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CREATIVE DESIGN FOR SUSTAINABLE DEVELOPMENT

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Introduction

Cities are crossroads of civilizations where the local interacts with the global, where tradition dialogues with modernity and where the economy is intertwined with the culture. Should we connect the dots between different global trends that are currently reshaping our world, we arrive at two major conclusions. First, that creativity is gaining momentum in developing and developed countries alike and second that urbanization has become one of the dominant trends of our present time and of the future.

As people around the world flock to urban areas in the hope of a better life,cities are increasingly finding themselves at the center of development and societal challenges, as people around the world flock to urban areas in the hope of a better life. It is in cities that the challenges of contemporary globalization, particularly environmental concerns, require urgent solutions and where innovative future strategies are most needed. Today, cities account for more than 80% of the world's greenhouse gas emissions, and the annual cost of adaptation to climate change is estimated at US $80-100 billion. To combat the dramatic rise in CO_2 emissions underpinning climate change, cities are urged to shift to new paradigms.

Making urban development more livable, sustainable, inclusive and creative is a major challenge for every city in the world. Adequate services have to be provided in cities in terms of access to water, sanitation or social services, but the role of creativity should not be underestimated. Making sustainable and creative choices for a city is essentially a social process, not a technocratic, financial or bureaucratic exercise. One of the main challenges for cities today is to address the political, cultural, social and economic barriers that prevent large-scale adoption of sustainable and socially integrated development models. One of the main questions concerns policies which should be kept, changed or discarded in order to ensure sustainable positive transformation. At the same time they should promote sustainable environment shaped both by innovation and diverse heritage

A source of identity and creativity for individuals and communities, culture is an essential component of human development. Culture and creativity constitute a great reservoir of social and symbolical human capital. Cultural industries and creativity have become a source of soft power in their own right, a strategic outlet and a lever for innovation, production, dissemination, income generation and poverty reduction.

Technology and innovation are critical components in driving economic growth in future cities. Cities and communities are becoming "smarter". It is important to reflect systematically design processes to address the behavior and accessibility of systems and objects over time as well as to assess whether digital mechanisms for city infrastructure such as waste management, water, sanitation and power supply can be better designed for future platforms. Furthermore, the debate should underline the role of the UNESCO Creative Cities Network in stimulating strategic and innovative thinking in this respect among decision-makers and stakeholders concerned. During this Conference, participants have highlighted some of the models, best practices and working hypotheses that may underpin strategic improvements in this area.

Organized by UNESCO in collaboration with the Municipality of Shenzhen, the International Conference on Creative Design for Sustainable Development brought together experts, practitioners, representatives of the UNESCO Creative Cities Network, artists and urban specialists to discuss the future of sustainable development through better strategies and designs.

The International Conference Creative Design for Sustainable Development offered an opportunity to share lessons learnt, best practices and information regarding the transformation of urban centers into efficient, sustainable green cities through creative thinking and forward-looking strategies and policies.

简介

城市是实现局部地区与全球交互的中心，是实现传统与现代对话的中心,是将经济与文化紧密结合的文明中心。我们将多种正在改造着世界的全球性趋势结合起来，我们会发现两种主要的趋势。首先，创造性在发展中国家以及发达国家都有着迅猛的势头。其次，城市化已经成为我们现在和未来的主要趋势之一。

在社会发展的过程中，全世界的人民都涌入城市以寻找更好的生活，城市的作用日益彰显。面对全球化的挑战，尤其是城市环境问题，迫切地需要解决方案；城市同样需要未来的创新方案。今天，城市占有超过80%的全球温室气体排放量，每年花费在治理气候变化上的费用大概800-1000亿美元。为了应对急剧上升的二氧化碳排放量即气候变化的主因，城市正被敦促转移到新的模式。由联合国教科文组织与深圳合作举办的教科文组织创新网略大会，旨在提供一个交流信息，交流经验的平台，通过创意思维以及战略政策的预测，更好的促进绿色城市的发展。

使城市发展得更适宜居住的，可持续的，包容性和创造性是世界上每个城市的一大挑战。就水源，环境卫生以及社会服务方面而言，城市需要提供足够的服务，但是创造性的作用不容小觑。为一个城市制定可持续的，创造性的政策，本质上是一个社会过程，而不是技术的，金融的，官方做法。一个为如今城市面临的主要挑战是消除政治，文化，社会，经济等方面的障碍。一个主要的问题在于如何保留或改变政策进而来保证可持续的良性的转变？同时他们应该如何创造一个创新的、多种物质文化遗产的、可持续发展的环境？个人和社区的特性以及创造性的来源，文化是人类发展的一个重要组成部分，文化和创造力构成社会和象征性人力资本的巨大容器。在他们各自的范畴内，战略出口和创新、生产、传播、创收和减贫，文化产业和创造力已成为软实力的来源。

技术和创新是推动未来城市经济增长的重要组成部分。随着时间的推移，我们如何设计一个有效的流程来检测系统的运作和目标的可行性；数字机械化在未来城市发展中是否该在城市基础设施如废物管理，水，卫生和电力供应等方面有更好的重新设计都显得尤为重要。联合国教科文组织的创意城市网络战略和创新思维如何激励决策者和利益相关者？什么样的规范，实践经验和工作设想可以巩固这一领域的战略发展？在此次会议中，与会者将会就这些问题展开讨论。

总之，可持续发展创意设计大会旨在提供一个互相学习、交流经验的平台，通过大家的创意思维以及前瞻战略政策来创造一个可持续发展的绿色城市。

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Assistant Director General for Strategic Planning, UNESCO

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Hans d'Orville, a German national born in 1949, is Assistant Director-General for Strategic Planning at UNESCO. He is responsible for global strategic planning and policy development, establishment of biennial programme and budget documents, results-based budgeting, risk management, extrabudgetary resource mobilization and partnerships. As a member of the senior management team, he also represents the Director-General in various UN system coordination bodies. 2011, he was elected as the Chair of the Advisory Group at the Assistant Director-Generals level of the UN Development Group (UNDG) and subsequently served throughout 2012 until February 2013 as Vice-Chair of UNDG. He established and directed successful public-private partnership programmes benefitting also the Creative Cities Network and activities focusing on culture and development.

Mr. d'Orville is a member-co-founder of the Africa Leadership Forum and served on its Executive Committee (1988-2007). He also served as senior advisor to various bodies, including the annual Eco-Forum Global in Guiyang and its Foundation (since 2009). He is a member of the International Advisory Council of the Global Initiative for Arts, Culture and Society of the Aspen Institute. He holds a PhD and MA in economics from the University of Konstanz, Germany.

汉斯·道维勒，德国人，出生于1949年，拥有德国康斯坦茨大学经济学博士和硕士学位。。现任联合国教科文组织战略规划编制局助理总干事。2010年间，他曾出任该组织代理副总干事一职。2011年，他当选为联合国发展集团（UNDG）助理总干事级顾问团主席，并且还在2012年始至2013年2月担任联合国发展集团的副主席。他还是爱知世博会和上海世博会教科文组织相关活动的协调员。他还在包括中国在内的不同国家成功地设立了一批国际合作项目，尤其是发展与中国的项目。

汉斯·道维勒先生也是“非洲领导人论坛”的共同创始人之一，并在1988年至2007年间担任其执行委员会成员。他曾担任多个组织的高级顾问，例如“人口与生活质量独立委员会”、2010年中国广州亚运会组委会和年度中国贵阳生态论坛（EFG）及其基金会（2009年至今）。他还是各类文化协会的理事会成员，例如纽约国际当代艺术中心（CICA）。目前，他是“文明间对话音乐协会”的荣誉委员会成员和华盛顿阿斯本协会（Aspen Institute）全球艺术、文化与社会倡议国际顾问团的成员。

Humanity is now half urban and is expected to be 70% urban by 2050. Yet, 60% of the area expected to be urban by 2030 remains to be built, indicating that the shape of future cities must and can be guided proactively. Policymakers therefore need to adopt a wider view of cities' use of space and resource footprints and to connect local development with global impact so as to achieve long-term urban sustainability. The majority of population growth in cities is the result of natural increase, rural-urban migration and the integration of formerly non-urban areas. It is also predominantly taking place in cities in developing countries, most notably in Africa and Asia.

Urban centers in this age of globalization must devise new strategies and initiatives for creating a sustainable roadmap. The soft power elements of creativity, innovation and imagination will play an enormous role in the future. And the role of design in all its diverse forms connected to the shaping of urban areas (urban design, information architecture, industrial design, interior design, landscape architecture, product design, process design etc.;) can be strategic in this respect.

As cities lose density and sprawl they lock themselves into unsustainable land use patterns where jobs and people are far from one another, transportation costs and congestion are high, infrastructure runs are longer and more costly, segregation of socio-economic groups and land use types are more pronounced and environmental impacts are greater. During the next several decades the world will more than double the amount of land used for cities. It is important to build this new urban fabric sustainably.

Cities remain large-scale consumers of water, energy, and natural and processed products as well as significant generators of greenhouse gas emissions and waste. By any measure, waste production is outpacing the earth's carrying and regenerative capacity. This is particularly problematic as the world has entered an era of resource scarcity that requires us to do more with less. The future sustainability of cities in terms of energy supply, their role in meeting global emission reduction targets and their ability to participate in the carbon economy are by no means automatic.

The current and prospective modes of urbanization, and the massive migratory trends that underpin them, have also been destructive of cultural resources, including built heritage, crafts, traditional knowledge and creative industries, thus seriously degrading the quality of urban historic environments which are essential for sustainable development and the resilience of communities. Cities are some of the most vulnerable areas to natural disasters: ninety percent of coastal areas are urban and 21 of the world's 33 megacities lie in coastal flood zones. Coastal cities may face unforeseen challenges such as sea-level rise leading to the displacement of unprotected populations.

Those issues like innovation and conservation for sustainable urban living, the role of cultural and creative industries in sustainable cities of the future, the importance of creative technologies and infrastructure (water, sanitation and food security) for sustainable city development and the limits and challenges associated with designing innovative transportation systems.

Technology and innovation, as expressions, tools and enablers of collective imagination, are critical components in driving economic growth in future cities. The relation between design and technology is therefore a key to sustainability. This is why its analysis and strategic development should be part of the international development agenda and why it has an important role in strengthening the Creative Cities Network.

To do so, many questions require to be posed and issues need to be discussed by social stakeholders in multiple fields and competence areas.

Integrated planning and design are transformative and must continue to set the stage for sustainable cities. Compact cities that offer a mix of land uses, building typologies, transport and jobs generally also offer higher levels of well-being at lower rates of resource use and emissions. Well-planned, intelligently designed cities that integrate sustainable use of surrounding and far-flung resources and ecosystems have the potential to improve the lives of half the planet's people today. Gender-responsive urban design can be a hub for creativity, exchange and innovation, and also create safe public spaces and non-motorized transit systems, promoting both social cohesion and safety in areas with the world's most concentrated diversity.

At the same time, planning policies that acknowledge and promote urban heritage - including its tangible and intangible components - and provide support to cultural infrastructure and creative industries, can harness their extraordinary potential for enhancing the livability of urban areas, fostering economic development as well as social cohesion.

Sustainable urban development demands a multi-sectorial, multi-stakeholder approach that engages the private sector, civil society, foundations, local authorities and higher levels of government as well as regional and global networks of cities. Local governments are closest to citizens and therefore best placed to promote cultural diversity, including support to safeguarding the living heritage of communities.

It is here that the Creative Cities, as a platform for the transformation of urban life through the soft power of culture and creativity, can play an important role.

The Mission Statement officially adopted at the general meeting of the Creative Cities that took place in Bologna, spells out the raison d'être of the network. I would like to quote the opening lines:

"To develop international cooperation among cities that have identified creativity as a strategic factor for sustainable development, in the framework of partnerships including the public and private sectors, professional organizations, communities, civil society, and cultural institutions in all regions of the world". The same mission statement continues to specify that the Network is bound to undertake projects that demonstrate the importance of creativity as a key to development, to promote and share good practices, knowledge and experience, training and policy measures.

By gathering the representatives of the Creative City Network UNESCO, together with experts in city design and planning, policy-makers and renown architects, we are offering a platform for exchange and multi-stakeholder dialogue on important issues that require global sharing and global solutions.

The key is "creativity as a strategic factor for sustainable development". Although this is not a new concept for UNESCO, the link between creativity and development and, more generally, between culture and sustainable development, underpins all UNESCO strategies in all its fields of competence. This view has evolved over decades of field experience on the basis of several key events and publications: the World Conference on Cultural Policies of Mexico City (1982), the Stockholm Intergovernmental Conference on Cultural Policies for Development (1998), the landmark report entitled "Our Creative Diversity" by the World Commission on Culture and Development, and the World Decade for Cultural Development (1988-1997) to mention only the most significant.

All UNESCO strategies and actions reflect the link between culture and sustainable development and the notion that culture is both an enabler and a driver of sustainable development.

Contemporary life and globalization are transforming our cities, benefiting some groups, while marginalizing others, threatening the sense of place and identity of communities.

As you can see, UNESCO's commitment for the Creative Cities is inextricably linked to our mission for culture-led development. But beyond UNESCO's own work, we try to advocate the indispensable link between culture and development in all international cooperation and to make of this link a fundamental strategic principle of the United Nation system. And, as a result of our advocacy, UNESCO's message on culture for development is gaining ground around the world, particularly among decision-makers.

In 2010 and 2011, the United Nations General Assembly adopted two innovative resolutions focusing on the contribution of culture and cultural diversity to sustainable development and the achievement of the Millennium Development Goals.

Thanks to the culture and development window of the MDG Fund funded by Spain and launched in 2006, UNESCO spearheads in collaboration with UNDP, UNIDO, ILO, FAO, and UNICEF 18 programmes demonstrating through hard field evidence that culture constitutes one of the pillars of sustainable development strategies.

The 2013 Ministerial Declaration of the UN's Economic and Social Council stated that "the fundamental importance of cultural diversity as a source of enrichment for humankind and a contributor to sustainable development of local communities, peoples and nations". It further recognized "that culture is an essential component of sustainable development; represents a source of identity, innovation and creativity for the individual and community, and is a critical factor in building social inclusion and eradicating poverty, providing for economic growth and ownership of development processes".

The May 2013 'Hangzhou Declaration', the outcome of the International Congress "Culture: Key to Sustainable Development", organized by UNESCO and the Government of the People's Republic of China, highlighted the critical role of culture as a resource for achieving sustainable urban development and management, by recalling that a vibrant cultural life and the quality of urban historic environments are key for achieving sustainable cities.

The Creative Cities programme and the present gathering are yet another important step in the advocacy for culture and development agenda. As we shape new global strategies for the post 2015 sustainable development agenda, cities must place culture at the heart of their policies and programmes. This is the message I would like to bring to you today. May it inspire your debates and the ongoing work in your cities and beyond.

现今，人类的城市化比例为百分之五十，到2050年，这个比例将达到百分之七十。然而，2030年城镇化土地的百分之六十仍在建设中，这也就意味着，未来城市的规模和架构是可以被引导的。因此，政策的制定者需要听取更多关于城市空间　、资源利用等意见，促进本地与世界的发展，进而保证城市的长期可持续发展。城市人口增长多数依赖于自然增长，农村人口向城市迁移和原非城市地区一体化。这种现象主要发生在发展中国家的城市，尤其是在非洲和亚洲。

全球化时代的城市中心必须制定新的战略和措施，来创建一个可持续的发展路线。创意、创新和想象力的软实力要素将在未来将发挥巨大作用。设计以它的各种形式（城市设计、信息架构、工业设计、室内设计、景观设计、产品设计、工艺设计等）渗透到了城市的建设中，具有战略意义。

随着城市的扩张，城市把自己锁进了不可持续发展的土地利用模式中。工作单位与人类的居住地相隔甚远，交通成本以及城市拥挤度增加，基础设施建设运行时间长、花费巨大，社会经济团体和土地利用类型划分为更加明显，对环境的影响也大。在接下来的几十年里，世界将增加一倍以上的土地用于城市土地建设。建立一个新型的可持续发展的城市显得更加重要。

城市大规模地使用着水、能源和天然加工产品，同时它也是温室气体排放和废物垃圾的制造者。从各种角度来讲，垃圾产量已经超过了地球的承载和再生能力。随着世界进入资源稀缺时代，这个问题显得尤其严重，这就更加需要我们少花钱多办事。城市在未来能源供应方面的可持续发展，尤其在满足全球减排目标和低碳经济方面，需要人类的参与。

城市化进程和大量移民的趋势，也一直在破坏文化资源，包括文物建筑、手工艺、传统知识和创意产业，从而严重降低了城市历史环境以及其抗灾能力的可持续发展。城市是某些自然灾害最脆弱的地区，例如：90%的沿海地区是城市，全球33个大城市中，有21个处在沿海洪泛区。沿海城市面临着不可预见的挑战，如海平面上升导致的人口流离。

可持续发展的城市生活的创新和节能、文化创意产业在未来可持续发展城市的作用、创意技术和基础设施（水、卫生和食品安全）对可持续城市的发展以及创新的运输系统的限制和挑战等问题显得尤为重要。

技术和创新，是未来城市拉动经济增长的重要组成部分。设计和技术之间的关系因此也成为了可持续的关键。这就是为什么它的分析和战略发展应该是国际发展议程的一部分，这也是加强创意城市网络的重要作用。

为了完成这个目标，许多问题也由此而产生，需要社会人士在多个方面进行讨论。

综合规划和设计变革，必须继续为可持续发展的城市来服务。紧凑型城市多重利用土地、建筑方式、运输和工作等，往往是提供给了人们更好的服务能力却忽略了资源的使用。智能型城市合理的策划，可以综合周边可持续发展的应用和生态系统来提高半个地球的居民的居住潜力。促进两性平等的城市设计可以作为创意、交流和创新的枢纽；创造安全的公共空间和非机动车交通系统；增加社会的共存、保持社会的多样性、促进社会和谐和安全。

与此同时，政策规划了城市遗产问题，包括有形的和无形的要素，对文化基础设施和创意产业提供支持，可以利用其非凡的潜力来提高城市地区的宜居性，促进经济发展以及社会凝聚力。

可持续的城市发展需要多部门合作：私营业主、民间社会、基金会、地方政府、上级政府以及城市区域和全球城市网络。地方政府是最接近当地居民，因此也最能促进文化多样性。

这里所提及的创意城市，作为城市生活的转型平台，是通过文化和创意的软实力来发挥其重要作用

上个月，在博洛尼亚举办的创意城市大会上，官方文件中阐述了网络的存在理由，我想引用其开头的几行：

根据创意城市网络的官方使命宣言，在合作伙伴关系的框架，我们要发展城市间的国际合作，把创意作为可持续发展的战略要素，包括公共部门和私营部门、专业组织、社团、民间社会和文化机构等。使命宣言同样指出，创意是发展的关键因素，创意网络的形成势必会承办更多的项目，以促进和交流先进实践、知识、经验、培训和政策措施。

此次会议聚集了创意城市网络的代表，城市设计规划方面的专家，政策制定者，和著名的建筑师，它应该是全球重大问题交换经验，各方代表对话的一个平台。

会议的关键在于，创意是可持续发展的战略因素。尽管它已经不再是教科文组织提出的一个新概念，创意和发展之间的关系，或者更加概括的说，在文化和可持续发展之间，创意在很多方面支撑了教科文组织的战略发展。这种观点已经发展了几十年，并且在一些关键的活动和出版物中得以体现：墨西哥城文化政策世界大会

（1982），斯德哥尔摩文化政策发展跨政府间会议（1998），由文化与发展世界委员会主编，题为“我们创意多样性”的具有里程碑意义的报告，以及世界文化发展十年（1988-1997）。

所有教科文组织的战略和行动反映了文化和可持续发展之间的联系，文化既是发动机也是驱动器。

现代生活和全球化正在改变我们的城市，它保护了社会部分群体的利益，同时又损害了部分群体的利益，阻碍了地区和社区一体化。

如您所见，联合国教科文组织对于创意城市的承诺与我们的文化主导发展的使命密不可分地结合在一起。但是除联合国教科文组织工作以外，我们在所有国际合作中提倡在文化和发展之间的这种不可或缺的联系，并使这种联系成为联合国系统的基础性战略准则。并且，作为我们倡导的结果，联合国教科文组织以文化求发展的信息在世界范围内，特别是在决策者中，得到越来越为广泛的接受。

在2010年和2011年，联合国大会通过了文化和文化多样性对可持续发展的贡献以及实现千年发展目标这两项创新性决议。

于2006年发起的千年发展目标基金文化和发展窗口，由教科文组织带头，与联合国开发计划署、联合国工业发展组织、国际劳工组织、粮农组织、儿童基金会等合作的 18个项目经过艰苦的野外调查证明，文化是可持续发展战略的支柱之一。

联合国经济和社会理事会在2013年部长级宣言表示，“文化多样性的最基本意义在于它是人类财富的源泉，是当地社区、人民和国家可持续发展的贡献者”，“文化是可持续发展的重要组成部分；是个人和社区的身份、创新和创造力的源泉；是构建社会包容性和消除贫困，经济增长和发展的一个关键因素。”

在2013年5月的“杭州宣言”，以 “文化：可持续发展的关键”为主题，由联合国教科文组织和中国人民共和国政府主办，这次会议通过回顾“充满生机的文化生活和城市历史环境质量是城市可持续发展的关键”，强调了文化作为实现可持续城市发展和管理的一种资源的关键作用。

创意城市项目和当前的创意城市峰会是文化和发展日程的倡导中的重要一步。正如我们制定2015年之后的全球战略时考虑的，城市必须将文化放在它们的政策和项目的中心。以上就是我今天想和大家分享的信息。希望它对你们的讨论和你们城市当前及以后的工作有所启发。

Francesco Bandarin

Assistant Director-General for Culture, UNESCO

弗朗西斯科·班德林

联合国教科文组织文化助理总干事

Francesco Bandarin, former Director of UNESCO's World Heritage Centre, took up office as Assistant Director-General for Culture on 1 July 2010.

As a specialist in architecture and urban planning, Mr Bandarin previously worked in both public and private institutions. He is an expert in the fields of built heritage, cultural heritage conservation, environmental heritage and cultural events, as well as architectural and urban design in developing countries. As Director of the World Heritage Centre, Mr Bandarin has led the development of a vast network of public private partnerships for World Heritage conservation, as well as the development of a series of regional centres under the auspices of UNESCO (category 2) in many parts of the world.

弗朗西斯科·班德林，曾任教科文组织世界遗产中心主任，自2010年7月1日起担任教科文组织文化助理总干事一职。

作为建筑和城市规划的专家，班德林先生曾在公营机构和私营机构从事建筑遗产、文化遗产保护、环境遗产保护及文化活动，以及发展中国家建筑和城市设计的工作，并且是这些领域的专家。作为世界遗产中心主任，巴德林先生为世界遗产保护搭建并拓展了广泛的公共及私人的合作伙伴关系网络，并在世界各地推动建立了一系列地区II类中心机构。

It is a pleasure and an honor to welcome you to UNESCO for the first International Conference on Creative Design for Sustainable Development organized by our Organization. At the outset, allow me to thank the City of Shenzhen not only for its financial support to this event, but also for its ongoing support to the Creative Cities Network in general. I would also like to take this opportunity to express my special thanks to the representatives of the Municipality of Shenzhen who are among us.

Many of you are familiar with the UNESCO Creative Cities Network. For those who are not, I would like to recall that this Network is a cooperation platform launched in 2004 to promote development through creativity through partnerships among cities, working together for cultural diversity and sustainable urban development. This programme is now experiencing a renaissance after a period of review and transition. The Network comprised 34 cities last year, but in the recent months its membership has grown to 41 cities, and it is expected to reach 50 cities by the end of this year.

The Network works at three distinct functional levels. At a first level, the activities developed by the cities themselves, locally: each year, every Creative City launches specific local initiatives like exhibitions, seminars, classes, contests, publications and media campaigns. The involvement of other cities in these activities is limited, although these events sometimes entail knowledge sharing and an exchange of human, financial or intangible resources.

On the second level are global Creative Cities events, organized by and with the participation of all the member cities. To date, general conferences have been hosted in Santa Fe (USA) in 2008, in Shenzhen (China) in 2010, in Seoul (Republic of Korea) in 2011, in Montreal (Québec, Canada) in 2012. Last year's conference in Bologna (Italy) was followed by a round table of the Mayors of the Creative Cities in Beijing.

The next general meeting (September 2014) is scheduled to take place in Chengdu (China) to be followed by Kanazawa (Japan) in 2015. These conferences provide excellent opportunities to discuss both strategic and management, or governance issues that concern all member cities regardless of their size, population or GDP.

The third level, and to some extent the most dynamic in terms of collective activities, is the intermediate or thematic level. The Creative Cities Network is in fact made up of thematic sub-networks in the designated seven fields: literature, music, design, crafts/ folk art, cinema, media arts and gastronomy. Each sub-network is characterized by intense cooperation, shared experience, and exchanges. Today's event is an excellent example of such thematic events that bring together the Creative Cities around a specific topic. This same group of Design cities convened in Saint Etienne last May, to attend the 8th edition of that city's "Biennale internationale" and to participate in the various debates linked to the stimulating theme of the exposition "EmpathiCITY, Making our City Together". Some of the same cities of design will meet in Shenzhen next March, for the awarding ceremony of the Design Awards for Young Talents, whose 'nominators' are Creative Cities representatives. The three main winners will be awarded 30,000 US dollars each, and ten contestants will receive "merit awards" of 5,000 US dollars.

Taken together these three levels of actions constitute a winning response to the challenge of contemporary urbanization, at a time when our cities, which host more the half of the world's population, find themselves increasingly at the center of a global debates on the impact, scope and inclusiveness of development. Today's cities showcase myriad challenges and as well myriad solutions. They require innovative, global and human-centered strategies. They are strategically positioned at the crossroads of past and future, where the 'local' and the 'global' connect, and where the cultural dimension of sustainability is intimately linked to social, economic and environmental factors. The environmental issues are of course particularly pressing, for, as we are well aware, global warming and climate change are causing drought, desertification, deforestation, food chains degradation, floods water supply and sanitation problems, and other human and ecological disasters.

The Creative Cities concept is based on the fundamental belief that culture can play a decisive role in urban renewal. More and more, policy makers are taking into account the role of creativity when planning economic, social and environmental policies as well as strategies for their cities. The issues which will be debated at this Conference relate directly to this challenge. After analyzing the various topics, you will hopefully begin defining options and methodology for follow up. In fact, we expect this conference to result in the creation of a 'think tank' capable of elaborating and proposing solutions in the field of creative design for development, at the global level, with a specific focus on environmental matters. Your meeting is meant to be, in other terms, just the beginning of a productive long-term interactive process.

Judging from the large number of distinguished experts and specialists present, the wide array of experiences you will share, and the range of initiatives and projects that will result from your deliberations, I very optimistic that this conference will bear fruit.

我很高兴，也很荣幸地欢迎您来参加由教科文组织主办的首届可持续发展创意设计国际大会。

首先，请允许我对深圳市表示感谢，不仅仅感谢其对于此次会议的财政支持，也对深圳市长久以来对创意城市网络这个项目的支持表示感谢。

我也想借此机会，表达我对深圳市代表的由衷的感谢。

在座的许多人都对联合国教科文组织创意城市网络这个项目很熟悉。我想帮那些不熟悉这个项目的嘉宾回顾下，创意城市网络这个项目是2004年推出的，旨在通过城市间的共同合作来促进创意发展，为文化多样性和城市可持续发展来服务。经过了审核期和过渡期，这个项目正在走向重生。截止到去年，已经有34个城市加入了这个项目，最近的几个月，其成员已经达到了41个城市，在今年年底，预计达到50个。

创意城市网络的工作主要分为三个不同的功能级别。首先，由城市在地方级别进行发展；每年，每个创意城市推出独具特色的活动，例如展览、研讨会、课程、竞赛、出版物和媒体宣传等。其他城市在这些活动的参与度是有限的，尽管他们有时在经验、人力、财力、无形资源上是共享的。

第二个层级是全球的创意城市活动，由所有的成员城市参与并举办。目前为止，此类活动在这些成员城市举办过：圣达菲（美国，2008年），深圳（中国，2010年），首尔（韩国，2011年），蒙特利尔（加拿大魁北克省，2012年）。去年，博洛尼亚（意大利）主办了全球会议，创意城市市长圆桌会议在北京举办。

下一届大会将在2014年的9月份在中国成都举行，2015年的大会将在日本金泽市举办。这些会议为讨论战略管理以及成员城市关注的问题（城市大小、人口、国内生产总值）提供了良机。

第三级别，一定程度上市最具有活力的集体活动，是跨领域或者是专题的级别。创意城市网络实际上七个子网络组成：文学、音乐、设计、工艺民间艺术、电影、媒体艺术和美食。每个子网络内部加强合作，共享与交流经验。今天的活动就是围绕一些特定主题进行讨论。同样，在去年五月，由圣埃蒂安组织召开的第八届双年展，代表们以“心连心，让我们的城市在一起（EmpathiCITY，Making our City Together）”为主题，展开了激烈的讨论。一些设计城市，例如深圳，明年三月将为鼓励设计型的青年人才，设置了专项奖励，前三名将会授予3万美元的奖金，前十名也会授予5000美元的奖励。

总而言之，这三个层次的活动共同应对那些来自城市化的挑战。未来，世界一半以上的人口将会在城市中，我们会越来越多的发现，城市处在了全球发展以及包容性等问题的讨论中心。现今，城市面临着无数的挑战，同样也需要大量的解决方案。它们需要创新的、全球性的和以人为本的战略。它们在战略方面，处在过去与未来的十字路口，需要局部与全球进行连接，并且把可持续发展的文化维度与社会、经

济和环境等因素相结合。环境问题无疑是我们最急迫需要解决的，众所周知，全球变暖和气候变化造成了干旱、荒漠化、森林砍伐、食物链退化、洪水、供水、卫生问题和其他人类、生态灾难。

创意城市的概念是基于文化在市区重建中发挥决定性作用这一基本理念。越来越多的决策者在制定经济、社会和环境计划时考虑创新的重要性。我们今天举办的国际会议直面以上的挑战。在分析多个主题之后，您们将会开始定义选项和寻找方法来解决城市出现的状况。事实上，我们期待这次会议能够在可持续发展的创意设计方面，在全球范围内，建立一个解决方案的“智囊团”，尤其是在环境问题方面。此次会议，也是长效互动与合作的开始。

今天莅临会场的有一大批杰出的专家和学者，你们将会广泛地分享经验与研究成果，我对这次会议的成果很有信心并充满期待。

Chen Xue
Representative of Huaqiang Holding Group

陈雪
深圳华强集团代表

First of all, I would like to say that I am happy to take part in this conference as the representative of Huangiang enterprise, a partner with UNESCO in this project. On behalf of City of Shenzhen, I wish to welcome the representatives and experts from various cities who attend this meeting.

This Conference organized by UNESCO and Shenzhen provides a platform of exchange of information and experience. We are exploring new avenues in combining creative ideas and strategic policies to promote the development of green cities.

Founded in 1979, Shenzhen Huaqiang Group Co., Ltd is a large holding group engaged in culture, technology, cloud industry, electronic industry, among others. Currently, Huaqiang Group has more than 90 investment holding companies and owns a number of national research centers. Huaqiang attaches great attention to cultural influence in the urban development. Thus, in the cloud industry sector, it has set up a smart city research center.

The city is the center of the local and global trends, the dialogue center of modernity and tradition, the center of economy and culture. Shenzhen, a new city, also needs solution to the global challenges, urban cultural heritage, urban green environment and other issues.

Finally, I would like to thank UNESCO for its organization and planning of this Conference, as well as to the participating cities representatives and urban experts. I wish the conference a complete success.

上午好！首先，作为中国与联合国教科文组织开展战略合作伙伴的第一批私有企业——华强企业的代表，对于能够参加本次会议，我感到非常荣幸。同时，我代表深圳市，热烈欢迎来自不同地区的各位城市代表、专家。

由联合国教科文组织和深圳共同举办的创新大会，提供了一个交流信息和经验的平台。我们通过创意思维与战略政策的结合，能够更好的促进绿色城市的发展。

深圳市华强集团有限公司创建于1979年，是一家以文化科技产业、云产业、高端电子产业等为主导的大型控股集团。目前，华强集团拥有90多家投资控股企业，拥有多家国家级开发中心。华强集团非常重视文化在城市发展中的应用。因此，在云产业板块，专门已经设立了智能城市研究中心。

城市是局部地区与全球交互的中心、是现代与传统对话的中心、经济与文化紧密结合的中心。深圳，作为一个新城市的代表，在面对全球化的挑战、城市文化传承、城市绿色环境等问题，同样需要迫切的解决方案。

最后，我要感谢教科文组织对这次会议的组织和策划，同时感谢各方代表前来参加，感谢城市专家接下来的会议中的讨论，预祝大会圆满成功。

Paul Andreu

Architect

Paul Andreu is an architect who graduated from the Ecole Polytechnique, L'Ecole des Pont-et-Chaussées as well as L'Ecole Nationale Supérieure des Beaux Arts in Paris. He is famous for having designed several airports, such as Ninoy Aquino International Airport (Manila), Soekarno-Hatta International Airport (Jakarta), Shanghai Pudong International Airport, Abu Dhabi International Airport, Dubai International Airport, Cairo International Airport, Brunei International Airport, Paris-Charles de Gaulle Airport and Paris-Orly Airport. He also planned, among other works, the Sea Museum in Osaka, the Oriental Art Center in Shanghai, and the National Grand Theater of China in Beijing. Since 2011, he has been teaching at Zhejiang University in Hangzhou, China, as the Dean Emeritus and Chair Professor of Architecture Department. He also published seven books, some about his work as an architect and novels, including Archi-memoires, between art and science, the creation in 2013. He has just inaugurated the Opera Jinan in China and is currently working on the big project "Cité Municipale" in Bordeaux.

保罗·安德烈毕业于巴黎综合理工大学、桥梁公路学院以及巴黎国家高等美术学院三所学校的建筑师。他参与设计了一些世界机场，并由此而闻名，如马尼拉的尼诺·阿基诺国际机场、雅加达苏加诺的哈达国际机场、上海浦东国际机场、阿布扎比国际机场、迪拜国际机场、开罗国际机场、文莱国际机场、巴黎戴高乐机场和巴黎奥利机场。除此之外，他还设计过大阪海洋博物馆、上海东方艺术中心、北京中国国家大剧院。自2011年起，他任教于浙江大学，并是该校设计学院的名誉院长。保罗·安德烈出版过七本关于建筑方面的书籍，包括2013年出版的《建筑回忆录，行走于艺术和科学之间》等。他刚刚完成济南歌剧院的设计，目前致力于波尔多市政府的大型项目。

Un design créatif et le développement durable

Comment le design créatif peut-il contribuer au développement durable des villes ?

Le thème de cette conférence est d'importance, tant il est clair que la population urbaine continuera d'augmenter dans les décennies qui viennent, et que ce sera en majeure partie par l'augmentation de l'étendue et de la densité des agglomérations existantes.

Les problèmes de la ville sont parmi les plus complexes qui soient. Ils mobilisent beaucoup de connaissances spécialisées. De tous ceux qui parleront ni au cours de ces deux journées, je suis sans doute le seul à n'être spécialiste des questions de développement durable ni des questions urbaines.

Aussi je vous prie d'accepter que je vous parle en termes très généraux, sur le mode du bavardage, d'un certain nombres de choses que j'ai comprises – ou cru comprendre - au long de ma longue carrière. Sans chercher à m'inscrire dans une théorie. En restant ce que j'ai toujours été : quelqu'un qui a toujours considéré la théorie comme une mise en ordre provisoire des acquis de la recherche et de la pratique.

Le « design créatif », pourquoi associer ces deux mots ?

Bien sûr, chaque fois que l'on s'attaque à de nouveaux problèmes, où que l'on veut simplement changer de point de vue sur les problèmes anciens, il faut signaler cette action par des mots nouveaux. Par des mots mobilisateurs, fédérateurs. Mais pour en avoir beaucoup entendus au cours de mes cinquante ans de carrière, je sais combien ils peuvent être décevants, trompeurs même parfois.

Créatif, certes. Que serait un design qui ne serait pas créatif ? Un simple jeu de séduction commerciale ? Une tromperie de communication ?

Le design ne peut qu'être cela, créatif, c'est-à-dire fondé sur les résultats de la recherche dans tous les secteurs de toutes les sciences – et jamais ils n'ont été aussi nombreux et variés – fondé aussi sur l'imagination, sur des idées nouvelles, mais surtout sur l'innovation, c'est-à-dire la mise en œuvre de ces idées dans l'espace économique et social.

A l'évidence, le développement durable, celui des villes plus que tout autre, ne peut qu'être le résultat de la rencontre et de l'association des résultats de toutes les créations, scientifiques, littéraires, artistiques, une rencontre et une association véritable, sans à-peu-près, sans faux-semblants.

C'est bien là un premier danger. Il faut agir, agir vite, de manière visible, de manière symbolique, exemplaire. Or nous voulons que les choses se voient, qu'elles se voient même avant d'exister, nous voulons leur image, non pas comme une mémoire, mais comme une promesse et tant pis au fond si elles n'arrivent pas du tout. C'est cela la virtualité. La virtualité de nos désirs et de leur satisfaction. La négation du temps.

Et, simultanément, saisis de scrupules, de remords, ou de peur nous ne cessons de parler de développement durable, oui, durable, qui ait à faire avec le temps, qui respecte le temps, le passage du temps.

Me suis-je trop éloigné du sujet d'aujourd'hui ? Non, je ne crois pas. Que peut apporter le design à la ville durable ? Pas seulement des promesses, mais du bien-être immédiat. Bien-être, c'est avec soin que je choisis ce mot, plutôt que ceux de plaisir ou de bonheur. Eux ne viennent qu'après, c'est le bien-être qui rend le plaisir et le bonheur possibles. Dans le bien-être, il y a quelque chose de calme, qui n'est ni caché ni invisible, mais qui se dérobe d'abord à la vue, qui ne s'exhibe pas. C'est ce que nous recevons de la poésie, c'est aussi ce que nous recevons de manière très triviale, de la technique.

Le design créatif ne doit pas encombrer notre vue, la saturer de signes et d'émotions. Il doit désencombrer le monde, nous donner le temps de voir, de réfléchir et de comprendre. Ne pas véhiculer de message, ne pas nous imposer une vérité, mais nous laisser libres d'en trouver une qui nous soit propre. Barthes écrit que dans la littérature, « la naissance du lecteur doit se payer de la mort de l'auteur », en d'autres termes, que le langage de la littérature doit être assez ouvert pour permettre au lecteur de réécrire le texte à son usage. Je crois que c'est, ou que ce devrait être, le propre de toute création, scientifique ou artistique, que de provoquer l'émergence du sens, plutôt que de chercher à en imposer un.

S'il y a une chose que mon travail m'a appris, c'est l'importance des rythmes contrastés qui s'enchevêtrent dans toute création urbaine et dans toute vie urbaine. Pendant quarante ans, j'ai poursuivi, sans interruption, la construction de l'Aéroport Charles de Gaulle à Paris. Je l'ai vu évoluer. J'ai compris comment la complexité apparait, toujours plus grande, comment s'établit et se différencie un système, comment apparaissent des qualités émergentes. Cela a été, je l'ai souvent pensé, apprendre, sur un exemple plus simple, un peu de ce qu'est la ville : un organisme complexe en évolution permanente. Mais dans le même temps, impliqué dans beaucoup d'autres projets semblables, j'ai pu constater que beaucoup suivaient des évolutions particulières et qu'il n'y avait pas, en définitive, de modèles généraux, sinon ceux qu'imposaient une sorte de mode.

Ceci m'a convaincu qu'aucune des méthodes d'analyse et d'optimisation – celles que nous avons apprises au cours de nos études, mais celles aussi, nouvelles, qui ne cessent d'apparaitre – ne permettent de modéliser un objet aussi complexe que la ville et de parvenir à prendre les décisions globales les meilleures.

Il faut que nous l'acceptions : une ville ne peut être qu'à peu près bonne. C'est dans cet « à peu près » que naissent sa résilience et sa capacité d'adaptation. Une ville combine toujours la pensée la plus précise, celle qu'éclairent les acquis de la science, avec un « bricolage » intuitif, disparate. Leurs rythmes sont à l'opposé. Les grands réseaux, de transport, de distribution d'assainissement, d'information même, ne peuvent pas croître lentement, par petites étapes. Les lieux d'activité et les lieux d'habitation, au contraire, ne doivent pas être déterminés globalement, très vite, trop vite, sous peine de devenir des freins au bon développement. La combinaison de ces échelles de temps est, à elle seule, une difficulté majeure du design urbain.

C'est à ce point de la difficulté que s'introduisent l'organisation sociale, et la politique, pour orienter les décisions. Elles le font d'une toute autre manière. Souvent, dans une volonté d'imposer un ordre social et des valeurs qui lui permettront de durer, elles vont à l'encontre de l'optimum économique du moment. Cela peut entraîner des catastrophes écologiques, comme à Terre-Neuve ou à l'Ile de Pâques. Cela peut au contraire, après des périodes difficiles de régression, déboucher sur de nouvelles modalités très positives de développement, comme cela semble avoir été le cas, selon les recherches les plus contemporaines, pour le passage à l'agriculture qui, pendant un long moment, a diminué les ressources de ceux qui avaient abandonné pour elle leur statut de chasseurs-cueilleurs, mais a connu ensuite la réussite que l'on sait.

Et puis il y a aussi cette constatation que la culture peut, ou doit, avoir une influence importante sur le développement des villes. Ce qui s'est passé à Bilbao, avec la construction du musée Guggenheim, a mis en route une réflexion générale, suscité beaucoup de projets plus ou moins ambitieux. Là encore il faut d'abord noter l'influence d'une décision politique qu'aucune étude économique, aucune étude de marketing, n'avait ou n'aurait pu justifier. Ces études appliquent et généralisent des connaissances acquises. L'analyse et la mesure de ce que peut produire la résilience leur échappe. La création, dans ce qu'elle a de plus fondamental, leur échappe aussi.

Mais Bilbao est un exemple, pas une recette. Je ne veux pas m'aventurer ici dans un commentaire superficiel des mots qui se retrouvent partout, soft power, story telling, big data. Même si je crains qu'ils soient employés très souvent de manière opportuniste, je sais qu'ils se fondent sur des recherches, importantes, mais dont on parle d'autant moins qu'elles sont difficiles à comprendre et encore incertaines. Leurs auteurs sont plus scrupuleux dans leurs annonces que beaucoup de communiquant. Ils ne travaillent pas sous la lumière des projecteurs, dans le flot des informations, mais dans les zones presqu'immobiles, ignorées, de l'ombre et des remous.

C'est là que naissent les idées, c'est dans ce calme, dans ce silence, que la création peut grandir et se développer.

Il faut que je dise un mot, pour finir, de l'architecture. Elle a été mon domaine de création presque exclusif pendant la majeure partie de ma vie et reste au centre de mes préoccupations, même si l'écriture a pris une bonne part de sa place aujourd'hui.

Un mot pour dire le malaise que je ressens, grandissant, depuis quelques années. Je crois avoir toujours fait partie de ceux qui souhaitaient que l'architecture ne cesse jamais d'être ambitieuse, à la fois utile et créative.

Utile d'abord. Elle est enracinée dans l'économie, dans la nécessité, l'usage. Elle ne doit pas les trahir. Mais dans le même temps elle n'existe que si elle s'en évade, et que, « chose mentale » qui se matérialise, elle fait d'un objet de nécessité une trace culturelle. Elle est prise dans un paradoxe constant. Elle doit être à la fois immédiate et lente, fragile et durable, généreuse et économe. Comme toute création d'art, elle est l'œuvre d'une personne ou d'un petit groupe de personnes, mais c'est à la rencontre du plus grand nombre qu'elle va. Dans ce processus- là, comme je le disais tout à l'heure à propos de la littérature, ce n'est pas l'ego de l'auteur qui doit s'imposer, mais la capacité de son œuvre à aider ceux qui l'utilisent, la parcourent, la regardent, à découvrir leur désirs, individuels et collectifs.

Il me semble que souvent aujourd'hui ce processus est en danger. A cause de notre relation de plus en plus faussée au temps, à cause des outrances de la commercialisation, à cause du « branding », l'architecture, avec un certain retard, traverse les mêmes épreuves que la mode et parfois succombe aux mêmes travers. L'originalité à tout prix, la prétention à faire de tout projet une « icone », la confusion et l'incohérence d'un langage qui utilise pour leur effet de mode les mots du développement durable pour justifier des projets qui dilapident sans raison les ressources naturelles et humaines.

Je ne veux pas insister ici sur ces travers, sur ces dangers. Je sais bien que quand on les évoque on est aussitôt dénoncé, fustigé, comme un réactionnaire qui veut tuer la création, alors même qu'on ne cherche qu'à la défendre, à en retrouver le sens. Soyons clairs. J'ai la conviction que jamais la création, en architecture comme ailleurs, n'aura été plus nécessaire, que le développement durable n'est pas une punition, une entrave, le prix à payer pour nos péchés antérieurs, mais une chance de repenser, sans dogme préalable, le bien-être, dans son sens le plus global.

J'ai cette conviction encore, la dernière, les générations nouvelles ne devraient pas s'inquiéter sur l'importance des tâches qui les attendent ni sur les bonheurs qu'elles leur apporteront.

Je devais parler de la ville durable et du design créatif. Me voilà à faire l'apologie de la profondeur et de la lenteur et à promettre le bonheur. Il est temps que je vous cède la parole.

创意设计和可持续发展

创意设计如何才能促进城市的可持续发展?

本次会议的主题是很重要的，很明显，在未来的几十年，城镇人口数量将继续增长，城市密集度也大幅度增加。

城市问题是现今存在的最复杂的问题。今天和明天大家讨论的话题，毫无疑问，我是在场唯一一个不是在城市可持续发展领域的专家。

我还想强调的是，我的演讲主要涉及我擅长的领域或者我的职业生涯方面。我并没有拘泥于单一的理论。我一直认为理论只是研究和实践的一个临时成果而已。

“创意和设计”，为什么要把这两个词连接起来呢?

当然，每次我们解决新的问题，或者每次我们要改变旧思想时，我们必须用新的词来定义这个过程，这个词要有驱动和团结的作用。然而，在五十年漫长的职业生涯后，我听到过许多不同的词语，我也看到了它们是如何在一段时间内误导和欺骗着大家。

如果没有创意，设计将会是什么样子的呢？难道它只是一个简单的商业游戏吗？或者只是一个具有欺骗性的沟通词汇?

除了创意性，设计再无其他可言，也就是说，设计是所有科学部门研究的成果，它也从来没有像现在这样庞大和多变。设计，基于想象、新观点，尤其是依赖于创意，这也意味着，这些想法需要通过经济和社会空间来实现。

正如大家所指出的，城市的可持续发展不仅仅是一个创造、科学、文学、艺术的一个拼凑的结果，而是一个本质真实关联的成果。

这是第一个风险。我们必须采取行动，并且迅速采取行动，运用更为有效的、有代表性的方式。然而，我们希望我们可以看到问题所在，甚至有时候在问题发生前就预见到它的存在，我们需要认清问题，不仅仅是作为以后的一个总结，而是一个承诺，无论其最后发生与否。这只是我们的一个期待，时间证明，这是不切实际的。

同时，在被顾虑、悔恨、恐惧束缚住之后，我们不得不再提到可持续发展。是的，可持续性，它必须与时间紧密结合。

如何才能把可持续发展城市的设计变为现实呢？这不仅是一个承诺，也是眼前的舒适。舒适，我很小心的选择这个词语，而不是选择快乐或者幸福。这些词是在舒适的基础上产生的，有了舒适，才有快乐和幸福的存在。

创意设计，不该只停留在理论上，它必须是把世界连接起来，给我们更多的时间来理解和消化。它不该只传达给我们信息，更应该是解放我们的思想让我们自己去探索我们城市的本质。罗兰·巴尔特，法国散文家和文学评论家曾经写道，

“读者的诞生必然以作者的死去为代价（la naissance du lecteur doit se payer de la mort de l'auteur）”，换句话说，语言文学必须能够满足以下的条件，读者在阅读之后重新用自己的语言重写这本书并为其本人所用。这就是我们该如何处理创造，让它更加具有科学性和艺术性。

四十年来，我从未中断过对巴黎戴高乐机场的建设。我看着它的落成与发展。我清楚的知道，困难看起来总是很复杂，如何建立一个系统并让它脱颖而出，如何展现其质量。我总是在思考，城市是什么样子的：它是一个复杂的、不断变化着的有机体。与此同时，当我参与到相似的项目的时候，我注意到了许多相似的演变以及案例。

这也使我确信，没有绝对的分析和优化的方法，即使是在我们的书本中也没有，新的问题不断的出现，如此复杂的一个内容，我们是不能做出一个对于全球范围内都适用的决策。

我们必须承认，没有一个城市是完美的，正是由于这种不完美性，城市的信息通信以及适应力才应运而生。一个城市总是结合最具体的想法，既利用了科学成就又同时根据自己的情况着手工作。它们的节奏是相反的。运输、信息、环卫等的大型网络不可能缓慢发展。活动和居住空间不该在全球的范围内确定某个标准，否则它将会承受稳定发展的壁垒的风险。把这些结合起来也就成为了城市化设计的主要难题。

在这一点上，必须引入社会组织和政府来帮助我们做决定。他们做决策的方式完全不同。通常情况下，它们试图运用社会秩序和社会价值观来实现目标。它们的目标是追求最优经济。然而，这也带来了环境的灾难，类似的状况发生在纽芬兰和复活节岛。然而，在极度下降后的一段时期内，又会出现一些新的发展。根据最新的研究，人类已经开采了未来农业狩猎采集的资源，当我们度过了这个时期，农业会有新的发展并取得新的成功。

此外，文化对城市的发展有着重要的影响。位于毕尔巴鄂的古根海姆博物馆，引起了社会广泛的思考。我们不得不注意，一个没有经济研究、市场调研的政策是很难有说服力的。

然而，毕尔巴鄂只是一个例子，并不适用于所有城市。我不想讨论那种浅显的到处流行的词汇，像软实力、叙述故事、大量数据。尽管我很担心这些词语并没有用在合适的场合，但不可否认，它们都是建立在研究的基础上。

观念由此而产生，它们是冷静的、沉静的，创造力在观念中建立和发展。

我还有另外一个愿景：我们的后代不该担心这个问题，我们不该把创造幸福的任务留给他们。

我参加会议是来阐述可持续发展城市和创意设计的，很荣幸能够和大家进行分享，把时间留给接下来的嘉宾。

Jana Revedin

International Union of Architects Education Commission Architect PHD, Professor of Architecture and Design

贾娜·雷韦丁

国际建筑教育委员会成员建筑学博士，建筑与设计学教授

Jana Revedin, Architect PhD, Professor of Architecture, UNESCO Delegate to the International Union of Architects Education Commission, is a German architect who holds the Professorship of Architecture and Design at Blekinge Institute of Technology in Sweden. She studied architecture and urban planning in Buenos Aires, Princeton and Milan Polytechnic, and gained her PhD at IUAV Venice. As the author of numerous publications on contemporary architectural theory, she focuses particularly on sustainable processes of architecture and urban design. Her interest in cross-disciplinary research led her to train engineers and designers since 2013 at the Faculty of Human Centered Computing at Klagenfurt University. In 1996 she founded her own architecture practice specialized in sustainable architecture and urban renewal. In 2006 she was appointed Curator of the European Student Competition on Sustainable Architecture and was the creator of its pedagogical making concept. In 2007 she initiated the Global Award for Sustainable Architecture™. She founded the LOCUS Foundation in 2009 which guarantees the scientific independence of the Global Award and federates the winners in research and participatory experimental urban renewal projects.

贾娜·雷韦丁，建筑学博士，建筑学教授，联合国教科文组织国际建筑教育委员会成员，瑞典布莱金厄学院建筑设计系教授。她在布宜诺斯艾利斯、普林斯顿与米兰理工等大学的建筑和城市规划专业学习过，并在威尼斯建筑大学（IUAV）取得了博士学位。众多关于当代建筑理论出版物的作者，并着重研究可持续发展进程的建筑以及城市设计。她对跨学科的研究兴趣使得她从2013年起开始培训工程师和设计师。1996年，她建立了她自己的市区重建以及可持续建筑的理论结构。2006年，被任命为欧洲可持续建筑学生竞赛的策划人。2007年赢得可持续建筑的国际奖项。2007年，她成立了轨迹基金会（LOCUS），这个基金会致力于培养科学的独立性并参与市区重建项目的实验与研究。

The Radicant City

Thank you for giving me the opportunity to speak about the research that we are currently working on. Creative cities and creative design are big new concepts. I believe that collective work will be creative. I will talk about the new design concept. The Radicant City – Why sustainable living space grows like ivy.

By 2050 more than 70 per cent of the world's inhabitants will live in cities, but at the same time five billion people will lack adequate accommodation. The people aged over sixty will make up 40 per cent of the population, while eighty per cent of the inhabitants of developing countries will still be living in the unplanned settlements.

Smart public transport, sharing models and all kinds of interactive services, will be needed to reconnect the regenerative city to its hinterland. In this context, agriculture must reject monoculture, rediscover biodiversity, develop attractive niche products and invent new jobs and research and tourism opportunities.

Let us see how regenerative living spaces transform cloud intelligence into cloud creativity. These are the spaces that we like to call "radicant".

A Radicant history: from Agropolis to Petrolpolis to Ecopolis

Cities are the oldest, the most tried and tested centres of economic activity, civil rights and social interaction. The technical complexity of their buildings and infrastructural systems is unique. Their transport and communication systems interact across the globe. They offer infinite services at a comparatively low per capita cost.

Self-sufficient in terms of food, fertilisers and farming, Agropolis was built and nourished in a systemic relationship with the landscape and a location wisely selected in terms of such resources as soil, water and wind. Morphologically, it had no need to be centralised, but could be linear, reticulated or polycentric as demanded by geography and geology.

The industrial age separated the human activities of "working" and "living". Cities became the focus of industry, economy and consumption and, although dependent upon an external energy supply, they declared themselves independent from their hinterland. This "Petrolpolis" is powered by massive daily injections of fossil fuels and discharges solid, liquid and gaseous wastes oblivious to such consequences as food and energy insecurity, rising sea levels, being subjected to storms and tsunamis. In this context we should remember that 14 of the world's 17 megacities of over ten million people are located in coastal areas and that 40 per cent of all cities with populations between one and ten million are found on coastlines!

Ecopolis will be a place whose inhabitants, driven by real eco-political need, collectively decide to transform their existing living space by taking elements from their social context and re-assembling and re-inventing them in line with "architecture's desire".

Radicant morphology

How can we plant these theoretical seeds in the fertile ground of today's urgent need to create new living space by using and upgrading the existing?

We have found one new "radicant" morphology in living spaces that grow and evolve like radicant plants such as ivy, which rationally put down roots wherever they find foothold and nourishment. Or, to be more precise, which put down many roots so that if one foothold or source of nourishment fails or misses, many others are available to recover the organism's vitality.

Radicant morphology could become a suitable morphology for Ecopolis. On the one hand respecting, as Agropolis did, the geographical quality and cultural character of place but, on the other hand, being socially inclusive and extremely flexible towards changing functions and generational needs.

The major themes on the way to self-development are not only physical spaces for living, working and the public "in-between" space, which is the setting for communication, but also the intellectual contents of such spaces. Henri Lefebvre's "Right to the City" is not only a right that must be exercised democratically and which requires time, investment in learning, zero-energy concepts and innovation in terms of both structures and materials, but it can also facilitate a radicant-ising leap to "smart" dimensions and challenge faith, class and gender-based assumptions.

The only option is the common seeking, risking and carrying-out of collective innovation because only such an approach will be understood, accepted, shared and catalysed. The coming generation of architect-companions will accompany this transformation of the already existing radicant cloud intelligence into the urgently needed radicant cloud creativity.

Radicant method

Radicant theory is divided into the four phases of the participatory design process which we have identified in our research and practice.

The first step is the presentation of needs by a community because no development is ever possible if the citizens are not ready for it. Such a presentation of needs is not limited to communities in the second or third world. The method is adaptive and can address any sort of request: learning to recycle and renew, designing smart transport models, reinventing the hinterland as a source of niche production and regeneration or creating inclusive forms of living for the increasing numbers of over-sixties.

Following this step, data is collected and critically elaborated during a process of cross-disciplinary urban mapping, which lasts at least a year. Here, we not only measure the built environment and infrastructure but we also try to read "between the lines" and understand the cultural traditions, anthropological habits and ethical values of the inhabitants and, hence, the human condition within an urban space. Tools have to be carefully tested to avoid the risk of being socially insensitive: interviews and playful interactive scenarios often work better than the photographic and film documentation, which can appear aggressive. The data collected from all inhabitants and stakeholders within reach – which represents all possible internal and external perspectives - is then critically reviewed as a means of identifying both the most urgent and also the most affordably and easily realisable needs. Our aim is to create the first positive result, the urban catalyst!

The third phase of collective making through trial and error is facilitated by our participatory design laboratories. The possibility of bringing in specialists in any required field: urban infrastructure, landscaping, recycling or, simply, careful and appropriate design ensures that the community gets "the best possible advice" while facilitating Open Work involving citizens, local specialists and the external architect-companion and his or her team.

The fourth phase, which we always hope will happen, is the catalytic chain-reaction of policies which, triggered by our intervention, occurs naturally due to the energy of citizens and users. If an economic goal is achieved, if the operation can pay for itself or even bring further profit, then it is hard to envisage that anything even long-standing political or religious conflict will cause it to fail. Something which is designed collectively will remain in the memory of the people as a success which they achieved together.

长青藤城市

谢谢大家给我机会来展示我现阶段的研究成果。创意城市与创意设计是新的概念。我相信我们共同的努力将具有创造性。今天我将介绍新的设计理念。根茎城市——为什么可持续发展生活空间以常春藤的形式发展。

到2050年，世界人口超过70%将居住在城市，与此同时，五十亿人会缺乏充足的资源。超过六十岁的人口数量将会增加40%。发展中国家80%的居民仍将生活在居无定所的环境中。

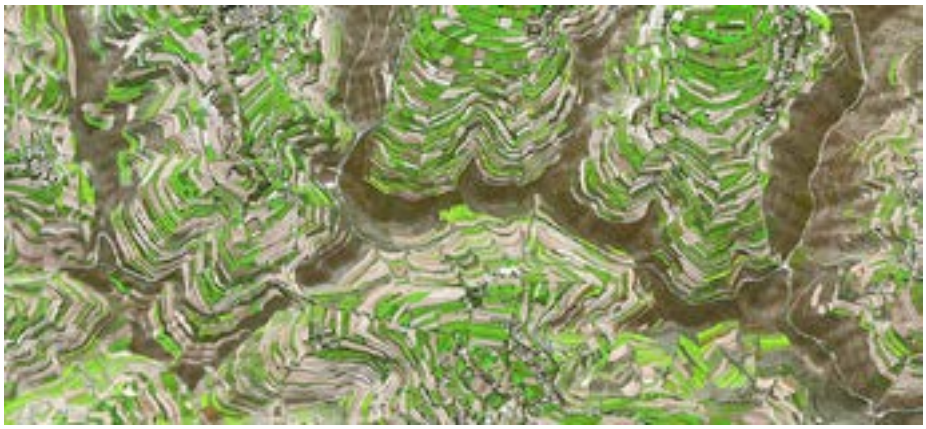
智能公共交通、模型共享和各种互动服务将需要来重新改造城市腹地。在这种背景下，农业必须拒绝单一文化、重新认识生物多样性、开发有吸引力的产品、创造新的就业科研机会和旅游商机。

让我们来看看如何运用云科技重新改造生活空间。我们喜欢把这个空间叫做“根茎”。

根茎的历史：从农耕城市到工业城市再到生态城市

城市是最古老的经济活动、公民权力和社会交往互动中心。城市建筑的技术和基础设施系统的复杂性是独一无二的。城市交通和通信系统在全球范围内相互作用。城市用相对比较低廉的成本提供无限的服务。

自给自足的粮食、化肥和农业方面，农耕城市被建造并在自然景观、土壤、水和风力等方面获得资源。从形态上看，它没有必要集中，从地理和地质学上看，它可以是线性的、网状的或者是多中心的。



工业时代把“工作”和“生活”等人类活动分离开来。城市是工业、经济和消费的中心，虽然依赖于外部能源供应，但它们依然对外宣称自己独立于它们的腹地。这种工业社会是有大量的化石燃料和固体、液体和气体所供应，这些资源的浪费也造成了粮食和能源安全危机、海平面上升、以及风暴和海啸等。我们应该记住，世界上17个大城市中有14个，超过一千万的人口位于沿海地区。世界上40%的人口在海岸线生活。

在生态城市中，居民将会真正地被生态政治所驱动，集体决定去改造他们现在所拥有的生活空间，运用现存的社会元素以及重新改造、发明的元素来实现他们的“建筑愿望”。

根茎形态

我们如何利用这些理论和现有资源来创造新的居住环境呢?

我们已经找到了一个新的“根茎”形态的居住空间，这个居住空间根茎植物一样生长，例如常春藤，常春藤这种植物的根不一定在土壤里，无论在哪里，它们找到了立足点和营养所需就可以生存。或者，更准确地说，里面有许多的根，所以如果一个立足点营养发生问题，其他部分将会对其进行复原。

根茎形态可能会成为一个合适生态城市的形态。一方面，像农耕城市一样，它以人为本，尊重地理特质和地方文化特色，在另一方面，由于其具有社会包容性和极其灵活的方式，可以改变职能以及各种需求。

自我发展的主要主题不仅仅是生活、工作空间上或者“在两者之间”的空间进行通信设置，它而且还包括这些空间的知识内容。列斐伏尔的“城市权利”不仅必须行使民主的权利，它还需要时间进行学习，零能耗的概念和结构、材料方面的创新，它可以促进根茎的飞跃。

唯一的选择是共同追求、冒险尝试和产出集体的创新，因为只有这样做，才是真正可理解、可接受、可分享、可促进的做法。

在即将到来的新时代，建筑师的同伴将会把现有的根茎云智能转变成我们所迫切需要的根茎云创造。

根茎方法

在我们的研究和实践中把根茎理论分为四个阶段。

第一步是需要一个社会进行宣传，如果居民没有准备好，发展它则是不可能的。这样的宣传需求并不局限于第二或第三世界社会。该方法具有适应性，并且可以满足任何类型的要求：学习循环和更新、设计智能交通模式、重塑腹地、把其打造成生产和再生的来源或是创造超过未来六十年的可包容性的生活形式。

接下来，就要进行数据收集，这个跨学科的研究至少要进行一年以上的时间来批判性分析。这时，我们不仅要测试建筑周围的环境和基础设施，还要尽量去了解城市内部空间、了解文化传统、人类风俗习惯、公民的道德价值和人类的生存条件。必须谨慎使用这些方式来避免社会风险：采访和进行互动的效果冲击性要超过摄影和电影文件。收集到的数据可能代表内部或外部的观点，即居民和利益相关者的观点，需要进行严格的审查。我们的目标是创建第一个积极的成果，城市进步的良药！

第三阶段是集体决策阶段，通过纠错和试验来提供便利。在任何所需要的领域引进专家的意见：城市基础设施、园林绿化、循环或者简单地说，谨慎和适当的设计保证了社会获得“最佳的意见”，同时营造开放的工作氛围，公民、地方专家和外部建筑师都可以加入这个团队中来。

第四阶段是我们一直期盼发生的，是有大众参与的政策催化链，公民和使用者参与到其中，如果一个经济目标得以实现；如果操作可以自动完成甚至带来收益，那么长期的政治、宗教冲突将会不再存在。由集体设计的事物将会长久地留在人们的记忆中，并将取得成功。

Mehri Madarshahi

International Cultural Advisor to the City of Shenzhen

梅里·马达沙希

深圳市国际文化顾问

President of "Global Cultural Network" and "Melody for Dialogue among Civilizations" Association. For 26 years, she served at the United Nations in New York in various capacities, such as a Senior Economist with the UN Office for Economic Assistance to Africa; an External Relations Officer in the Office for Emergency Operation in Africa; as member of the UN Secretary-General's Task Force on the Decentralization of Economic and Social Issues; as the Head of the Management Audit Section and a Management Analyst; as a senior advisor to the Executive Secretary of the Reform and Efficiency Board of the UN and as an elected President of the UN Coordination Committee of International Staff Unions and Associations.

To promote a new global role for cultural diplomacy and communications particularly on issues related to environmental awareness she founded Global Cultural Networks, based in Hong Kong to assist in the organization of international conferences and debates on pressing contemporary issues. In 2006 she has received from the Director-General of UNESCO the 60th anniversary medal for her innovative approach to intercultural dialogue through music. For the same reason, she received an award from the Marrakesh Environment Group in 2007, the recognition of the City of Guangzhou in 2010 and a letter of appreciation from City of Shenzhen in 2012. In October 2012, she won the Cultural Diplomacy Award by the Aspen Institute (USA) jointly with former President Olusegun Obasanjo of Nigeria. At present, she acts as an Advisor to the Guiyang Eco-Forum Global (EFG) and works as an International Cultural Advisor to the City of Shenzhen, China and International Cultural Exchange Consultant for the City of Nanjing, China.

全球文化网络和文明间对话音乐协会主席。梅里·马达沙希女士曾在位于纽约的联合国秘书处工作长达26年，先后担任众多要职，例如“联合国非洲经济援助办事处”高级经济师，“非洲紧急行动办公室”外联高级官员，“联合国秘书长关于在经济和社会问题领域分权特别工作小组”成员，管理审计科科长和管理分析员，“联合国改革与提效委员会”执行秘书高级顾问，以及“联合国系统国际工会和协会协调委员会”主席。

梅里·马达沙希女士是“文明间对话音乐协会”的创始人。该协会在法国、瑞士、香港和美国都有分支机构。为了推广文化外交和交流在国际事物中所扮演的新角色，特别在提高环境意识方面，她在香港成立了“全球文化网络”，该机构以组织举办国际会议和论坛为目标。由于其以音乐作为跨文化对话的创新方式，梅里·马达沙希女士于2006年获得由联合国教科文组织总干事颁发的奖项。此后，她还先后获得了马拉喀什环境组织（2007年）和广州市颁发的奖项，以及深圳市给予的感谢信。2012年10月，她和尼日利亚前总统奥卢塞贡·奥巴桑乔共同荣获美国阿斯彭协会（Aspen Institute）的文化外交奖。目前，梅里·马达沙希女士出任贵阳生态论坛顾问、深圳市国际文化顾问和南京国际文化交流顾问。2014年，她被聘为中国华南理工大学公共政策研究院名誉教授。

Sustainable Urban Living: an Imperative for the Future

It is a great honor for me to be here and speak about an important impending topic such as future urban living. One of the defining challenges of our time is how to reconcile the need for rapid growth and sustainable development in many parts of the world with the need to avoid irreversible and costly environmental damage. This is a challenge that will be played out in the world's cities.

More than half of the world's population already live in cities and this is expected to reach 75 per cent by 2050. Cities occupy only two per cent of the earth's land, yet account for 60 to 80 per cent of energy consumption and 75 per cent of carbon emissions. Natural hazards such as flooding and drought, temperature extremes, and tropical cyclone activity already impact cities and these will be exacerbated by climate change.

The growth of cities puts additional pressure on resources and environmental assets such as forests, water, and air that support the needs of their inhabitants. People living in cities are particularly at risk from changes in the price of and disruption in the flow of resources such as energy, water, and food.

Given that 95 per cent of this urban expansion is projected to take place in the developing world, it is cities in developing countries which will be at the front line of managing this challenge

Future planning of cities should, therefore, deal with utilizing and developing the capabilities of cities to respond to the risks associated with climate change, resource scarcity, and damage to ecosystems in a way that catalyzes inclusive urban development. There is an important – but closing – window of opportunity for many cities to act now before they are locked into unsustainable and unsuitable development pathways. This should be the tasks of National and regional governments and development agencies, as well as national and multinational companies to identify the risks facing them and develop solutions which can respond effectively to those risks over the long term.

A majority of studies focus on measures to address one or two risks such as carbon emissions or flood risks, but provide insufficient attention to issues such as potential resource scarcities in energy, water, and food, and the need to safeguard natural habitats and biodiversity.

Most policy guidance is also inadequately tailored to the specific challenges facing cities with different characteristics. Additional attention is also needed to identify which solutions can generate social and economic benefits, alongside environmental ones. This is crucial if cities are to build support among communities and stakeholders for sustained programmes of action.

A wide range of policies can respond to multiple environmental risks by, such as reducing carbon emissions and energy use, responding to climate hazards, and helping protect or manage water and food systems and natural habitats. These can be thought of as 'win-win' policies in addressing environmental risks. Many of these policies are an extension of integrated urban planning and infrastructure investment. They include mixed use zoning, use of greenbelts, developing mass transit, pedestrian and bike orientated development plans, and prudent land management. These policies provides an opportunity for cities to build on existing initiatives and good practice in urban planning and combine these with more specific 'win-win' actions such as urban greening and tree planting programmes, which are often overlooked. Cities should unlock opportunities in the built environment by combining measures which incorporate rainwater harvesting and grey water reuse, recycling, pollution control, and solar power systems to generate 'triple-win' and 'win-win' benefits.

Although various groups of cities face common environmental risks, they usually differ markedly in their vulnerability to those risks based on their levels of poverty and inequality, strength of basic services, and urban form. In order to implement these innovative policies there is a need for leadership by city stakeholders, regional and national government, international funding agencies, philanthropic, academia, and private sector companies in order to plan for the long term by acting now and support cities to future proof their development. As this Conference will point out, such wide-range implementation actions require skills to be leveraged across the infrastructure, engineering, environment, planning, design, economics, and social science professions.

可持续发展的城市生活：未来发展的必然趋势

十分荣幸能够在这里演讲关于未来城市生活的主题。我们这个时代的一个关键挑战在于如何调和高速发展与可持续发展直接的关系，同时避免由发展所带来的环境破坏。这是世界上的城市都要面临的挑战。

世界上超过一半的人口已经居住在城市离，到2050年，这个比例将达到百分之七十五。城市仅仅占了全球陆地面积的百分之二，然而它却占了百分之六十到八十的能源消耗以及百分之七十五的煤炭排放。洪水、干旱、气温变化以及热带气旋活动等自然灾害已经影响了城市，同时，这些气候变化将更加加剧。

城市的发展使得环境资源以及其他各类资产更加短缺，　例如森林，水和空气等人类十分需要的资源。生活在城市的人们同样面临着能源、水和事物资源的价格变动与流通等危机。

这种城市的扩张百分之九十五是发生在发展中国家，因此，发展中国家的城市将处在面临这些挑战的最前沿。

城市未来规划应该处理好应对气候变化、资源短缺、生态系统破坏等挑战。在城市被他们自己的发展所困住之前，城市本身应该采取一些措施来放弃一些对环境有破坏的发展机会。这也是国家和地区政府、发展机构、国营和跨国公司所要面临的挑战，制定出长期应对风险的解决方案。

大多数的研究侧重于解决一两种风险，例如碳排放或洪水风险，但是并没有对能源、水、食物、生物多样性稀缺等问题给予重视。

大多数的政策导向也针对不同城市的特点给予不同的解决措施。值得格外注意的是，我们需要确认那些措施是可以产生社会、经济和环境效益。如果城市要建立社区与利益相关者的可持续发展项目，这点是至关重要的。

当今，大多数的政策可以降低各类环境危机，例如：减少碳排放和能源消耗；应对气候灾害；有助于保护或管理水和食物系统。这些措施是解决环境问题的双赢政策。很多措施都是城市规划和基础设施投资的延伸和整合，它们包括混合分区使用、绿地应用、公共交通发展、以步行和自行车为导向的发展计划、审慎的土地管理政策等。通过城市绿化、植树等项目，它们也为城市提供了建立城市规划典范、实现共赢结果的机遇。城市通过雨水收集、水资源循环利用、污染防治、太阳能发电等措施来达到“三盈”和“双盈”。

尽管城市面临着共同的环境危机，但由于贫困、基础服务能力以及城市形态的不同，他们所呈现的表现形态也有所不同。为了落实这些政策，我们需要呼吁城市利益攸关者、地区和国家政府、国际投资机构、慈善、学术机构和私营公司的参与，来支撑城市未来的长远规划。就像会议所指出的，规模如此大的项目需要基础设施建设、工程、环境、规划、设计、经济和社会科学等部门对长期的合作。

Catherine CULLEN
Deputy Mayor in charge of Culture, Lille (France),
President of the Committee on culture of United Cities and Local Governments (UCLG)

凯瑟琳·卡伦
法国里尔市文化副市长
城市与地区政府联盟委员会（UCLG）主席

Catherine Cullen is Deputy Mayor of Lille in charge of Culture as well as Vice-President of the Committee on Culture of United Cities and Local Governments (UCLG) to promote the Agenda 21 for Culture. She has created and managed cultural projects and events for over 30 years, based on her experience of different cultures and artistic activities. She started her career in publishing, working for Cambridge University Press, Le Seuil and Albin Michel among others. Before becoming editor in chief for LIBER magazine, she was produced the cultural supplement of several European newspapers (Le Monde, El País, etc.). She then served as an advisor to the French Presidency for the implementation of the cultural universal academy. As a freelance writer and translator, she has also contributed to many national and international meetings on various aspects of culture.

凯瑟琳·卡伦是里尔市分管文化的副市长，同时也是城市与地区政府联盟委员会（UCLG）副主席，这个组织主要是为了促进21世纪的文化议程。她在不同背景的文化环境中工作过，并有超过30年的管理文化项目活动的经验。她从出版方面开始了她的职业生涯，如剑桥大学出版社，塞伊（Seuil）出版社以及阿尔宾·米歇尔（Albin Michel）出版社等。在成为自由（LIBER）杂志的主编之前，在皮埃尔·布迪厄（Pierre Bourdieu）的领导下，她负责撰写一些欧洲报纸（世界报，国家报等）的文化文章。她还曾担任法国文化学院的咨询顾问。凯瑟琳·卡伦女士同时也是一位作家和翻译家，促成了许多创意产业的国际项目。

The Role of Culture and Sustainable Development

Today we will talk about sustainable urban living linked to innovation and conservation. This discussion is usually held economic variability, social equality environment responsibility and culture vitality. Sustainable development is a holistic approach dealing with all these components. The role of culture and sustainable development has been the main focus of the works of Culture community of the United Cities in Local Government since 2004.

Today two major international debates, are centered around negotiations for the United Nations post 2015 development agenda over the couple of years. The UCLG culture community has been advocating and disseminating the agenda 21 for culture since 2004.

Cultural diversity, citizen participation, cultural education, eco-organization and government are in relationships with economic, social and environmental sustainability. Today, more than 450 cities in local government all over the world are involved in implanting agenda 21 for culture. Many researchers and NGOs are working on the role of culture in sustainable development. We have, ten years practice in culture sustainable development, ten years professional knowledge on this subject. We hope to bring out the updated version of agenda 21 for culture early next year.

The UCLG culture community is a global platform at two different levels. On the one hand, it helps cities to improve development of agenda 21 for culture through networking, advice, and information. On the other hand, the culture committee is very active at international level. Culture has a main influence in the sustainable development, especially at the UN level. We support the UN post 2015 development agenda. Our several programmes are linked to creativity, heritage, knowledge and diversity. We believe each goal and target should have a knock on effect and a set of goals and targets that are truly transformative. In 2010, United Cities in Local Government improved the policies on culture and sustainable development.

Culture is a driver of development, due to infusion of knowledge, creativity and innovation. Culture is also as an enabler of development, through the pacific contribution it brings to the promotion of economic and social development as well as environmental sustainability.

Concerning economic development, we are aware that creative industry, heritage and the arts generate employment. They have an impact on new technologies and tourism. It is one of the fastest going economic sectors all over the world. Digital technology provides the platforms for social and economic exchanges and contributes to new types of creative economies in big cities as well as at the different levels of local communities. Cultural sector provides increasing number of jobs and opportunities. It is important to keep in mind that poverty is not only materiel, but often a result of a lack of education and opportunities, in which marginalized people are being trapped without the possibility for a better future.

Visionary cultural policies can and have an impact on the fight against poverty, gender inequality, and can support job creation. It can promote better governments and empower marginalized people.

The relationship between culture and environmental issues is crucial. Culture contributes to the values promoted by environmental sustainability. It can also raise awareness to the impact ecological footprints. The collective responsibility reconnects values to environment. We have adopted a very open approach to various definitions of culture. What makes a city creative depends on how the city develops in relation to education, tourism, economic development, health, urban planning, and the active responsibility of citizens.

To conclude, I believe we should pay attention to the emergence of the new social practices and urban initiatives for on cultural diversity, eco-organization, cultural rights, social innovation, urban design, creative industry, and citizen's participation. Today cultural vitality is the center of sustainable development, alongside economic viabilities, social equality and environmental sustainability, thus contributing to imaging solutions for major challenges of the 21st century.

文化和可持续发展的作用

今天我们将讨论可持续发展生活的创新和保护。我们经常讨论经济波动、社会公平、环境责任和文化活力，可持续发展是解决这些问题的有效措施。自从2004年，我们一直关注文化和可持续发展在地方政府以及文化社区内的重要作用。

今天，国际上有两大焦点，一个是联合国制定的2015年之后的发展议程，另外一个就是城市与地区政府联盟委员会 (UCLG) 从2004年起就一直倡导和宣传的文化21条。

文化多样性、公民参与、文化教育、生态组织和政府都与经济、社会和环境的可持续发展息息相关。今天，世界上有超过450个城市的政府参与到了“文化21条”这个项目里面。许多研究员和非盈利性政府组织一直致力在研究文化在可持续发展中的作用。我们有10年的在文化可持续发展方面的经验，以及10年的在这一领域的专业知识。我们希望在明年年初的时候，可以完成“文化21条”的升级版本。

城市与地区政府联盟委员会 (UCLG) 是一个全球化的平台，它主要分为两个不同的层次。一方面，它通过网络活动、咨询、以及信息通信来帮助城市发展它们的文化；另一方面，它在国际文化方面也有着积极的作用。我们支持联合国2015年后的战略发展目标，同时我们也是全球可持续发展的重要组成部分。我们的一些项目涉及到创意、文化遗产、知识产权以及多样性。我们相信，每一个目标、每一个任务都会有效果，在完成了一系列的目标和任务之后，它们会带来革命性的改变。2010年的时候，城市与地区政府联盟委员会 (UCLG) 在文化可持续发展方面改进了其政策。

得益于知识、创意以及创新，文化是发展的驱动力。文化，作为发展的推动者，同时用和平的方式给我们带来了经济的发展、社会的发展和环境的可持续发展。

在经济方面，我们都知道，创意工业、文化遗产以及艺术产业创造了很多就业机会。他们同样渗透到了新科技和旅游业。文化是现在世界上发展速度最快的行业之一。数字技术同样给社会和经济交流提供了平台，与此同时，在一些大城市以及不同层次的地区社团，它同样也促进了新型的创意经济的发展。我们需要谨记的是，贫穷不只是物质的匮乏，更是边缘人群的教育以及未来机遇的缺失。基于创新的文化政策可以直接解决很多问题，为那些没有受过教育的公民消除贫困、性别歧视、创造更多的就业机会。

文化和环境问题之间的关系是很关键的。文化有助于环境的可持续性价值的实现。它也同样提升了人们对于生态的意识，也把集体价值观重新与环境联系到了一起。我们已经采取了更加开放的方式来重新定义文化。把城市改造得更具有创意性取决于它如何发展教育、旅游、经济、医疗健康、城市规划与公民责任感。

总之，我相信在文化多样性、生态组织、文化权利、社会创新、城市设计、创意产业、公民参与等与城市创新相关的领域，都值得我们的关注。今天，文化的生命力、经济的波动、社会的公平性都是可持续发展的中心，它们为21世纪我们所面临的主要挑战提供了解决方案。

Masayuki Sasaki

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Professor of Osaka City University

正幸 佐佐木

神户、金泽创意城市顾问大阪城市大学教授

Masayuki Sasaki is currently a Professor at the Graduate School for Creative Cities at Osaka City University in Japan and an internationally recognized leader in the emerging field of Creative Cities and Creative Economy. Masayuki Sasaki is also an adviser of the UNESCO Creative Cities Network in Japan. He received the prize of the Japanese Society of Urbanology in 2003, and launched the new journal with Elsevier – "City, Culture and Society" in 2010. He earned a PhD in Economics from the Graduate School of Economics at Kyoto University. Prior to joining the Osaka City University faculty in 2003, Masayuki Sasaki was a Professor at Kanazawa University and Ritsumeikan University. In 2005, he was appointed Dean of Graduate School for Creative Cities. He became a Director of Urban Research Plaza at Osaka City University in 2007. Masayuki Sasaki also published numerous works, including Challenge for the Creative City (2012) and The Prospects to the Creative City (2007).

正幸佐佐木是日本大阪城市大学创意城市研究生院的教授、创意经济和创意城市在新领域的领导者、联合国教科文组织创意城市网络日本地区的顾问。2003年获得日本社会城市化奖项，并在2010年通过爱思唯尔（Elsevier）发表了题为“城市，文化与社会”的文章。2003年加入大阪城市大学之前，正幸佐佐木是金泽和立命馆大学的教授。2005年，被任命为研究生院创意城市专业的主任，2007年，成为大阪城市大学广场研究的负责人。正幸佐佐木发表过大量的著作，包括“创意城市的挑战”以及“创意城市的前景”等。

Innovation and Conservation for the Sustainable and Creative City

As an advisor for creative cities to Kobe and Kanazawa and I would like to talk today about the experience of Japanese creative cities.

With a major shift towards globalization and a knowledge based Creative Economy and the decline industrial cities a great deal of attention is now being given to the development of a new type of city, namely creative cities. These cities are characterized by the formation of clusters of creative industries, such as film, video, music, arts and crafts. There are also cities where 'the creative class' consisting of high-tech experts, artists, and innovators. This new wave of development has reached the cities and regions of Japan and East Asian regions. The goal of becoming a 'creative city' has been expressed by cities such as Kobe, Kanazawa, Nagoya, and Sapporo just to name a few. The number of 'creative cities' is multiplying rapidly.

We are entering the age of the creative city, where the focus is changing from an industrial manufacturing economy to a creative economy. Production goes from a large scale top down system to a flexible scale bottom up system. There is less mass consumption and more cultural consumption. In addition, circulation and media changes from mass circulation and mass media to a more flexible network and social networking. Finally, capital, land, energy is no longer superior and competitive, as creative people, knowledge and culture take the lead. These are all signs of the possibility of the industrial city morphing into the creative stage.

One important tasks of a creative city is problem solving in different areas related to the economy, culture, society and environment. One definition of a creative city could be: "a city that cultivates new trends in arts and culture and promotes innovative and creative industries through the energetic creative activities of artists and ordinary citizens; a city that is rich in many diverse 'creative milieus' and 'innovative milieus'; that has original, grass-root capability to find solutions to social problems and global problems. It is a city where a variety of social innovations happen." The creative city promotes the development of knowledge and culture through crafts and folk art, music, literature, design, gastronomy, film and media arts.

The launch of UNESCO's "Global Network of Creative Cities" in 2004, gave rise to much interest globally and this initiative. It quickly spread beyond the confines of Europe and America to Asia, and developing countries throughout the world. Prior to this UNESCO promoted the Universal Declaration on Cultural Diversity 2001 aiming at standardization of the culture in this time of globalization. Now 41 cities in the world and 4 cities in Japan (Kobe, Nagoya, Kanazawa and Sapporo) are registered in the global network. In addition there are around 4 other Japanese candidate cities that are preparing to join the network.

Richard Florida, a renowned Professor at NYU and senior editor of The Atlantic magazine, advocated for his own creativity index consisting of eight indices in three fields: talent, technology and tolerance. This index has created a stir among urban theorists and policymakers throughout the world. Among these three categories, Florida himself has stressed the importance of tolerance. What makes up the 3 T's, talent, technology, and tolerance according to Richard Florida is different from other indexes. Inside of Talent we can find the creative class, human resources, talent employed in science and technology and, in technology we can find the innovation and the high tech index.[1]

To be an effective contributor to the regional growth, the university must play three interrelated roles that reflect the 3T's of creative communities. Technology: Universities are centers for cutting-edge research in fields from software to biotechnology and important sources of new technologies and spin-off companies. Talent: Universities are amazingly effective talent magnets. By attracting eminent researchers and scientists, university in turn attract graduate student, generates new spin-off companies, and encourages other companies in a cycle of self-reinforcing growth. Tolerance: Universities foster a progressive, open, and tolerant people climate that helps attract and retain members of the Creative Class.

David Throsby, a distinguished professor of Economics at Macquarie University in Sidney, Australia, mentioned that arts and culture may have a more pervasive role in urban regeneration through the fostering of community identity, creativity, cohesion and vitality via the cultural characteristics and practices which define the city and its citizens. He also pointed out the importance of cultural capital, which embodies and gives rise to both cultural value and economic value in the city. Consideration of heritage or cityscape as cultural capital can provide a tool for integration of diverse interests. He emphasized good relations about cultural capital and the sustainable development of the city. In other words, he states that grasping a cityscape as cultural capital enables coexistence of conservation and innovation. (Throsby, 2002)

On conservation and innovation, Charles Landry, an international authority on the use of imagination and creativity to bring about urban change and the inventor of the concept of creative cities in the late 1980s, mentioned that cultural heritage and cultural cityscape are the sum of our past creativities and results of creativity, and is what keeps urban society going and moving forward. Culture is the panoply of resources that show that a place is unique and distinctive. The resources of the past can help to inspire and give confidence for the future. Even cultural heritage is reinvented daily whether this is a refurbished building or an adaptation of an old skill for modern times: today's classic was yesterday's innovation. Creativity is not only about the new continuous invention, but also about dealing appropriately with the old (Landry, 2000).

On the other hand, cultural capital and cultural cityscape attracts Florida's creative class to the city. This could foster the formation of cultural cluster, as the engine of sustainable development of creative city. We in Japan try to look at the creative city from conservation and innovation viewpoint.

1 Richard Florida, *City and the Creative class*, Rutledge, 2005

Kobe is moving forward rapidly as one of the top creative cities in the world. It was designated as a design city by UNESCO on 16 October 2008. The unique landscape of the city encircled by mountains and sea has been a long-standing attraction for many residents and visitors. Kobe is also a historical port city; it was opened to trade with the West in 1868, and actively embracing all elements of Western culture that entered through the port.

Furthermore, Kobe city made a sustained effort to preserve its unique cityscape. The city is moving towards innovation and is an exemplary 'creative city'. The Great Kobe Earthquake of 1995, which took the lives of about 6000 residents and resulted in immense damage to the city. As a result, its urban infrastructure was absolutely devastated and the city was completely paralyzed. After the earthquake Kobe implemented a creative solution for recovery. The first solution was to enhance the unique cityscape of the city and attractiveness with creative designers and creators. Creating further attractions in Kobe and connecting people and places leading to new possibilities. The second solution was to support the medical industry cluster by attracting talented researchers and creative entrepreneurs. The goals of these two initiatives were to create a better society and quality of life by making use of creativity new fields. With these three basic policies – Cityscape Design, Daily life designs, Design for creative industry – the goal was to enrich lifestyles, use the city's uniqueness and attractions, revitalize the economy, enhance creativity, develop people's self-confidence for the next generation.

Kobe has become very innovative and in the forefront of technology, art, media, and culture, attracting the attention of the global community. Some other Examples are Kobe fashion weeks, and Kobe Design Day on 16 October. KIITO, the design creative center of Kobe, is a historical large building, a former Raw Silk Testing Center, which was renovated to serve its modern purpose in autumn 2012. This center has become a hub for the "creation and interaction" of the design conscious city. It is a place to connect citizens, entrepeneurs and creators by accumulating and developing talent, by making it accessible to the public, by enabling Kobe originality to develop. KIITO provides support for creative effort, aims at the cultivation of creative human resources, as well as network building. Through a design point of view Kobe aims to be a place that will contribute to the community through promotion and integration of creative human resources in civilian lives and economic activities.

The beautiful cityscape, traditional culture and entertainment of Kanazawa contribute to the development of the city. The Kanazawa College of Arts and Crafts contributed to the development of the creative economy by training young talents in the field of art, as well as by bringing up creative talents in the field of ICT.

Although Kanazawa is making great advances in the creative fields there exist some challenges. Faced with the decline of the textile industry, the city administration attempts to convert the discarded remains of old textile factories into a "creative art space" with the active participation of its citizens. In 1996, responding to public suggestion, old warehouses of textile factories we converted to new art centers named Citizen Art Villages.

There are 22 types of traditional arts and crafts industries in Kanazawa. Approximately 900 establishments and 3,000 employees. This occupies 20% of establishments in the city, and 6% of the employees. In addition, 74 craft studios and 139 craft shops are concentrated in a radius of 5km from the old Kanazawa castle located in the inner city.

In 2015 Kanazawa city will hold the the annual meeting of UNESCO Creative Cities Network. For this event we are preparing the special forum of "Creative City and Bio-Cultural Diversity" in cooperation of the United Nations University. This initiative is aimed at raising awareness on the craft production and preserve the ecology and nature as well as cultural heritage.

To summarize, there are several implications concerning the given examples. First, it is necessary to conduct intensive analysis concerning the crises and problems within the city, increase the shared awareness of citizens, clarify the need to become a 'creative city', and formulate a creative city concept embedded in the city's culture and cultural diversity. Second, while developing these concepts, one must recognize that artistic and cultural creativity are factors that have an impact on many other areas, including industry, employment, the social system, education, medical care, and the environment. In order to link cultural policy with industrial policy, urban planning, and environmental policy, the vertical administrative structure must be made horizontal, ordinary bureaucratic thinking must be eliminated, and organizational culture must be changed.

Furthermore, the cultural capital of a city must be recognized as basic social infrastructures in the knowledge and information society, and strategic planning must be carried out to inspire the creativity of its citizens. Finally, for the sustained development of the creative city, the promotion of the culture cluster is indispensable. It is essential to obtain the cooperation of a broad selection of citizens, including business leaders, and NGOs, perhaps in the form of a creative city promotion committee. The most important element for the promotion of creative cities is the establishment of research and educational programs for developing the necessary human resources.

可持续发展的创意城市的创新与保护

我的名字叫佐佐木，是日本创意城市神户、金泽的顾问。今天，我想谈谈日本在创意城市方面的经验。

随着全球化的重大转变以及以知识为本的创意经济的迅速发展，人们越来越多的注意到一种新型城市的发展。这些城市是创意产业的聚居地，例如电影、视频、音乐、艺术以及手工业。这些城市同样也是高科技专家、艺术家所聚集的地方。这一个发展热潮已经蔓延到了日本以及东亚地区的很多城市。因此，也就出现了像神户、金泽、名古屋、札幌等几个日本创意城市。创意城市的数量还在迅速上升。

我们正在进入创意城市的时代，同样也是工业手工经济向创意经济所转型的时代。产品从大规模生产到小规模适量生产的转变。大量消费变少，文化消费开始增多。与此同时，流通与媒体更加趋于社会网络发展。最终，资本、土地、能源将不再具有优势，相反，创意人口、知识以及文化将占主导地位。这些都是创意城市中的特点。

对于创意城市来说，一个最重要的任务就是解决在不同领域的经济、文化、社会和环境等问题。对于创意城市的其中一个定义是这样的：“一个城市可以孕育出新的文化、艺术形式，通过富有活力的创意活动，例如通过艺术家、原创者以及普通市民的活动来促进创新、创意工业；一个城市的创意环境以及创新环境是多元化的；这一地区同时也具有找到并解决社会问题的基本能力，例如一些全球问题”这是一个社会创新时刻都会发生的时代。

联合国教科文组织“全球创意城市网络”项目2004年成立以来，一直关注于全球创意的发展，并迅速发展到了欧洲、美国、亚洲以及全世界的很多发展中国家。这个项目符合2001年联合国教科文的文化多样性宣言以及全球发展的趋势。现在全球四十一个创意城市中，有四个在日本（神户、名古屋、金泽、扎幌），另外日本还有四个城市准备加入创意城市网络这个项目。

理查德·佛罗里达，纽约大学的教授，同时也是大西洋杂志的资深编辑，他在三个领域用八个指标来支撑他的创造性指数：人才、科技和包容。该指数对于世界的城市理论家和政策制定者来说无疑是一种震动。在这三类中，佛罗里达本人也强调包容性的重要性。同性恋指数、开放、前卫的思想也成为了创意城市中一个重要指标。根据佛罗里达的理论，3T理论，人才、技术、包容是有着不同的索引。我们可以根据内部人才找到创意阶级、人力资源、以及人才在科技中的应用。与此同时，在技术方面，我们可以发现创意以及高科技元素。

大卫·思罗斯是澳大利亚悉尼麦考瑞大学的特聘经济学教授，他曾经提到艺术和文化在城市化重建中有着更为重要的作用，它通过对社会身份、创造力、凝聚力和生命力的培养，通过文化特色和实践来重新定义城市和城市居民。他同时指出，文化资本的重要性，文化资本能够促进一个城市的文化价值和经济价值的重建。考虑到遗产以及城市景观作为文化资本的一种整合手段。他十分强调文化资本和城市的可持续发展的良好关系。也就是说，创新和保存的共存是通过抓住城市景观来作为文化资本。

在保护和创新方面，查尔斯·兰德里则是运用想象力和创造力在城市改造方面的权威专家以及80年代末期创意城市概念的创始人。他提到，文化遗产以及文化城市景观是我们过去创意和创造力的成果，也保证了现代化社会前进和进步。文化是一个地区独特的铠甲。过去的资源可以帮助我们激发对未来的自信。即使是文化遗产每天都在经历着重建，这是为了适应新的时代：今天的经典是昨天的创新。创意不仅仅是不断的发明，更是如何妥善处理旧事物的方法（兰德里，2000年）。另一方面，文化资本和文化城市景观也吸引了佛罗里达城市创意阶级概念，把文化集群的形成作为创意城市可持续发展的动力。我们试着从创意与保护的角度来审核日本的创意城市。

神户是世界上快速发展的创意城市之一。它在2008年10月16日被联合国教科文组织授予创意设计城市的称号。神户被群山和大海包围的独特风景一直吸引了许多居民和游客。它也是历史上的港口城市，在1868年打开了与西方的贸易通道，并且积极引进西方文化。此外，神户市一直努力保持其独特的城市景观，特别是1995年的神

户大地震带走了6000多居民的生命，城市也受到了毁灭性的打击，给许多当地居民留下了深刻的印象。城市基础设施完全损坏，城市处于完全瘫痪的状态。地震发生后，神户市实施了一系列的挽救措施。第一个解决方案就是，与设计师合作，重塑城市独特的景观吸引力，把人和地区相连接进而创造新的可能性。第二个方案就是促进医疗产业。吸引更多有才华的研究人员和创新企业。这两种解决方案的目标是发展一个更优质的社会、生活质量并应用于创意领域。通过城市景观设计、生活设计、创意工业设计三原则，神户的目标是丰富生活方式，利用城市的独特性来振兴经济、增强创新意识、培养下一代的民族精神以及民族自信心。

神户已经在科技、艺术、媒体以及文化方面的创新能力吸引了全世界的目光。还有就是神户的时装周，每年的10月16日，这个城市吸引了大量的媒体前来参加。KIITTO,神户的创意设计中心，是一个大型的历史建筑，之前是丝绸检测中心，在2012年的秋天的时候成为“创作与互动”中心。KIITTO提供创意支持，对创意人才进行培养，并对人们的生活和经济活动做贡献。

美丽的城市景观、传统文化和娱乐产业都促进了城市的发展。虽然金泽市在创意领域取得了巨大的进步，它同时也面临了一些挑战。

面对纺织行业的衰落，市政府管理机构进行了一些新的尝试，把那些废弃的老纺织工厂改造成有公民参与的“创意艺术空间”。1996年，顺应民意，我们把纺织厂的旧仓库改造成公民艺术村。

在金泽，有22种不同类型的手工艺产业，大约有900个单位，3000名员工在此工作。这些企业数量占到城市总量的百分之二十，以及就业人口的百分之六。与此同时，74个手工艺工作室和139个工艺品商店都集中在金泽老城的方圆5公里以内。

金泽市将承办2015年联合国教科文组织创意城市网络年会。我们与联合国大学合作正在筹备“创意城市与生物文化多样性”的专题论坛。这一项目的目的是为了提高工艺制作的意识并保护生态环境、自然以及文化遗产。

我们需要对上述的例子做一些总结。首先，有必要进行和分析城市问题，提高公民的共同意识，明确成为“创意城市”的必要性并制定基于文化和文化多样性的创意城市理念。第二，当发展“艺术与文化创意”理念的时候，我们必须要认识到在工业、就业、社会制度、教育、医疗保健和环境等领域有着重要的影响。为了把文化政策和工业政策、城市规划、环境政策相结合，垂直管理结构必须扁平化，盛行的官僚思维必须被淘汰，组织性文化必须改变。此外，一个城市的文化资本必须被确认为知识和信息社会的基本社会基础设施和战略规划，并不断地激发它的公民的创造力。最后，为了创意城市的可持续发展，促进和发展文化集群是不可或缺的。最重要的是要和居民一起合作，包括商界领袖以及非营利组织，也许是以创意城市促进委员会的形式。推动创意城市的最重要的因素是建立发展所需要的人力资源研究计划和教育计划。

Gilles Saucier

Saucier + Perrotte Architects

吉尔·斯索西耶

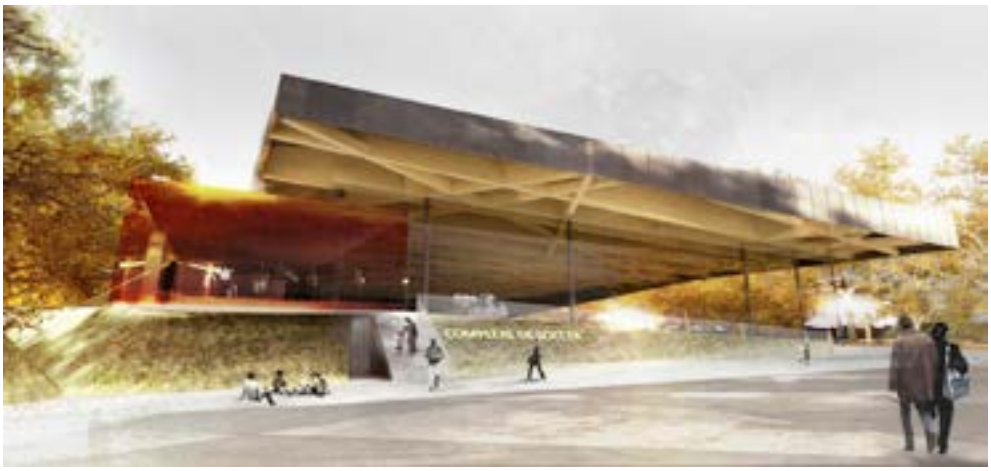
索西耶+ 贝户特建筑事务所

Gilles Saucier est architecte, diplomé de l'Université de Laval (Canada). Il a fondé l'agence d'architecture multidisciplinaire Saucier + Perrotte avec son associé André Perrotte en 1988, où il supervise la conception de chaque projet. Celle-ci a depuis été récompensée par sept médailles d'architecture du gouverneur général, deux International Architecture Awards et par le Prix d'excellence du meilleur cabinet d'architectes du Canada en 2009. En 2004, l'agence a représenté le Canada à la prestigieuse Biennale d'architecture de Venise. Gilles Saucier est également professeur associé depuis 1990 dans plusieurs universités canadiennes et américaines, dont le MIT, l'Université de Montréal, l'Université de McGill, etc. En plus d'enseigner l'architecture, il a été invité à intervenir à AIA Seattle et San Francisco, ainsi que par le Centre canadien d'architecture et la New York Architectural League.

吉尔·斯索西耶，加拿大建筑师，1988年创建了索西耶+贝户特（Saucier+ Perrotte）建筑师事务所，并在拉瓦勒（Laval）大学获得他的建筑学位。他的公司已经获得过7项政府建筑大奖，两个国际建筑大奖，2009年加拿大最杰出建筑公司RAIC 奖项获得者。2004年，他的公司代表加拿大参加威尼斯建筑双年展会。从1990年起，吉尔·斯索西耶同时受邀成为加拿大与美国几个大学的访问教授，包括，美国麻省理工学院、蒙特利尔大学、麦吉尔大学等。与此同时，在北美的一些大学、旧金山以及西雅图美国建筑师协会、加拿大建筑中心、纽约建筑师联合会等进行演讲。

Le Complexe environnemental de Saint- Michel

Le complexe environnemental de Saint-Michel (CESM), apporte des solutions créatives aux problèmes environnementaux et urbains de ce secteur en développement de Montréal. Il propose en effet la transformation de l'ancienne carrière Miron, site d'extraction de la pierre calcaire grise de Montréal, si caractéristique des constructions de la ville.



Le projet CESM est en fait un véritable paradoxe autant sur le plan urbain qu'environnemental. En effet, cette carrière de pierre calcaire grise est la source même du matériau qui a fait l'image de Montréal.

La carrière Miron est en fonction de 1925 à 1984. En cours de transformation, elle est acquise par la Ville de Montréal pour devenir dès 1968 un site d'enfouissement de déchets. Au cours des années, 40 millions de tonnes de détritus y seront enfouis soit de 1968 à 2009.

La Ville de Montréal soutient le développement de la pratique d'activités physiques et sportives, le sport de haut niveau et le déploiement d'événements sportifs, en rendant disponibles des plateaux et des services de qualité au grand public et aux athlètes. La Ville endosse ce qu'avancent de multiples études, à savoir que le sport est bénéfique pour la santé physique et psychologique et que par son effet préventif, il éloigne la maladie et diminue les frais en soins de santé. En rendant les activités physiques et les sports accessibles, la Ville vise notamment à briser l'isolement que vivent plusieurs jeunes, dont les nouveaux immigrants. Par le sport, enfants et adolescents développent leur estime d'eux-mêmes, apprennent à respecter des règles, s'intègrent à un groupe ou un quartier.

Le nouveau Centre de soccer de Montréal vise à offrir un équipement public de qualité supérieure qui favorise la pratique d'activités physiques et sportives et à développer un pôle sportif et événementiel au CESM.

En avril 2010, la Ville de Montréal annonce qu'elle procéderait par concours d'architecture plutôt que par appel d'offres traditionnel pour sélectionner les concepteurs de ce nouveau grand projet. Cette approche vise à améliorer la qualité de l'architecture des édifices institutionnels et ainsi affirmer Montréal en tant que Ville UNESCO de design. Ce concours devenait un des premiers du genre pour un édifice sportif.

Tout en favorisant une diversité d'approches conceptuelles vers la création d'une œuvre singulière et remarquable, le concours pour le Centre de soccer au CESM permettait de répondre à trois principaux défis : la construction d'une œuvre architecturale de grande qualité, l'intégration du complexe à un ensemble naturel aussi distinctif que le parc du CESM et l'insertion réussie d'un édifice de grande envergure sur l'avenue Papineau.

La formule retenue comprenait deux étapes : Première étape — dépôt d'une planche conceptuelle illustrant le projet et de deux textes (approche architecturale et développement durable). Le nom de l'équipe derrière la proposition était confidentiel. Deuxième étape — développement de la proposition par les concurrents finalistes désormais connus et composition finale de l'équipe de projet.

L'Association de soccer Montréal-Concordia (ARSC) qui compte 13 000 membres et est le partenaire privilégié de la Ville pour le Centre de soccer. Elle gèrera la majeure partie des plages horaires dans le Centre de soccer et y installera ses bureaux administratifs. Cet organisme accompagne étroitement la Ville dans la conception et la mise en opération de cette nouvelle installation sportive. Un dialogue constant est instauré et les besoins et préoccupations du milieu du soccer sont aux premières loges.

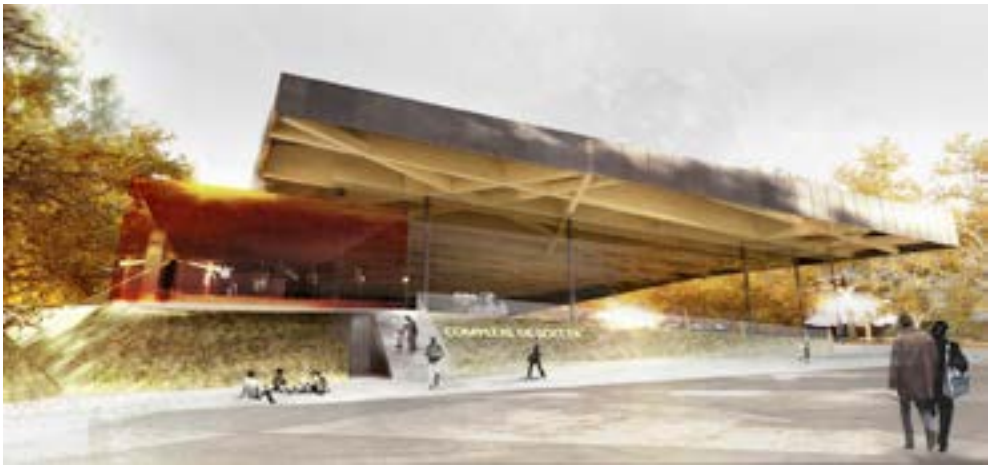
Les citoyens ont été invités à la présentation des finalistes du concours d'architecture faite devant public en 2011 et plus de 150 personnes étaient présentes. Depuis le début et encore aujourd'hui, des présentations sont faites par l'équipe projet devant les Tables de concertation locales et les associations de soccer. Des avis à la population sont régulièrement acheminés afin d'informer les citoyens des étapes clés du projet. La Ville aussi réalisé deux vidéos portant sur le projet et sa progression lesquelles sont disponible sur Internet et notamment sur le site du Bureau de design de la Ville où le projet est mis de l'avant (forum). Enfin, une maquette du projet a été exposée au Centre canadien d'architecture dans le cadre de l'exposition ABC:MTL. Un autoportrait de Montréal.

Pour s'intégrer a un lieu si chargé de l'histoire de Montréal, le nouveau Centre de soccer propose de garder des traces de la topographie artificielle qui représente le parc. Le nouveau bâtiment ajoute une strate minérale sur le site – rappelant la nature géologique du site – et symbolisant son activité nouvelle : l'activité sportive.

Tel un élément minéral qui paraît s'élever des murs de la carrière, la strate du toit est d'abord horizontale et forme un porte-à-faux qui marque clairement la plazza et l'entrée du Centre et invite les usagers à l'intérieur. Elle surplombe les supports à vélos et le débarcadère pour automobiles et autobus qui sont ainsi à l'abri des intempéries, et constitue un véritable espace de rassemblement et d'animation pour le parc de la CESM. Le toit se transforme ensuite pour loger le terrain de soccer intérieur, puis il s'abaisse et se retourne sur lui-même pour accueillir la future phase 2 du projet et intégrer les gradins du soccer extérieur.

圣米歇尔市的复杂环境

圣米歇尔的环境建筑群（CESM）给蒙特利尔市的环境和发展问题提供了创新解决方案。它代表了米龙垃圾制造厂的转型，灰色的是蒙特利尔石灰石的来源，圣米歇尔的环境建筑群（CESM）实际上是和城市规划相矛盾的项目,石灰石同时也是蒙特利尔的主要制作材料



米龙石灰石在1925年到1984年期间被使用。在转型的过程中，蒙特利尔市在1968年管理了米龙，把它改造成垃圾填埋场。从1968年到2009年中，4000万吨垃圾在这被填埋。后来，这块区域被用作运动场。

蒙特利尔市十分支持体育运动、高水平体育赛事和提供面向公众的高质量服务。城市认为体育运动有利于身心健康消除该疾病，并减少医疗费用。城市的目标是打破了年轻人的距离。通过运动，儿童和青少年可以培养尊重规则、融入集体的强烈意识。

蒙特利尔新的足球中心的目的是为了提供高品质的公共设施，这些设施可以促进体育活动的开展以及把它打造为体育赛事中心。

2010年4月，蒙特利尔市宣布，它将开展一个新的重大项目，选拔更多优秀的建筑师，这次的选拔不再依靠传统的选拔方式。这次的选拔方式是为了提高建筑质量以及呼应蒙特利尔联合国教科文组织设计之都的称号。本次大赛成为同类型的首次选拔。

推进项目概念多样性的同时，也取得了独特而卓越的进展。这次比赛主要有三大要求：高品质的建筑作品，融合周围的自然景观、公园，整合附近的帕皮诺大道。

活动为了两个阶段。第一阶段，提交项目概念说明和两个文本（建筑和可持续发展的方法）。计划书的团队名称是保密的。第二阶段，最终的竞争者或者团队进行完善项目计划书并做最后的展示。

蒙特利尔足协康考迪亚（ARSC）有13000成员，是足球中心首选的合作伙伴。它的大部分时间都将投入到足球中心的管理上来，并把其行政办公室设在足球中心内部。这个协会和城市设计紧密结合起来，并将新的体育设施投入使用。

这个活动向公众开放以来，得到了广大民众的支持。2011年蒙特利尔市民被邀请参加设计的总决赛，有150人参加了这个活动。项目团队向足协和地方代表进行展示。群众也给项目很多可塑性的意见。我们经常会更新和跟进次次活动的进展。城市也做了相关活动的两个视频放到网上。最终的项目选择由加拿大建筑中心决定。

为了结合蒙特利尔的历史，新的足球中心将会保持人造公园。新的设计添加了矿物层，代表着运动这个新元素并崇尚回归自然。

添加这个材质可以增加墙壁的寿命，屋顶的标志明确的显示其入口以及中心广场。自行车架、公交车等也很好地保护起来。这是一个真正的可使用的停车空间。屋顶也可以转变成室内体育场，与室外足球场区域相结合。

Tomohide Mizuuchi
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知秀水内
名古屋艺术大学

Tomohide Mizuuchi is a lecturer at the Department of Design, Nagoya University of Arts. He holds a MA in Future Design from Goldsmiths College and a Bachelor's degree in Science of Design from Musashino Art University in Japan. A specialist in the areas of design theory, design education and meta-design, he teaches design education from a comprehensive perspective including lifestyle design. Tomohide Mizuuchi has been driving various community design projects and research. He is also the Convener of a Foundation Design Programme at Nagoya University of Arts, and a member of the Society of Science of Design, Japan.

知秀水内是名古屋艺术大学设计学院的讲师。他拥有日本武藏野艺术大学设计科学专业的学士学位以及伦敦大学金匠学院（Goldsmiths）大学未来设计专业的硕士学位，设计理论、教育以及变换设计方面的专家。他从一个全面的角度来讲授设计教育课程，包括生活方式的设计。知秀水内已经推动了多个社区的设计项目和研究，是名古屋艺术大学设计项目基金会的召集人，学协会的成员。

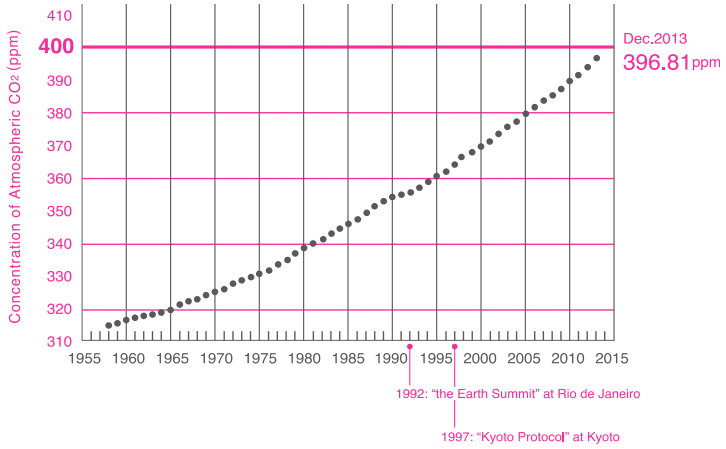
The Role of Cultural and Creative industries in Sustainable Cities of the Future

Currently a couple of billion people are living in cities. Many researchers have raised the alarm regarding the fact that the cities and the accompanying urban lifestyle has caused serious climate change and led to depletion of biodiversity. Obviously, what we are facing is the crisis of our life and civilization. There is no choice to continue business as usual, and we need radical changes in society.

Having said we need radical change, it is true that many organizations are devoting tremendous efforts to solving these problems.

For instance, Toyota's headquarters is near Nagoya, Aichi prefecture. Toyota has produced an eco-friendly hybrid car called the Prius. It is marketed as a means of eco-friendly mobility that is expected to decrease CO_2 emission dramatically. At the same time, we need to stop and consider how these so-called "green products" and services have affected the sustainability from a broader perspective.

This graph shows that the CO_2 level has continued to rise and has reached almost 400ppm over the entire world. Unfortunately, even though many organizations have worked energetically to deal with these issues by creating greener products or services, it is very hard to turn the tide.



In the same vein, people once expected that online ordering and smart delivery systems supported by the development of Internet technology might reduce energy consumption. However, it has not worked out that way. It has been pointed out that the use of the Internet produced over 300 million tones of CO_2, and this number could double by 2020. Internet

technology gave additional market power to traders which is leading to a greater load on the environment rather than decreasing it.

This data shows us that on a global scale technological innovations have worked negatively on the global environment rather than improving it. Thus, what is the fundamental problem? Why can't we change the situation? What should designers really do to get us out of this quandary?

In this context, the fundamental issue is a problem with the concepts of "creativity" and "design" themselves.

The notion of design has been generally defined under the narrow mindset of producing purchase options for "consumers" for economic growth. Most designers are educated as specialists in creating consumption. Their methods are part of the cultural framework that needs a radical shift. We need to re-design design and to create new societal values that balance ecological capacity with our happiness.

The term creativity is also regarded as a way to drive future economic growth under enterprise competition, which ignores the capacity of the planet Earth. If the framework of our activities has caused the disruption, it is necessary to challenge the purpose of "creative innovation."

As Einstein once said, "We can't solve problems with the type of thinking we used to create them." This means that we must challenge the familiar belief systems that both design and society currently hold. We do not need technological innovation, but rather a new cultural approach to shake up the framework itself.

To do that, design needs to take a more ethical and critical stand. However, those of us in the design education system are still concentrating on producing "commodities."

In addition, the design field is sub-divided into specialties that reflect old-fashioned industrial segmentation. We cannot deal with environmental problems under such a sub-divided design system, since the environment is highly complex and there are too many aspects that need to take into account at once.

Design education needs a comprehensive and integrated approach to the way we understand service, food, work, shelter, mobility, and communication. The Lifestyle Design course I am currently teaching at Nagoya University of Arts is one approach to changing the existing education system. What we call lifestyle design is intended to help design students to re-think their habits and assumptions about what is "normal," notice things that are invisible in the existing paradigm, and encourage them to design comprehensively at the lifestyle level.

Over the last two-years, I have managed a project called the "Land and Human Design Project." I asked students to design a dinner party using only local resources. Students started this course work by cultivating farmland near the university campus. Local farmers

coached the students. The students researched not only agriculture but also searched the neighborhood to find local resources. They met and established relationships with many local residents through their research and communicated with them. For instance, the students found a traditional ice shop and tofu maker in the area.

As I noted above, in this course students are required to make all things needed for the dinner party using local resources. For instance, the students examined old sake container boxes which they got from a local sake shop owner were inspired to design new stools for the dinner party. They received wood materials needed for making stools, tables, and other things for the party from a local public bath owner (many neighborhoods still have the old traditional public baths). The wood was to be used as fuel for the stove for heating the bath. Food for the dinner party was also originally designed. Ingredients were, of course, from the student farm and from local retailers. The tent for the party was secondary-use vinyl from a greenhouse. The lighting, tables, dishes, and all of the things needed are made by hand using local materials. Local residents whom students got to know during this process were invited to the party.

I will now return to talking about redesigning design. To re-design design and re-position creativity, one of the important perspectives is to conceive of design as having a more "relational and combinational" aspect. One reason for the difficulties of creating a paradigm shift toward a sustainable society is that there are too many factors to be taken into account. In order to achieve such cultural changes, we need to challenge our thinking at all levels at once. It is better to analyze many different things at the same time in relation to one another than to improve individual objects and fix them separately within a larger system.

Cities are highly complex. To deal with the current paradigm, which is complexly intertwined with interrelated factors, we need a more combined approach. Just as all contemporary cultural components are required to be opened and inclusive to make things accessible, allowing the participation of various stakeholders in the process of creating and managing cities is also essential.

As a "facilitator," a designer should synergize input from different specialists including citizens who see themselves as co-creators of a sustainable city.

Encouraging the local residents themselves to have a shared sense of their own ability to imagine an ideal city in the future is important. Cities must be maintainable and reproducible by creative citizens acting as co-creators of the city. Designers need to find a new way to facilitate and support the participatory creative activities that we have already begun to see all over the world, such as movements to share houses, work, and social services in a community.

If, as Enzo Manzini and others point out, the knowledge-based network community and multi-local society in which local communities connect openly with each other as a global network to create positive change is the key for creating a sustainable society, how can design contribute to that?

One of the important roles of design is conceiving possible visions of the future with clear and concrete pictures, as well as facilitating ongoing activities, networks, and knowledge of people. As John Wood points out, what the world lacks is not resources, but imagination.

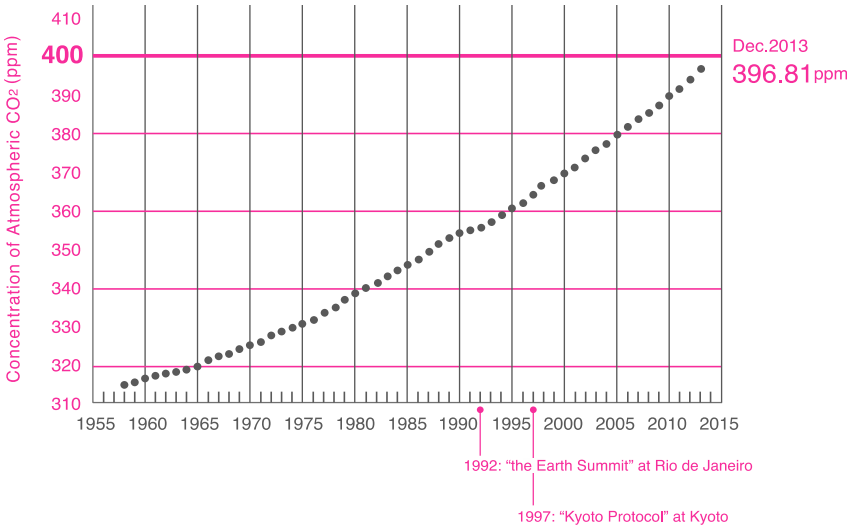
To conclude, it can be stated that the concepts of "creativity" and "design" have not been always used positively. It is also true that the focus in design on an economically-centred paradigm has caused many of the serious problems we facing. To meet the challenge of dealing with today's situation, re-positioning design for creating a sustainable society is essential. I call this kind of activities, "meta design".

文化创意产业在未来可持续发展城市中的作用

目前，几十亿人生活在城市。许多研究人员都曾提出警告，事实上，城市生活造成了严重的气候变化和生物多样性的枯竭。很显然，我们面临的是我们的生命和文明的危机。不能再继续像往常那样发展经济，我们需要在社会中进行根本性地变革。

既然说到根本性的改革，事实上，现在许多组织都大力致力于解决这些问题。例如，丰田公司总部就位于爱知县名古屋附近。丰田公司生产的一种环保型混合动力汽车被称为普锐斯。它运用生态友好型的方式来大幅降低二氧化碳排放量。同时，我们也许需要停下来思考如何将这些所谓的“绿色产品”和服务用来促进和实现可持续发展、开阔视野。

这个图表显示，二氧化碳水平不断上升，全世界已经几乎达到400ppm。遗憾的是，尽管许多组织都积极努力通过创造更环保的产品和服务来处理这些问题，却很难改变。



同理，人们一度预测，随着互联网技术的发展，网上订购和智能传输系统可能会减少能源消耗。然而，它并没有按照我们预计的那样发展。据了解，互联网生产了超过300万吨的二氧化碳，到2020年这个数字可能会增加一倍。互联网技术给予贸易商更多的市场，同时也给环境带来了更大的的负载，而不是降低它。

这个数据告诉我们，在全球范围内的技术创新对全球环境产生了负面影响，而并没有改善它。

那么，我们所面临的根本问题是什么？为什么我们不能改变这种状况？设计者应该真正做些什么来使得我们走出这个困境呢？最根本的问题是与“创新”与“设计”。

设计的宏大概念已经被狭隘地定义为消费者对经济增长的购买选择。大多数设计师被教育成为创造消费的专家。他们的方法是文化框架的一部分，这种文化框架需要一个根本性的转变。我们需要重新设计那些设计，这些设计能够创造生态与我们的幸福相平衡的新社会价值观。

“创意”被视为企业竞争下促进未来经济发展的方式，它让我们忽略的地球本身的能力。如果我们的活动框架已经引起了混乱，这就需要我们以“创意创新”来迎接挑战。

正如爱因斯坦曾经说过，“如果用我们熟悉的思维方式不能解决问题，我们就要创造思维”。这意味着我们必须挑战现今社会所熟悉的信仰体系。我们不需要技术创新，而是需要用一种文化的做法来鼓励对传统框架的改变。

要做到这一点，设计需要具备更多的道德和批判立场。然而，我们的设计教育体系仍然更加关注、生产“商品”。

此外，设计领域反映老式的工业细节。我们不能在这样的细分设计系统里来处理环境问题，因为环境非常复杂，还有许多其他方面需要考虑。

设计教育需要一个全面和综合的方法来为我们的食物、工作、住所、移动和通信方式服务。生活方式的设计课程是我在名古屋艺术大学教的一门课，它是为了改变现存的教育体系。生活方式的设计课程是为了让学生重新思考自己的生活习惯和重新思考什么是真正的假设，并鼓励他们在生活层面上全面设计。

在过去两年，我管理了一个叫“土地与人类设计”的项目。我让学生仅依靠本地资源来设计一个晚宴。学生选择学校附近的农田进行耕作。当地农民教这些学生如何耕作。学生们不仅学习农业知识，还要搜寻附近的资源。学生们在调研与沟通的过程中，与当地居民建立良好的关系。例如，他们在该地区发现了一个传统的冰店和豆腐机。正如我上面提到的，在这门课上，同学都必须就地取材来准备晚宴上所有的东西。例如，学生从当地酒店老板那里得到启发，利用旧的集装箱来设计了晚饭

的椅子。他们从公共浴室老板（许多街区仍然使用旧的传统公共浴室）那里收集到了木质材料来制作椅子、桌子等。木材在公共浴室是用作燃料进行加热。至于晚宴的晚餐，学生从农场和当地零售商那里获得。帐篷是二次使用的乙烯。灯光、桌子、盘子和所有需要的东西都是取材于当地材料手工制成。学生们也邀请这段时间认识的居民来晚宴。

重新设计的设计和重新定位创造力，其中一个重点则是设计的“关系和组合”。其中一个因素就是，创造一个可持续发展社会的范例需要考虑到很多因素。为了实现这种文化转变，我们需要挑战我们在不同层次的思维。最好是要分析不同的事物之间的联系，而不是单纯地去提高某一个对象、把他们隔离。

城市的情况是非常复杂的。为了适应当前的模式，就要把互相关联的因素交织在一起，我们需要一个更加综合的方式。

正如当代文化组成部分需要更加开放和更加具有包容性来使得事物变得更加流行。利益相关者在创造和管理城市进程中的参与是必不可少的。

作为“促进者”，一个设计师应该协同来自不同行业的专家和居民共同参与到可持续发展的城市建设中来。

鼓励当地居民之间对未来城市的理想进行分享认识、达成共识是很重要的。通过居民的协作，城市必须具有可维护性以及可重复性。设计人员需要发现一个新的方式，更加便于或者更加融入到居民的创意活动中来。在世界各地我们已经开始看到一些创意活动，例如分享住房、工作、社会服务等活动。

如果像恩佐·曼齐尼和其他人所指出的，以网络社区为基础的知识和多区域社会，为了创造一个可持续发展的社会，关键在于在当地社会在开放的环境下相互联系。设计能贡献什么呢?

设计的一个重要角色就是运用具体、清晰的图片、活动、网络工作、人类的知识等等来构思未来。正如约翰·伍德说，这个世界缺乏的不是资源，而是想象力。

作为总结，我们可以从“创意”和“设计”的概念尚未被全面使用这个角度进行分析。现在的设计都偏重于经济，从而就引起了我们现在所面临的那些严重问题。为了迎接我们今天所面临的挑战，重新定位设计，创造一个可持续发展的社会是必不可少的。我称这种活动为“元设计”。

Sibongile Masuku Van Damme
African World Heritage Fund

斯堡智勒・马苏库・云・顿
非洲世界遗产基金会代表

Sibongile Masuku Van Damme works for the African World Heritage Fund. Previously she has been involved in educational, environmental and cultural heritage projects. Her background includes both the practical and the theoretical aspects of these fields. Having graduated with a BA in Humanities and a Diploma in Education from the University of Swaziland in 1986, she completed her Master in Environmental Education at Rhodes University in South Africa in 1999. Sibongile was a Director of Heritage with the National Department of Arts and Culture in 2002. She continued to play an active part as a volunteer to the Department even after she joined the South African National Parks in 2004. She has spent eleven years working on People and Parks Programmes in KZN Wildlife and the South African National Parks at community and policy level.

斯堡智勒・马苏库・云・顿在非洲世界遗产的资金工作。她之前的工作领域主要在教育，环境以及文化遗产等项目。她的工作经历同时包括了理论和实践。1986年，她以学士身份毕业于斯威士兰大学的人类学专业。在1999年，她完成了南非罗斯德（Rhodes）大学环境教育专业的硕士学位。2002年，她成为国家艺术与文化部遗产中心主任。2004年到南非国家公园任职后，她仍然在文化艺术方面发挥着积极作用。她在人类与公园方面有着11年的工作经验。

Towards best practices in creative designs in natural and cultural heritage resource sites for sustainable development in South Africa

I have to point out from the beginning that I am neither an urban development specialist, architect or environmentalist. I am an education and a culture Heritage specialist.

As we take a close look at South African cities, we are presented with complexities such as ruins of urban spaces. Many people feel, that they need to rebuild these areas. The varying levels of incomes highlight security problems in Africa. There are so many metropolises in Africa and we should make sure to have security in our society.

In such urban environment with people require spaces to practice their rituals, to clean or to obtain their traditional medicine. There is a need for clean rivers and for reducing pollution. That is our urban specialists' task. My background in cultural heritage and natural culture heritage showed me that the educational process is a good way to solve the problems. When we exploit the cities, we need to analyze the interacting dimension in the articular environmental factor.

I have worked particularly in South Africa with a number of cultural conventions and we ratified the 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage. We also participated at the ratification of the 2001 Convention on the Protection of Underwater Cultural Heritage.

The situations in Europe and South Africa are different. In South Africa are very diverse and we have to consider the cultural background of the people living there.

How could heritage be defined? When you refer to heritage in South Africa, people usually think of cultural heritage, particularly the convention dealing with culture heritage. However, most of our people who work on culture heritage are very skeptical about these ideas.

In 2010, we set up a program to tackle the issues of poverty within the urban landscape. First one is a project concerning an underwater culture museum, a concept that has been applied by Mexico. South Africa is looking for an example for creativity using its cultural heritage and traditions

Africa needs to pay more attention to its cultural heritage. The 1972 Convention focuses mainly on cultural heritage sites and it is important to change their management. If you look at the situation in Africa, you could see that Africa ratified this Convention, and at the same time, we have created legislation to protect these heritage sites. I think in terms of managing cultural heritage, Africa needs to learn from the experiences in creative design and management and find the resources for supporting it.

南非可持续发展自然、文化遗产的创意设计

首先我要说的是，我不是可持续发展方面的专家，也不是一个建筑师或者环境学家。我是教育家和文化遗产方面的专家。

当我们近距离看南非城市时，我们直觉上感受到的是其复杂性，收入的差距导致城市空间的破坏。他们需要重建这些区域。非洲有很多大城市，使人们更加具有安全感是我们社会不得不考虑的问题。

在南非或者世界的其他地需要一个空间来发展他们的项目，获得药品人们需要清澈的河水来减轻污染。

这也是非洲的城市专家主要的任务。在文化遗产和自然文化遗产方面的经验使得我更加清楚教育在这个过程中的重要性。当我们开发城市的时候，我们需要分析环境内部的联系。

我曾经为南非签署的一些列文化公约工作过，南非签署了1972年关于文化遗产的公约，我们同时也参与到了2001年保护水下文化遗产公约。

欧洲和非洲的城市情况是不同的，即使是在南非由于其多样性，在发展的同时，我们不得不考虑居民所在的城市的背景，以及民众的具体情况。

该如何定义遗产呢？当我们谈到南非的时候，我们强调的是文化遗产，尤其是我们1972年所参与的文化遗产公约。然而，大多数的人对这个概念是模糊的。

2010年我们建立了一个项目来解决城市景观匮乏的问题。第一个项目一个水下文化博物馆，我们是从墨西哥那里得到的经验。人们可以潜水到海底来看文化遗产。南非正在寻找文化遗产和传统的创意典范。

非洲需要投入更多的经历在文化遗产方面。1972年的公约主要侧重于文化遗产，因此，改变管理结构是十分重要的。同时，我们通过立法来改变现状，保护这些遗产。

我认为在文化遗产管理方面，非洲需要学习更多的创意设计管理方面的经验，并且不断地整合资源来支持。

HUANG Weiwen

Vice Chief Urban Planner of Urban Planning and Land Resource Commission of Shenzhen Municipal

黄伟文

深圳市城市规划与土地资源管理委员会副主任

Weiwen Huang has been Deputy Chief Urban Planner of Urban Planning & Land Resource Commission of Shenzhen Municipality, and is now the Director of Shenzhen Center for Public Art, and the Shenzhen Center for Design (SCD). He is Loeb Fellow '09-'10 of Graduate School of Design, Harvard University, and the main organizer of '05'07'11'13 Urbanism/ Architecture Bi-city Biennale of Shenzhen (UABB). Weiwen Huang keeps exploring and reforming urban planning and design in Shenzhen. As a civil servant, he maintains an independent research program, and writes articles questioning the automobile-oriented and super-scale space design, attaching greater importance to public space, green transportation, and public participation in urban planning. In recent years, he has been leading a research team working on new development models for planned cities, such as MGC (Multiple Ground City) and SLID (Super Low Impact Development). He promotes UABB and SCD as platforms for exchange and communication about urbanism and built environment, especially about Urban Village, urban renewal, and land damage, which are the reality and challenges faced by his city, Shenzhen. His published works include: *The Urbanism/Architecture Biennale and Shenzhen* (2012), *Shenzhen, The Rapid City-Making* (2011), *Urbanization in Contemporary China Observed: Dramatic Changes and Disruptions* (2008), *Utopia Lost City* (2007), *Sculpture City* (2006), *Redevelopment of Huaqiangbei Road* (2005), *and Research in Renovation on the Villages-in-the-City* (2003). After the 2008 Sichuan earthquake, he initiated the first NGO led by architects in China, named Re-Tumu, to provide design for the disaster-stricken or rural area.

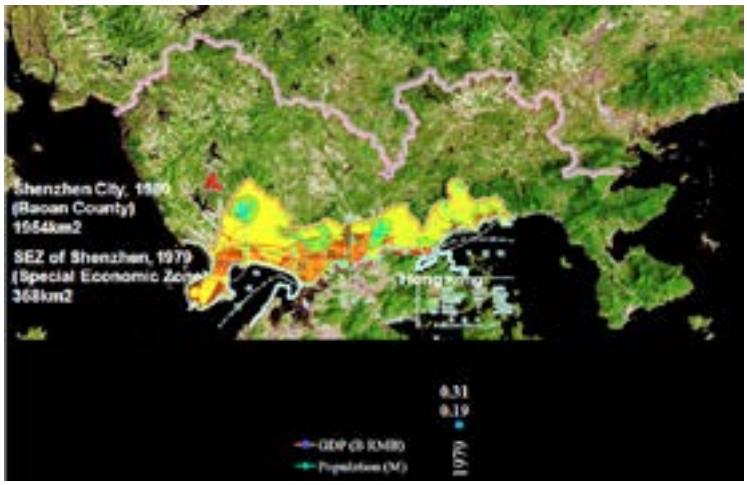
黄伟文，深圳市城市规划与土地资源管理委员会副主任。深圳市政府公共艺术中心主任，深圳设计中心（SCD）主任。2009年到2010年哈佛大学设计学研究生院研究员。2005年、2007年、2011年和2013年深圳市城市建筑双年展（UABB）的组织者。黄伟文不断地在深圳市探索和改革城市规划与设计。作为一名公务员，他独立进行研究项目，编写关于批判汽车为主导超大空间设计的文章，更加注重公共空间的重要性，绿色运输以及城市规划的公众参与。近几年，他一直领导一个关于城市规划的发展模型的项目，例如MGC（多层城市）以及SLID（超低影响发展）。他主张UABB 和SCD作为交换平台，促进城市化交流以及环境建设。城中村、市区重建以及土地破坏等问题都是深圳市面临的挑战。

Building a Green City in Shenzhen

On behalf of the Planning Department and Design Center in Shenzhen, I would like to share some ideas with you on building a green city in Shenzhen. I agree 100% with the ideas expressed about improving the formula to promote creative industry. Today I want to discuss the concept of green city, the multiple-ground city, which is a special development model driven by technology.

First of all, some information about Shenzhen. Shenzhen, the world's youngest city, was founded in 1979 as one of the Chinese special economic zones. The following picture is the situation in 1979, and most of the areas at that time are green.

Soon after urban planning and exploitation the green part is diminishing in contrast to the gray and brown part that are increasing.



Finally, we recognized the seriousness of the problem. Therefore, we made a control planning for the ecology and proposed an eco-line which is the minimum standard of green land in our city and it is, roughly fifty per cent of land in Shenzhen.

We have to think what is actually our relationship with the environment? Shenzhen is building new cities, such as Shenzhen Guangming city. Founded in the northwest of Shenzhen, it has a well-established infrastructure, such as high-speed rail. We've done a lot of planning in this region, for example, planning the central area, the surrounding industrial development, etc. In theory, these plans are based on green urban city. During the city's development process, we usually bulldoze the land and build roads. However, this standard development approach has destroyed the land and the environment. We have to think if we could avoid the destruction caused by urban development and how? In recent years, many Chinese cities are under the impression that cars can make our cities more modern, therefore, they built more roads. Finally, these cities are controlled by the cars. A good example of this is Beijing which today suffers from irreversible environmental pollution with its PM2.5 reaching to more than 1,000.

Therefore, we need to discuss new methods to build our city. During the construction of Guangming city, we got inspiration from high-speed rail construction. High-speed rail is built on with minimal damage to the environment. We can use this way to build the transportation system over the ground, for example high-speed rail (more than 300 km/h), streetcar (more than 70 km/h), the small cable car, and so on. Combining these systems with bike and walking, we can finally build a truly green transportation system. It does not rely on or destroy the land. We could also build our city in the air.

The picture below is the entrance of the train station. We build the corresponding green land and parking facilities and if we combine it with the air traffic system, we finally return the ground to nature. In fact, if we have this new transportation, we do not need parking lot.

The new transport system can operate through intelligent systems, such as using the phone to order. This system could be controlled by a cloud technology. The Huaqiang Group operates in Shenzhen the cloud industry to develop such a transport system.

Based on research conducted on the efficiency of conventional cars and new modes of transportation, it was found that the destruction of the land inflicted by the old urban system is one hundred percent, while the new system reduced it to fifteen percent. We can put the natural ground as the first layer, and give it back to nature while we put the infrastructure and traffic in the air. This is what I call a multi-ground city. In fact, this is not a new idea. The ancient Chinese people used this formula to build their home in order to fight the southern humid climate. In my opinion, Venice also uses the same principle and it had constructed its urban life above the sea level. Modern architecture has also repeatedly referred to the "overhead theory ". In fact, the overhead is intended to give the land back to nature even it does not mention its purpose.

This image is a photograph of Shenzhen Wanke Headquarters. The designers put all the office space in the air, and gave the ground back to nature.

The last photo is the Shenzhen in 1980; however, this view has disappeared. If we have new urban development model, we will absolutely coexist with nature.

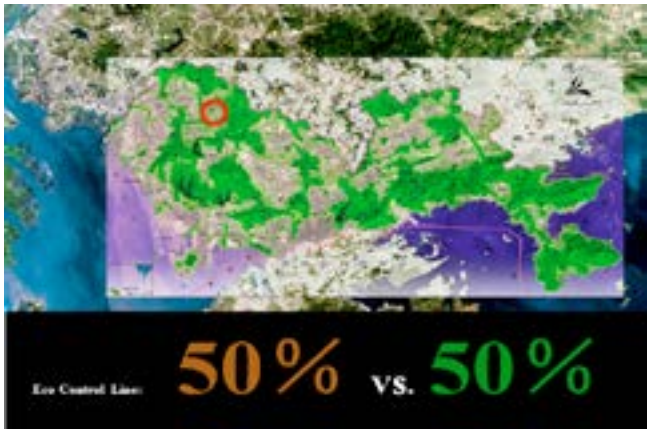
在深圳建立一个绿色城市

我代表深圳市的规划部门以及设计中心，来和各位创意城市代表分享深圳在建设绿色城市中的一些设想。我百分之百同意我们今天上午讨论的内容，如何通过制度的改进来推动创意建设。我今天想分享绿色城市这一概念，也就是多地面城市，它是在技术的推动下产生的另类的开发模式。

首先，我介绍下深圳市的情况。深圳可是说是全球最年轻的城市，始建于1979年，是中国的经济特区。以下是1979年城市建立时候的照片，大部分的地区在当时都是绿色的。

极短的时间内，我们开始做城市规划、开发土地。从地图中我们可以看到，绿色部分是越来越少，灰色和棕色部分是越来越多。

最终，我们认识到了问题的严重性，一个城市不能没有绿色。所以，我们在六年前做了一个生态线的控制规划，也就是说，这是数量是绿色土地的最低标准，它大概占了深圳土地的百分之五十。



我们要思考我们和环境的关系到底是怎样的？深圳现在也在打造新的城市，例如深圳西北边的光明新城。这个新城有相当完善的基础设施，例如高铁。我们在这一区域做过很多规划，例如中心区域的规划、周边产业发展的规划、整个区域的整体规划等等。理论上，这些规划都是以绿色城市作为基础，但是在实施的时候又是怎样的呢？通常情况下，在城市的开发过程中，我们就是要把土地推平、修建道路。然而，这种标准的开发方式就导致了土地和环境的破坏。我们必须思考一个问题，我们是否能避免在城市开发中的破坏并如何解决。最近几年，中国的很多城市认为，汽车可以使得我们的城市更加现代化，因此它们修建了更多的道路。最后，它们被汽车所控制。一个典型的例子择食，北京正面临着不可逆转的环境污染，其中PM2.5已经超过了1000。

因此，我们需要讨论新的方法来建设我们的城市。在光明新城的建设中，我们从高铁的建设中得到了启发。高铁是在地面上建立的，对环境的破坏最小。按此逻辑，我们可以建造在地面上的交通系统，建造300多公里每小时的高铁、70多公里每小时的有轨电车、小型化的缆车等等。把这些交通系统和自行车、人类步行相结合，我们可以建设一个真正的绿色的交通体系。这个系统不依赖、不摧毁地面，同理，我们把城市架在空中，我们就可以得到一个新型的绿色城市。

下面的这个图片是火车站门口，我们建造了相应的绿地以及停车设施。如果我们把它和空中交通系统结合，我们就可以把地面还给自然，实际上，如果我们拥有这个新开发的交通工具，我们不需要停车场，从而得到更多的自然地面。

新的交通工具可以通过智能系统来运作，例如我们可以运用手机，用手机系统来订购交通工具。与此同时，交通工具之间也可以相互通信。这些交通最终通过一个云计算来调度。这次的投资方深圳华强集团就在深圳运作云产业，以现在深圳计算机行业的水平，是完全有能力开发出这样的一个系统。

一些研究表明，老的城市系统对土地的破坏是百分之百的，但新的城市系统对土地的破坏也许会减少到百分之十五。我们可以把自然地面作为第一层，还给自然；把基础设施和交通放在空中；把人的城市生活放在最上面，这就是我所称的“多地面城市”。其实这并不是一个创意，中国古代人民为了适应南方潮湿的气候，就是利用这样的方式建造他们的家园。威尼斯也是利用了同样的原理，把人类生活建造在海平面之上。现代建筑学也多次提到了“架空”的理论，但是却没有设计到架空的目的是什么，实际上，架空的目的是把土地还给自然。

这张图片是深圳万科总部的照片，设计师把所有的办公空间提升到十几米的空中，地面还给自然。

我们开发出这种新模式，试图像古人一样，保护自然与自然　和谐相处。我们要讨论如何建造一个新型的未来城市，要思考如何处理环境问题。现在，是时候把土地还给自然。

最后一张照片是1980年的深圳，然而这种景色已经没有了。如果我们有新的城市开发模式，我们完全可以和大自然共处

Eric Dubosc

Director of Dubosc & associés

埃里克·杜博斯科

杜博斯科公司总经理

Eric Dubosc is an architect who graduated from the Institute National des Beaux Arts in Paris. He is also an Honorary Fellow of American Institute of Architects and member of HFABCEM (Brazil). He started his career working on public and planned communities' projects. Since 1974, he has developed eco-friendly architecture practices that he applied to several sustainable construction projects in France and China. In 1985, he founded his architecture practice Dubosc & Associés, which has now several branches in Paris, Shanghai, Doha and Hanoi. His firm, which favors a pluri-disciplinary approach, won several Architecture awards, such as the "First European Prize for Architecture of the ECCS – Venice" in 2001, and the Prize for Urban Design Awarded by the Association for the Promotion of Urban Design - Robert Auzelle Seminar – Paris in 2002. He is a pioneer in the fields of steel and eco-friendly construction and a main architecture consultant to the French government. He is also an expert of the World Bank in China regarding energy savings.

埃里克·杜博斯科是毕业于巴黎国家美术学院的建筑师，美国建筑师学会的荣誉会员，巴西 HFABCEM 的一员。他从规划社区公共项目开启了他的职业生涯，自1974年以来，他已经在中国和法国开展了几个环境友好型的可持续发展项目。1985年，他创办了自己的建筑公司杜博斯科公司（Dubosc & Associés），公司在巴黎、上海、多哈和河内等地都设有分支机构。他的公司运用跨学科知识，多次获得建筑奖项，如2011年威尼斯 ECCS 设计奖项的欧洲一等奖，2002年巴黎罗伯特·欧赛勒（Robert Auzelle）研讨会城市设计奖。他同时也是环境友好型环保建设方面的先驱，法国政府建筑顾问，世界银行中国分部的节能专家。

Design et developpement durable
UNESCO

Pour DUBOSC et Associés, la recherche d'une harmonie environnementale est source d'une nouvelle créativité architecturale : autres matériaux, autres aspects, autres conceptions.

Bien sûr, le rapport de base d'une architecture est celle qu'elle entretient avec le climat, « l'environnement climatique ».

Cet impératif environnemental, DUBOSC et Associés y a été confronté dès 1975 (premier choc pétrolier). L'économie d'énergie était impérative. L'utilisation d'isolants thermiques extérieurs collés, pour la rénovation de Givors, dans le cadre du Plan Construction (Ministère de l'Equipement et du Logement) opération du Programme Architecture Nouvelle, permis, à l'époque, une économie d'énergie pour le chauffage de 50% !

DUBOSC et Associés

C'est cette même technologie que DUBOSC et Associés a appliquée 30 ans plus tard, dans la province chinoise du HEILONGJIANG, l'une des plus froides du monde. Elle a permis d'économiser 75% d'énergie par rapport à un bâtiment de référence. La suite de cette coopération franco-chinoise a été aussitôt (2005) suivie d'une nouvelle règlementation thermique pour toute la province (70 millions d'habitants).

Ainsi, la relation environnementale est basée sur le rapport climat-architecture

L'économie d'énergie est une économie, au présent, participe à la dépollution de l'air et à contenir la formation de gaz carbonique (effet de serres). Enfin, elle préserve les ressources, au futur.

Comment économiser l'énergie ?

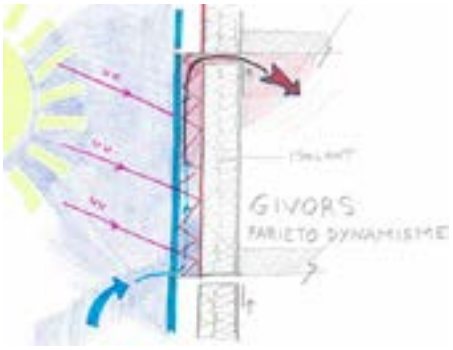
Comment chauffer gratuitement (sans consommation d'énergie industrielle) ?

Par des serres qui récupèrent l'énergie naturelle du soleil. Ces serres sont ventilées et peuvent être protégées du rayonnement.

Par le parieto dynamisme.

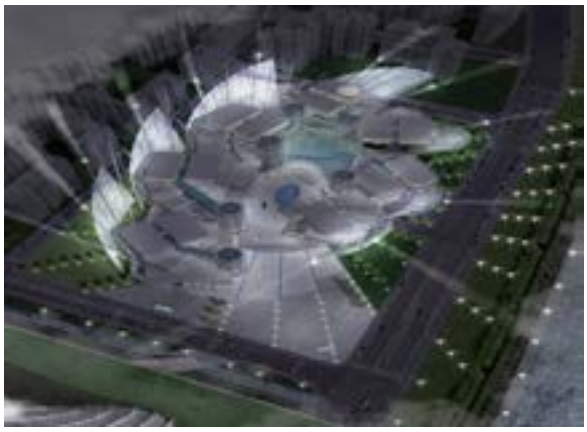
La paroi est réchauffée naturellement et apporte 2 à 3 degrés de température en plus aux logements.

DUBOSC et Associés : Saturne III à Givors



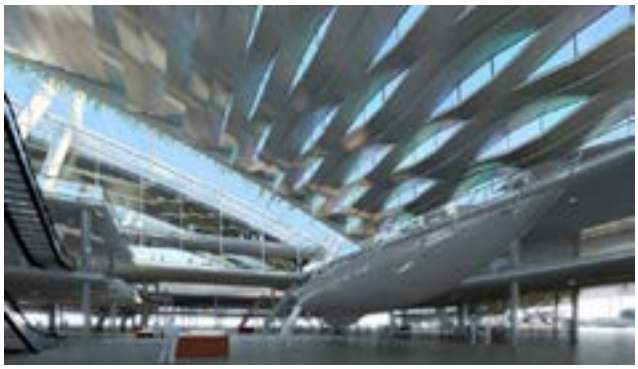
Comment rafraichir gratuitement ?

Ici, le long de la rivière des Perles, on capte les courants d'air qui suivent le fleuve, pour les amener à tourbillonner dans l'enceinte du bâtiment : en utilisant des formes architecturales qui accélèrent la vitesse du vent.



DUBOSC et Associés : Station de Télévision à Guangzhou

En utilisant des dispositifs passifs qui filtrent le soleil. Les échancrures dans la toiture sont calculées en fonction de la hauteur du soleil à la saison chaude.



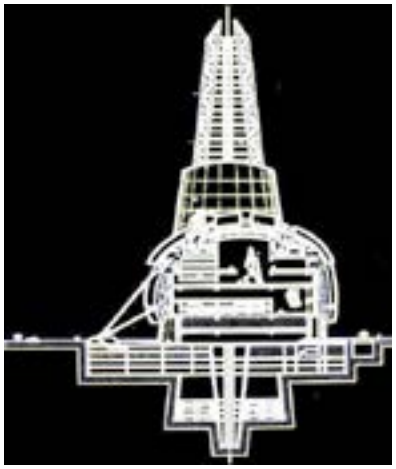
DUBOSC et Associés : Marina à Busan

On peut également utiliser des dispositifs passifs en métal ajouré qui permettent de limiter le sur ensoleillement.

DUBOSC et Associés - Collège à Limoges

Le contrôle de l'ensoleillement permet de réinventer l'architecture des Musées (par coulissement des parois extérieures).

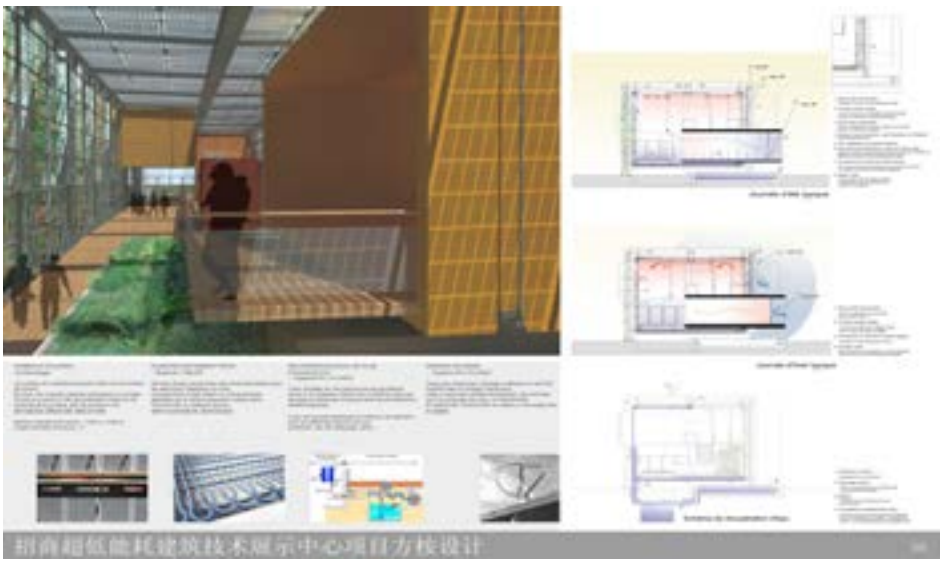
Le coulissement des parois extérieures permet de doser exactement le niveau de lumière naturelle à l'intérieur des salles.



DUBOSC et Associés : Musée Capital de Beijing

Vers l'AUTARCIE des bâtiments

Des dispositifs technologiques simples permettent d'inventer des bâtiments en AUTARCIE (eau et énergie).

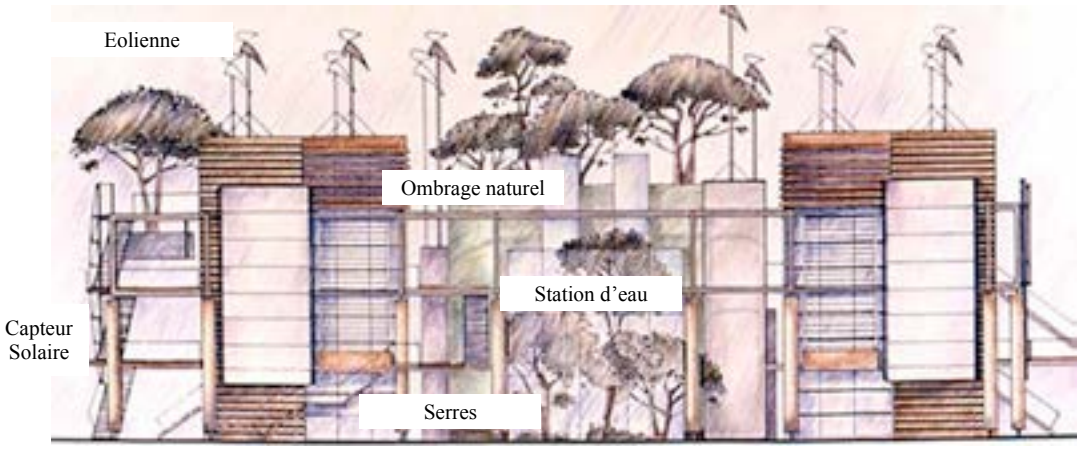


Smart Pavilion pour China Merchants à Shenzhen : DUBOSC et Associés

Venise est une des rares villes au monde à ne pas être construite près d'une source d'eau potable. Les vénitiens historiquement ont inventé l'art de capter l'eau de pluie et de la purifier.

Le projet pour l'extension de l'Ecole d'Architecture de Venise est l'occasion de poursuivre dans cette voie : récupération et recyclage des eaux de pluie mais aussi, en profitant des vents réguliers qui soufflent sur la lagune et de l'ensoleillement spécifique, fabrication d'une énergie renouvelable par la simple utilisation du climat.

Ecole d'Architecture de Venise – DUBOSC et Associés



Vers l'AUTARCIE des VILLES

On imagine, bien sûr, l'économie urbaine réalisée par l'utilisation de ces bâtiments autarciques : (suppression des principaux réseaux urbains : eau propre, eau sale, gaz, électricité).

Projet pour le nouveau centre ville de Liao Binh (LIAONING) - 2012

DUBOSC et Associés
Une ville pour les hommes

Les Matériaux Recyclables

Le recours à des matériaux recyclables : charpente acier, matériaux manufacturés, planchers et parois réutilisables ou recyclables assemblés à sec, légers, offrent aux bâtiments leur qualité durable.

Hôtel de ville de Gauchy

Logements à Evreux

Le bâtiment vert

Est une manifestation symbolique de la nouvelle entente de l'homme avec la Nature (l'environnement matérialisé).

Ce subtil rapport Architecture Nature est une constante de toutes les architectures traditionnelles en Europe et en Asie, de Versailles à Tian Tan.

Tour de laboratoire à Cheng Du

Parlement à Colmar

Bâtiment polyfonctionnel au bord de la Seine. Grand Paris – 2012 : Dubosc et Landowski

Energies naturelles pour quartiers anciens

Les tours solaires à vent produisent une énergie éternellement renouvelée, accumulée dans des piles à combustible. Ces dispositifs qui peuvent s'implanter à peu près partout peuvent fournir un pourcentage de l'énergie nécessaire et dans certains cas répondre à la totalité des besoins.

Nous terminons ce rapide survol de la relation architecture et techniques environnementales par la simple image d'un logement en ventilation 100% naturelle à RECIFE au BRESIL.

L'architecture environnementale est tres concrete. elle renoue avec les fondements meme de l'architecture qui met l'homme en harmonie avec le cosmos

设计与可持续发展
联合国教科文组织

对于杜博斯科公司来说，它一直致力于新的创意建筑资源，寻找利于环境和谐的资源：材料，设计，各个方面。

当然，建筑结构的报告的基础是它可以保持“环境气候”。

杜博斯科公司自1975年（第一次石油危机）以来，一直致力于环境设施建设。节能经济是时代的必然趋势。在公共工程和住房部的建设规划中，采用外部保温改造设施，节约加热能源达到50% ！

DUBOSC et Associés

30年后，杜博斯科公司在中国的黑龙江省（世界上最冷的地区之一）使用相同的技术。相较于其他建筑，它节约了75%的能源。在这次中法合作项目之后（2005年），该省（7000万人口）又接着制定新的热能管理条例。

因此，环境关系基于气候建筑报告

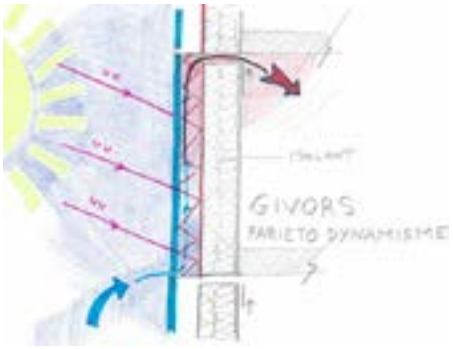
能源经济也是一种经济，目前，它渗透到空气污染控制和二氧化碳形成（温室效应）中。最终，它节约了未来能源。

如何节约能源?

如何免费加热? （没有工业能耗）

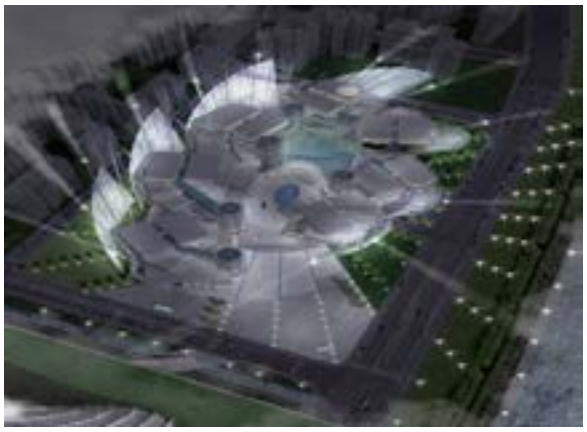
我们通过温室来收集太阳能源。这些温室可以免受辐射。
墙壁自然加热，并能提高2到3摄氏度的温度。

杜博斯科公司：日沃尔市土星3号项目



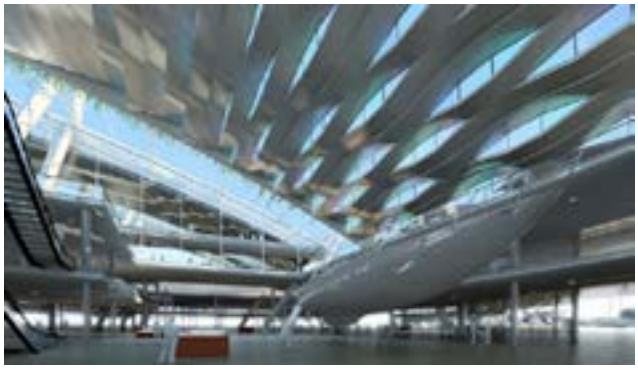
如何免费翻新?

在珠江畔，我们意识到风的方向和河流的方向是一致的，为了使得风能在建筑中形成旋涡，我们利用建筑形状来加快风速。



杜博斯科公司：广州电视台

通过无源器件来过滤太阳。屋顶的凹槽是根据太阳不同季节的高度来计算的。

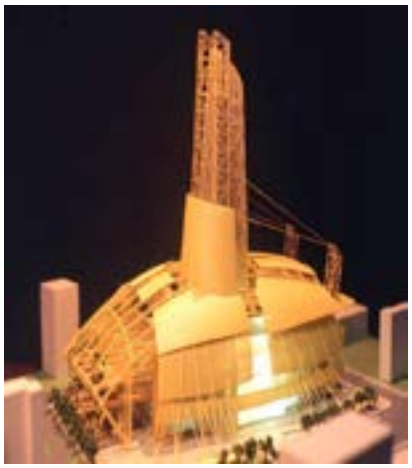


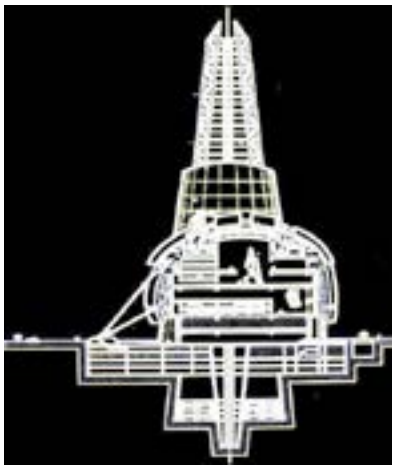
杜博斯科公司：釜山滨海

我们同样利用金属无源器件来控制日照量。

杜博斯科公司：利摩日学院

通过对阳光的控制来重塑博物馆建筑（滑动外墙）
外墙的滑动能够控制自然光的摄入量。

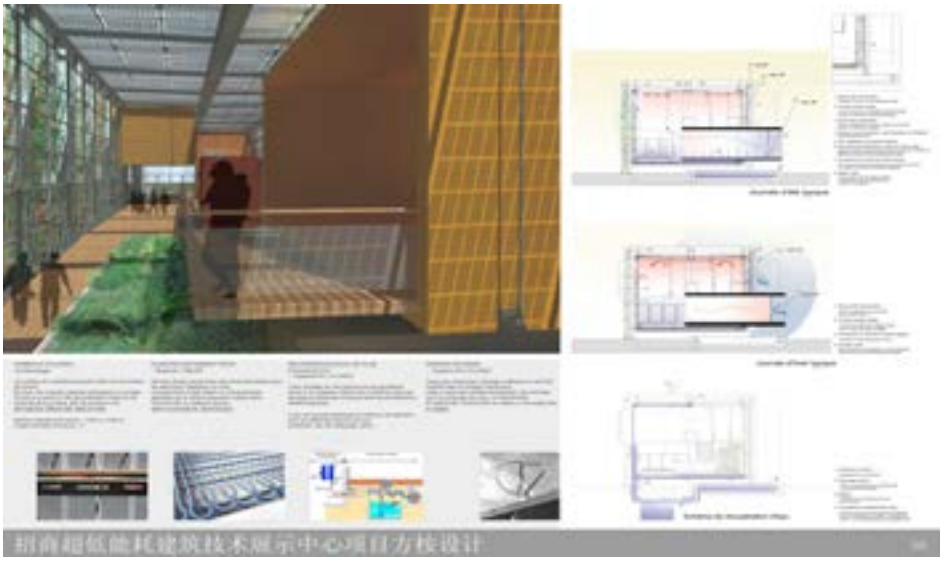




杜博斯科公司：北京歌剧院

建筑的自给自足

简单的技术设备能够使得房屋具有自给自足性（水和能源）

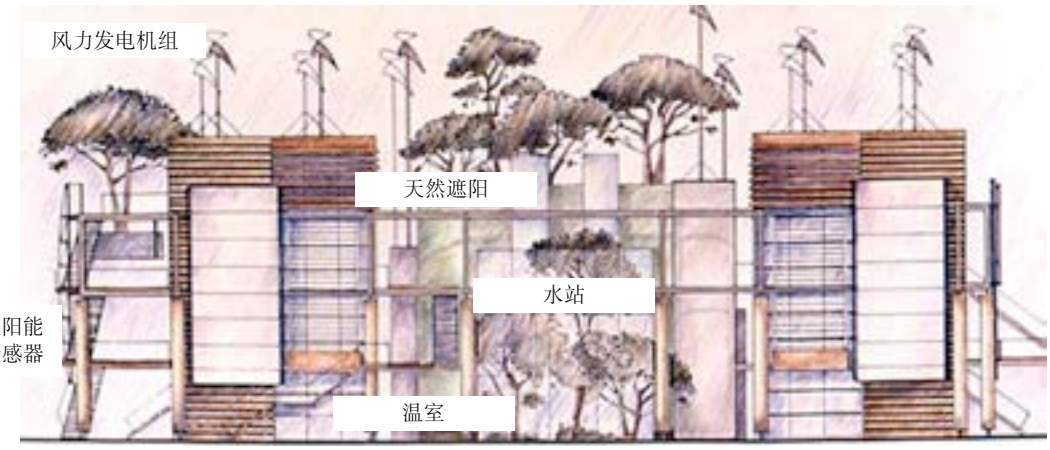


杜博斯科公司：中国深圳智能招商馆

威尼斯是世界上少数不靠近引用水源而建成的城市之一。历史上，威尼斯人发明了雨水捕捉以及净化技术。

威尼斯建筑学院的扩展项目是该方向研究的延伸：采取常规的方式采集雨水，与此同时，利用拂过湖面的风能以及对阳光的收集，产生可再生新能源。

杜博斯科公司：威尼斯建筑学院



自给自足型城市

可想而知，城市经济的实现是可以利用这些自给自足的建筑物（拆除主城区的网：清洁水，污水，燃气，电力）。

辽宁辽平新中心城市项目（2012年）

杜博斯科公司：人文城市

可回收材料

我们使用可回收材料：钢架、加工的材料、地板、可重复利用的墙壁、轻便的回收组合使得建筑物的质量更加持久。

戈希市政厅

埃夫勒房屋

绿色建筑

绿色建筑是指人与自然的新的相处模式（把环境物化）。
从凡尔赛到天坛，这种细微的联系在欧洲和亚洲所有的传统建筑中都有所体现。

成都实验室大楼

科尔马议会

杜博斯科公司和德沃斯基公司：大巴黎塞纳河畔多功能建筑（2012年）

老城区的自然能源

太阳风塔生产出不断更新的能源，这些装置在任意地点、任意时间都可以提供所需要的能量，在某些情况下，满足人类所有的要求。

我们通过巴西累西腓的一些图片粗略地看下建筑和科技环境之间的关系，这个建筑是百分之百通风的。

建筑的环保是非常具体的。它的基础在于与宇宙的和谐相处。

Youngil Song
Land and Housing Institute, Daejeon

宋英日
韩国土地与房屋研究院研究员

Youngil Song is a Researcher at the Land & Housing Research Institute of Korea Land & Housing Corporation. He earned a PhD in Urban Planning from Seoul National University with a thesis on the spillover effects of knowledge among cities. He then worked as a senior researcher at the Urban Land Research Institute of Korea for 3 years. His major research topic was smart growth of cities, especially regarding land-use planning and transportation for sustainable planned communities. He also joined as a planning consultant in several projects of planned towns such as Goduk, Dongtan, and etc, which stand out as green and renewable energy cities. From 2010 to present, he has worked for the Land and Housing Institute of Korea Land & Housing Corporation, the largest public corporation in the country. As a research fellow, he participated to diverse projects related to planned towns. One of topics was the concept of Smart City, which is to make cities work more efficiently and sustainably thanks to ICT infrastructure. In projects such as "Sejong new town", IT was used to enhance safety and reduce travel time and energy. Currently, he is working on the regeneration of old industrial sites that reorganize the urban structure and land-uses by adopting a smart city model.

宋英日是韩国土地与房屋研究院的研究员。在首尔国立大学获得城市规划博士学位，其博士论文是关于城市外流人口。随后，担任3年城市土地研究院高级研究员。他的主要研究课题是关于城市智能发展，尤其是关于新城镇交通运输以及土地规划的使用。他还加入了几个城镇规划项目的咨询团队。2010年至今，他一直在韩国最大的国企韩国土地与住房公司工作。以研究员的身份，他曾多次参与到新城镇的各种项目中。其中一个主要的主题是智能化的城市，这个项目主要是使得城市各项工作能够更加有效地运行。例如在世宗新城镇项目，IT被用于提高安全指数、减少运动时间与能源。他目前正致力于塑造智能城市的模型，利用可再生能源对旧工业区以及城市结构进行改造。

Smart City Projects in New Towns of Korea

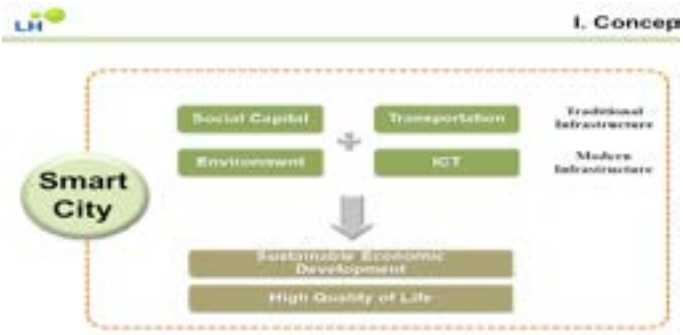
Why should we develop smart city projects in Korea?

Why should we develop smart city projects in Korea?

At the present there are many problems in traditional cities, such as overcrowded land, shortage of housing housing, traffic, crime, environmental pollution, energy water shortage.

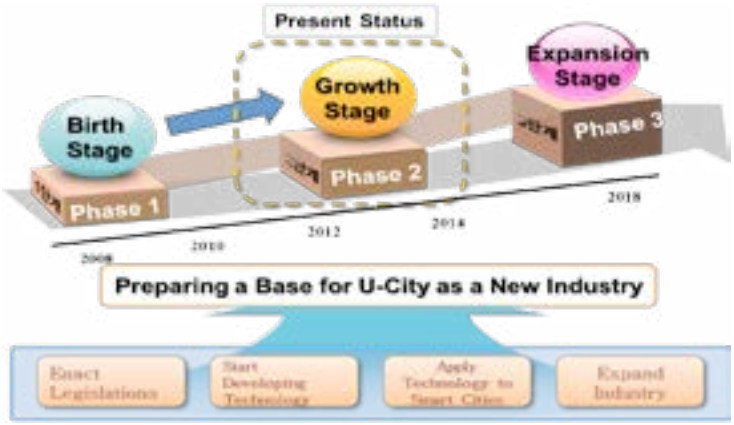
To solve these problems, there are some paradigm models. The goal of a smart city is to promote life, nature and technology.

This picture shows the concept of a smart city. This model is dedicated to the improvement of the quality of life, provide sustainable development, transform the traditional infrastructure to modern infrastructure, and use technology.



Let me share with you some information about the IT infrastructure in Korea. South Korea is recognized as a pioneer in Internet speed, high-speed Internet penetration and smart Phone penetration. We move on to the smart city in Korea, with an infrastructure based on IT anywhere and anytime. The city follows the process of information collection.

The U-city plan in Korea is designed in three stages: birth – growth – expansion. The next steps for the smart city in Korea is to develop technology, enact legislation, apply technology to smart cities, and to expand its related industries.

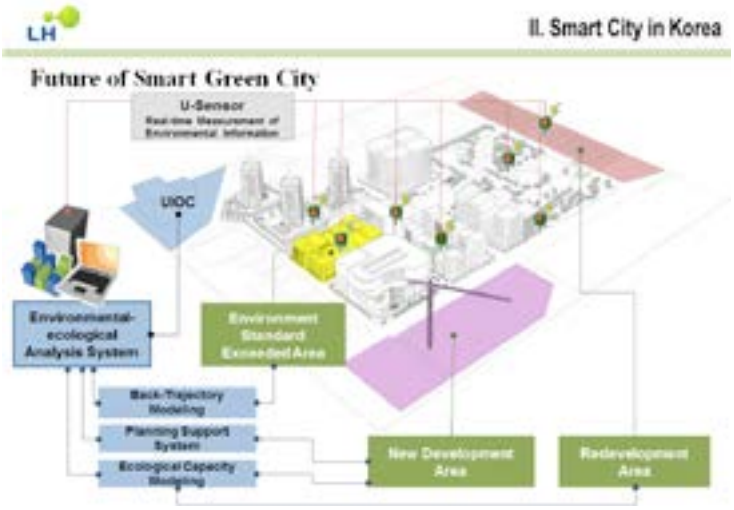


Currently, 15 local governments adopted the 'Smart City' in their Master Plan. 52 Smart Cities are under construction for new development projects. 80% of the total projects are done by LH Service: Traffic Control, Public Safety, Facility Management, and Disaster Prevention.

Sejong Multifunctional Administrative City is the largest new town in Korea with the population of 500.000. The urban integration operations center uses the CCTV network for safety and traffic control. Then it is facility management – for example having a bridge collect information and send it to the control center.

However, the main challenge of the smart city in Korea is that changes in the city are limited to security, traffic control, and facility management. The green growth policy on the other hand requires complete ecological network, material recycling and new renewable energy.

The future of smart green city in Korea will require adherence to the environmental standards. Back -trajectory modeling, planning support system and ecological capacity modeling are used in these areas. U-sensor is the measurement that will collect the information real-time.



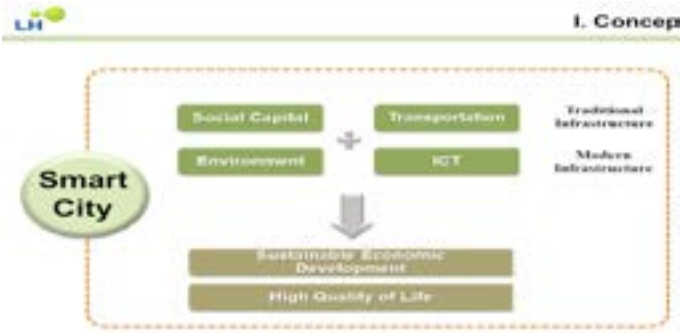
Korea has the world's number one cutting-edge ICT infrastructure. New towns are good test grounds for applying smart city systems and technologies. Fifty-two smart city projects are under way and there have been successful outcomes concerning the decrease of crime rate, travel time and CO2. One of the main challenges faced implementing Smart City systems is the high costs associated with the project and its burden on the local Government's budgets.

韩国新城镇的智能城市项目

我要讲的是我们为什么要在韩国发展智能城市项目。

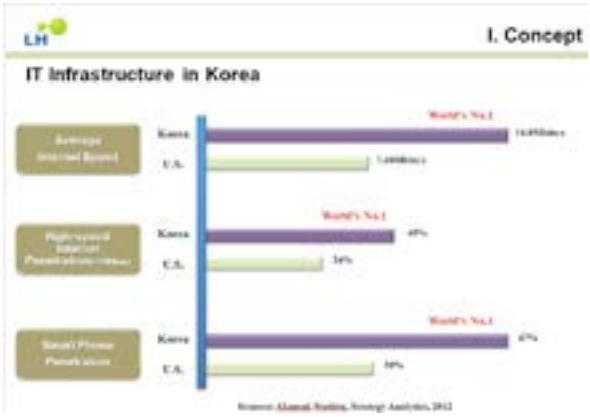
当前，传统城市面临着很多问题，例如，土地拥挤、房屋短缺、交通、犯罪、环境污染、能源等等。

为了解决这些问题，我们可以参考一些范例、模型。智慧城市的目标是促进人类、自然与科技的和谐共处。

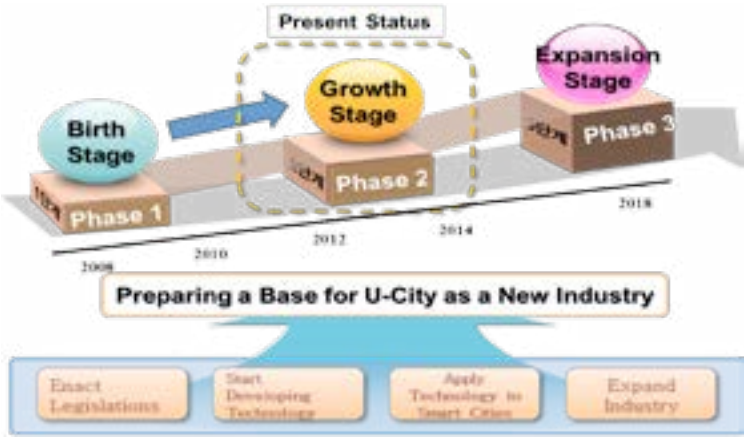


这张照片显示了智慧城市的概念。这个模型旨在提高生活质量、提供可持续发展、把传统基础设施改造成现代化的基础设施并使用技术。

我向大家分享下韩国在信息技术领域的基础设施。韩国在互联网网速方面被认为是世界的领先者，高速互联网普及率和智能手机普及率。我们再看下韩国的智能城市项目。在韩国，基础设施无时无刻地都在依赖着信息技术。城市也在信息收集的过程中运作。



韩国U-城市计划在设计中分三个阶段：诞生期、成长期和扩张期。韩国智能城市的下一步计划是开发技术、立法、应用适合智能城市的技术、扩大相关产业。



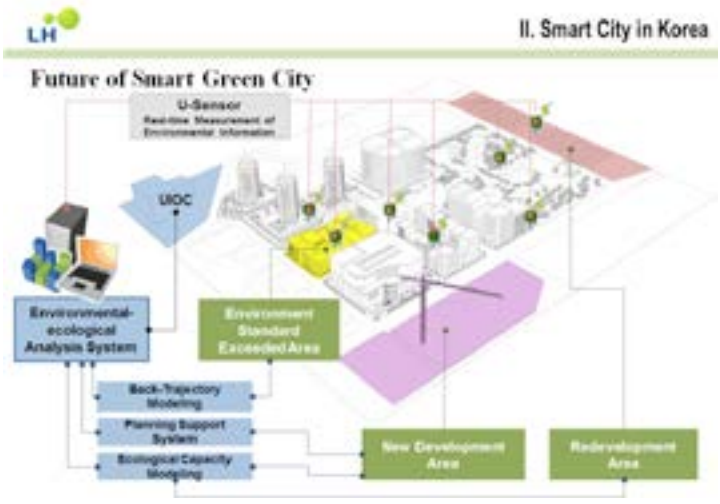
目前，15个当地政府在它们的城市规划中采用了“智能城市”项目。52个智能城市正处于建设阶段。80%的项目都是由土地与房屋研究院完成的：交通控制、公共安全、设施管理、防灾等。

世宗多功能行政市是韩国最大的新城，大约有50万人口。

这是城市一体化运营中心。图片是城市安全和交通管制的控制中心。城市所有的交通信息都由闭路电视所控制。另外一个是系统管理，许多桥梁都可以收集到的信息，并将其发送到控制中心。

然而，智能城市这个项目在韩国所面临的主要挑战是，它受安全、交通控制、设备管理等多方面的限制。另一方面，绿色增长政策发展一个生态网络、物质循环和新的可再生能源。

韩国未来绿色智能城市致力于采用环境标准。规划辅助系统和生态承载力范例都将用于这些地区。U型感光芯片是我们实时收集信息的工具。



韩国拥有世界第一的前沿信息和通信技术基础设施。新城市是智能城市系统、科技应用的测试基地。52个智能城市项目正在韩国进行推广，并且在减少犯罪率、旅行时间，控制二氧化碳等方面取得了良好的效果。然而，智能城市服务在一些地区所面临的主要挑战是项目高成本给当地政府带来的预算负担。

Ni Yang

Chairman of Shenzhen Jishang Building and Decoration Design Engineering Co., Ltd.

倪杨

深圳极尚建筑装饰设计工程有限公司任公司董事长及首席设计师

Yang Ni is Chairman and Chief Designer at Shenzhen Jishang Building and Decoration Design, Engineering Co., Ltd. He holds a PhD in Architecture and Visiting Professor at Shandong Institute of Arts and Design, China Academy of Art. Ni Yang also serves as consulting member of national, provincial and municipal associations. His design projects won several awards in the Asia-Pacific region's competitions, including the National Industry Award honors.

倪阳，建筑学博士，深圳极尚建筑装饰设计工程有限公司任公司董事长及首席设计师，山东工艺美术学院/中国美院客座教授。同时任职行业的全国/省/市协会理事及专家库成员，相关设计项目及论文荣获过多次亚太地区及全国行业的评奖荣誉

Shenzen – Past Present and Future

I would like to share with you the experiences of the "Bi-city Biennale of Urbanism and Architecture" in Shenzhen. Shenzhen always gives an impression of a city near Hong Kong, a city with high privatization and rapid development. We all marvel at the pace of development in Shenzhen. But at the same time, when compared to Dubai for example, it develops much more slowly.

This exhibition is located in Shekou, the origin of the development of Shenzhen thirty years ago. In this sense, the location underlines the past, present and future of Shenzhen.

I would also wish to talk about my own story with Shenzhen. After teaching for a while at the university, I went to Shenzhen to try and fulfil my dreams, along with thousands of young people. At that time, all I had were a few boxes of books and a couple of thousands of RMB.

The following pictures are taken at the museum project of my company. This is a 220,000 square meters of office space cluster, and it hosts the world's largest property management company. In order to improve its cultural competitiveness, we transformed the original restaurant garbage transport channel to an art gallery which is more than ten thousand square meters. My company also designed the Wanke Headquarters.

After ten years of development, my company has now 1,500 square meters, more than 10 branches and about one hundred employees. The sum of business of my company invests in design and construction is about ten billion RMB.

Shenzhen HQ of my company

We can see the changes which took place in Shenzhen through these pictures.

As a citizen of Shenzhen, I am both excited and melancholic about these changes. There are areas in the center of Shenzhen that are very similar to Paris. The city has expanded a lot and became a multi-center city.

The Urban Village is a major feature of Shenzhen. Based on their living environment and policies, the local farmers fight to maximize their living space. These farmers built a lot of houses to attract the migrant workers to Shenzhen. We call these projects "handshake houses" because of their proximity to each other. The government also has plans about the development of urban village and hopes to inject cultural life into the urban village.

Due its transformation from a small fishing village to a modern city, Shenzhen confronts many challenges and we need to think and reflect upon them. The aim of the biennale is to propose solutions to the urban problems, analyse challenges, and think about the future of the city. We can say that starting with its first edition in 2005, the Shenzhen Biennale has changed people's life. This year, the theme of the biennale was "the edge of the cities", that is to say, the starting point of our cities was gradually marginalized, and we need to return to our origin to make it better. From the picture below one can see, this area is far from the center of Shenzhen and Hong Kong. Thanks to the biennale, it evokes our memory of original Shenzhen

The exhibition shows how ecological ethics could work, and we could see the results of waste recycling as well as vegetables on the roof and so on. These examples remind us that we come from nature and construct the era of concrete. We have to return to the embrace of nature to contribute to the ecological cycle.

China has been a male-dominated society in the past 2000 years, but now we think more about the women when it comes to urban construction. The Biennale continues to produce energy for Shenzhen. In the past three decades, China always produces material energy, and now we have to transform and produce cultural and spiritual energy. Therefore, we have changed our traditional thinking mode, which had a good influence on the urban development. The multiple Ground –City in Shenzhen is an excellent example. The Aerodynamics Project, organized by Harvard University and Tongji University, will be carried out in Shenzhen. This project uses the example of the high-speed rail station in Shenzhen to carry out research. These are the results of our Biennale.

Creativity is the return to nature. I hope I can go fishing in the Chinese desert areas in the future.

—— 过去、现在与未来

我要和大家分享的是在深圳举办的双城双年展这一项目。深圳给人的传统印象是一个靠近香港的城市；是中国一线城市私有化很高的城市；是快速发展的一个试验田。大家都惊叹于深圳的发展速度，与此同时，如果和迪拜相比，我们又不算什么了。

这次的展会选择在深圳30年前发展的原点——深圳蛇口。从这个意义上来讲，它展现了深圳的过去，现在和未来。

我也想结合自己的经历谈谈我和深圳的故事。在大学教书一段时间后，1992年，我带着几箱书和几千块的存款，和成千上万的人一起在深圳逐梦。

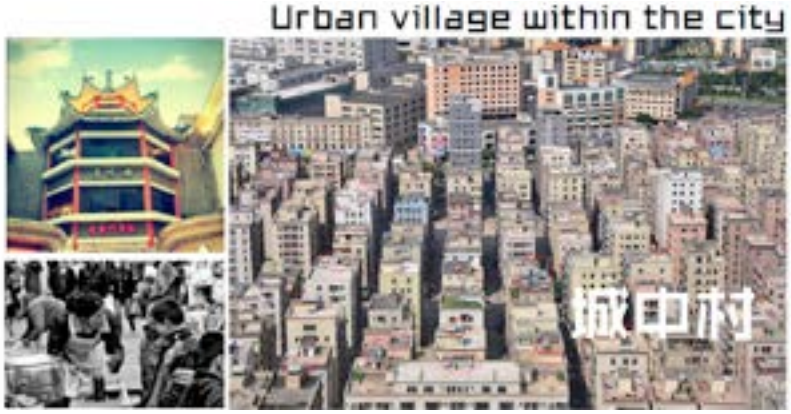
下面的图片是我们公司做的美术馆项目。这是一个22万平方米的写字楼群，请了全球最大的物业管理公司进行管理，为了提高其文化竞争性，把原先的餐厅垃圾运送通道改建成了一个美术馆。这个美术馆大概一万多平米。黄先生之前提到的万科总部的内部室内设计也是我们公司配合完成的。

经过十几年的发展，我的公司现在有1500平米，全国有十几个分支机构，一百名左右的员工。公司设计和施工的营业额在十个亿人民币。

我们可以通过图片看到这些年深圳发生的变化。

作为深圳人，对于这些变化，我们既振奋又遗憾。深圳和巴黎的中心区域的面积差不多也很相近，随着二次扩展之后，城市面积扩展很多，它现在已经成为了多中心的一个城市。

城中村是深圳市的一大特色。城中村是本地农民基于其生存环境和政策，争取到他们的最大化的生存空间。这些农民盖了很多房子，并吸纳了很多深圳打工者。我们也把这些房子叫做握手楼，因为楼与楼之间的距离特别近。作为城中村的发展，政府也有很多的方案，希望能够把文化生活注入到城中村中。



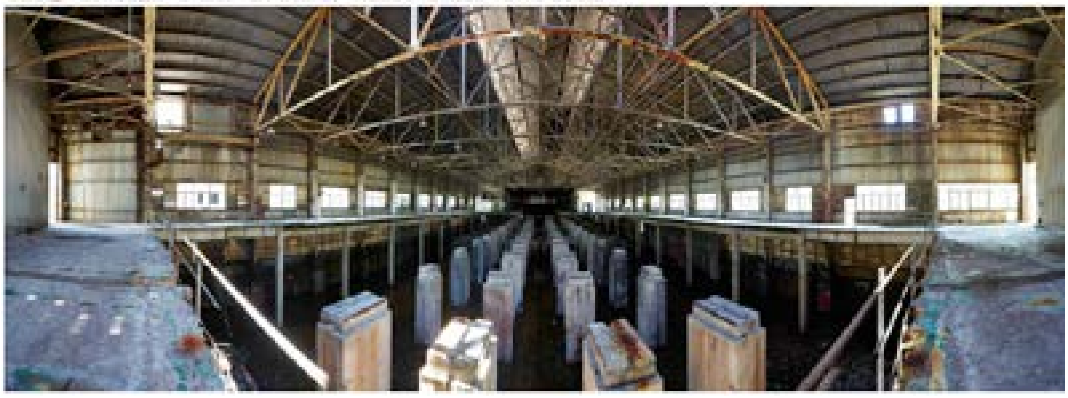
在转型过程中，深圳从小渔村到现代化都市的发展过程中出现了很多挑战，需要我们去思考、去反省。我们举办双年展的目的就是解决城市问题、分析城市问题、思考城市的未来。我们从2005年就开始实施，双年展改变了深圳人生活的方式，我的行业在中国大概有几千亿的营业额，其中的一半是在深圳。我个人就带了十几批的客户来参观双年展。今年双年展的主题是“城市的边缘”，也就是说，城市的起点在逐步边缘化，我们需要返回起点，再生它的价值。从下面的图片我们可以看到，这个区域距离深圳市区和香港都有1个小时左右的车程，在地理位置上是处于边缘位置。深圳最初的崛起都是在蛇口这个地区，通过此次双年展，又唤起了人们对于深圳的记忆。

逆袭 - 游戏 - 还原"边缘"
Border/Game/Return

边缘哲学/边界无界/边缘状态/
Boundaries/Periphery

以下是双年展展馆的文献图。

轻轻"触碰" A Light Touch...
Design concept/ Creative Future/ Industrialized Terra Cotta



整个展览展示了生态的伦理，我们看到废物如何回收、在屋顶种菜等等。这些展品提示着我们，我们从自然来，建造了混凝土的时代，我们还要回到自然的怀抱，进而促进生态的循环。

生态"伦理" From Ego to Eco
人与自然/回收利用/天台农场/
Nature/Recycle/Farm

2000多年来，中国一直是男性社会为主导，而现在我们更多的会思考女性的满意度来进行建设，我也向在座的各位女性表示致敬。五届的双年展不断地为深圳市储蓄能量，过去的三十年，中国一直大量的积蓄物质能量，而现在我们面临着要转型，转型成文化和精神方面的能量。能量的积蓄使得我们颠覆固化的思维和模式，这样才能形成对城市更好的发展的创新。深圳的多地面城市的设想就是一个例子。哈佛大学与同济大学合作的空气动力学的项目就在深圳落实，这个项目结合深圳的高铁站，从而进行研究。这些都是双年展的成果。

创意就是回归自然，我希望未来我可以去中国的沙漠地区钓鱼。

Markus Pernthaler
Architect

马库斯・贝赫那雷
建筑事务所

Markus Pernthaler is an architect who graduated from Graz University of Technology. After post-graduate studies at Tokyo University he founded his own office in 1990 in Graz. He has designed numerous housing projects, schools, hospitals as well as public spaces and is currently working at building a surgical clinic in Graz. Throughout his career, he won several architectural prizes, such as the Austrian State Prize 2013 for Architecture and Sustainability thanks to his residential project "Messequartier" in Graz. For the last 3 years he has been mainly involved in the Graz Smart City Project, an Austrian flagship project for sustainable city development. His work generally focuses on economic, ecological and social sustainability.

马库斯・贝赫那雷是一位毕业于格拉茨科技大学的建筑师，在东京大学教育系完成其研究生课程，1990年在格拉茨成立了自己的工作室。设计过许多房屋项目、学校、医院以及其他公共区域，现在正在建造格拉茨外科诊所的的项目。在他的职业生涯中，赢得过一些建筑大奖，例如通过在格拉茨的多地区（Messequartier）项目，他获得2013年奥地利建筑国家大奖。近三年来，他致力于格拉茨智能城市这个项目的设计。“依靠智能手段、通过改变设计的思路，可以显著的提高生命周期”他说。

Smart City Graz

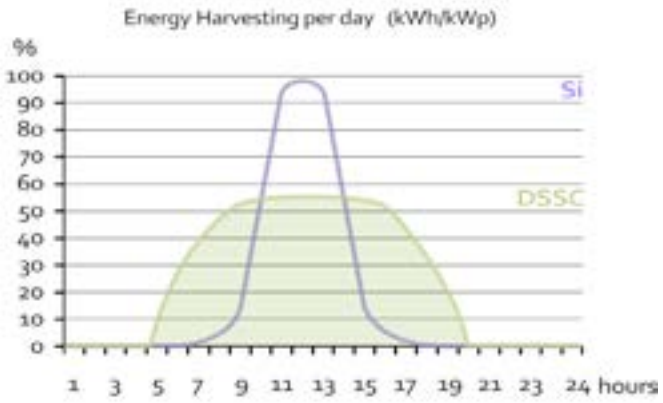
Graz is growing quite quickly and focuses on the sustainable development. The city had 270,000 inhabitants in 2011. With its increasing development, the number is projected to reach 286,000 in 2021 and 305,000 in 2050. Another characteristic of the city is the university with its about 50.000 students, who make the town quite lively. The population density of Graz is 2000 P/sq.km. Three years ago, we started focusing on the social economy and ecological sustainability. Therefore, we began to build all facilities for daily life and smart urban energy technology in the city district. We also integrated smart mobility solutions, e-mobility and mobility concepts for the city district.

As an example, we use newly developed urban energy technologies on a large scale, including building integrated technologies, new types of PV-modules and updraft power generation. These technologies can be integrated into existing networks: multi-building energy management, building energy supply systems, mobility infrastructure, etc. With increasing number of commerce and household users, the energy technologies function in a real environment.

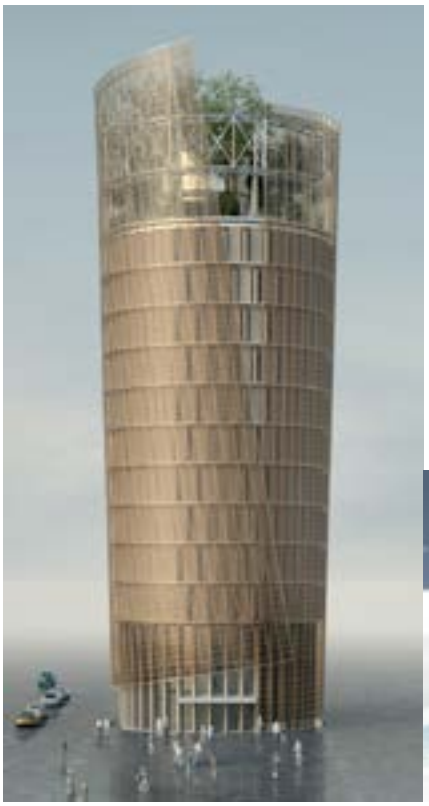
The pictures show the old industries which started in the 19th century. This company iwas shut down step by step between 1980 and 1990. Since then, it was more or less empty. The next picture shows how it looks like right now. The factory is in the red corner. On the one side, the road runs through the area.

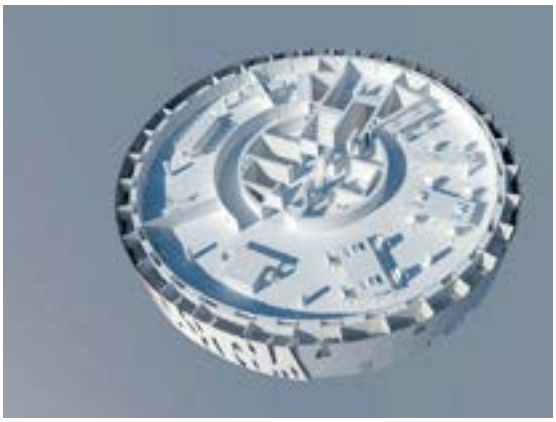
The following picture shows the key element of the demonstration project. Firstly, we sought to improve the technical element. After that we will build the central energy unit. Beside the demonstration programme, we consider all the elements when we are conceiving the project. During this period, we hold negotiations with the city planning department. The goal of this project is the achievement of 100% renewable energies, 100% local or regional production, usage of innovative technologies, local combination of energy-networks, energy storage within building ensembles, innovative financing models and and smart homes.

The following graph shows the energy harvesting per day and the maximal power conversion efficiency. The green one is the DSSC which saves 50% energy with the new technology. It is a competitive system, should research continue. The second one demonstrates that if we use slow light intensity the new technology earns about 80% capacity. It starts working early in the morning and stops working in the evening with the sunset.



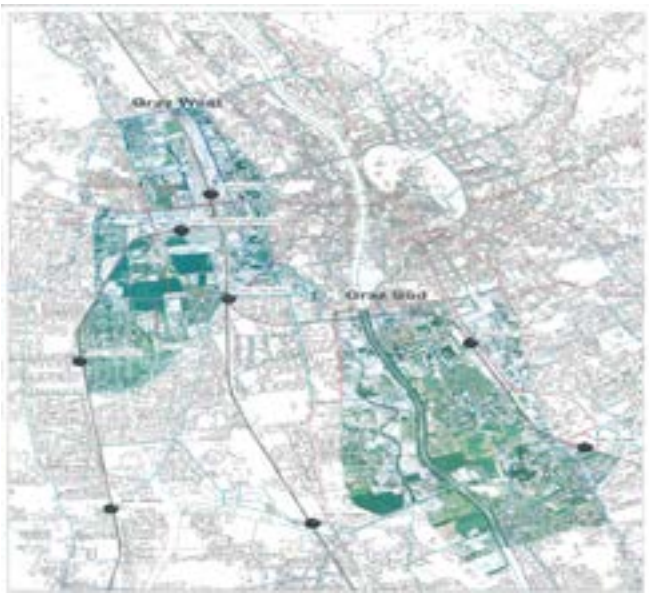
Another programme is our solar updraft power plant which combines the different physical systems. Building integrated technology which reduces the electricity consumption, increases efficiency and develops independent energy supply is our main task ahead.





智能城市格拉茨

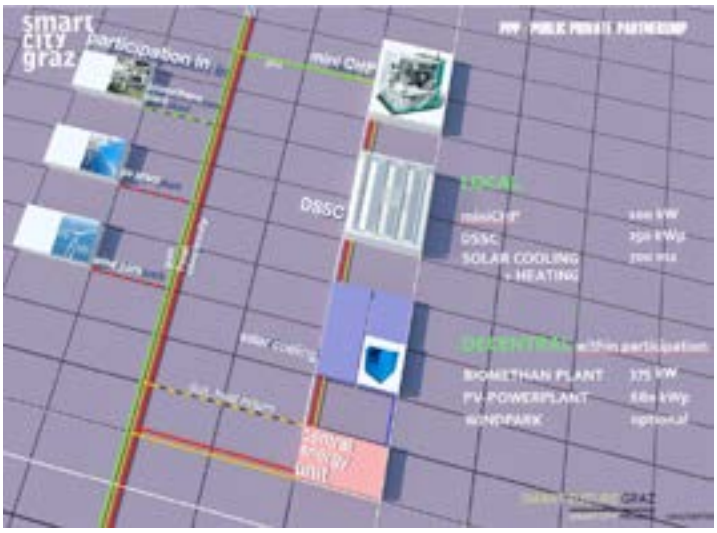
格拉茨正高速发展并注重可持续发展。2011年城市居民有27万，到2021年,这个数字要增加到28万6千人，2050年将达到30万5千人。这个城市的5万名大学生也使得这个城市充满活力。格拉茨的人口密度是每平方千米2000人。三年前，我们开始集中发展社会经济和生态可持续发展。因此，我们开始在城市区域建立日常生活设施和智能能源技术。我们在城市地区设置了移动系统、电子移动设置和可持续移动通讯概念。

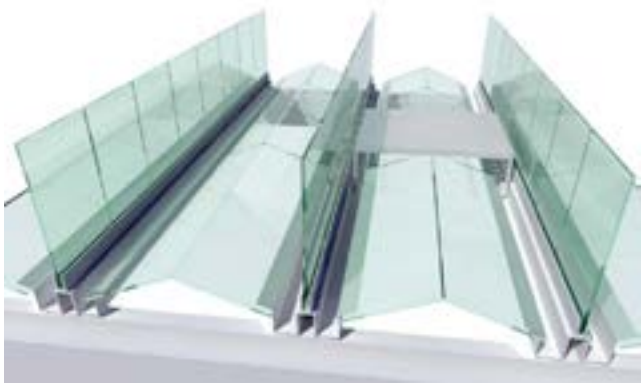


举个例子，我们新开发的大型城市能源技术，包括建立一体化技术，新型光伏模块和上升气流发电等。这些新开发的城市能源技术可以渗透到现有的网络中：多层建筑能源管理、建造能源供应系统和基础设施。随着商业和家庭用户数量的增加，能源科技可以在真正的环境中发挥其作用。

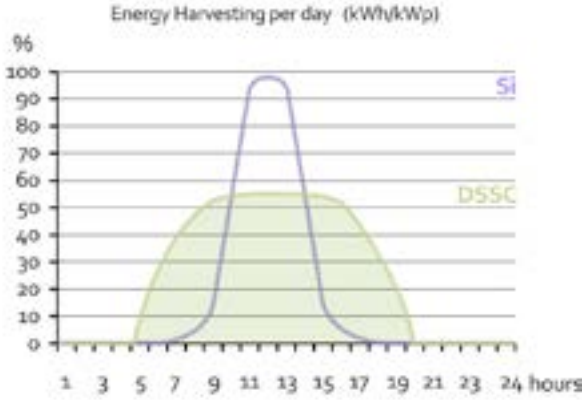
这些图片展示了在19世纪的旧工业状况。该公司在1980年到1990年期间开始倒闭。因此，这片土地开始变得空旷。另外一张图片展示了这块区域现在的状况。工厂是在红色的区域内部，并且一条路穿过这块区域。

接下来的图片展示了这个项目的重要环节。首先，我们应该提高技术元素。然后我们建立中央能量单位。在这个项目的改造过程中，我们和城市规划部门的沟通进展缓慢。在这个项目中，我们的目标是使用百分之百的可再生能源、百分之百的本土产品、创新科技、本土能源组合网、创新融资模式、智能家居等等。

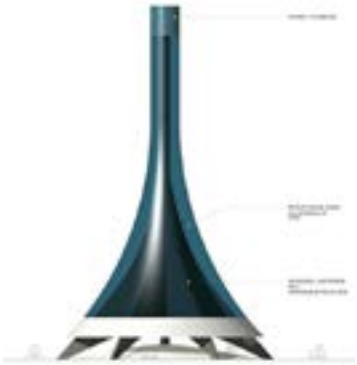




下面这个表格显示了能源的最大采集量效率表。绿色的部分是染料敏化太阳能电池（DSSC）,使用它可以节省百分之五十的能源。这个项目如果坚持下去，它一定会很有竞争力。第二个则显示的是我们使用慢光的强度。这个新科技系统早上工作，日落则停止。



另外一个方案则是太阳上升气流发电系统，这个系统结合了不同的物理系统。这个系统减少电量的消耗，增加效率，提高能源链。



建立综合型技术、减少耗电量、提高效率、开发独立能源链是我们的主要任务。

Nathalie Arnould

Saint-Etienne

娜塔丽・阿尔努

圣艾蒂安市

Nathalie Arnould is a designer and graduate of the Saint-Etienne School of Arts and Design. She has taken part in the Saint-Etienne International Design Biennale since its beginning in 1998, and was one of its curators in 2006 and 2008. She also worked for the Cité du Design, in Saint-Etienne, leading projects in partnership with public authorities and realizing schemes to integrate design in the city structure, shops or hotels. In 2011, she became the first Design Manager serving public authorities in France. In this position, her mission is to integrate design in the policies led by the Saint-Etienne municipality, to develop design practices and to disseminate design principles in all departments of the administration.

娜塔丽・阿尔努毕业于圣艾蒂安高等学院艺术与设计系。1998年，她曾参与圣艾蒂安国际设计项目的初始设计，同时也是这个项目2006年与2008年的策划人之一。她领导过一些可持续发展项目，随后负责圣埃蒂安市的城市设计，并推动与其他公共机构在城市建设、商店以及酒店设计等方面的合作。2011年，她成为第一个服务于法国当局的设计经理。她的这个岗位主要负责圣艾蒂安市的市政设计、发展设计项目并在各个管理部门传播设计理念。

Nathalie Arnould est designer, diplômée de troisième cycle de l'École d'art et de design de Saint-Étienne. S'intéressant plus particulièrement aux contextes sociaux, économiques et environnementaux du design, elle initie, dès la première Biennale Internationale de design de Saint-Etienne en 1998, des évènements et expositions qui rapprochent les démarches du design et les enjeux de société Depuis 2005, Nathalie Arnould travaille pour la Cité du design de Saint-Etienne afin de développer une approche systématique et transversale du design sur le territoire stéphanois. Avec la Cité du design et les acteurs économiques, elle développe la commande et la pratique du design sur le territoire auprès des acteurs publiques, des entreprises, des commerces et hôtels, mais aussi auprès des associations socio-éducatives. Elle met en place des dispositifs expérimentaux d'innovation par le design et anime des réseaux de partenaires-designers-experts dans l'objectif de mieux comprendre l'évolution des usages, d'appréhender les nouvelles pratiques et d'améliorer les services, de manière à inventer les modes de vie de demain. Nommée design manager en avril 2011, elle travaille étroitement avec les services des collectivités pour intégrer le design dans le déroulement des programmes de conception des équipements et des services portés par les collectivité.

Les circuits courts de l'alimentation à Saint-Étienne

Les circuits courts est considéré comme circuit court un mode de commercialisation des produits agricoles qui s'exerce soit par la vente directe du producteur au consommateur, soit par la vente indirecte, à condition qu'il n'y ait qu'un seul intermédiaire entre l'exploitant et le consommateur. Aujourd'hui, 1 producteur sur 5 vend en circuit court (21 % des exploitants).

À Saint-Etienne, city Eco Lab a été un incubateur du citizen co-design (design basé sur la collaboration entre citoyens, cette évènement a permis de faire aboutir les deux démarches suivantes : "De la cantine - 80 km » et « Design dans les quartiers ». L'écosystème créatif et durable d'un quartier et d'appropriation de l'espace public sont crées par les habitants.

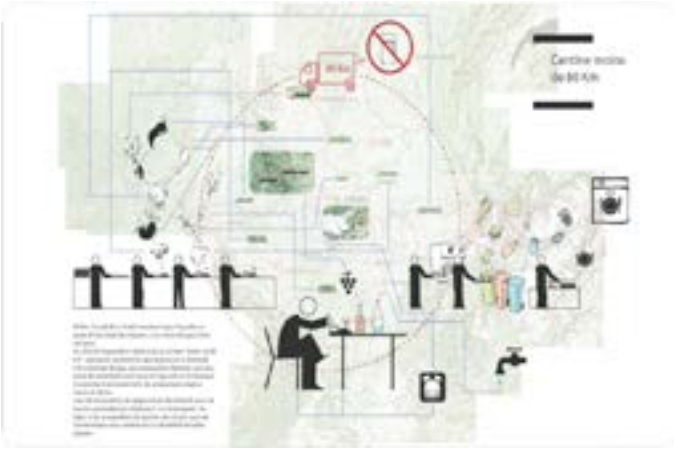
Aujourd'hui appelés jardins familiaux, les jardins ouvriers sont nés au XIX^{e} siècle afin d'améliorer le sort des ouvriers souffrant à cette époque des conjonctures économiques très difficiles. Ces petits jardins cultivés permettaient de ramener les gens à la terre et leur offraient la possibilité d'avoir un complément alimentaire non négligeable. Sur Saint-Étienne 89 hectares de jardins familiaux (3180 parcelles au total) qui font partie du paysage stéphanois et qui apportent au printemps une vraie touche de campagne dans la ville. Au début du XXème siècle, ces jardins furent les seuls îlots de verdure au sein de la ville industrielle. Et aujourd'hui encore, sauf erreur, Saint-Etienne reste la ville qui compte la plus forte densité de jardins familiaux. Ceux-ci sont cultivés par des jardiniers appartenant à trois groupements dont deux sont exclusivement stéphanois : les Jardins Volpette (40 hectares en 2005, 1650 parcelles) et les Jardins du Puits Couriot (13 hectares en 1996).

L'AMAP (Association pour le Maintien de l'Agriculture Paysanne) repose sur un contrat d'engagement mutuel entre le consommateur et le producteur pour le maintien d'une agriculture de proximité (peu de transport occasionné) et saisonnière.

Casino, entreprise emblématique de St Etienne a été parmi les toutes premières entreprises à faire des livraisons à domicile. Dans les catalogues Manufrance (1930), une page entière est consacrée aux triporteurs, avec un argument publicitaire imparable : « Vous doublerez votre clientèle en livrant à domicile ».

Notre objectif est de concevoir un démonstrateur de l'écosysteme de la cantine moins de 80 KM. 80 km correspond à la distance au-delà de laquelle un camion frigorifique est obligatoire pour garantir la fraicheur des aliments; c'est aussi un moyen de transport extrêmement énergivore. Le choix a été donc définir un périmètre de maximum 80 KM dans lequel on pouvait trouver des productions agricoles locales Bio ou petites productions paysannes qui permettraient de faire un menu journalier pour un restaurant collectif accueillant 200 personnes par jours.

Il y a 17 AMAP à Saint Etienne qui sont à saturation avec 50 à 70 abonnés mais il n'y a plus assez d'offre d'agriculteur locaux l'agglomération est en train de prévoir le gel des terre agricole pour empêcher toute construction.



Depuis City éco lab, les 6000 repas servis par jour des cantines scolaires de la ville sont composés de produits frais locaux. Cette démarche, progressive depuis 2009 est unique en France à un tel niveau, et s'est accompagnée d'une diminution du tarif de 10% à 25% selon le quotient familial et d'un développement des circuits courts d'approvisionnement. La restauration scolaire est un service municipal facultatif ouvert à tous les enfants des écoles publiques maternelles et élémentaires. Depuis 2009 s'est accompagnée d'un développement des circuits courts d'approvisionnement. Et l'opération ne s'arrête pas là : elle a été étendue au portage des repas pour les personnes âgées et aux 24 crèches communales, qui servent actuellement 70% d'aliments bio aux tout-petits. La Ville de Saint-Etienne dépasse les objectifs du Grenelle de l'Environnement, qui préconisait 20% de produits bio dans les menus pour fin 2012.

Les enfants ont été associés à la conception de leur nouvelle cantine dans son aménagement mais aussi dans son fonctionnement.

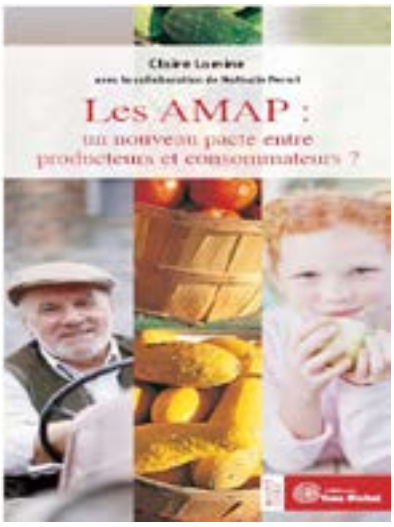
圣埃蒂安市的食物短途运输

如果经营者和消费者之间只有一个联系，短途运输则是生产者和消费者的唯一纽带。如今，五分之一（21%）的农民生产者运用短途运输进行销售。

在圣埃蒂安市，城市生态实验室是公民共同设计的产物。它是一种基于公民之间的合作设计而成的产物，并且通过“80公里”和“设计街区”的两种方式来在周末实现其作用。创造性的、可持续的生态系统，其区域以及公共空间都是有居民所设计创造。

今天我们称之为家庭种植园以及工人种植园的地方，诞生于十九世纪，他们是为了提高在当时经受苦难的工人的生活质量。这些小种植园可以使得人类重新回归土地并给予人类充足的食物供给。在圣埃蒂安，家庭种植园（3180个）已经成为城市景观的一部分。在二十世纪早期，这些花园仅仅是工业城市中的一块绿地。到了今天，我相信，圣埃蒂安仍然是城市花园密度最高的城市。城市种植者主要来自于三个地方，其中两个来自于是圣埃蒂安本地：在渥勒派特种植园（40公顷，2005年，1650地块）和普特库赫特种植园（13公顷，1996年）。

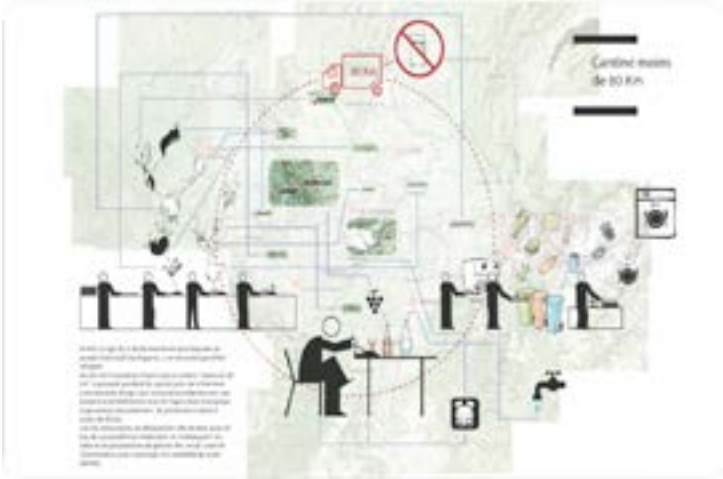
AMAP（郊区农业维护公会）是基于消费者和生产者对地方性和季节性农业的培育而建立的工会。



圣埃蒂安的一家公司是第一家推出送货上门的公司。在法国黄页上（1930年），有一整个版面都是在宣传其卖点：对于送货上门服务，连你自己都会觉得惊喜。

我们的目标是设计出80公里以内的食物短途运输。我们需要冷藏车以确保在80公里以外的食品的新鲜度；80公里同时也是高效节能的运输装置。因此，在80公里的周边地区，你可以找到当地农民生产的有机食品，这些当地产品可以满足接待量为200人的餐厅的食物供给需求。

在圣埃蒂安，有十七个AMAP（郊区农业维护公会），它们中的每一个有50-70名用户，并且保证当地农民的利益。



自从生态城实验室建立以来，城市学校食堂一天要做6000份食物，这些食物都是以当地供应的新鲜食材烹制而成。这是法国的创举，而且花费要减少10%到20%。校餐是公立幼儿园和公立小学的所有孩子都可享有的。自2009年以来，它通过食物短途运输来运输。但我们的工作并不满足于此，它要扩展到为老人以及为24个市级幼儿园送餐，并已经为70%的幼儿提供有机食品。圣艾蒂安市也达成了环境问题的协议，2012年有机产品要占到20%的比例。

孩子们不仅参与了他们的新食堂的发展，还参与到了其运作的设计。

Geneviève Ferone Creuzet

Director of Casabee, Territorial Design Consulting Agency

吉纳维芙·费红娜·科赛特

卡撒比土地设计咨询公司总经理

Geneviève Ferone Creuzet earned a PhD in Law from the University Paris-Sorbonne after having graduated with a degree in Business. Currently, she manages Casabee, a consulting firm specialized in sustainable urban development and territorial engineering. She is also Vice-President of the Nicolas Hulot Foundation and The Shift Project (TSP), a think tank focusing on energy transition. She also created ARESE in 1997, the first French socially responsible rating agency. Geneviève Ferone Creuzet worked for the International Energy Agency, the OECD and was associated with an Economic Intelligence firm based in San Francisco on socially responsible investments. She was Director of Sustainable Development at Eiffage and at Veolia Environment.

吉纳维芙·费红娜·科赛特在经济学士学位后，又获得了巴黎索邦大学法学博士学位。目前，她是Casabee公司的经理，这是一家专门从事城市可持续发展和土地工程的咨询公司。她也是Nicolas Hulot基金会副会长和TSP项目的副主席，注重能源转换方面的智囊专家。在1997年，她建立了ARESE，是法国第一家社会责任感的评级机构。吉纳维芙·费红娜·科赛特曾任职于国际能源机构EOCD，并在旧金山分部负责投资业务。她同时也是Eiffage和Veolia环境可持续发展总监。

Creative Technologies and Infrastructure (Water, Sanitation and Food Security) for Sustainable City Development

We are discussing about Creative Technologies and Infrastructure (Water, Sanitation and Food Security) for Sustainable City Development.

We must first ask ourselves: why do cities need to innovate differently? One in two people live in cities. The city is the next frontier where great territorial balance and future changes will take place. The territories, whatever their perimeter or their characteristics may be, from a local scale to large metropolitan regions, are confronted with issues regarding the management of their main stream: water cycle, energy, mobility, nutrition, waste management. It is therefore necessary to create new tools, founded on prospective reflection, for the modeling and sharing of practices and land. It is necessary to make new tools based on forward thinking. At the same time, we should take into account the expectations of residents and environmental constraints. For a sustainable city development, we have to look at things not only from top level, but also we have to see what citizens want on a daily basis.

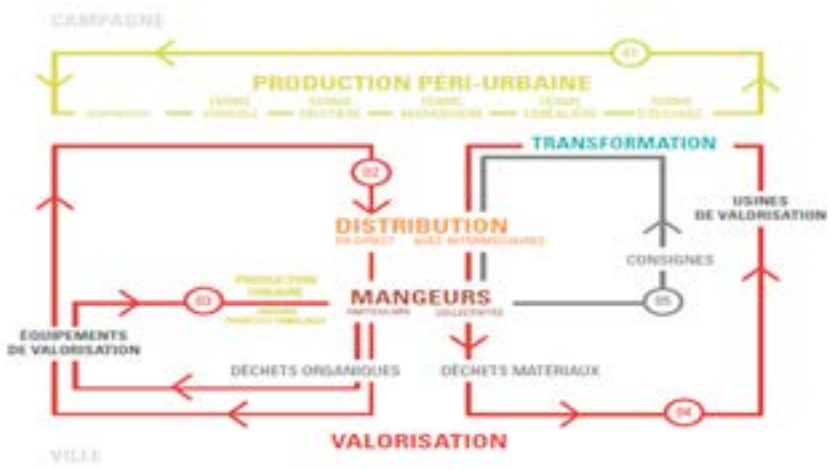
As part of the its management of water cycle, territories manage directly or through DSP (Delegation Service Public – Public Service Delegation) which takes care of a set of established infrastructures. These sites were often abandoned or degraded and with the right changes, they could become spaces dedicated to expression of social and environmental engagement, places for manufacturing collective projects at local scale. These issues of land valuation are insufficiently integrated in tendering and daily site management responses. However, the potential of differentiation is important, especially in the following domains: local recreation, local loops and economic integration, reservoir of biodiversity, landscape integration and accessibility to public, local renewable energy generation, pedagogical course, urban agriculture, and finally, enhancement of cultural heritage.

The processing and sharing of these resources represents a real lever of territorial attractiveness, a factor of market differentiation, and a local partnership in entertainment media. To identify these new opportunities, particular attention must be paid to the following elements: state ownership, easements and regulatory framework, relations to neighborhoods and neighborhood areas, socio-economic components, landscape and environmental values of the site, employers and historical components, conjugated utility of digital tools, and a set of local actors involved in the field of heritage, socio-economic development, of education, culture etc.

We could transform these places into pumping stations, water towers, etc. But when you start talking about the cost of such facilities, most of the time, the least expensive project will be chosen. At the same time, we have much to do with the administrative department which can be very complicated.

I have found that the water cycle is often invisible: it disappears when it comes to the surface. But local residents have the little ideas about what has happened. What we should do is to enable people to become familiar with these issues. There are many potential ways in dealing with these problems, particularly in the following areas: local leisure activities, local loops and economic integration, urban agriculture, and enhancement of cultural heritage.

The new infrastructure of bio-mimicry in the treatment of wastewater is the model Organica (Hungary). By associating fauna and flora one can reconstruct an artificial ecosystem consisting of different species living in harmony within reactors and enabling the degradation of various pollutants in several stages. The system is a hybrid system with specific strengths.



In general, it aims to promote effective, environmentally friendly, multi-functional and no intensive land resources which are integrated into the landscape and the city. The issue of ownership of this infrastructure by residents is crucial.

创意科技和基础设施（水，卫生和食品安全）对于可持续性城市的发展

我今天要讲的是创新技术和基础设施（水，卫生设施和食品安全）对可持续性城市的发展。

我们需要问我们自己一个问题：为什么我们的城市需要创新？全世界有二分之一的人居住在城市。城市也是土地平衡和未来变化的交汇点。土地，无论其规模和特质，无论其在任何地点，都面临着以下问题：水循环、能量、流动性、电力、废弃物管理等等。基于思维、统筹和土地用途等前瞻性的思考是十分必要的。我们同时也要考虑居民的期望以及环境的制约。与此同时，我们还要看看居民日常生活需要什么；我们要设计出更加实用的基础设施而不只是外观美丽而已；我们要把基础设施设计的更有设计感。

作为水循环管理的一部分，公共部门代表（DSP）负责管理一系列的基础设施。这些地区往往被废弃或者逐步衰退其功能，成为社会和环境空间的一部分，成为地方制造业或者居住的一部分。这些问题在日常管理中并没有得到充分的解决。这些照片都是我拍的。我提出的问题就是，这些区域，谁才是真正的贡献者？公共服务机构还是代表，谁才有资格参与其中当我们处理供水设施。当这些地区并不具有开放性的时候，我们应该怎么做呢。

昨天，我们讨论了很多可持续发展环境等问题。今天我将展示一些关于水循环的照片。我一直在探究，如何重建这些地区或者文化遗产，并邀请居民也参与到其中。图中的这些地方也可以改造为休闲区或者公园。

然而，个性化的潜力是很重要的，尤其是在以下几个方面：本地娱乐、本地循环和经济一体化、开放性、可再生能源、学习方式、都市农业以及文化遗产。这些资源的共享和改造都忽略了真正的杠杆：土地吸引力、商业因素以及当地的合作伙伴。我们要十分重视：地役权和监管框架；邻近地区的联系；社会经济成分；这些地区的景观和环境价值；数字化工具（安全及教学法）的联合使用；文化遗产、社会经济、教育、文化等领域的参与。

另一个问题是，这些地区的价值是什么？在这些地区有各式各样的供水设施。执政者也十分乐意看到这些设施，因为他们可以看到这些东西如何被井井有条地规划。但是当你开始谈论这些设施的费用，大部分的情况下，人们都会选择最便宜的那种方案。也许一百次的尝试之后，我们能够实施那些合适的项目。同时这些东西也会对每个人开放。从我自己的经验来看，最受欢迎的地区有时候是城市的中心。通常来说和城市的管理单位打交道都是十分复杂的。

总体来说，它增加效率、更加环保、多功能并且没有占大量的土地资源，同样也融入了城市景观之中。居民对于这些基础设施的使用权是至关重要的。

Meine Pieter Van Dijk
Professor UNESCO-IHE & EUR in the Netherlands

梅内·彼得·范戴克
联合国教科文组织水资源教育研究所教授

Meine Pieter van Dijk, holds a PhD in Economics from Free University Amsterdam, is an economist. He is a professor of Water Services Management at UNESCO-IHE Institute for Water Education in Delft, , Professor of Entrepreneurship at Maastricht School of Management and Professor of Urban Management at the Institute of Social Studies and at the Institute of Housing and Urban Development Studies of Erasmus University in Rotterdam. He is a member of the research institutes CERES and SENSE. He worked in developing countries since 1973 and is the consultant for NGOs, the Asian Development Bank, the Inter-American Development Bank, the World Bank, different bilateral donors and UN agencies. Meine Pieter van Dijk began to study Chinese eco-cities. His recent publications include *Cities as engines of growth and transformation in Ethiopia* (with Samson Kassahun and A. Bongwa, Addis Ababa: Lesan Press, 2012), *Global value chains, linking local producers from developing countries to international markets* (with J. Trienekens, Amsterdam: University Press, 2012), and *Managing cities in developing countries* (Edward Elgar, Beijing: Renmin University Press, 2006).

梅内·彼得·范戴克，阿姆斯特丹大学自由大学经济学博士。是联合国教科文组织水资源管理的经济学专家以及顾问，马斯特里赫特管理学院教授，城市管理社会研究所教授，鹿特丹伊拉斯姆斯（Erasmus）大学住房与城市发展学院教授，CERES和SENSE研究院研究员。从1973年起，他一直在发展中国家工作并在非政府组织内部担任顾问的职位，例如亚洲发展银行，美洲开发银行，世界银行，以及联合国机构等。梅内·彼得·范戴克最近在研究中国生态城市。最近发表的文章包括，“埃塞俄比亚城市作为成长与转型的动力”，“全球价值链，链接着发展中国家的本地生产者与国际市场”，“发展中国家的城市管理”等。

Chinese eco-cities, creative technologies & infrastructure for sustainable city development?

As we can see the definition of an eco-city emphasizes that it is a city accessible for everyone, a city in balance with nature, a city that reduces, recycles, and re-uses waste, a city that contributes to a closed water cycle and that is integrated into the surrounding region. More visions like this are possible, however an effort should be made to list the most important criteria and then classify which cities would score high on the criteria.

Some research questions that need to be asked are: what were the key urban policies that contributed to the success of eco city initiatives and which lessons can be drawn from successful examples of eco-cities or eco-neighborhoods that can inform rapidly urbanizing cities in developing countries on how to achieve sustainability? How does the city deal with different pollution issues? What does climate change mean for water & waste management? How is energy managed in a more ecological city? Are the sectoral issues implemented with stakeholders?

The methodology that will have to be used includes comparing a number of case studies selected, looking for indicators of the performance on dimensions, field visits, and cross case analysis. It is imperative that cities change their policies because of climate change, higher energy prices traffic congestion, waste collection, and increased pollution (increased emissions of carbon dioxide – CO_2). Some policies that should be implemented are for cities to go for climate mitigation, adaptation activities, for them to become ecological cites, and to come up with creative technologies as well as infrastructure for sustainable city development.

My proposal for a more ecological approach which cities should implement combines integrated water resources managementconsisting of closing the water cycle, energy management, reducing the greenhouse gases, waste minimization and integrated waste management, integrated transportation policies, objectives concerning justice (equality). Jeffrey Kenworthy[2] a professor of sustainable development at Curtin University considers that a sustainable city is characterized by the natural environment permeating the city's spaces and embraces the city, while the city itself and its hinterland provide a major proportion of its nutritional needs. Furthermore the freeway and road infrastructure is de-emphasized in

2 «Office of Research and Graduate Studies: Professor Jeffrey Kenworthy.» *Curtin Univerity. N.p., n.d. Web.*

favor of transit, walking and cycling infrastructure, with a special emphasis on rail. The goal is to minimize the use of cars and motorcycles. There should also be an extensive use of environmental technologies for water, energy and waste management. That way the city's life support system would become a closed loop system. The central city and sub-centers within the city should be human centers that emphasize access and circulation by modes of transport other than the automobile. Moreover, physical structure and urban design of the city must be highly legible, permeable, robust, varied, rich, visually appropriate as well as personalized for human needs. The city should have a high quality of public culture, a sense of community, equity and good governance. In addition, the economic performance of the city and employment creation should be maximized through innovation, creativity, and uniqueness for the local environment, culture and history, Planning for the future of the city is a visionary debate and decision based process, not a predicted and computer driven process. The decision making process must be based on sustainability, integrating social, economic, environmental and cultural considerations. Finally the decision making process must be democratic, inclusive, empowering and engendering of hope.

The *Switch* approach begs the question of whether a sustainable water system, a basic feature of an ecological city is enough. *Switch* seeks a paradigm shift in urban water management to achieve a more ecological attitude towards water and environmental issues. Its purpose is to make water treatment more sustainable and to protect the quality of drinking water sources. Another goal of this approach is to reduce risks such as water related diseases droughts and flooding. Finally, through learning alliance platform barriers to information sharing are broken down and the process of technological and institutional innovation is sped up.

Many initiatives are taken at the city level. For example, in China the real promotion of ecological neighborhoods comes from the national level through subsidies. Secondly, we note all kinds of ecological neighborhoods. Even provinces want to get the label eco province and take different kinds of initiatives to achieve this title. We note that individual initiatives are spontaneously triggered by incentives or price increases. People begin to save energy and use less water than in developed countries. This is, however, a question of the level of development and partially of the availability and the price. There exist different ecological initiatives in China, which include, isolation measures, recycling of treated grey water[3] in Beijing, alternative building methods, and alternative sources of energy are used such as sun heater boilers. Hainan and Fujian are developing into ecological provinces and there are initiatives to turn Zhejiang and Shandong into ecological provinces as well. There have also been conferences on eco-cities such as the conference in Shenzhen in 2010. This however, begs the question of whether all these changes are really enough to make a difference?

Some creative technologies and infrastructures for sustainable city development are: Rain water harvesting technologies, separating grey & black[4] water, stopping the use of ground water, and different water governance structures. Additionally, more and more 'ecological neighborhoods' have been appearing. For example, there are cases of ecological initiatives in Wuhan neighborhoods. There has also been objective isolation to bring construction costs in Wuhan down to 30%. There have also been efforts to recuperate grey water. However, no money of the treatment change will be repaid to the inhabitants which causes the greater costs of recycling. Consequently, there is limited motivation of inhabitants to improve aquatic environment.

3 Waste water generated from wash hand basins, showers and baths. This water can be recycled on site for W.C flushing, landscape irrigation or constructed wetlands. Grey water may include discharge from laundry, dishwashers and kitchen sinks. «Sustainable Earth Technologies.» What Is Greywater? Greywater Treatment, Recycling and Systems. N.p., n.d. Web. 11 July 2014.

4 Waste water containing fecal matter and urine (also known as sewage). «Black-water (sewage) Treatment.» Black-water (sewage) Treatment. N.p., n.d. Web. 11 July 2014.

Although cities in China are developing quite quickly into a more ecological state they do encounter some issues. For example, there is no agreement concerning the single definition of an ecological city. Stating that it requires an integrated approach is not enough, because one could integrate the analysis of the issue, the approach chosen to deal with the issues and finally the activities undertaken to solve the problems. In Beijing there are many ecological initiatives; other cities are doing their best as well. However, is it enough to counter a looming environmental crisis? Sustainable development is at the beginning stages but not enough has been achieved yet. Private developers are looking for new ideas, although they are mainly interested in cost savings and attractive alternative options for their projects.

In 2007 there was a plan to construct an ecological neighborhood in Wuhan, China. The project consisted of 10 buildings of 8 stories each. The project received a 30% subsidy because energy saving techniques were used with the condition that grey water would be recycled. During the field work in 2007 the houses were about to be completed, however, the grey water facilities were not yet built. Energy saving is based on double glazing and the use of ground source heat pumps. A geothermal heat pump uses a system of pipe absorbing the latent heat from the ground and transferring it to the heating & hot water systems.

Some issues of ecological cities and infrastructure are the integration of the different sectoral interests, the role of planning and management, the importance of economic, financial, social and environmental criteria, as well as how to combine them. Furthermore, other issues include who the decision makers are and how to deal with the strict and loose meaning of sustainable urbanization. Ecological cities in China deal with the question of what are they heading for? Is it just more ecological urban water systems?

In conclusion, ecological cities imply integration of different approaches or sectors. Integration could take place in the framework of urban management. It is possible to find idealistic, sectoral, or issue based definition of ecological cities. This begs the question whether or not the Chinese be denied the level of energy consumption of the average US citizen? Improvements in eco-efficiency also require institutions and technology and fundamental change in culture. In China the initiatives are at three distinguished levels, but there is no real integrated approach at the provincial of city level. Consultancy firms claim that sustainable urban development start with integrated design (DHV). Moreover, the most important element is convincing the people that it is important to do something to improve the environment. As the font is too big in comparison with the rest Dutch government claimed in a campaign: “the environment starts at home”.

中国生态城市，创意技术和基础设施
对于城市可持续发展的作用?

正如我们可以看到的，生态城市的定义强调的是，这是一个对大家都很适宜的城市，是一个与自然的平衡的城市，是一个减少、回收和再利用废弃物的城市，是一个拥有封闭的水循环的城市，是一个与周围地区相融合的城市。像这样的愿景是可以实现的，然而，我们需要列出来最重要的条件标准，然后把城市进行分类，可以根据上述说的标准列出符合标准的城市。

我们需要讨论一些问题：城市化政策的关键是什么？这些政策有助于生态城市举措的成功，同时我们也要从生态城市和生态社区的成功例子中总结如何能获得可持续发展？城市如何处理不同的环境污染问题？气候变化对于水和废物管理意味着什么？能源如何在生态城市中进行管理？这些问题如何实施？

对于生态城市，我的建议把水资源纳入到综合管理里面来，包括封闭水循环、能源管理、减少温室气体排放、减少废物及废物综合管理、综合运输政策、公平平等的目标等等。杰弗里·肯沃[5]，科廷大学可持续发展方面的教授，他认为，一个可持续发展的城市，其特点是自然环境渗透城市的空间并与城市容为一体，与此同时，城市本身及其腹地能够提供其所需要的供给需求。此外，交通不再只强调高速公路和道路基础设施，同时发展步行、自行车的基础设施和铁路建设。我们的目标是尽量减少使用汽车和摩托车。我们还要把环保技术应用到水资源、能源和废物管理等方面。这样，城市的生活系统将成为一个闭环系统。城市中心以及次中心应该注重现代交通方式而不是汽车。在全市范围内的中心城市和次中心应该是强调通道。

5 “研究与科研办公室：杰弗里·肯沃教授”科廷大学。

此外，物理结构和城市设计必须是高清晰、渗透性、健全的、多样的、丰富的、直观以及个性化满足各人需求的。城市应该有高品质的公共文化、社区、公平和良好治理的意识。一个城市应该通过创新、创意、环境的独特性、文化、历史、未来城市规划等等的最大化来创造更多的就业机会。这个决策必须基于可持续性，并把社会、经济、环境和文化因素考虑其中。最后，决策过程必须是民主的、包容的、有影响力的，并把两性平等观点纳入其中。

我们不能回避一个问题，也就是是否一个可持续发展的水系统对于一个生态城市就足够了。采取环保的态度来解决水资源和环境问题。其目的是使水的处理更加具有可持续性和保护饮用水源的质量。这种方法的另一个目标是降低诸如与水相关的疾病、干旱、洪水等风险。最后，通过学习联盟这个平台，可以打破信息共享的壁垒，技术和制度的创新过程也因此而加快。

许多举措都应用在城市一级。例如，在中国真正推动生态社区发展的是国家补贴。其次，我们注意到各种生态社区。甚至各省他们自己也想要得到不同的生态标签，并采取不同的措施来实现赢得这个称号。我们注意到，个别省份是通过奖励或奖金等作为激励措施。人们开始节约能源，使用比发达国家更少的水。在中国，有不同的生态措施，其中包括隔离措施、在北京回收污水[6]、选择性的建筑方法、可替代能源的使用，例如太阳能。海南和福建正在发展成为一个生态省，浙江和山东也同样把这个项目列到计划中。2010年，深圳也有相关的生态城市的会议。然而，这些政策真的会带来改变吗?

创新技术和基础设施也应用在一些可持续发展城市中：雨水收集技术、分离灰色和黑色的水[7]、停止使用地下水、治理用水结构。此外，越来越多的“生态社区”纷纷出现。

虽然中国城市正在迅猛发展生态状态，他们也遇到了一些问题。例如，对于生态城市的定义，人们总是莫衷一是。一个综合的方式是远远不够的，我们要收集这些问题，分析问题，进而解决问题。在北京，有很多生态方面的举措，其他城市也有着显著的成果。然而，对抗环境危机，这就够了吗？可持续发展仅仅在起步阶段，远远还没有实现。私营发展商正在寻找新的想法，尽管他们的兴趣主要是节约成本、找到可替代他们项目的选择。

6 污水主要是洗手池、淋浴、浴缸的废水。这些水可以循环利用在厕所冲洗、园林灌溉或者人工湿地。污水可能包括从洗衣机、洗碗机和厨房水槽等而来。“地球可持续技术”。什么是污水？污水处理，循环和系统，2014年7月1日。

7 废水含有粪便和尿（也称为污水）。“黑 - 水（污水）处理。”黑色 - 水（污水）处理。2014年7月11日。

2007年有一个计划，它是关于在中国武汉构建生态邻里社区的项目。该项目包括10个单元，每个单元有8层。由于节能技术的应用、污水的回收利用，该项目获得了30%的补贴。2007年，该项目的野外工作已经结束，然而污水设施尚未建成。节能减排是基于双层玻璃窗和地源热泵的使用。地热利用管道从地面吸收热量，并将其加热转换成热水系统。

总之，生态城市意味着不同方式或不同部门的整合。整合可能发生在城市化管理的框架中。这也产生了一个问题，中国是否能够达到美国平均居民能源消费水平？生态效率的提高也要求机构技术和文化的根本变化。在中国的措施基本处在三个等级，但在省级和市级却没有一个真正的综合办法。咨询公司声称，可持续的城市发展开始采用一体化设计（DHV）。此外，最重要的元素是人们要改善环境。就像荷兰政府声称的：“环境要从家里开始”。

Chris Chi Lon Wan
Representative of Masdar City

克里斯・池・龙・万
马斯达尔城市代表

Chris Chi Lon Wan is an architect who graduated from the University of Bath in UK and is a registered architect in UK and Hong Kong. He currently holds the position of City Design Manager of Masdar City, Abu Dhabi's sustainable urban development that is powered by renewable energy. He is responsible for setting and guiding key design parameters for Masdar City where sustainable theories meet sustainable practices. His architectural work includes several environmentally driven projects for the Richard Rogers Partnership in London and a series of railway and metro projects for Rocco Design Ltd in Hong Kong before joining Masdar City in 2008. He is a regular contributor at conferences, panel discussions and roundtables in the field of sustainable development. With a belief in knowledge sharing, he has given talks on this subject at venues including the Harvard Graduate School of Design, the Paris-Sorbonne University Abu Dhabi, the Institute for Advanced Architecture of Catalonia and the Masdar Institute of Science and Technology.

克里斯・池・龙・万毕业于英国巴斯大学，同时是在英国以及香港同时注册的建筑师。现在负责马斯达尔城的城市设计工作以及阿布扎比可再生能源供电的城市可持续发展。他负责制定和指导马斯达尔城的主要项目设计，现在该地在实践可持续发展设计的理论。2008年，在参与马斯达尔城之前，他的建筑作品包括和理查德・罗杰斯合作的伦敦环境项目以及香港的一些地铁项目。多次受邀参加可持续发展会议，并在哈佛大学设计研究生院，巴黎索邦大学阿布扎比分校，加泰罗尼亚高等设计学院，马斯达尔科学技术学院等学院进行演讲。

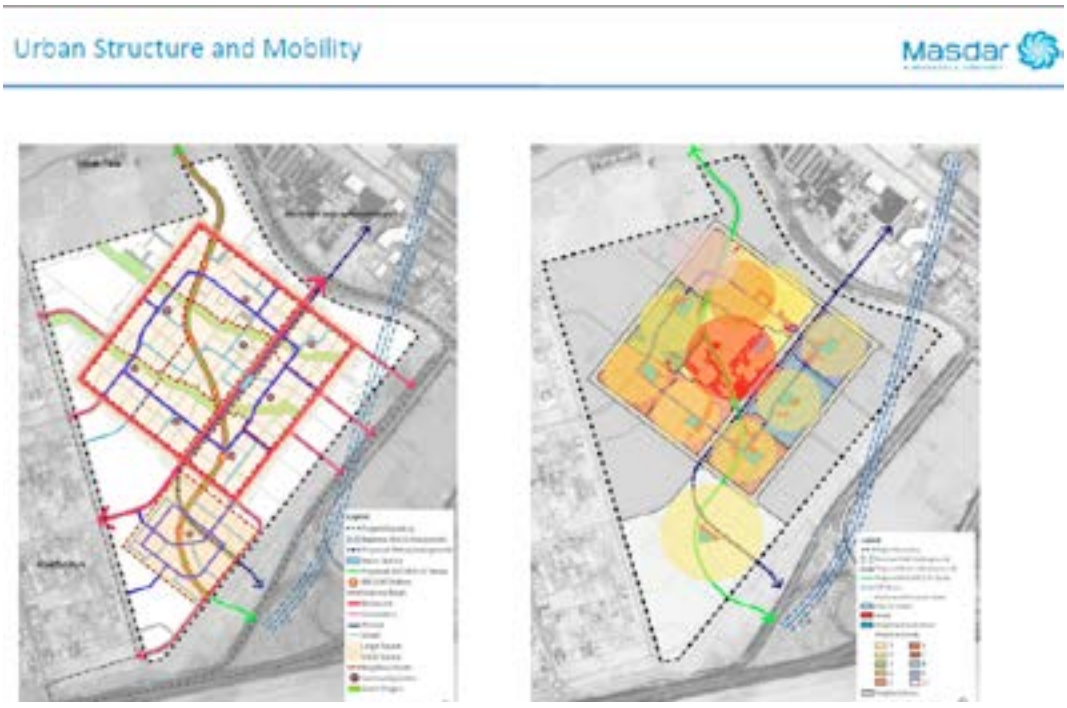
Masdar City – an overview

It is an amazing experience for me to listen to all these topics which are very connected to a lot of work that I have been working on Masdar city for last five to six years now. So today I want to give a brief interaction to share some experiences in Mastar city, where I have been working since 2008. Established in 2006, Masdar Company is a commercially driven enterprise that operates to reach the broad boundaries of the renewable energy and sustainable technologies industry.

Masdar, a subsidiary of the Mubadala Development Company, is mandated to expand the the energy portfolio of the United Arab Emirates (UAE) by advancing, commercializing and deploying future energy and clean technologies. Masdar also plays an important role in extending Abu Dhabi's energy leadership beyond hydrocarbons, thereby supporting economic diversification and human capital development. The company serves as a link between today's fossil-fuel economy and the energy economy of the future. It is organized around five main business units, including an independent, research-driven graduate university. By adopting an integrated, holistic business model, Masdar is uniquely positioned to meet the changing needs of the evolving industry, keeping the company at the forefront of the global clean energy industry.

Masdar city is on a journey of exploration and that is the reason what keeps me going. We keep on asking ourselves questions, defining and redefining of what we are trying to do, and I think it is very important to get a point that we are on a journey looking for solutions. We also invest in the free zone. Investment zone means that anybody or anybody who needs room can come to us, and invest in Masdar city. Masdar city is located 75 kilometers outside downtown of Abu Dhabi, and we are next to Abu Dhabi International Airport. It is truly working out through a mixed use development, which leads people to live here.

Masdar City is an emerging global clean-technology cluster that places its resident companies in the heart of the global renewable energy industry. Housing thousands of residents and hundreds of businesses, the low-carbon, low-waste sustainable urban development is being designed and operated to provide the highest quality of life with the lowest environmental footprint – all in a manner that is commercially viable. Continued growth will eventually see 40,000 people living in Masdar City. A total of 50,000 people will work, research and study in Masdar City - many of whom will also be living in the city.

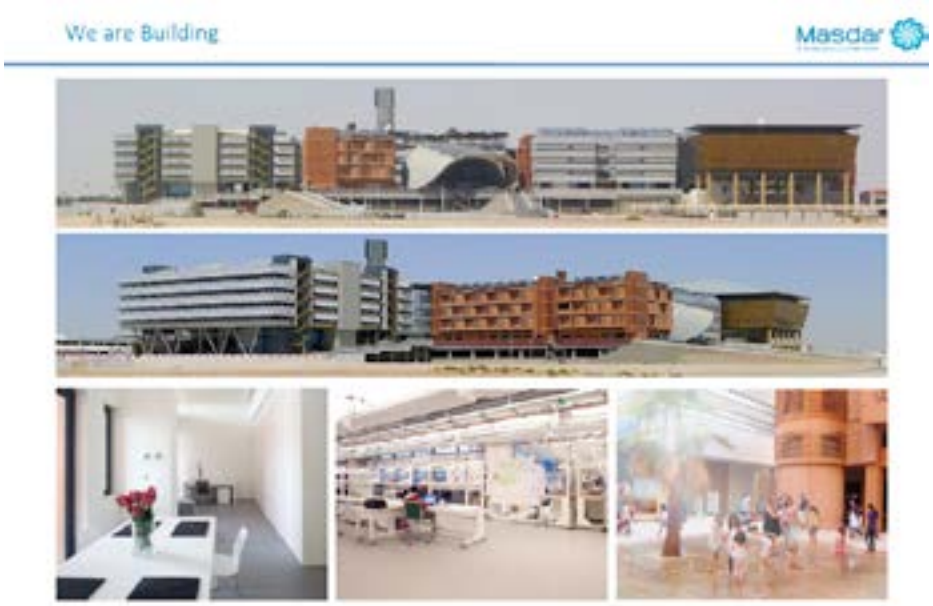


By 2030, 60 percent of the world's population will live in cities. Urbanization leads to increased energy demands, increased transport infrastructure, increased ecological footprint. Cities consume 70% of the world's energy – primarily by transportation & buildings. Cities must adapt and become bastions of sustainable living. Our goal is to minimize the solar gains, maximize the wind flows, reduce energy consumption and increase the energy efficiency.

As with most dynamic technology clusters, the city has a top-notch research university that is a source for innovation technologies, R&D and highly skilled graduates. Other major partners include Siemens, GE, Schneider Electric, BASF; the Swiss Village Association; the Korea Technopark Association, and the International Renewable Energy Agency (IRENA).

There are a number of mobilities that connect neighborhoods, including walking, cycling, PRT, Electric Vehicles, GRT, Public Bus, LRT and Metro, etc. The following two pictures demonstrate the Group Rapid Transit (GRT) Corridor and the Light Rail Transit (LRT) Corridor in Masdar. We believe that mobility and land integration are equally important, therefore, commercial and community building, and the research establishment are all together in Masdar.

In Masdar we realized that we should connect the neighborhood, which is good for the transportation and is helpful for our development. We are building neighborhood by neighborhood. We have already built the Internal Courtyards, Urban Squares, Linear Parks and Desert Parks as the open space.



智能城市——马斯达尔城

在聆听过在座关于各位工作成果、主题广泛的演讲之后，对我是一个极大的震撼。我已经在马斯达尔城工作了5-6年，今天我想要介绍的是阿布扎比对于马斯达尔城的建设情况。

我从2008年在马斯达尔城工作至今。成立于2006年，马斯达尔公司以经营可再生能源和可持续发展技术产业为主的企业，其投资领域涉及未来能源、煤炭、清洁能源等等。

马斯达尔是穆巴达拉发展公司的子公司，它的业务主要有五个方面：独立的研究为主体的研究生院；通过采用一个综合的，全面的业务模式，马斯达尔不断地应对着行业的变化与挑战，并在世界清洁能源方面处于领先地位。

马斯达尔城是一个高速扩张的城市，这也是我不断进步、前行的原因。我们不断地问我们自己问题，不断地定义、再定义我们所做的一切，我认为对于发展中的我们来说，不断地寻求解决方式是最为关键的。我们同时也规划了自由投资区域。自由投资区是指任何人需要投资土地都可以来找我们，并在马斯达尔城进行投资。从图中我们可以看到，马斯达尔城位于距离阿布扎比国际机场75公里的地方。我们希望通过不同形式的发展使得这块土地更加适宜人类居住。

马斯达尔城是一个以本土公司为本的全球清洁集群。当地的房屋由居民和上百家的企业全力开发，低碳、低废物、可持续的城市发展在被设计和运作，并用最低的价格提供优质的生活方式。4万人目前生活在马斯达尔城，这个数字也不断在增加。总共会有五万人工作、生活在这个城市中。

到2030年，60%的世界人口将居住在城市。城市化导致能源需求的增加，以及交通基础设施建设的增多，生态足迹的扩大。城市消耗了70%的世界能源，主要是由运输及房屋造成。城市必须适应并成为可持续生活的堡垒。图片展示了我们城市的核

心原则，包括正确的方向，风能，紧凑的设计建筑。我们的目标是利用太阳能与风能，减少能量消耗，提高能量效率。

作为最有活力的技术集群，全市拥有一流的研究型大学作为创新技术的资源，研发技能和高技能的毕业生源。其他主要合作伙伴包括西门子、通用电气、施耐德电气、巴斯夫;瑞士村协会、韩国科技园协会和国际可再生能源机构（IREANA）。

我们拥有一系列的交通方式连接着周边地区，包括步行，骑自行车，电动车，公共巴士，轻轨和地铁等。以下两张图片展示了马斯达尔快速公交和轻轨现状。我们相信，流动性和土地整合是同等重要的，因此，商业区，社区，研究中心经常是溶为一体的。

在马斯达尔城市，我们意识到我们应该连接周边地区，不仅仅是便于交通，更有助于我们的发展。我们已经建成了多个内部庭院、城市广场、沿线公园以及沙漠公园等开放性空间。

Paul Andreu

Architect

I work in architecture, in RATP in the Paris region, and my professional life has much to do with transportation.

I told you earlier that a town is about techniques. NASA was able to go to the moon, but in other areas, we have to find social solutions to solve the transportation problems.

Some of people live in the suburbs of Paris and far from the center. The places where they live are not really nice. For example, for some areas around Paris, you have only two or three trains per day. And those people have little choice, either they have a car or they use the train. We should give the people in the Great Paris an equal opportunity in transportation, maybe not for all of them, but perhaps to large number of them.

Something else that I want to say is regarding mobility in a town. There is a concept of an airport city which was successful for a limited time. Why it did not work? Because they are not real towns. We have to deal with the problem in places that have real heritage concerning population. I am not sure that shopping malls in train stations or something similar are the solutions either. This is what we discuss with RATP. These places will disappear one day.

We always try to move fast. Why? Because we think that the time spent in the transportation is negative. We make the train move faster but we have no time to stop and think. I have been thinking for a long time that we need to give values to transportation time. Perhaps you think it is a waste of time, but it has a different meaning from different points of view – be it physical or emotional.

保罗·安德烈

设计师

我在巴黎从事了多年的建筑行业，并在RATP（法国巴黎公交系统集团）工作过多年，我的职业生涯都是跟交通运输有着很大的关系。

我昨天所讲的是关于城市的科技。美国航天局是负责把人带到月球上去，但在其他方面，找到方案以解决交通问题，是我们的责任。

有些人住在巴黎郊区，远离市中心。他们居住的地方并不方便，例如，在巴黎周边地区，一天中才有2到3辆火车。这些人没有选择，只能开车或者乘坐火车。我们应该给生活在大巴黎的人们一个平等的交通机会，即使是不能普及到每个人，但是至少是其中的大多数人。

我还想讲一些关于城市流动性的情况。曾经某段时间流行机场城市的概念。为什么它到现在没有成型呢？因为机场城根本就不是真正的城市。真正的城市必须是有人口增长，有真正传承的地点。所以机场城市这个概念并不能成型并且火车站中的商场也不能是真正解决城市问题的途径。这些是我和法国巴黎公交系统集团（RATP）私底下讨论的结果。这些地方终究有一天会消失。

我们总是试图快速发展。我们为什么要一直坚持快速发展呢？因为我们认为在交通上花费的时间属于浪费。我们总是使火车运行的更快，却没有时间停下来进行思考。长久以来我就一直思考一个问题，我门需要赋予交通运输的时间新的价值。也许你认为这是浪费时间，但实际上，从切身角度来讲，它给予我们不同的意义。

Pierre Becquart
Foresight, Research and Innovation Division, Group RATP, France

皮埃尔·贝卡特
法国巴黎公交系统集团（RATP）创新研究部主任

Pierre Becquart is currently Head of Foresight, Research and Innovation for Groupe RATP. After graduating from Ecole Supérieure des Techniques Aéronautiques et de Construction Automobile, he served as a transportation engineer and managed the implementation of urban transportation networks in several places in France, such as Saint Quentin en Yvelines near Paris, or the border region of Annemasse-Geneva. He also previously worked as a Coordinator of the European project "Bus System of the Future" for Groupe RATP.

皮埃尔·贝卡特目前是阳狮集团巴黎公交系统公司战略研究创新负责人。从航空汽车制造高等技术学院毕业后，他在法国的一些城市（巴黎附近伊夫林的圣昆汀，安马斯与日内瓦边境）担任交通工程师并管理城市交通网络。他还负责阳狮集团巴黎公交系统公司“公交的未来系统”欧洲项目的协调工作。

Mobilités Urbaines : Enjeux pour les opérateurs

J'aurai pu parler de l'explosion des besoins de mobilité, de la création d'infrastructures qui ont augmenté la périurbanisation (ou étalement urbain), de notre expertise à augmenter la capacité d'un réseau centenaire en exploitation... J'ai choisi de présenter comment nous répondons à trois enjeux au cœur du débat d'aujourd'hui en écartant la question de la ville numérique qui sera sans aucun doute au cœur de nombreuses autres interventions :

1. Gérer une identité forte porteuse de valeurs et de continuité

2. Rendre acceptable les sites industriels en ville

3. Penser la mixité des infrastructures

Le groupe RATP est l'un des rares acteurs à réunir toutes les compétences du transport public. L'intégration des compétences et la transversalité sont une force qui permet d'améliorer continuellement la qualité de notre offre. Opérateur à Paris du premier réseau multimodal au monde, le groupe RATP maîtrise l'ensemble des modes de transports urbains, y compris metro, bus, tramway et ferroviaire.

Le groupe RATP est un leader mondial du métro automatique, mode particulièrement adapté aux grandes métropoles en quête de réseaux de transport collectif de grande capacité. La ligne 14 est la première ligne de métro automatique à grand Gabarit. Imaginée dans les années 1990, inaugurée en 1998, elle a déjà été prolongée à deux reprises. 9 stations aujourd'hui, Vitesse commerciale de 39 km/h. la ligne 1, une ligne traditionnelle en ligne entièrement automatique avec maintien de l'exploitation quotidienne.

Le bon cheminement entre les différents modes dans les espaces de transport est l'une des conditions de la qualité d'un voyage. Intégrer la dimension éco mobilité dans la construction ou la rénovation de stations, gares et pôles d'échanges nous permet d'optimiser les interconnexions entre réseaux lourds, réseaux de bus et modes doux (vélo, marche…). À Paris, la 301ème station du métro parisien inaugurée en 2011, Créteil- Pointe du Lac, offre ainsi des équipements pensés pour tous : voies et parcs à vélos, voies de circulation douce, passerelle pour créer un lien direct entre la ville et le nouveau pôle de transport métro/bus.

Un réseau de transport public est aussi un espace de vie et de création de lien social. Culture, musique, sport… le groupe RATP développe depuis des années une politique d'animation pour faire de ses espaces des lieux de vie favorisant la proximité et la rencontre.

Un réseau de transport public est aussi un espace de vie et de création de lien social. Culture, musique, sport… le groupe RATP développe depuis des années une politique d'animation pour faire de ses espaces des lieux de vie favorisant la proximité et la rencontre.

Pour rendre tangible sa vision sur les futurs espaces de transport, et leur synergie avec les espaces urbains, la RATP s'est engagée dès 2009 dans une démarche baptisée Osmose. Cette démarche de recherche prospective vise à promouvoir, des aménagements urbains durables, une amélioration des fonctionnalités et des services rendus aux voyageurs, et une qualité d'architecture, de design, et de paysage urbain. Trois approches différentes d'une « station de métro Osmose » connectée aux autres modes de déplacement et à la ville ont ainsi été imaginées.

Pour contribuer au projet EBSF (European Bus System of the Future), la RATP a cherché à tester comment les mêmes types de conclusions pouvaient prendre forme à l'échelle des arrêts et des stations de bus dans l'espace public, en présentant une « station de bus Osmose ». Installé en mai 2012 près de la Gare de Lyon, à Paris, ce démonstrateur est bien plus qu'un simple arrêt de bus : verres chauffants « intelligents », éclairage LED évolutif, recharge de téléphone, design sonore intégré dans la structure du mobilier… la station est un véritable micro-espace public multiservices.

A spot in the cityscape, enhancing the bus mode

城市交通：公共运输运营商的问题

我们可以讨论流动性需求的发展，基础设施的建立对于郊区的发展，我们的专业知识对于旧的交通网络的更新等等。我首先想要讨论三个主要问题：

1. 保持价值与特殊性

2. 制造城市有发展前途的工业用地

3. 考虑基础设施的组合

巴黎公交系统集团（RATP）是世界上少数关于拥有所有公共交通设施的公司之一。综合的技能使得我们可以不断地提高我们的服务质量。巴黎的交通网络是世界上第一个多形式的网络。巴黎公交系统集团（RATP）拥有各种交通工具包括地铁、公共汽车、电车和火车等。

巴黎公交系统集团（RATP）拥有全球领先的自动化地铁，特别适合于大型城市运输系统。巴黎地铁14号线是第一个自行运转地铁线。我们在20世纪90年代开始构思这个项目，并在1998年开始运营。至今它的线路已经延长了一倍，拥有9个地铁站，商业速度达到39公里/小时。地铁1号线也是全自动化，投入到每天的运营当中。

不同运输方式之间的连接也是考验其质量的标准之一。车站的翻新以及不同的车站的连接使得我们必须优化交通运输网络。2011年开放的巴黎克雷伊湖站站是巴黎的第301个地铁站。它提供各种配套设施服务：自行车车道、交通桥梁等等，来保证地铁站和公交车等交通运输方式的连接。

公共交通网络也是一个生活空间，连接着社会、文化、音乐、运动等。巴黎公交系统集团（RATP）已经开始开发新的政策来保证附近的生活空间。

为了使未来的航天运输和城市空间相结合。巴黎公交系统集团（RATP）在2009年参加了一个叫“奥斯墨斯”的项目。这个项目是为了促进城市可持续发展，更好的为旅客服务并保证建筑质量。“地铁站奥斯墨斯”有三个不同的方式连接其他的运输方式。

为了帮助未来欧洲公交系统（EBSF）这个项目，巴黎公交系统集团（RATP）寻求测试同类型研究成果如何能够为多种车站服务。2012年5月在巴黎里昂火车站开始运营，它不仅仅是一个巴士站，它由智能系统进行加热、LED灯进行照明、还有手机充电电源等等，是一个多功能的公共空间。

Conclusions

结语

Synthesis Marcos Amadeo

General Director, General Board of Creative

Industries and Foreign Trade, Buenos Aires Government City (Argentina)

As we have discussed during this Conference now most people now live in the modern city. We thank to UNESCO for inviting us to be here to exchange our experiences and challenges in each city.

As the Mr. Bandarin mentioned the decision makers must use more innovation and creativity. The policy makers and the city residents should have a specified contact. After listening to the different lectures, and taking in account the different backgrounds, architecture, NGOs, and governments we realize that we must work together with the society and involve the local people in the process.

Every lecture concerned different branches. Jana Redevin told us about the sustainable living space. The project on which Saucier focused was about the football center in Montreal. I am convinced that the question of how can we make more green space in the city remains essential and I am also surprised by the Chinese planning for houses in the next thirty years. Mr Sasaki also told us about the innovation and conservation for the sustainable and creative city. Africa is amazing about the way in which it invited local people to solve their problems. I want to congratulate Cape Town for winning the Design Capital 2014 designation, which is a good way to inspire residents as well as local government and policy makers to work together. For the water management, the only way to make a sustainable solution is to cooperate with the local people.

I think that through this conference, we realize that the only way to develop a sustainable economy is to work with all the sectors, including local people, NGOs, local governments and policy makers. We must listen to the local people and invite them to join us.

总结

马科斯·阿马德奥
阿根廷布宜诺斯艾利斯市创意工业和
对外贸易办公室主任

正如我们在过去一天半的时间所讨论的，大多数人现在都生活在城市中。感谢联合国教科文组织邀请我们到这里，交换在每个城市的经验和存在的挑战。

正如班德林先生所提及的，政策制定者必须运用更多的创新与创造性思想。政策制定者和当地居民应该有一种特殊的联系。所以，在听过一系列不同背景的演讲后，在座的各位来自于建筑行业，来自于非政府组织，来自于政府等等，我们意识到在这个过程中我们必须与社会共同努力。

每个演讲都涉及到不同的领域。贾娜·雷韦丁的演讲关于可持续发展的生活空间。索西耶的项目主要是关于蒙特利尔的足球中心。我其中最为印象深刻的是，我们如何能在城市中创造更多的绿色空间这个话题。我同时也十分期待未来三十年中国住房规划的前景。佐佐木先生还为我们讲述了可持续发展的创意城市的创新和节能。非洲在邀请当地居民一起解决问题的方面也有显著的成果。我在这里要祝贺开普敦，赢得了2014年设计之都的举办权，这是当地政府、政策制定者和当地居民共同合作的很好的契机。对于水资源管理，唯一的做法就是制定一个可持续的解决方案，并邀请当地居民一起参与其中。

我认为通过这次会议，我们可以认识到，发展经济的唯一途径就是结合所有的部门，包括当地居民、非政府组织、当地政府和政策制定者等等。我们必须要听取当地居民的意见，并邀请他们参与到这个过程中。

Perspective

Mehri Madarshahi

International Cultural Advisor to the City of Shenzhen

Taking advantage of this opportunity, I wish to share with you a preliminary conclusion of our discussions. The more complete proceedings of this Conference will be made available as soon as practically possible.

We agreed that cities are increasingly finding themselves at the center of sustainable development and societal challenges, as people flock to urban areas in the hope of a better life. As a result, there is a consensus that a fresh approach to the urgent issues arising from rapid urbanization, such as energy, food, water, transportations and infrastructures - in an integrated way – is essential.

In this process, identification of practical and relevant policies - tailor made - to the needs of citizens has become urgent.

Moreover, the prevailing strategies based on "grow first, tackle environmental risks later"' among some countries is unlikely to be effective given the risks to economic growth and the urban poor who suffer the most from depletion of natural resources, climate change, and global population pressures.

Making urban development more livable, sustainable, inclusive and creative is therefore a big challenge for every city in the world. Adequacy of services in relation to water, sanitation, energy and social services for all citizens is considered the primary responsibility of cities, but at the same time, creativity should not be discarded as a mere luxury.

Making sustainable and creative choices for a city is essentially a social process, not a technocratic, financial or bureaucratic exercise. Culture is considered as both a driver and an enabler for sustainable development. Promotion of eco-diversity entails acknowledging and promoting of different approaches in shaping sustainable environmental practices, respecting indigenous knowledge systems that could offer innovations and practices which are based on traditional lifestyles. At the same time it could generate jobs and opportunities for the citizens.

A few references were made to the preservation of cultural diversity. Emphasis was put on citizen's involvement in the development and promotion of innovative ideas and the fact that design should be people-driven. It was concluded that the objective of planners should be helping people to discuss the balance between the broader goals of urban living and their personal goals.

The role of smart cities in the development of new ideas for urban living was reviewed and the importance of information technologies for urban development was underlined. Questions related to how to transform the present cities to cities of the future and linkages between innovation and efficiency in greening of the cities and living space were debated.

Our target was formulated succinctly: Achieving sustainable development requires balancing environmental, societal, cultural and economic considerations in the pursuit of development and an improved quality of life.

Our meeting should serve as an introduction to a continuous process for better understanding the risks facing cities and their vulnerability in the near future. During this short conference, we could not touch upon a number of pressing issues, such as the wide range of policies built on existing initiatives and good practice in urban planning, combined with innovative ideas that can respond to multiple environmental risks by: (1) reducing carbon emissions and energy use; (2) responding to climate hazards; (3) helping protect or manage water and food systems and natural habitats. These policies could form part of follow-up meetings.

Many cities in the developing world do not have the financial resources to respond to these challenges. For an innovation to be successfully introduced into the marketplace and accepted by society, it must be based on many forms of partnership and continuous dialogue with stakeholders, including NGOs, academia and private citizens.

It is not an easy task and our aim today is to take advantage of the wealth of knowledge presented at this gathering and establish a group of volunteers who could act as a "think tank" or a clearing house. The main function of this group is to receive information on the best practices from all of you, conduct research on innovative and practical solutions to problems of the future, reality checks to understand the feasibility of success in various areas and provide visionary responses to what could or should be done by an urbanized world of the future.

With the support of UNESCO a knowledge sharing mechanism will be established to facilitate our exchanges including multi-media presentations, texts messages and dialogues or blogs. I believe that both Shenzhen and UNESCO are in agreement with this proposal.

The group will meet periodically to revise its approach and discuss the best outcomes. A more detailed technical arrangement for these exchanges will be presented.

Let me take this opportunity once more to thank the City of Shenzhen, our UNESCO colleagues and our partners for your participation and to have made this Conference a success.

展望

梅里·马达沙希
深圳市国际文化顾问

在我们的讨论过程中，我们一致认为，在人类不断移居到城市的过程中，城市便越来越处于发展和社会挑战的中心。因此，人们有了更多的共识，寻找一个新的方式来解决快速城市化所带来的问题，例如能源、粮食、水、交通和基础设施建设等问题，寻找一个综合的方式势在必行。

在这个过程中，实地调查、制定相关政策、具体情况具体分析进而来满足城市居民的需要是现在的当务之急。

此外，一些国家现行的战略是“先发展，后治理”，这种理念已经不可能有效解决经济增长和城市贫民化所带来的自然资源损坏、气候变化以及人口压力等问题。

使得城市发展更加宜居、可持续性、包容性和创造性的这一目标也因此成为世界上每一个城市所面临的挑战。

能够满足城市居民需要的充足的水资源、卫生、能源和社会服务是城市所面临的主要任务，与此同时，创意不该作为单纯的奢侈品而被束之高阁。

城市选择可持续性的和创意的选择本质上是一个社会的过程，而不是技术性的、财务的或者是官僚性的做法。

文化被认为是发展的始动力和驱动力。推广生态多样性、培养多种方案来落实可持续环境的实施、尊重当地文化环境等方式可以为传统的生活方式提供更多的实践和创新。与此同时，它也可以为居民提供更多的工作机遇。

少数的引用资料也提及了保护文化多样性。重点在于提高居民在发展中的参与度、提高创新思想。

我们总结可以得出，规划者的目标应该是帮助居民讨论城市生活以及个人生活目标的平衡问题。

智能城市的城市生活新理念在发展中的作用被重新提及，城市发展中的信息技术的重要性也受到关注。一些关于城市未来转型以及城市生活空间、创新、绿化效率等问题也在我们的讨论之中有所涉及。

我们制定了简洁的目标：

实现可持续发展的目标，需要在追求发展以及提高生活质量的同时，平衡环境、社会、文化、经济等因素。

我们今天的会议要在未来城市面临的挑战时，不断持续解决问题的过程中进行探索。鉴于会议的时间有限，我们没有在一些亟待解决的问题上进行讨论，例如：

许多政策运用了创新理念，与城市规划结合做出了良好的典范，同时也应对多种环境风险：（1）减少碳排放以及能源消耗（2）应对气候灾害（3）保护或管理水、粮食系统以及自然栖息地。

发展中国家的很多城市由于资金的限制，未能很好的应对这些挑战。把创新引入市场并被社会所接受，这必须建立在多种形式的伙伴合作以及多方的持续沟通，例如非政府组织之间、学术界以及公民个人。

虽然它不是一件容易的工作，但今天我们的目标是利用与会代表丰富的知识理论优势，建立一个志愿者性质的“智囊团”。这个小组的主要作用是收集在座城市以及即将加入我们的那些城市们的优秀成果、组织创新研究、解决未来即将出现的问题、考察方案在各个领域的可行性等，进而应对未来世界城市化进程中所出现的问题。联合国教科文组织知识共享机制的协议的建立，促进了成员之间的交流，包括多媒体演示、文字信息、对话以及博客等等。我相信，深圳以及联合国教科文组织也都在这项计划中。

该小组将会定期的召开会议、修改方案以及讨论最优成果。对于一些细节性、技术性的安排将会在会后向您呈现。

我们已经收到了一些嘉宾希望加入“智囊团”的请求，如果其他与会嘉宾希望加入，请通知我们。

请允许我借此机会再一次的感谢深圳市、我们的合作伙伴，感谢您们的参与以及联合国教科文组织的工作人员在此次会议中所做的努力，使得这次会议圆满成功。

Concept note

> *"…we need an environment which is not simply well organized, but poetic and symbolic as well. It should speak of the individuals and their complex society, of their aspirations, and their historical traditions, of the natural setting and of the complicated functions and movements of the city world."*[8]

Creativity for sustainable cities of the future

Presently, the Earth's physical-structural and eco-environmental systems are under strain owing particularly to commercial-industrial priorities and malpractices that are not compatible with the well-being of our planet. The carbon-based economy and prevailing consumption patterns have brought about the perils of global warming and climate change causing drought, desertification, deforestation, environmental degradation, floods and tsunamis – all producing disastrous impacts on food chains, water supply and sanitation.

Due to rapid growth, cities are increasingly at the center of debate concerning the impact, scope and inclusivity of development, requiring innovative strategies and new paradigms of understanding urbanized living. Standing at the intersection of the past and the future – cities are places where tradition meets modernity, where the 'local' and the 'global' interact, where the economic, social and cultural dimensions of sustainability interweave most tightly.

Therefore, it is important to support cities in becoming 'loci of innovation', spaces which support wide communities of practice, where new knowledge is generated, articulated and integrated as new designs and technological artifacts[9]. Creativity, understood as a special kind of resource and human talent, becomes an essential component of knowledge creation, innovation and adaptation. In a world facing limits, creativity may be, indeed, the ultimate renewable energy.

The immediate task facing all urban centers may be to reflect on redesigning of infrastructures, and to address a more efficient delivery of goods and services to citizens.

These trends call in rapidly changing and growing societies for new approaches to problems of urban living, such as highway congestion, local transportation bottlenecks, lack of clean and green energy industries, the need for ubiquitous connectivity, or clean water supply. How can urban leaders adopt constructive courses of action for a viable life and a sustainable future in harmonious approach with cultural trends and the well-being of humanity. Innovators, planners and decision-makers must reconcile the challenges resulting from an exploding urban population, their increasing needs and shrinking resources.

Making urban development more livable, sustainable, inclusive is a major challenge for every city in the world. While adequate services have to be provided in cities in terms of access to water, sanitation or social services, it must be underlined that making sustainable and creative choices for a city is essentially a social process, not only a technocratic or bureaucratic exercise. Innovation cannot emerge separated from the social context and local culture.

8 Lynch K, The Image of the City, Cambridge: The MIT Press, 1960, 119.

9 The discussion around "spaces of innovation" is presented in detail in: Ilkka Tuomi, Networks of Innovation: Change and Meaning in the Age of Internet, Helsinki: Oxford University Press, 2002, 104-121.

At the heart of the city stands the idea of community, of collaboration and solidarity. Cities are made of buildings, roads and infrastructure – but they are sustained by human ingenuity, by the power of shared values, by the renewal of aspirations, by the integrative and connective capacity of groups. Therefore, education and retraining of citizens based on cultural heritage, belief and value systems can serve as a pivotal link in bringing about social transformations and practices. "Creative cities" should be capable of mobilizing the potential for global impact, highlighting existing cultural assets and making creativity an essential element of a city's multidimensional economic base, growth and development path.

Culture is as a source and resource for creativity – an important component in finding innovative solutions to cities' challenges and an effective tool for addressing the open questions that rapid technological development inevitably poses. Creativity will inject vitality to the city itself and will serve as a foundation for a city's competitiveness. Design lies at the heart of the strategic nexus linking culture and sustainable development and innovation, playing a paramount role in today world's creative economy.

Culture is, as the 2013 Creative Economy Report put it, an enabler and driver of development, a force for and a vector for social inclusion. In May 2013, the 'Hangzhou Declaration' highlighted the critical role of culture as a resource for achieving sustainable urban development and management, by recalling that "a vibrant cultural life and the quality of urban historic environments are the key for achieving sustainable cities." The contribution of the arts, music and culture to income generation and jobs creation has convinced many cities to capitalize on culture and the arts as an activity to drive local development. Today, many cities use cultural heritage and artistic, musical and other cultural events and institutions to improve their image, stimulate urban development, and attract visitors and tourists as well as investments. 3

As the Beijing Consensus, adopted at First Beijing Forum on Arts and the City (October 2013) stipulated: "Sustainable urban development demands a multi-sectoral, multi-stakeholder approach that engages the private sector, civil society, foundations, local authorities, all levels of government, the media, academia as well as regional and global networks of cities. Local governments are closest to citizens and therefore best placed to promote cultural diversity, including support to safeguarding the living cultural heritage of communities." The potential of public-private partnerships can provide alternative and sustainable models for cooperation.

The Conference

Organized by UNESCO in collaboration with the City of Shenzhen and in conjunction with UNESCO's Creative Cities Network, the International Conference on Creative Design for Sustainable Development will provide an opportunity to share lessons learnt, best practices and information regarding the transformation of urban centers into efficient, sustainable green cities through creative thinking and innovative strategies and policies.

By gathering the representatives of the Creative City Network and experts in city designs and planning as well as policy-makers, renown architects, and private sector contributors, the Conference will be a platform for exchange and multi-stakeholder dialogue on key global issues.

During five sessions, the participants will address a number of essential issues such as innovation and conservation for sustainable urban living, the role of cultural and creative industries in sustainable cities of the future, the importance of creative technologies and infrastructure (water, sanitation and food security) for sustainable city development and the limits and challenges associated with designing innovative transportation systems.

Technology and innovation, as expressions, tools and enablers of collective imagination, are critical components in driving economic growth in future cities. The relation between design and technology is therefore a key to sustainability. This is why its analysis and strategic development should be part of the international development agenda and has an important role in strengthening the Creative Cities Network.

To do so, many questions require to be posed and issues need to be discussed by social stakeholders in multiple fields and competence areas.

How do design processes scale to address social behavior and accessibility of systems and objects over time? Can digital mechanisms for city infrastructure such as waste management, water, sanitation and power supply be designed for future platforms? And how can the UNESCO Creative Cities Network stimulate strategic and innovative thinking in this respect among decision-makers and stakeholders concerned? What are the models, best practices and working hypotheses that may underpin strategic improvements and collaboration in this area?

Urban infrastructures are increasingly being equipped with sensors and other means of collecting information and channeling everyday activities of citizens, from energy use and driving habits to parking patterns, to software and networks that analyze and process data. As a result, cities -- and communities -- are becoming "smarter". More and more people, objects and components of our environment, such as parking spaces are becoming connected, paving the way for future models of traffic and energy use. In reviewing some of the present and upcoming practices and innovations, we hope to generate fruitful exchanges on a number of key questions: What are the good practices and the models, for sustainable cities in terms of transport systems and infrastructures, including roads, rails, airports and shipping lines? What are the possible roles and impacts of technical and social innovations and creativity?

One of the main challenges for cities today is to address the political, cultural, social and economic barriers that prevent large-scale adoption of sustainable and socially integrated development models. What should cities keep what should they discard and change, to ensure sustainable positive transformation? How can they promote a sustainable environment shaped both by innovation and by their diverse heritage?

In particular, the Conference will focus on experiences and proposals underpinned by innovative and inclusive approaches to culture and development, through culture-led revitalization of urban areas and public spaces. Advanced technology, a diversified culture, enhanced linkages between design and other industries, and an international integration and networking – all this has enabled the UNESCO cities of design to transform themselves into global design centres and hubs.

By showcasing successful environmental and cultural sustainability through design, the conference will help identify options for growth and participation in the fragile context of present-day crises and global risks.

The UNESCO Creative Cities Network

Including an important group of cities particularly active in the field of design, the UNESCO Creative Cities Network addresses key challenges such as the need to make urban development more livable, sustainable, inclusive and creative, which is important for every city in the world. Contemporary cities share common challenges of planning, infrastructure and resources, housing and environment, welfare and health. And yet every city is different, and every solution must be tailored to specific needs and contexts. To this end, effective policies remain strategically important. Success in attracting creative industries or creative actors is an outcome of long-term policies affecting soft infrastructures, directly involving UNESCO's domains of expertise: education, the sciences, culture and communication and information.

UNESCO Creative Cities active in the field of design are well-placed to engage with other cities, exchange experience and knowledge, draw on best practice and inspiration from other world centers, and promote cross-fertilization of the best and brightest minds.

These cities - Berlin, Buenos Aires, Graz, Montreal, Nagoya, Kobe, Beijing, Shenzhen, Shanghai, Seoul and Saint-Etienne – have already a significant story of interaction and joint programmes, whose last episode is the organization, upon initiative of Shenzhen of an important international contest for young designers.

These Cities of Design can build on the Conference to launch a think-tank that, by focusing on the collaborative potentiality and connectivity of their creative industries, could function as a do-tank and engine of new design and sustainability models with global impact.

概念说明

《…我们需要一个并不是简单组织起来的环境，而是一个富有诗意并且有活力的环境。它代表了个人、社会、期许、历史传统、自然环境、复杂的功能以及城市的变化。》[10]

未来城市可持续发展的创新性

目前，地球的物理结构和生态环境系统面临巨大的压力，尤其是由于商业工业的发展和违规行为，对我们的地球造成了巨大的破坏。碳排放为基础的经济和消费模式带来了危险造成了全球变暖、干旱、荒漠化、砍伐森林、环境退化、洪水和海啸等等，所有这些灾难性的影响又蔓延到食品连锁、供水和卫生设施等方面。

由于城市化的迅猛发展，城市发展的包容性、规模以及影响等方面，都是人们争论的焦点。城市需要更多的创新战略和新的模式来定义城市化生活。城市是过去与未来，传统与现代，本土与世界的交汇点，在这里，经济、社会以及文化等方面能够紧密结合并持续发展。

因此，支持城市成为新的“创新”场所显得尤为重要，在这里，有更多的空间来保证各种实践的完、新的知识的产生、阐述并整合新的设计以及技术缺陷。[11]创造力被誉为一种特殊的资源与天赋，是知识的创造性、创新性和适应能力的重要组成部分。当世界面临着局限的时候，创新也许是一种可再生资源。

现在我们所面临的紧迫任务是城市基础设施的重新设计，并且更有效地提供物品和服务。这些趋势需要心得方式去解决这些问题来适应这个快速变化和不断发展的社会。例如，如高速公路上的拥堵情况，当地的交通瓶颈，缺乏清洁和绿色能源产业，一个广范围覆盖的服务、和清洁水资源的供应等等。城市领导人如何采取富有建设性的措施来更好的为可持续发展的未来以及人类的良好生活做贡献。创新者、规划者和决策者必须协调城市人口增长，城市日益增长的需求以及不断减少的资源等问题。

使城市发展得更加适宜居住的，更加可持续、具有包容性是世界上每一个城市都要面临的重大的挑战。虽然充足的供水、卫生和社会服务已经被提供，但必须强调的是,一个城市做出可持续性和创意的决定，不仅仅是一种政策，更重要的是一种社会过程。创新是不能和当地的社会背景、文化分开。

10 Lynch K，城市影响，剑桥：麻省理工出版社，1960，119页，联合国教科文组织非官方翻译。
11 关于“革新的范围”的讨论：Ilkka Tuomi，革新的网络：互联网时代的意义于改变，赫尔辛基：牛津大学出版社，2002年，第104-121页。

社区、合作和团结是城市的中心议题。 通过人类的智慧，共同价值观的力量，期许的重新建立，连接各个组织等等，城市的建筑物、道路和基础设施会更加持久发展。因此，基于文化传统、信仰和价值的教育和公民培训可以作为社会变革和实践的一个关键步骤。“创意城市”应该是能够调动潜在的全球性的文化资源,让创造力成为城市经济发展道路上的一个重要因素。

文化，作为创造力的原动力，是寻找创新方法解决城市面临的挑战的重要组成部分，是解决开放性问题的一种有效工具。创造力将会给城市本身注入活力同时提升城市的竞争力。设计连接这文化、可持续发展和创新，与此同时，在世界创意经济中扮演了很重要的作用。

2013创意经济报告[12]把文化作为发展的推动和驱动程序，是一种社会包容性的力量。2013年5月，杭州宣言强调了文化在城市可持续发展和管理方面作为一种资源的重要作用。通过“一个充满活力的文化生活和的城市历史环境的质量，都是城市可持续发展的关键。”许多城市充分利用艺术、音乐和文化等资源创造了收入，提供了就业机会。今天，很多城市利用文化遗产、艺术、音乐和其他文化活动来提升他们的形象，促进城市发展，吸引游客以及招商引资。

2013年10月在北京举办了首届艺术和城市论坛，《北京共识》“可持续的城市发展要求一个多部门、多个利益相关方参与的方式，结合私营部门、民间团体、基金会、地方主管机构、各级政府、新闻媒体、学术界以及区域和全球性的城市网络。当地政府是最接近公民的，因此也是最能促进文化的多样性的。潜在的公共和私营部门同样提供了双向性的和可持续性的合作模式。

会议

“可持续发展的创意设计”国际大会将在联合国教科文组织的巴黎总部举行。此次会议由联合国教科文组织举办，深圳市联合承办。创意设计城市的代表，在城市设计、规划方面的专家，政策制定者，建筑师以及一些私营设计公司负责人将会参与到此次会议中来。

此次会议为全球发展中遇到的问题的解决提供了一个经验分享、信息交流的舞台。会议将重点放在文化和发展中的创新性和包容性的经验和建议分享。先进技术，多元文化，设计与其他产业联系的增强，国际一体化和网络等等都可以使得这些教科文创意城市转变为全球设计中心于枢纽。

12 创意经济报告，UNDP/UNESCO，2013。

会议分为五个专题，与会者将讨论一些基本的问题，例如创新和保护可持续的城市生活，文化和创意产业在未来城市可持续发展中的作用，创意科技和基础设施(水资源、卫生和粮食安全)对于未来城市可持续发展的重要性以及它们所面临的局限与挑战。

技术和创新是推动未来城市经济发展的关键组成部分。设计与技术之间的关系因此也是可持续的。这也就是为什么对于技术和创新的分析和战略发展应该成为国际发展议程中的一部分，并且成为加强创意城市网络的重要组成部分。许多新的问题由此产生，这就需要社会领导这在多个领域对此进行讨论。

技术和创新是推动未来城市经济增长的重要组成部分。随着时间的推移，我们如何设计一个有效的流程来检测系统的运作和目标的可行性？数字机械化在未来城市发展中是否该在城市基础设施如废物管理，水，卫生和电力供应等方面重新设计？联合国教科文组织的创意城市网络战略和创新思维如何激励决策者和利益相关者？什么的规范，实践经验和工作设想可以巩固这一领域的战略发展?

城市基础设施越来越多地融入人们的生活，从能源消耗，驾驶习惯到停车模式，用软件和网络工作来分析和处理数据。因此，城市 - 和社区 - 正变得“聪明”。人，物与环境越来越多的融为一体，例如，停车位变得紧凑，为未来交通和能源的运用提供了资源。回顾当前和未来的某些实践和创新，我们希望在一些关键问题上产生富有成效的交流：在城市可持续发展中，尤其是城市交通系统和基础设施的发展，包括公路，铁路方面，机场及航运公司，哪些模型和实践是有益的？哪些方面是技术和社会创新可能发挥作用的领域?

今天，城市面临的主要挑战之一是，如何跨越政治、文化、社会和经济的障碍来防止大规模的千篇一律的发展模式。城市应该保存或改变哪些方面来确保可持续发展的良性转变？如何利用各种物质或者非物质的遗产来提升他们可持续发展的环境?

此次会议为全球发展中遇到的问题的解决提供了一个经验分享、信息交流的舞台。会议将重点放在文化和发展中的创新性和包容性的经验和建议分享。先进技术，多元文化，设计与其他产业联系的增强，国际一体化和网络等等都可以使得这些教科文创意城市转变为全球设计中心于枢纽。

通过展示这些成功的环境以及文化的可持续性设计，这次会议将会有助于未来相关项目的发展以及应对未来全球性发展的风险。

联合国教科文组织创意城市网络

教科文组织创意城市网络主要面临的挑战是，使城市发展得更加适宜居住、可持续、兼容性与创造性，这对世界上的每一个城市都是十分重要的。现代城市在城市规划、基础设施、资源、住房、环境、福利和健康等方面面临着同样的挑战。但是每个城市又有其各自的特点，每种解决方案必须适应当地的需求。为此，有效的长期的战略政策显得尤为重要。成功地发展创意产业或者创意行动是长期发展软实力的一个重要成果，也同样涉及到了联合国教科文组织的专业领域：教育、科学、文化和通信。

联合国教科文组织创意城市项目在设计领域积极地展开各项活动，与各个创意城市一起，交流经验于知识，从世界其他城市的实践中获得灵感，提供最佳方案与灵感。这些城市包括柏林、布宜诺斯艾利斯、格拉茨、蒙特利尔、名古屋、神户、北京、深圳和上海,首尔和法国圣艾蒂安。它们之间已经进行了充分的交流，并且开展了合作项目，深圳同时倡议为年轻设计师举办依次国际性的比赛。

这些创意城市可以组建一个智囊团，在世界的范围内重点发展有潜能且有合作性的创意产业，发展新的设计。

List of participants

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Nathalie ARNOULD	Design Manager, Saint-Etienne Métropole & Cité du Design, France
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Eric DUBOSC	Architect DPLG, France Honorary Fellow of American Institute of Architecture (AIA), Honorary Fellow of Assioaçao Brasiliera de Engenharia (ABECE) BRAZIL and ABCEM, Professor at l'Ecole Nationale Supérieure d'Architecture (Paris, France), Professor at HIT (Harbin, China), Architect councilor of the French State, World Bank Expert, Chevalier des Arts et Lettres
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