of the overall City Council annual budget is used to keep this service operated on daily basis and supporting funds also came from the Public Transportation Trust Fund where every town developer that submits application for development approval in the city need to contribute an amount of money to this trust fund.

WBPM: What are the main objectives of PJ's smart city project?

Mr. Johary Bin Anuar: Petaling Jaya Smart City Project (Smart PJ) is a special effort taken by Petaling Jaya City Council, applying advanced IT and GIS systems to enhance inter – agency coordination in the city towards Petaling Jaya as a Smart, Resilient and Sustainable City by year 2030. The Smart PJ project main framework consist of 3 components which are the development of Petaling Jaya Smart Centre Building and Mini Smart Centre, development of dashboards / applications and the usage of Internet of Things (IOT).

A refreshed version from "PJ Sustainable Strategic Plan 2030" plan is set to localize the Sustainable Development Goals and New Urban Agenda by producing 84 dashboards with its own Key Performance Index and being place in state of the art Petaling Jaya Smart Centre. Petaling Jaya Smart Centre was launched on March 14th 2019 as a One Stop Centre for all 84 dashboards. This building is a remarkable milestone for Petaling Jaya City Centre to achieve the vision.



▲ 八打灵再也智慧城市倡议的物联网 (IoT) 框架
Internet of Things (IoT) framework for PJ Smart City Initiative

及可用的自然和休闲空间。其中包括 Jaya 公园、Sri Aman 公园（城市公园），Padang Timur（休闲区），Kompleks Sukan Astaka（体育中心）和 Bukit Gasing 森林公园，也被称为“城市丛林”，并提供关于丛林生态系统的重要教育信息，由社区负责保护森林。

2017 年 5 月 13 日，市议会与私人开发商及其他私营和公共部门组织者密切合作，推出 PJKITA I（游戏公园），这是一个具有革命性的城市公园，由 6 至 16 岁的学生共同设计，市议会、专家和志愿者提供指导。这个城市公园的主要吸引力之一是我想（I - Think），有一个由可回收材料制作的桌椅组成的室外教室，以鼓励在自然环境中的学习过程。

WBPM: 八打灵再也市主要的社会发展计划是什么？

佐哈利·安努亚先生：八打灵再也市议会与社区和非政府组织（NGO）合作，不断地为市民提供最佳服务。2012 年 10 月 1 日，为庆祝“世界粮食日”，城市启动了城市食品银行计划，市议会已经严格管控，减少食物浪费，其中大部分是优质的和可食用的食品。通过这个项目，市议会收到来自工厂、超市、面包店、酒店和餐馆的食品捐赠，然后将其分配给城市周边的所有的孤儿院，养老院和福利

WBPM: PJ has become known as a new 'green' city. Can you kindly share with us some information on local programs aimed at enhancing urban recreational opportunities and ecological sustainability?

Mr. Johary Bin Anuar: Petaling Jaya City Council emphasizes the importance for the community to access easily all the urban parks, nature and recreational spaces available in the city. These includes Jaya Park, Sri Aman Park (Urban Parks), Padang Timur (Recreational Field), Kompleks Sukan Astaka (Sport Complex) and Bukit Gasing Forest Park which also known as the “Jungle in the City”, providing important educational information about the jungle ecosystem and community responsible taking care of the forest.

On May 13th 2017, Petaling Jaya City Council has working closely with private developer and other private & public sector organizers to launch PJKITA I – Play Park, a revolutionary urban parks that being designed together by school students aged 6 – 16 years old with the guidance from the City Council, professionals and volunteers. One of the main attraction of this urban park is i – Think, an outdoor classroom furnished with tables and chairs made by recyclable materials to encourage natural environment learning process.

院。该项目还得到 Rakyat 银行的关注，为给学校的孩子们提供免费早餐，他们同意捐赠 150 万令吉，将食物分发给城市周边的当地学校儿童。

PJKITA 是由市议会创建的一项以社区为基础的倡议，作为市议会与社区之间更好互动的平台。该计划有助市议会将地方议程落实到社区，并使社区助推其产品，如当地的食品和饮料，企业和志愿服务计划和活动。

根据计划，八打灵再也市议会与雪兰莪州公共图书馆公司合作开发了一个名为 PJKITA 的社区图书馆，位于八打灵再是的甘榜林东岸。该项目是雪兰莪州第一个使用再生工业容器作为建筑体的图书馆。这个图书馆提供阅览室、教育用电视室、社区电脑室和祈祷室。图书馆的外部空间可用作自助餐厅、户外电影院、社区花园、回收中心和运动场（室外球场）。



▲ 位于甘榜林东岸的 PJKITA 社区图书馆，由旧工业集装箱制造 PJKITA Community Library in Kampung Lindungan, which is made by used industrial containers

为了提升八打灵再也社区的经济，市议会制定了一个名为“Karung Kitar”的计划，市议会向选定的社区提供可回收材料用于生产可回收的手提袋，并在其社区内分发。该计划鼓励社区在日常生活中使用回收手袋，因为塑料袋会对我们的星球产生有害影响。



▲ 通过引进“再生袋”项目支持社区经济
Supporting community level economy by introducing “Karung Kitar”

WBPM: What are PJ's main social development programmes?

Mr. Johary Bin Anuar: Petaling Jaya City Council has engaged continuously with the community and Non – Government Organizations (NGO) to provide the best services for the citizens. Through PJ City Food Bank program that has been launched on October 1st 2012 in conjunction with World Food Day celebration, the City Council has stepped up ahead to reduce food waste where most of it are made up of good and edible food. Under this project, the City Council received food donations from factories, supermarkets, bakeries, hotels and restaurants then will be distribute evenly to all orphanages, old folks and welfare homes around the city. This project also attracted Bank Rakyat attention to bring a free breakfast for school kids where they agreed to donate RM 1.5 million to distribute the food to local school children around the city.

PJKITA is a community based initiative created by the City Council as a platform for better engagement between the City Council and the community. This program has become a place for the City Council to spread the Local Agenda to the community and enable the community to promote their products such as local foods and beverages, businesses and volunteering programs and events.

Throughout this program, Petaling Jaya City Council collaborated with Selangor Public Library Corporation to develop a community library called PJKITA Community Library located in Kampung Lindungan, Petaling Jaya. This project is the first library in Selangor that used recycled industrial containers as the library building. This library provides reading room, television room for educational purposes, community computer room, and Musolla (praying room). The outside library space can be utilized as cafeteria, Wayang Pacak (outdoor cinema), Community Garden, Recycle Centre and Sport Court (outdoor court).

To enhance the economy among the Petaling Jaya community, Petaling Jaya City Council has created a program called ‘Karung Kitar’ where the City Council has providing recyclable materials to the selected community to produce a recyclable tote bag and distribute it within the community itself. This program encourages the community to use recycle bags in their daily routine since plastic bags create harmful effects to our planet.

Petaling Jaya City Council also has allocated RM 3 million grant for the qualified community and NGO's associations to apply in implementing any activities or initiatives that related to Smart City, Low Carbon City,

市议会还为合格的社区和非政府组织拨款 300 万令吉,用于在八打灵再也市实施任何与智慧城市、低碳城市、学习型城市、绿色城市、人工智能/工业 4.0 以及无现金社会、安全城市,生态交通和艺术城市相关的活动或倡议。

WBPM: 打灵再也的姐妹城市有哪些? 有任何正在进行或计划中的交流计划吗?

佐哈利·安努亚先生: 八打灵再也积极地与亚洲其他城市接触,在文化、艺术、社会、旅游、经济和最佳范例方面交流经验和寻求共赢。2011 年,名为“友谊城市”的项目开始启动,涉及少数城市,包括印度尼西亚的万隆市,韩国的牙山市和城北区,日本的埼玉县三芳町,以及中国的清远市。市议会计划举办年度活动,即八打灵再也国际艺术节和由学生参加的八打灵再也青年领袖训练营,届时,将邀请所有的“友谊城市”。

注: 本次采访由可持续发展政策高级顾问拉尔夫·万福查特先生完成

图片来源: 八打灵再也市政厅



▲ 市议会致力于通过提供新的学习环境,支持八打灵再也的青年教育

Petaling Jaya City Council is committed to support education among youth in Petaling Jaya by providing a new environment of learning.



▲ 左起: 韩国首尔城北区市长李承罗先生, 马来西亚八打灵再也市前任市长莫哈末阿兹兹·莫哈末拿督, 日本埼玉县三芳町市长伊佐雄, 印度尼西亚万隆市市长代表

From left : Mr. Lee Seung – ro, Mayor of Seongbuk – Gu, Seoul, South Korea, Dato' Mohd. Azizi Bin Mohd. Zain, Ex – Mayor of Petaling Jaya, Malaysia , Mr. Hiroshi Isao, Mayor of Miyoshi, Saitama, Japan and Mayor Representative of Bandung, Indonesia

Learning City, Green City, Artificial Intelligence / Industry 4.0, Cashless Society, Safe City, Ecomobility and Art City in Petaling Jaya.

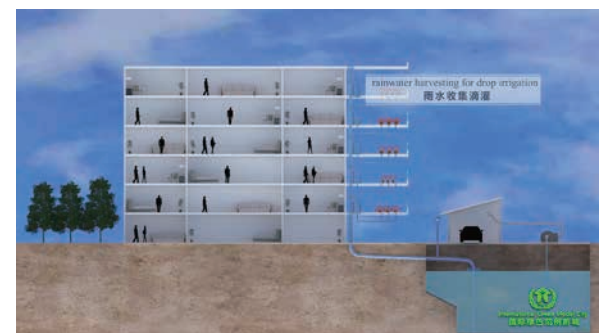
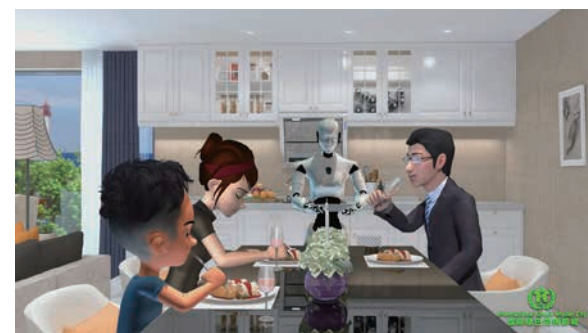
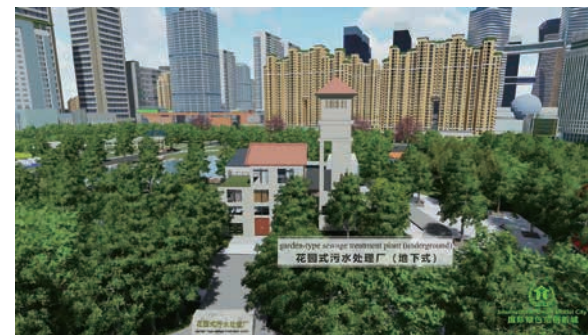
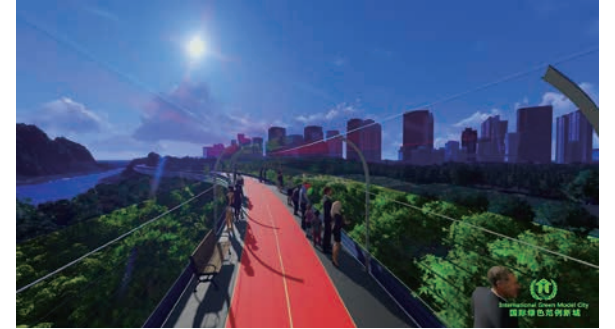
WBPM: What are PJ's sister cities? Do you have any ongoing or planned exchange programmes?

Mr. Johary Bin Anuar: Petaling Jaya is actively engaging with other cities around Asia, exchanging experience and benefits in terms of culture, arts, social, tourism, economy and best practices. This program called “Friendship City” has started since 2011 and involving few cities including Bandung, Indonesia, Asan and Seongbuk-Gu, South Korea, Miyoshi District, Saitama, Japan and Qing Yuan, China. Petaling Jaya City Council has planned annual events that involving all “Friendship City” which are Petaling Jaya International Festival and Petaling Jaya Youth Leadership Camp that been participate by school students. WBPM

Note: The Interview was facilitated by Ralph Wahnschafft, Senior Advisor on Sustainable Development Policies.
Image source: Petaling Jaya City Council



International Green Model City, A Greener City for All 国际绿色范例新城 人人共享更绿的城市



▲ 所有场景来自“国际绿色范例新城”动画短片 All scenes are from IGMC animation film



Join International Green Model City Initiative
to implement 2030 Agenda for Sustainable Development
and the New Urban Agenda

加入国际绿色范例新城倡议 贯彻《2030 年可持续发展议程》和《新城市议程》

Safety • Sustainability • Equity • Identity • Prosperity • Happiness
安全 · 可持续性 · 公平 · 个性 · 繁荣 · 幸福



▲ 《IGMC 标准 3.0》发布仪式，联合国高级官员及知名专家代表出席，基多，人居三期间，2016 年 10 月
右二为现任联合国副秘书长、联合国人居署执行主任麦姆娜·谢里夫女士，

Publishing ceremony of IGMC Standards 3.0 during the Habitat III in October 2016, Quito, Ecuador, attended by UN senior officials, mayors and well-known experts. Second from right: Ms. Maimunah Mohd Sharif, United Nations Under-Secretary-General and Executive Director of UN-Habitat

为应对 21 世纪城市化的巨大挑战，在联合国环境规划署和有关国家与地方政府的支持下，全球人居环境论坛（GFHS）于 2011 年在联合国总部发起了 IGMC 倡议。作为一种创新的绿色低碳城镇发展行动计划，IGMC 倡议激发前瞻性的政府、企业和社会力量共同努力，探索可持续的城市发展和城镇化模式。作为里约 +20 和《2030 年可持续发展议程》的自愿承诺成果之一，IGMC 倡议已经在联合国注册，成为在区域和地方层面贯彻可持续发展目标（SDGs）、《巴黎气候协定》和《新城市议程》的自觉行动。

In response to the enormous challenges of urbanization in the 21st century, Global Forum on Human Settlements (GFHS) launched the International Green Model City ("IGMC") Initiative at the United Nations Headquarters in April 2011, in close collaboration with various international organizations including UNEP and national as well as local governments concerned. As an innovative green low-carbon urban development action plan, the IGMC stimulates forward-looking and responsible governments, businesses and social forces to work together on exploring sustainable urban



▲ 2018 年 4 月 2 日

第十四届绿建大会·国际绿色范例新城论坛在珠海举办
The International Green Model City Forum of the Fourteenth International Conference on Green and Energy-Efficient Building was held in Zhuhai, April 2-3, 2018



▲ 2017 年 8 月 16 日

浏阳经开区加入“IGMC 倡议试点”签约仪式
On 16th August 2017, The Signing Ceremony of Liuyang Economic and Technological Development Zone joining the "IGMC Initiative pilots"

加入 IGMC 倡议的益处：

- ◆ 通过 IGMC 标准制定带有测量目标的行动计划和政策选项；
- ◆ 评估诊断建成的城市，帮助城市管理者更有效地管理其城市、人口和资源；
- ◆ 评估诊断处于规划设计阶段的项目，识别不足之处和改进机会，规避风险，提高投资效益；
- ◆ 进入 IGMC 数据系统，和同类比较学习；
- ◆ 通过培训、研讨会和活动加强能力建设，获得专业资讯；
- ◆ 获得以需求为导向的解决方案和互动性的咨询服务，应对挑战和差距；
- ◆ 根据情况实施 IGMC 试点项目，示范绿色转型；
- ◆ 建设新型伙伴关系；
- ◆ 提升品牌价值和使商业机会最大化。

development alternatives and urbanization models. The IGMC Initiative has been registered with the United Nations as a voluntary commitment of Rio+20 and 2030 Agenda for Sustainable Development as well as a conscious action to implement the Sustainable Development Goals, Paris Climate Agreement and New Urban Agenda at the regional and local levels.

The Benefits of Joining the IGMC

- ◆ Through the IGMC Standard, to develop action plans and policy options with measurable goals;
- ◆ To use the IGMC Standard for assessment and diagnosis of existing urban areas, enabling city administrators to manage their cities, people and resources more efficiently;
- ◆ To use the IGMC Standard for assessment and diagnosis of projects at the planning or designing stage, and identify challenges, gaps and opportunities so as to reduce risks and to facilitate the effective investment;
- ◆ To access IGMC data system, learning from each other and comparing with counterpart;
- ◆ To strengthen capacity building through various trainings, workshops and activities, obtaining professional technical information and knowledge;
- ◆ To obtain demand-oriented solutions and inter-active consultation services to address existing challenges and gaps in certain cities and projects;
- ◆ To conduct IGMC pilots as appropriate to demonstrate the green transformation;
- ◆ To build up new type partnerships;
- ◆ To enhance the brand value and maximize business opportunities.



▲ 2014 年，国际人居环境范例新城 (IGMC) 试点项目战略合作签约仪式在中铁置业集团上海总部举行

The Signing Ceremony of Strategic Cooperation Agreement with China Railway Real Estate Group on IGMC Pilot Project, Shanghai, 2014

● 更多信息 *More information* <https://www.igmc.org>



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江山市人民政府



鞍山汤岗子新城



黄果树风景名胜区



淳安县人民政府



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常山县人民政府



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