



Responsible Consumption and Production
负责任的消费和生产

Creativity 创意 2030

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Preface

卷首语

By **Sarah Orlando**
萨拉·奥兰多

“To achieve the Social Development Goals, countries must change patterns of consumption and production to decouple human well-being from environmental degradation, including through circularity that promotes reuse and recycling of materials,” states the latest working paper on SDG implementation, entitled Six Transformations, of which you can read more in this issue.

We consciously chose Goal #12. “Ensure Sustainable Consumption and Production Patterns” as our thematic anchor for this issue of Creativity 2030 Journal [C2030] considering it one goal that ultimately connects them all.

Economic and social progress over the last century has been accompanied by environmental degradation that is endangering the very systems on which our future development—indeed, our very survival—depends. Globally, we continue to use ever-increasing amounts of natural resources to support our economic activity. About one third of the food produced for human consumption each year is lost or wasted, most of it in developed countries. As shown in the SDG Report 2019, shrinking our material footprint is a global imperative.

“Material footprint” refers to the total amount of raw material extracted to meet final consumption demands. It is one indication of the pressures placed on the environment to support economic growth and to satisfy the material needs of people. The rate of natural resource extraction has accelerated too rapidly since

“为了实现可持续发展目标，各国必须改变消费和生产模式，使人类福祉与环境退化脱钩，包括通过促进材料再利用和再循环的循环方式。”最新的可持续发展目标实施工作文件《六个转型》中如是写到。本期杂志内页中将有详细内容。

我们有意选择目标12“保证可持续的消费和生产模式”作为本期主题，是因为这是一个最终将所有联系在一起的目标。

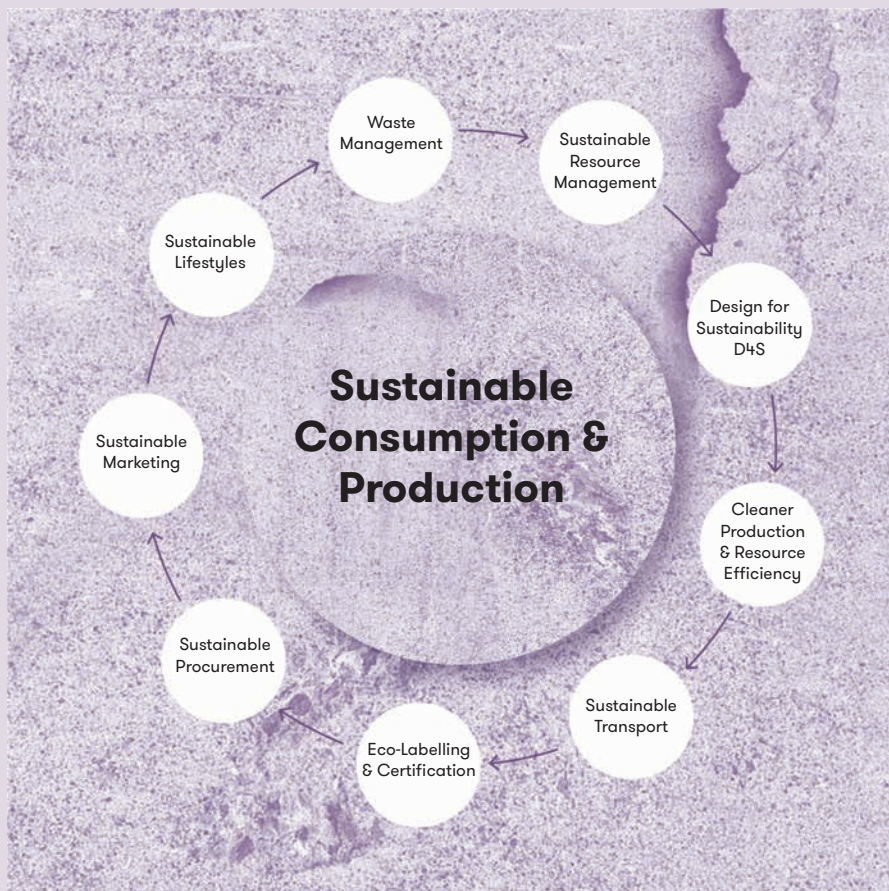
上个世纪的经济和社会进步以环境退化为代价，现在正危及我们未来发展，以及我们未来生存所依赖的体系。在全球范围内，我们还在持续依赖自然资源来支持经济活动。每年生产供人类食用的食物中，约有三分之一被丢弃或浪费，其中大多数发生在发达国家。正如《2019年可持续发展目标报告》所警示的，减少材料足迹是全球的当务之急。

材料足迹指的是为满足最终消费需求而提取的原材料总量，它显示了为支持经济增长和满足人民的物质需求而对环境施加的压力。自2000年以来，自然资源开采速度增长过快，超过了人口和经济增长。如果不采取协调一致的政治行动，预计到2060年开采量将增至1900亿吨（较2017年翻了两番还多）。

《2019年可持续发展目标报告》的另一个重要结论也在意料之中：最富裕国家人民的的生活方式在很大程度上依赖从较贫穷国家开采的资源。

2017年，高收入国家拥有最高的人均材料足迹（约人均27公吨），比中高收入国家高出60%，是低收入国家（人均2公吨）的13倍还多。高收入国家的材料足迹大于其国内的材料消耗，说明这些国家的消费通过国际供应链依赖于其他国家的材料。

2018年，71个国家和欧盟报告了共303项全球性促进可持续消费和生产的政策及措施。尽管如此，社会福利却极少被纳入政策目标或衡量标准。大多数报告的政策和文书调查了它们对空气、土壤和水污染、废物减少和温室气体排放的影响，但只有11%考虑了它们对健康的影响，7%考虑了它们对性别的影响。我们需要更进一步揭示这些政策能给所有可持续发展目标带来的益处。



IN ORDER TO ACHIEVE TARGETS ON CLIMATE, IT IS CRITICAL THAT WE TRANSFORM HOW WE DESIGN, MAKE, AND USE PRODUCTS AND FOOD

为了实现气候目标，
我们必须改变设计、
制造和使用产品及
食物的方式

2000, outpacing population and economic growth. Without concerted political action, it is projected to grow to 190 billion metric tons by 2060 (more than doubling the level reached in 2017).

Another important outtake from the SDG Report 2019, unfortunately not so unexpected, is that the lifestyles of people in the richest nations are heavily dependent on resources extracted from poorer countries. In 2017, high-income countries had the highest material footprint per capita (approximately 27 metric tons per person), 60% higher than upper middle-income countries, and more than 13 times the level of low-income countries (2 metric tons per person). The material footprint of high-income countries is greater than their domestic material consumption, indicating that consumption in those countries relies on materials from other countries through international supply chains.

In 2018, 71 countries and the European Union reported on a total of 303 policies and measures to promote sustainable consumption and production in place globally. Nonetheless, social benefits are rarely included in policy objectives or measured in implementation. Most of the reported policies and instruments examined their impact on air, soil and water pollution, waste reduction and greenhouse gas emissions. Only 11% considered their impact on health, and 7% looked at their impact on gender. Demonstrating the benefits of such policies to all the SDGs will be essential.

“转向可再生能源在应对气候变化方面发挥着至关重要的作用，但光靠这一点是不够的。为了实现气候目标，我们必须改变我们设计、制造和使用产品及食物的方式。通过向循环经济转型来完成这一任务，可以使我们满足不断增长的全球人口的需求，同时创造一个繁荣、有弹性并能长期保持的经济。”女爵士艾伦·麦克阿瑟在其同名基金会最近公布的一篇报告中说到。

我们不可能通过单纯一期杂志就完全把握到这种转变的范畴和意义，因此我们试图把重点放在能够在全球和地方产生共鸣的主题上，从而揭示它们在实际行动方面的潜力。

这本由联合国教科文组织主办的国际创意与可持续发展中心推出的《创意2030》杂志并不是有关最近或最新的事情；它关乎针对社会挑战的切实可行的解决方案，聚焦那些从创造性思维和创新性解决问题中诞生，并有可能赋能当地社区、推动国际讨论的方案。

“Switching to renewable energy plays a vital role in addressing climate change, but this alone will not be enough. In order to achieve targets on climate, it is critical that we transform how we design, make, and use products and food. Completing the picture through a transition to a circular economy can enable us to meet the needs of a growing global population, while creating a prosperous and resilient economy that can run in the long term.” says Dame Ellen MacArthur in the last report published by the eponymous foundation.

It is impossible to capture the full extent of implications of such a transition in only one journal, so we tried to focus on subjects that would resonate both globally and locally, thus already showing their potential for implementation and practical activation.

Ultimately, Creativity 2030 Journal (C2030), promoted by International Centre for Creativity and Sustainable Development under the auspices of UNESCO (ICCSD), is not about the latest or the newest. It is about practical actionable solutions to social challenges, focusing on those born from creative thinking and innovative problem-solving, and with the potential to empower local communities and drive international debate.

Throughout this issue we dealt with urgent topics connected to the food chain and the fashion industry in particular. These are two of the most pollutant industries, affecting both the sourcing and exploitation of natural resources, and consumption – our lifestyles and what we deem to be positive.

In this sense, innovation and creative thinking not always lie in visible actions, but in designing processes and new applications that can fundamentally change consumer perceptions, even sometimes on very micro-scale ideas, which we have also tried to present.

In dealing with Responsible Consumption and Production, it is impossible not to raise climate-related questions, and we are happy to portray the on-going project Shifting Sands by Magnum photographer Sim Chi Yin, and to show some works by Adaptive Capacity, a recently awarded UK creative environmental organization.

Another urgent topic is sustainable fashion at large: how to make it circular, how to use blockchain to make it more traceable, and the question connecting production and consumption that focuses on crucial aspects deeply rooted in culture, as the article by ATLAS Studio Co-Founder Catherine McMahon unfolds.

In China Logs and Serial Innovators we delved into the topic of waste management systems, new materials research, and the environmental challenges that the take-out industry has imposed on the global metropolis: issues where China, given its importance in global discourse, can make a real difference for our planet, even in the short to medium term. ■

Six Transformations to Achieve the Sustainable Development Goals (SDGs)

实现可持续发展目标的六大转型



我们在本期讨论了与食品链相关、与时尚产业相关的迫切话题。这是两个污染最严重的行业，在生产和消费两端均负有责任：一端是对自然资源的开采，一端又影响着我们的生活方式和价值观念。

从这个意义上说，创新和创造性思维并不总是存在于看得见的行动中，也存在于能够从根本上改变消费者认知的设计过程和新应用中，有时作用于非常微观的一些概念中，这也是我们试图呈现的。

谈论负责任的消费和生产时，不可能不提与气候相关的问题。我们非常高兴在本期收录正在进行的《流沙》摄影项目，这是由玛格南摄影师沈绮颖拍摄的，以及最近获得英国创意环境组织嘉奖的机构“适应能力”的一些作品。

另一个紧迫的话题是整个时尚产业的可持续性：Atlas工作室联合创始人凯瑟琳·麦克马洪在文章中展示了如何使产业循环，如何使用区块链使商品更具可追溯性，以及将生产与消费联系起来，这一问题深深植根于文化的关键方面。

在“中国日志”板块，我们还特别尝试讨论废物管理系统专题和新材料的研究，以及外卖行业正在对全球大都市带来的环境挑战：考虑到中国在全球讨论中的重要性，这些问题很可能会对我们的地球产生巨大影响，哪怕只是在中短期。■



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The Big Picture

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Consumption and Production: Imagine a Virtuous Circle

By **Jean-Louis Turlin**
former New York correspondent for Le Figaro

消费和生产： 想象一个良性循环

路易·特林

法国《费加罗报》前驻纽约记者



“Our house is burning and we are looking elsewhere”. Since this wake-up call was issued by the recently deceased former French President Jacques Chirac at the 2002 Earth Summit in Johannesburg, 17 years ago, our planet has been on fire continuously, with flames raging across the Amazon this past summer and the local authorities looking elsewhere.

Fortunately, a growing number of politicians, business leaders and ordinary citizens are heeding the warnings of experts and no longer “looking elsewhere”, if they ever did. Adults are being made to answer by the younger generations, whose anger was expressed by the Swedish teenager Greta Thunberg at the United Nations General Assembly in September.

Anger is not the answer though. Action is in order, and being taken. For instance, a global company from Greta’s country, IKEA, has committed to make all its products – mostly furniture – according to “circular” principles by 2030, “meaning that they can be reused, refurbished or recycled”.

In an article published by the design magazine Dezeen on September 4, journalist Augusta Pownall explains that “a circular business is one that eliminates waste and pollution while restoring natural systems”. She quotes Ellen MacArthur, who established a foundation by the same name: “If you make a car with less material... You’re still consuming materials. Whereas within a circular model, from the outset you design in a way whereby that product comes back into the system: the components are recovered, the materials are recovered”.

A circular model does sound like an ideal solution allowing production to operate in a virtuous circle. Other industries are inspired by it. Take Lablaco, a circular fashion platform, which aims to enable recirculation of 100,000 fashion items to save an estimated 2,000 tons of CO₂. Similarly, according to the Ellen MacArthur Foundation, “By doubling the average number of times a garment is worn, we can almost halve the fashion industry greenhouse gas emissions”. The 10% of global greenhouse-gas emissions

“我们的房子着火了，而我们还在张望别处。”最近逝世的法国前总统雅克·勒内·希拉克17年前在约翰内斯堡的2002年地球峰会上给我们敲了警钟。自那以来，我们的地球一直在燃烧，今夏亚马逊雨林烈焰熊熊，巴西当局却在顾左右而言他。

幸运的是，越来越多的政客、商界领袖和普通民众都听到了专家们的警告，不再顾左右而言他。以瑞典“气候少女”格蕾塔·通贝里为代表的年轻一代，9月在联合国大会上表达了对成年人不作为的愤怒之情，要求成年人行动起来。

但愤怒并不是答案。行动已有准备，而且正在进行中。例如，来自瑞典的全球性公司宜家承诺，到2030年，其所有产品（以家具为主）都将遵照“循环”原则生产，“这意味着它们可以重复使用、翻新或回收利用”。

在设计杂志Dezeen于9月4日发表的一篇文章中，记者奥古斯塔·鲍纳尔解释说，“循环业务在恢复自然系统的同时消除浪费和污染”。她引用艾伦·麦克阿瑟（同名基金会的创立者）的话：“如果生产汽车时使用了更少的材料你依然在消耗材料。但在循环模式下，设计从一开始就是以一种产品终将返回系统的方式进行的：组件会被回收，材料会被回收。”

循环模式听起来确实是一个理想的解决

generated by the fashion industry make it the world's second most polluting.

A host of new materials aimed at reducing carbon footprint is being tested in the construction industry, from self-healing concrete to mass timber and bio plastic – made from biomass resources such as algae. Recycled materials like scrap metal are being used in new buildings, including cardboard for insulation purposes.

Sustainable Development Goal 12 (responsible production and consumption). One of the targets consists in halving per capita global food waste at the retail and consumer levels by 2030.

And yet, “820 million people are chronically hungry”, write Jeffrey D. Sachs and Angelo Riccaboni in an editorial for Project Syndicate. The challenge is not only to produce enough to feed a planet of 7.7 billion people, a population which may reach

方案, 允许生产在良性循环中运行。其他行业也受到了它的启发。比如循环时尚平台 La-blaco, 目标是回收10万件时尚产品, 以减少约2000吨的二氧化碳。同样, 根据艾伦·麦克阿瑟基金会的说法, “一件衣服的平均穿着次数增加一倍, 我们几乎就能将时尚界的温室气体排放量减半”。时尚界产生的温室气体排放量占全球总量的10%, 这让它成为世界第二大污染源。

建筑业正在测试许多旨在减少碳足迹的新材料, 从自愈混凝土到大量木材和生物塑料(由藻类等生物质资源制成)。废金属等回收材料被用在新的建筑物上, 包括用于绝缘的纸板。

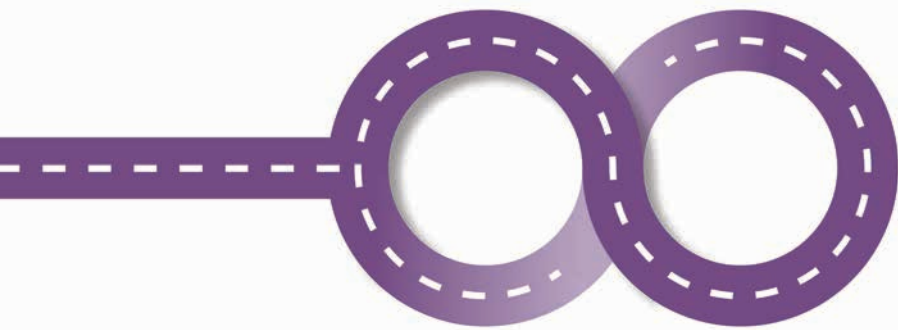
循环生产的目的是减少甚至消除浪费。然而, 多年来在塑料瓶回收过程中实施的环境措施已经显示出它们的局限性, 例如, 最近在海洋中出现了成吨的废弃物。回收塑料正在被用来制造更多的新瓶子, 这使得这种做法看起来像一个恶性循环。亚历克斯·理查森在他的博客中指出了一种全新的回收塑料瓶的方法: 塑料瓶可以用于生产PET地毯; 地毯使用寿命终止后, 这些柔软的纤维产品可以用在汽车零部件、填料和绝缘材料上。

浪费是食品工业中的一个主要问题。联合国可持续发展目标12(负责任的消费和生产)的导言中写道: “据估计, 每年生产出的食品中有大约三分之一——约13亿吨, 相当于1万亿美元——最终会在消费者和零售商的垃圾箱里腐烂, 或者因为糟糕的运输和收割习惯而腐烂。”目标12里提到的其中一项指标是到2030年在零售和消费端将全球人均粮食浪费减少一半。

然而, “8.2亿人长期处于饥饿中”, 杰弗里·萨克斯和安盖洛·里卡博尼在“报业辛迪加”的社论中写道。挑战不仅在于须生产出足够的粮食来养活地球上的77亿人口, 而且据联合国的数据显示, 到2050年这个数字可能达到96亿; 更关键的是还需提高标准, 这意味着将生活方式、生产实践与“健康和可持续的饮食”相协调, 因为按萨克斯和里卡博尼的说法: “我们知道快餐正在杀死我们。”事实上, “成年人肥胖人数达6.5亿”(联合国估计“全球有20亿人超重或肥胖”)。

健康饮食的定义可能需要修正。发表在《科学》杂志上的一份报告令人警醒: 全球日益增长的肉类消耗量(根据联合国的一项估计, 到本世纪中叶, 全球肉类消耗量将增长76%)正在严重影响环境。畜牧业的排放占二氧化碳、甲烷和其他氧化物总量的15%, 造成了生物多样性的消失。

种植动物饲料需要更多的土地, 这就导致了亚马孙地区的森林砍伐和大火。我们要如何打破这个恶性循环? ■



Circular production is all about the reduction, if not elimination of waste. However, environmental measures that have been enforced for years in the recycling of plastic bottles, for instance, have shown their limits, with tons of rejects surfacing recently in the oceans. Recycled plastic is being used to make ever more new bottles, which makes the practice look like a vicious circle. On his blog, Alex Richardson points to a new innovating way of recycling plastic bottles, which can be used in the production of polyethylene terephthalate (PET) carpets. At the end of their life as carpets, those soft and fibrous products can be used in car parts, stuffing and insulation.

Waste is a major concern in the food industry. “Each year, an estimated one third of all food produced – equivalent to 1.3 billion tons worth around \$ 1 trillion – ends up rotting in the bins of consumers and retailers, or spoiling due to poor transportation and harvesting practices”, reads the introduction to the United Nations’

9.6 billion by 2050 according to the UN, but to feed it better, which means aligning lifestyles and production practices with “healthy and sustainable diets”, as Sachs and Riccaboni put it: “We know that the fast-food culture is literally killing us.” Indeed, “650 million adults are obese”, they note (the UN estimates are that “two billion people globally are overweight or obese”).

The very definition of a healthy diet may have to be revised. A sobering report published in the journal Science warns that rising global meat consumption (by as much as 76% by mid-century, according to a UN review) is severely affecting the environment. Livestock production accounts for 15% of carbon dioxide, methane and other oxides, and livestock farming contributes to the loss of biodiversity.

Indeed, more land is needed to grow animal feed, which leads to deforestation and huge fires in the Amazon. How are we going to break this vicious circle? ■

Sustainability's Moment of Truth

By **Nicholas Stern**

可持续性的真相时刻

尼古拉斯·斯特恩

LONDON – When it comes to sustainability, 2015 was a landmark year. The international community signed on to the Sustainable Development Goals (SDGs) and adopted the Paris climate agreement, under which more than 190 countries have committed to reducing greenhouse-gas emissions (GHGs). In that year and the next, there were complementary agreements on finance, cities, and biodiversity. Taken together, these accords established a clear global agenda.

The challenge now is to deliver on that agenda, which requires clarity on both the objectives and on strategies to achieve them. Sustainability is about ensuring that future generations have opportunities that are at least as good as those available to the current generation, assuming they behave similarly to those that follow. Much, then, will depend on the assets we leave to those who come after us. Some assets take the form of physical capital, such as infrastructure, or human capital, including health and education. But it has become ever clearer that opportunities for future generations depend critically on natural capital (water, air, land, forests, biodiversity, and oceans), and social capital (public trust, strong institutions, and social cohesion).

This implies that it makes no sense to invest in physical capital that is harmful to public health, the natural environment, or social trust and cohesion. Sustainability demands that we invest in and protect all four forms of capital simultaneously. It requires

that we incorporate such principles into our economic theories and development models. Only by changing how we think about progress can genuine progress be made.

EMPOWERING PEOPLE

Fortunately, in some dimensions of sustainable development, particularly those related to human capital, the world has made remarkable progress since the end of World War II. Life expectancy has increased by around 30 years, and the global literacy rate has increased from around 50% to close to 90%. We have seen a significant decline in poverty, and reduced inequalities in health and education. Decolonization paved the way for democratization. These advances were fostered by the international order that emerged in the late 1940s and early 1950s, following three traumatic decades of social turmoil, economic depression, and world war.

This progress has occurred globally, though it has been strongest in



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在可持续性问题上，2015年是一个里程碑。国际社会签署通过了可持续发展目标，接受了巴黎气候协定，根据该协定，190多个国家承诺减少温室气体排放。2015年和2016年还涌现出各种金融、城市和多样性方面的补充性协议。这些协议一同构成了一幅清晰的全球日程。



emerging markets and developing countries. But while the advances made in many Asian countries have been significant, the pace of change in Africa has been somewhat slower. And far too many people still live in poverty, or are at a high risk of being pushed back into poverty by external economic, social, or environmental shocks.

The post-war developments in sustainability have coincided with a restructuring of the world economy. The balance of economic activity has shifted decidedly toward emerging markets and developing countries. At the same time, regions and countries have become increasingly interdependent through trade,

investment, finance, and the movement of people, not to mention fundamental technological change and the rise of digital technologies that collapse space and time. Since WWII, the global population has increased threefold, and output per head has risen by a factor of around 4. Thus, the total output has increased by a factor of around 12.

THE PRICE OF PROGRESS

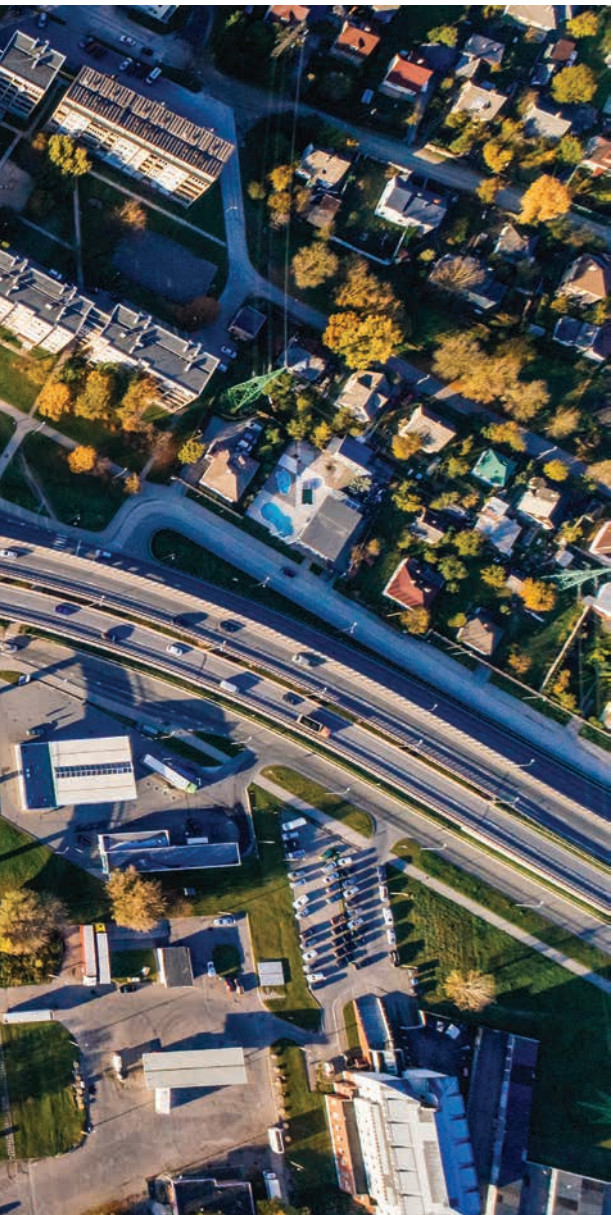
Most of this growth, however, was driven by fossil fuels, and thus has led to accelerating climate change, biodiversity loss, and the acidification of our oceans. Our natural capital has been severely depleted; now, social capital in many parts of the world is eroding. Mismanagement of structural change, combined with the response to

现在的挑战是实现这一日程,这就需要厘清目标和实现目标的战略。可持续性是为了确保子孙后代拥有至少与现世代一样好的机会——假设现世代和后代的行为大体相似。因此,很多事情取决于我们为后代留下什么财产。其中有些属于实物资本,如基础设施;或者人力资本,包括健康和教育。但现在愈发明显的一点是,子孙后代的机会最主要取决于自然资本(水、空气、土地、森林、生物多样性和海洋)以及社会资本(公众信任、强大的机构和社会凝聚力)。

这意味着投资于对公共健康、自然环境或社会信任及凝聚有害的实物资本毫无意义。可持续性要求我们同时投资并保护所有四种资本。这要求我们将这些原则纳入经济学理论和发展模式。唯有改变进步观,才能带来真正的进步。

赋能人民

幸运的是,在可持续发展的某些维度,特



政府加大承诺，会大大加快变化速度。现在，我们应该开始制定清楚、可信、可预测的长期政策和战略，同时保持灵活性

the 2008 financial crisis and its aftermath, has fueled mistrust and anger toward governing elites.

As we have seen, such conditions are ripe for populists and demagogues offering simplistic “solutions” to complex problems. From the Brexit referendum and US President Donald Trump’s election in 2016 to the rise of right-wing governments in Hungary, Italy, Poland, the Philippines, and Brazil, the loss of social capital has given rise to political outcomes that threaten to erode social capital even further.

For natural capital, the impact of human activities on the environment – be it the climate, the atmosphere, or

the oceans and other specific ecosystems – has been immense and unprecedented. GHGs and other atmospheric pollutants have increased substantially. Annual carbon dioxide emissions from the energy sector have soared, from around 9 gigatons in 1960 to around 35 Gt in 2016. As a result, the concentration of CO₂ in the atmosphere has risen from around 315 parts per million in 1960 to more than 400 ppm today; that is higher than at any point in the past three million years.

Though GHG emissions in some major economies have fallen in recent years, they are still increasing worldwide. We are already feeling the effects of a 1oC increase in average global temperatures relative to pre-industrial levels, in the form of heat waves, droughts, and other extreme weather events. Yet even with the Paris agreement’s current emissions-reduction targets, we are on track to experience warming above 3oC by the end of the century. The last time the planet was that hot, sea levels were 30-60 feet (9-18 meters) higher than they are today. A return to such temperatures would displace hundreds of millions – perhaps billions – of people, and would likely result in conflict on a global scale.

别是与人力资本相关的维度，人类自二战以来取得了可观的进步。寿命预期增加了大约30年，全球识字率从50%左右上升至近90%。贫困率大幅下降，健康和教育的平等也有所降低。去殖民地化为民主化铺平了道路。促成这些进步的是20世纪40年代末50年代初形成的国际秩序，而在此之前，是社会动荡、经济萧条和世界战争的创伤的三十年。

这一进步是全球性的，但幅度最大的还是新兴市场和发展中国家。许多亚洲国家取得了长足的进步，而非洲的变化速度则相对落后。太多人仍生活在贫困中，或者很容易就会被极端经济、社会或环境冲击打回贫困状态。

二战后可持续性的发展恰逢世界经济重组，经济活动的平衡决定性地移向了新兴市场和发展中国家。与此同时，地区和国家通过贸易、投资、金融和人力流动而变得互相依存，更不用说科技的根本性变化以及令空间和时间大幅“缩水”的数字技术了。自二战以来全球人口增加了三倍，人均产出更是增加了四倍。因此，总产出大约增长了12倍。

进步的代价

但是，这一增长大部分是由化石燃料所推动的，因此造成了气候变化加速、生物多样性损失和海洋酸化。我们的自然资本已经严重耗竭；如今，世界许多地方的社会资本也在恶化。结构性变化管理不善，加上应对2008年金融危机及其后果的措施，助长了针对执政精英阶层的不信任和愤怒情绪。

从2016年英国脱欧公投和特朗普当选美国总统，到右翼政府在匈牙利、意大利、波兰、菲律宾和巴西的崛起，社会资本的损失带来了可能进一步削弱社会资本的政治结果。

对于自然资本，不管是气候、大气还是海洋或其他具体的生态环境，人类活动带来的影响空前巨大。温室气体和其他大气污染大幅增加。能源行业的年二氧化碳排量一飞冲天，从1960年的90亿吨增长到2016年的350亿吨，导致大气中二氧化碳浓度从1960年的约315ppm增加到现在的400ppm以上；这一水平比过去三百万年中的任何时候都要高。

最近几年来，一些主要经济体的温室气体排放有所下降，但世界总量仍在上升。我们已经感受到全球平均气温较前工业化水平上升

A STRONGER COMMITMENT FROM GOVERNMENTS COULD ACCELERATE THE PACE OF CHANGE SUBSTANTIALLY. NOW IS THE TIME TO START DEVELOPING CLEAR, CREDIBLE, AND PREDICTABLE LONG-TERM POLICIES AND STRATEGIES, WHILE MAINTAINING FLEXIBILITY AS WE LEARN ALONG THE WAY

If that were not bad enough, the UN Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services estimates that over 75% of the planet's land has been substantially degraded. They conclude that nearly 700 vertebrate species have been lost since the sixteenth century. Meanwhile, plastic pollution, overfishing, coral bleaching, and other human impacts have caused severe damage to the world's oceans.

THE ONLY WAY FORWARD

Notwithstanding the pressures on the environment, much of the progress toward the SDGs achieved so far will most likely continue in the short to medium term, particularly in the areas associated with human capital, technology, and economic growth in emerging markets and developing countries. In the medium to long term, however, climate change and the collapse of ecosystems could reverse the progress made so far. That is to say, we are on a development path that is fundamentally unsustainable.

All is not lost. We understand the challenge, have begun to develop the tools for tackling it, and are building momentum for global action. New low-carbon technologies and falling renewable-energy costs point toward a viable pathway for achieving net-zero GHG emissions by 2050, even in sectors that were considered “too

difficult” to decarbonize just a few years ago, such as steel, cement, aviation, and long-distance transportation.

If emissions are net positive, concentrations rise and temperatures rise – hence the necessity for net zero. The earlier we reach net zero, the lower the temperature rise we will have to live with. The target enshrined in the Paris accord is well below 2°C, and preferably below 1.5°C; for the former we need net-zero CO₂ emissions by 2070, and for the latter by 2050.

The United Kingdom has already shown that reducing GHG emissions is perfectly complementary with sustainable economic growth. China has demonstrated that deploying renewable-energy systems on a large scale can rapidly reduce energy costs, thereby supporting investment and growth in other sectors. And India offers an example of how public procurement and directed distribution of LED lightbulbs can be used to improve energy efficiency, lower costs, and create new employment sectors.

Moreover, private-sector companies such as Unilever, along with pension funds such as AP4, have shown that integrating the SDGs into everyday business practices can be both sustainable and profitable for shareholders. Few predicted a decade

1°C会有什么影响,包括热浪、旱灾和其他极端天气事件。但是,即便根据巴黎气候协定的现有减排目标计算,到本世纪末,我们还是将体验到升温3°C的结果。上一次地球这么热的时候,海平面比现在高了9-18米。回归如此高温将让数亿人——也许是数十亿人——流离失所,可能爆发全球规模的冲突。

如果这还不够的话,生物多样性和生态系统服务政府间科学政策平台(IPBES)估算,75%以上的地球土地已经大大退化。他们推算,自16世纪以来,已有近700种脊椎动物灭绝。与此同时,塑料污染、过度捕捞、珊瑚白化和其他人类影响给全球海洋造成了严重伤害。

唯一的前途

尽管面临着巨大的环境压力,到目前为止所取得的SDG进步,很有可能会在短期到中期继续保持,特别是在新兴市场和发展中国家的人力资本、科技和经济增长等方面。但在中期到长期,气候变化和生态系统的崩溃将逆转这些进步。也就是说,我们现在走的是一条根本上不可持续的发展之路。

但还有一线希望。我们明白了挑战,已经开始开发应对挑战的工具,并在构建全球行动的动力。新低碳技术和可再生能源成本的下降指向了一条到2050年实现净零温室气体排放的可行之路,即使是我们几年前还认为“太难”去碳化的行业也是如此,如钢铁、水泥、航空和长途交通等。

如果排放为净正值,浓度就会上升,温度也会增加——因此有必要净零排放。我们越早实现净零排放,我们生活环境的升温幅度就越小。巴黎协定所规定的目标是远低于2°C,最好是低于1.5°C;对于前者,我们需要在2070年实现净零二氧化碳排放,而对后者,我们要在2050年实现。

英国已经证明,降低温室气体排放是对可持续经济增长的完美补充。中国已经证明,大

ago that all the major auto manufacturers would now be making large-scale investments in electric vehicles. But now it is easy to imagine that vehicles driven by internal combustion engines will be phased out over the next two decades, ideally sooner.

In a series of publications dating back to 2014, the New Climate Economy, which I co-chair, has detailed how inclusive growth and sustainability can be achieved side by side. By focusing on sectoral and technological change, we show that a policy agenda for economic growth and poverty reduction fits perfectly with one focused on sustainability, climate action, and inclusivity. The oft-assumed tradeoff between growth and sustainability is completely artificial.

CRUNCH TIME

Nonetheless, we are moving far too slowly. Whether we can manage the effects of climate change will depend on the actions taken now and in the next two decades. During that period, the global economy can be expected to grow by about 3% per year, on average, implying roughly a doubling of output. The area of urbanized land will also roughly double, as will the urban population over the next 40 years or so. Finally, to support this growth, investment in infrastructure will result in at least a doubling of the existing stock in the next 15 or 20 years.

At the same time that output, the urban footprint, and infrastructure double, GHG emissions must go in the opposite direction. To have a reasonable chance of keeping

temperatures well below 2°C, we will have to cut CO₂ emissions by at least 40% by 2040, and by much more to get to net-zero emissions by 2050. If future infrastructure investment looks anything like that of the past, we will not come anywhere close to that target. In fact, all infrastructure must be sustainable from now on. Otherwise, we run the risk of building capital that will lock in atmospheric GHGs at a dangerous level.

A sustainable, inclusive alternative to the status quo is now within our reach. The progress made to date has been achieved with relatively weak policy support. A stronger commitment from governments could accelerate the pace of change substantially. Now is the time to start developing clear, credible, and predictable long-term policies and strategies, while maintaining flexibility as we learn along the way.

With radical change will come disruptions that must be managed. Unless vulnerable individuals and communities are supported and protected, the political will necessary for the required policies can vanish, as the “yellow vest” (gilets jaunes) protests in France have shown. Fortunately, shifting to a sustainable economy will create enormous opportunities for workers at all levels. Managed well, the process will restore social capital, preserve natural capital, and harness our collective human creativity. Everything rests on what we do now and in the next few years. Will we deliver for future generations – and for ourselves? ■

规模部署可再生能源系统能够快速降低能源成本,从而支持其他部门的投资和增长。印度也提供了一个范例,说明公共采购和定向分配LED灯泡可以提高能源效率,降低成本,创造新的就业部门。

此外,联合利华等私营公司与AP4等退休基金合作,证明了将SDG纳入日常商业实践既能实现可持续,也能为股东带来收益。十年前,几乎没人预测到所有主要汽车制造商都会大量投资于电动汽车。但如今我们很容易想象,内燃机驱动的汽车将在未来二十年退出市场,最好更快一些。

由我参与共同主持的《新气候经济学》,在自2014年以来的一系列刊物中详细讨论了包容性增长和可持续性如何携手共进。通过聚焦于行业和科技变迁,我们证明了经济增长和减贫政策日程能够与聚焦于可持续性、气候行动和包容性的政策日程完美契合。通常认为的增长与可持续性非此即彼的关系,完全是人为造成的。

关键时刻

尽管如此,我们的动作仍然太慢了。我们能否遏制住气候变化的影响,全取决于现在和未来20年的行动。在此期间,全球经济预计将以年均3%的速度增长,即产出大致将实现翻番。城市化土地面积也将大致翻倍,未来40年的城市人口也是翻倍。最后,要支持这一增长,未来15至20年中基础设施至少需要在现有存量的基础上增加一倍。

在产出、城市足迹和基础设施翻番的同时,温室气体排放必须朝相反的方向发展。要想提高成功将升温幅度控制在远低于2°C的几率,我们需要在2040年将二氧化碳排放量降低40%;要想在2050年实现净零排放,所要求的减排力度还要大得多。如果未来基础设施投资和过去没有什么区别,我们根本无法接近这一目标。事实上,从现在开始,所有基础设施都必须可持续的。否则,我们所建设的可能就是会被锁定在危险大气温室气体浓度水平中的资产。

用可持续的包容性方案代替现状是我们力所能及之事。迄今所取得的进步是在政策支持相对较弱的情况下取得的,政府加大承诺,会大大加快变化速度。现在,我们应该开始制定清楚、可信、可预测的长期政策和战略,同时保持灵活性。

彻底的变化将带来扰动,我们必须管理好这些扰动。要保证弱势个体及社群得到支持和保护,否则必要政策所需要的政治意愿就会消失,法国“黄背心”运动就是明证。幸运的是,向可持续经济的转型将为各层次工人创造巨大的机会。管理得当的话,这一过程将恢复社会资本,保护自然资本,激发人类的集体创造力。一切都取决于我们现在和未来几年中的行动。我们会为子孙后代——也是为我们自身——而努力吗? ■

Food for Sustainable Development

促进可持续发展的粮食问题

By **Jeffrey D. Sachs** and **Angelo Riccaboni**
杰弗里·D.萨克斯, 安盖洛·里卡博尼



NEW YORK – Feeding a planet of 7.7 billion people is no easy matter. Every person on the planet needs, expects, and has the right to a healthy diet. Every farmer needs, expects, and has the right to a decent livelihood. The roughly ten million other species on the planet need a habitat in which they can survive. And every business that produces, processes, and transports food needs and expects to earn a profit.

It's a tall order – and it's not being fulfilled. Over 820 million people are chronically hungry. Another two billion or so suffer from micronutrient deficiencies, such as a lack of vitamins or proteins. Around 650 million adults are obese, an epidemic caused in part by ultra-processed foods that are stuffed with sugar, saturated fats, and other chemical additives.

But the problems go far beyond hunger and diet. Today's agro-industrial practices are the main cause of deforestation, freshwater depletion and pollution, soil erosion, and the collapse of biodiversity. To top it off, human-induced climate change, partly caused by the food sector, is wreaking havoc on crop production. With more warming and population growth ahead, the crisis will worsen unless decisive changes are made.

The food industry is a powerhouse of the global economy and includes some of the best-known brand names, because we connect with them every day. Solving the many intersecting food crises will be impossible unless the food industry changes its ways. Fortunately, there is an important

glimmer of hope. A growing number of food companies understand the challenge and want to forge a new direction that is consistent with human health and planetary survival. We have been asked by some of these industry leaders, convened by the Barilla Foundation, to help identify the steps needed to align the food sector with sustainable development.

Our starting point is another source of hope. In 2015, all 193 members of the United Nations agreed unanimously to two vital agreements. The first, called Agenda 2030, adopts 17 Sustainable Development Goals (SDGs) as a roadmap to human wellbeing and planetary safety. The second, the Paris climate agreement, commits the world's governments to taking decisive action to keep global warming to less than 1.5o Celsius. Both the SDGs and the Paris agreement require decisive changes in practices by the food industry.

In our report, we call on all companies in the food sector, both producers and distributors, to adopt clear guidelines, metrics, and reporting standards to align with the global

goals. Specifically, each company must address four critical questions.

First, do the companies' products and strategies contribute to healthy and sustainable diets? We know that the fast-food culture is literally killing us. The industry has to change, urgently, to promote healthy diets.

Second, are the company's production practices sustainable? Too many companies are engaged in chemical pollution, massive waste from packaging, deforestation, excessive and poorly targeted fertilizer use, and other environmental ills.

Third, are the company's upstream suppliers sustainable? No consumer food company should use products from farms that contribute to deforestation. The destruction of forests in the Amazon and Indonesia – literally a scorched-earth process – underscore the need to barcode all food products to ensure that they are sourced from sustainable farms.

Lastly, is the company a good corporate citizen? For example, aggressive tax practices that seek to exploit legal loopholes or weak enforcement processes should be avoided, as they deprive governments of the revenues needed to promote public services and thereby achieve the SDGs.

As part of our work, we examined the food industry's current reporting practices. While many companies purport to pursue sustainable development, too few report on the

healthfulness of their product lines or how their products contribute to healthy and sustainable dietary patterns. Too few recognize that they are part of the environmental crisis, either directly in their own production, or as buyers of products produced in environmental hotspots such as the Amazon or Indonesia. And companies don't report in detail on their tax practices. In short, the food industry's commitment to sustainability is still too often more high-minded sentiment than actual reporting and monitoring to ensure alignment with the SDGs and the Paris accord.

But we are not pessimistic. Around the world, young people are demanding a sustainable and safe way of living and doing business. We believe that companies, too, will change. After all, companies need customers who are satisfied, workers who are motivated, and the respect of society as a tacit "license to do business." Some of the cases we analyzed give us hope that change is possible. As our project continues in the coming year, with the aim of working with the industry to ensure that performance, reporting, and monitoring are aligned with sustainable development, we will keep the public informed of what we see and learn.

The food sector is a key part of a larger picture. World leaders gathered at the UN this week to review progress – or lack thereof – on the SDGs and the Paris agreement. They must keep in mind one crucial fact: the world's people are demanding change. We have the know-how and wealth to achieve a prosperous, inclusive, and sustainable world. The business sector must urgently recognize, acknowledge, and act upon its global responsibilities. ■

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养活一个77亿人口的星球绝非易事。地球上每个人都需要、期望且有权利享受健康饮食；每个农民都需要、期望且有权利过上体面的生活；地球上约一千万个其他物种需要能够存活的栖息地；每家生产、加工和运输粮食的企业都需要且期望获得利润。

这是一项艰巨的任务——而且现在还没有达成。全球有超过8.2亿人长期处于饥饿状态，另有大约20亿人患有微量元素缺乏症，如缺乏维生素或蛋白质。约6.5亿成年人处于肥胖状态，这种流行病部分是由于食用含有糖、饱和脂肪和其他化学添加剂的超加工食品所致。

但问题还不止于饥饿和健康饮食。今天的农业、工业实践是造成森林砍伐、淡水枯竭及污染、土壤侵蚀和生物多样性崩溃的主要理由。更严峻的是，部分由食品行业造成的人类所引发的气候变化正在严重破坏农作物生产。随着未来气候进一步变暖和人口进一步增长，除非做出决定性的改变，否则危机将进一步恶化。

食品行业是全球经济的支柱产业，其中一些品牌闻名遐迩，因为我们每天都要同它们打交道。除非整个食品行业改变方法，否则解决多重交叉的粮食危机几无可能。

幸运的是，现在出现了重要的一线希望。越来越多的食品企业了解到这一挑战，并愿意打造一个符合人类健康和地球生存要求的新方向。由百味来基金会牵头召集起来的一些行业领袖，请求我们协助制定协调食品行业和可持续发展目标的步骤。

我们就从另一个鼓舞人心的消息出发。2015年，联合国193个成员国一致通过了两项重要协定：其一是《2030年议程》，通过了17项引导人类福祉和地球安全的可持续发展目标；其二是《巴黎气候协定》，该协定要求全球各国政府果断采取行动，确保全球变暖保持在1.5°C以下。可持续发展目标和巴黎协定均要求食品行业对自身的生产方式进行彻底变革。

我们在报告中呼吁食品行业的所有企业，包括生产商和分销商在内，奉行符合全球目标要求的明确指导方针、报告标准和指标。具体而言，每家企业必须解决四个关键问题。

第一，企业产品及战略是否有助于促进健康和可持续饮食？我们知道快餐文化正在实实在在地杀人。行业必须马上做出改变，才能促进饮食健康。

第二，企业生产流程是否可持续？太多企

业存在化学污染、大规模包装浪费、森林砍伐、过度及不明目标的化肥使用以及其他环境问题。

第三，企业的上游供应链是否可持续？任何消费食品企业均不应使用来自砍伐森林的农场的产品。亚马孙流域及印度尼西亚的雨林破坏简直就是焦土政策，凸显出非常有必要对所有食品进行编码，以确保它们来自可持续农场。

第四，公司算不算好的企业公民？例如，应当避免试图利用法律漏洞或执法程序薄弱环节的激进税收做法，因为上述做法剥夺了政府促进公共服务从而实现可持续发展目标所需的收入。

我们在工作中审查了食品行业目前的报告流程。尽管许多企业声称追求可持续发展，但鲜有企业报告其产品线的健康程度或者自身产品如何促进健康和可持续饮食。很少有企业认识到自己是环境危机的组成部分，要么通过直接生产、要么通过购买亚马孙或印度尼西亚等环境热点地区所生产的产品，而且企业也没有详细报告内部的税收准则。简言之，食品行业对可持续发展的承诺经常还停留在高尚的情操阶段，而非通过实际的报告和监测来确保符合可持续发展目标及巴黎协定的要求。

但我们并不就此悲观。世界各地的年轻人正在要求一种可持续和安全的的生活及营商模式，我们相信企业也会做出改变。归根结底，企业需要满意的用户、干劲十足的员工，以及起到默认“经商许可证”作用的社会尊重。我们所分析的某些案例给了我们希望，认为变革可行。随着我们的项目在今后一年内的推进，我们将与业界合作，确保绩效报告和监管程序符合可持续发展的要求，无论我们看到和学到什么，我们都将持续向公众通报。

粮食行业是大背景下的关键行业。世界领导人近期齐聚联合国，审查可持续发展目标和巴黎协定的进展情况。他们必须牢记一个重要事实：世界人民正在要求变革。我们拥有实现繁荣、包容及可持续世界所需的知识和财力，商业部门亟须承认、认可并履行其全球职责。■

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Fixing the Business of Food

解决粮食问题

Given today's global food challenges, the food industry is increasingly responsible for sustainable production and the health and wellbeing of the consumers.

The Barilla Center for Food & Nutrition (BCFN Foundation), in partnership with the Sustainable Development Solutions Network (SDSN), The Columbia Center on Sustainable Investment (CCSI) and the Santa Chiara Lab—University of Siena (SCL), are joining forces to help the agro-food sector accelerate progress towards the 2030 Sustainable Development Goals (SDGs).

On September 24th 2019, on the occasion of the High-Level Political Forum (SDG Summit) under the auspices of the 74th General Assembly of the United Nations (UNGA), at the Warwick Hotel (NYC), BCFN co-hosted a workshop for Sustainable Practices in the Food Industry. On this occasion Guido Barilla, President of the Barilla Foundation, officially launched the new Report “Fixing the Business of Food- the food industry and the SDG challenge”.

During the event, among others, the topic was discussed with Columbia University professor and Sustainable Development Solutions Network Director, Jeffrey Sachs, and Director General of the Food and Agriculture Organisation of the United Nations (FAO), Qu Dongyu. Qu called on the food industry to do more to support healthy foods and reduce food loss and waste.

This is the first of a 2-year program, with the aim to make the second-year recommendations available to the public and the industry at the occasion of the UN General Assembly session in 2020.



The report highlights the need for improved systemic practices in the food industry, and provides recommendations for corporate practices in the food sector through **four overarching dimensions**:

1. Development of products that contribute to healthy and sustainable dietary patterns. The food industry has a major responsibility to address and reverse the epidemics of obesity, metabolic diseases, and other related disorders, and to address the special needs and challenges facing low-income households, which must obtain nutritious diets on a tight budget.

2. Identification of sustainable ways to produce food. Each company's production processes raise a host of sustainability issues: the adequacy of worker compensation; the occupational safety of workers; the environmental sustainability of production processes regarding land, air, water, biodiversity, packaging and waste, and greenhouse gases (GHG) emissions; and the company's relations with host communities. Even in jurisdictions where environmental regulations are lax, companies should pursue best practices in social and environmental management.

3. Innovation of sustainable global supply chains. Efforts by companies to improve the health and wellbeing of their customers, and to enable them to enjoy more healthful diets and lifestyles are still quite limited in scope, and should be prioritized. Similarly, producing companies should give more attention to the waste flows emanating from packaging and discarded products and implement innovative solutions to reduce the waste flows, in collaboration with retailers and researchers, and public awareness campaigns for consumers.

4. Good corporate citizenship. The SDG transformations depend on eliminating negative externalities, that is company processes (even legal ones) that impose harms on others and the planet. Market competition is appropriate; deliberately harming workers, competitors, taxpayers, or host communities is not.

The report also advocates for comparable monitoring and reporting standards to be structured around the four dimensions, by harmonizing reporting and monitoring standards on the existing platforms. This should also entail Industry efforts to expand the public's awareness of sustainable and healthy diets and lifestyles.

The harmonized reporting system should cover each major product line along the entire global supply chain. The goal should be to track the supply chain of each product line from the upstream sources to the final users, to monitor and ultimately to ensure economic, social, and environmental sustainability along the entire supply chain.

Finally, companies should foster innovations in order to address the environmental, health, and social challenges consistent with sound financial performance. Innovations will include new products and processes, new digital solutions, social innovations, and adoption of the principles of the circular economy. ■



The full report, the video of the launch, and constant updates about the program can be downloaded here: www.fixing-food.com

COMPANIES SHOULD FOSTER INNOVATIONS IN ORDER TO ADDRESS THE ENVIRONMENTAL, HEALTH, AND SOCIAL CHALLENGES CONSISTENT WITH SOUND FINANCIAL PERFORMANCE

企业应该鼓励创新，以应对环境、健康和社会挑战，这与良好的财务表现是一致的。创新包括新产品和新工艺、新数字解决方案、社会创新和对循环经济原则的应用

鉴于当今全球面临的粮食挑战，粮食行业对可持续生产和消费者的健康福祉负有越来越大的责任。

百味来食品营养中心(BCFN基金会)正在与可持续发展解决方案网络、哥伦比亚大学可持续投资中心、圣基亚拉实验室-锡耶纳大学展开合作，以帮助农业粮食部门加快实现2030年可持续发展目标。

2019年9月24日，时值第74届联合国大会主办的高级别政治论坛(SDG峰会)召开，在纽约华威酒店，BCFN联合主持了一场粮食行业可持续实践工作坊。期间，BCFN基金会主席 Guido Barilla 正式发布了一份题为“解决粮食问题——粮食行业和 SDG 挑战”的新报告。

活动期间，BCFN与哥伦比亚大学教授、可持续发展解决方案网络主任杰弗里·萨克斯、联合国粮食及农业组织总干事屈冬玉等就此主题展开了讨论。屈冬玉呼吁粮食行业

应采取更多措施来支持健康粮食，以减少粮食损失和浪费。

这是为期两年的项目的第一年，目标是在2020年联合国大会期间向公众和业界提供第二年的建议。

报告强调改善粮食行业的系统做法的必要性，并通过以下四个主要方面为粮食行业公司提出建议：

一、研发有助于健康和可持续饮食模式的产品。粮食行业的主要责任是解决和扭转肥胖、代谢疾病及其他相关紊乱病症的扩散，并解决低收入家庭面临的特殊需要和挑战，这些家庭必须在预算紧张的情况下获得营养饮食。

二、确定可持续的粮食生产方式。每家公司的生产流程都会引发一系列有关可持续性的问题：工人报酬；工人职业安全；涉及土地、空气、水、生物多样性、包装及废物、温室气体排放的环境可持续性；公司与所在社区的关系。即使在环境法规宽松的司法管辖区，企业也应该在社会和环境管理方面追求最佳途径。

三、可持续全球供应链的创新。在改善消费者健康福祉、提供更健康的饮食和生活方式方面，企业所做的努力仍然相当有限，应该被优先考虑。同样，生产企业应更多地注意包装和废弃产品产生的废物流，与零售商和研究人员合作实施创新的解决办法，并开展提高公众意识的运动，以减少废物流。

四、良好的企业公民身份。可持续发展目标的实现有赖于消除负面的外部因素，即对他人和地球造成损害的公司生产流程（即使是合法的）。市场竞争无可厚非；故意伤害工人、竞争对手、纳税人或所在社区则不可为。

报告还主张在四个方面建立类似的监测和报告标准，协调现有平台报告和监测标准。这也会促使业界努力增强公众对可持续健康饮食和生活方式的意识。

统一报告系统应该覆盖全球供应链上的每一条主要产品线。目标应该是跟踪每条产品线的供应链，从上游来源到最终用户，监控并最终确保整个供应链的经济、社会和环境可持续性。

最后，企业应该鼓励创新，以应对环境、健康和社会挑战，这与良好的财务表现是一致的。创新包括新产品和新工艺、新数字解决方案、社会创新和对循环经济原则的应用。■

完整报告、发布视频及项目进展可参见：
www.fixing-food.com

From Dream to Action

By **Brune Poirson**

PARIS – The French author and aviator Antoine de Saint-Exupéry once wrote that “a goal without a plan is just a wish.” The Paris climate agreement was one such “dream.” In 2015, 197 parties gathered to make the planet great again. By concluding the first-ever universal climate agreement, the world’s governments committed to reducing greenhouse-gas emissions and limiting global warming to 2°C above pre-industrial levels.

For many of us, the Paris Agreement was meant to be the cornerstone of a new social contract, one that could ensure a safe and decent standard of living now and in the future. Yet four years later, decision-makers still do not fully understand the urgency of the issue. We have two choices: soft-pedal our ambitions, indicating that we are happy with “business as usual,” or try something more demanding, but also much more exciting – in particular for young people, who are writing the inclusive and sustainable growth story of the twenty-first century.

By launching the One Planet Summit initiative, French President Emmanuel Macron, together with the United Nations and the World Bank, has chosen the second, more demanding path. “Results-oriented” diplomacy is about building coalitions between public- and private-sector players, starting at the local level to reinvent the sustainability agenda of international cooperation. The One Planet approach is global, strategic, and transformational, with commitments expected to be followed by real action and regular progress reports. The goal is to generate new business models in the key areas of climate, the oceans, and biodiversity.

Unlocking the potential of sustainable finance is essential to realizing this goal. The global investment needed for a low-carbon transition is estimated at \$32 trillion annually between now and 2030. This requires a massive redirection of financial flows. Thus, greening the financial system is at the core of this approach. We need money to flow toward sustainable projects at unprecedented speed and scale.

This year’s Finance Action Plan, led by Macron, Jamaican Prime Minister Andrew Holness, and Qatari Emir Sheikh Tamim bin Hamad al-Thani under a UN mandate, focuses on accelerating this process. The goal is to foster collaboration between public and private actors to finance inclusivity, scale up climate finance, and trigger a broad transformation of the financial system.

Development finance institutions have already proven that they can integrate climate goals into their core development strategies, and that more private finance can be mobilized when working together. And in recent years, pioneers in the financial sector have devised innovative methods for integrating climate risks into existing business strategies. Blended-finance initiatives such as the Land Degradation Neutrality Fund are demonstrating that viable business models do exist to address issues like desertification, agroforestry, and adaptation. Six major sovereign wealth funds, with combined assets worth of

\$3 trillion, are adopting environmental, social, and governance (ESG) criteria. The Task Force on Climate-related Financial Disclosures has offered recommendations for factoring climate risks into private investment portfolios. Starting with eight central banks and supervisors in December 2017, the Network for Greening the Financial System has grown to 42 members and eight observers, and is exploring methodologies to implement climate stress tests.

WE NOW HAVE A METHODOLOGY FOR USHERING IN A SUSTAINABLE FUTURE – OUR GOAL IS NO MERE DREAM

The One Planet Summit also offers an opportunity to explore the new frontier of sustainable finance. Plenty of opportunities exist, but it is up to us to seize them. To improve our chances of

success, we need to overhaul the current regulatory framework in order to recognize natural capital as a valuable asset. In fact, the best long-term investment we can make is in nature, because climate stability and biodiversity are ultimately two sides of the same coin. The Natural Capital Lab, developed by the Inter-American Development Bank with initial funding from France, is a perfect example of what can be accomplished through collaborative efforts.

Under the leadership of Bertrand Badré, Nicholas Stern, and Paul Polman, the One Planet Lab (part of the One Planet Summit) brings together committed CEOs, innovators, economists, and activists, with the aim of converting innovative concepts into transformative commitments and action. The methodology is based on a

“tipping point” approach. When a critical mass of actors (say, 20% of a market) takes a common direction, they will be in a position to change the system. At this moment, a clear signal is sent to regulators and competitors: the market is ripe for deep change. Such a strategy is the key to ensuring that green policies in general become the new mainstream, and it should be applied to all sustainability challenges. We need to build a critical mass of high-level ambition in all sectors, so that there can be no turning back.

This year, the One Planet Lab was responsible for a sustainable fashion initiative. The fashion industry is the world’s second most polluting – currently it generates 10% of global greenhouse-gas emissions. It is also resource-intensive, with between 5,400 and 16,000 liters of water required to produce one kilogram of cotton. The industry should start designing sustainable clothes, affordable for all, on a larger scale. That is why Macron has asked François-Henri Pinault, CEO of Kering, to craft a fashion pact with a global sustainability strategy and clear environmental goals for the industry as a whole.

Going sustainable means that value chains will need to be overhauled and investment strategies reconceived. And it is incumbent on politicians and policymakers to ensure that the incentives and regulatory frameworks for such changes are in place. The good news is that we now have a methodology for ushering in a sustainable future – our goal is no mere dream. We also know that doing nothing will cost much more than capitalizing on the opportunities that are already in front of us. If we act now, we will have both money and science on our side.

When the American astronaut Neil Armstrong first set foot on the Moon 50 years ago, he said it was a “small step for man,” but “a giant leap for

**IF WE ACT NOW,
WE WILL HAVE BOTH
MONEY AND SCIENCE
ON OUR SIDE**

mankind.” And so it was. Yet today, our task is not to reach the stars, but to save our own planet. That will require many more small steps, at a constantly accelerating pace, and a shared determination to move forward. But it will also require taking a giant leap, because this is the greatest challenge humankind has ever faced. It is our generation’s moonshot. If we don’t make it work, we may not get another chance. ■



Brune Poirson is France’s Secretary of State to the Minister for the Ecological and Inclusive Transition.

从梦想到行动

布鲁娜·普瓦松

法国作家、飞行员安东尼·德·圣-埃克苏佩里曾经写道，“没有计划的目标只是一厢情愿。”巴黎气候协定就是这样一个“梦想”。2015年，197个国家聚集在一起，目的是让地球再次伟大。全世界政府达成了历史上首个全球气候协定，承诺降低温室气体排放，将全球变暖幅度限制在前工业化水平以上2°C以内。

对很多人来说，巴黎协定应该是制定新社会契约、确保现在和未来的生活安全又体面的基石。但四年过去了，决策者们仍然未能理解问题的紧迫性。我们有两个选择：或者收敛雄心，承认我们乐于“一切照旧”；或者提出一些更高同时也更令人振奋的要求，对年轻人来说尤其如此，是他们正在撰写21世纪的包容和可持续的增长故事。

法国总统马克龙选择了第二条要求更高的路：他与联合国和世界银行一起，启动了“一个地球峰会”计划。“结果导向型”外交是要在公共和私人部门行动方之间实现统一，首先是在地方层面，重新制定可持续性的国际合作日程。“一个地球”方针是全球性的、战略性的以及变革性的，它将以切实行动和定期进展报告来跟进承诺，目标是在气候、海洋和生物多样性等重要领域建立新的业务模式。

释放可持续金融的潜力对于实现这一目标至关重要。据估计，从现在到2030年，低碳转型的全球投资需求每年将达到32万亿美元。这要求大幅改变金融流。因此，金融体系的绿化是该方针的核心。我们需要资金以前所未有的速度和规模流向可持续项目。

今年的“金融行动计划”由联合国任命法国总统马克龙、牙买加总理霍尔尼斯、卡塔尔埃米尔塔米姆共同牵头，焦点便是加快这一进程。目标是促进公共和私人部门行动方之

间的合作，为包容性提供融资，扩大气候金融，引导金融体系的全面转型。

发展金融机构已经证明，它们能够将气候目标融合到核心发展战略中，如果紧密合作，能够动员更多的私人融资。近几年来，金融行业的先行者已经设计出创新方法，将气候风险融入现有业务策略。类似“土地退化清理基金”这样的混合金融项目证明，有自生能力的业务模式确实存在，能够解决沙漠化、农林和适应等问题。资产总规模达到3万亿美元的六家主要主权财富基金正在实施环境、社会 and 治理 (ESG) 标准。气候相关财务披露任务组提供了建议，将气候风险因素纳入私人投资组合。从2017年12月的八家中央银行和监管机构开始，金融体系绿化网络已扩展到42个成员和八个观察员，正在探索实施气候压力测试的方法。

“一个地球峰会”也是一次探索可持续金融新前沿的机会。机会有的，但我们要能抓得住。为了提高成功率，我们需要修改当前的监管框架，承认自然资本是宝贵的资产。事实上，我们能够做出的最好的长期投资便是大自然，因为气候稳定和生物多样性说到底是同一枚硬币的两面。由泛美开发银行制定、法国提供启动资金的自然资本实验室，便是一个我们通过集体努力取得成就的完美案例。

在伯特兰·巴德雷、尼古拉斯·斯特恩和保罗·波尔曼的领导下，“一个地球实验室”（“一个地球峰会”的组成部分）聚集了有决心的CEO、创新者、经济学家和活动家，目标是要将创新性概念转化为变革性的承诺和行动。其方法基于“引爆点”理论。当临界数量的行动方（比如20%的市场参与者）朝向共同方向时，就能够改变整个系统。此时，监管者和竞争对手就会收到明确的信号：市场已经准备好



发生深度变化。这一战略是确保绿色政策总体成为新主流的关键，并且应该被应用到所有可持续性挑战上。我们需要形成各行业高层雄心的临界数量，确保开弓就没有回头箭。

今年，“一个地球实验室”负责一个可持续时尚项目。时尚业是世界第二大污染行业，目前产生了10%的全球温室气体排放。它也是一个资源密集型行业，生产一公斤棉花需要5400~16000升水。时尚业应该设计可持续服装，价格更低廉，规模更大。因此，马克龙要求开云集团首席执行官弗朗索瓦·亨利·皮诺起草一份时尚契约，其中要包含整个行业的全球可持续性战略和清洁环境目标。

走向可持续意味着价值链需要修正，投资策略需要重估。政客和决策者有责任确保有利于这些变化的激励和监管框架的到位。好



Illustrations by LAVA Beijing

消息是我们现在已经有了打造可持续未来的方法——我们的目标不是单纯的梦想。我们还知道，什么都不做要比抓住眼前的机会代价更高。如果我们现在采取行动，资金和科学都站在我们这一边。

50年前美国宇航员尼尔·阿姆斯特朗第一次踏上月球时，他说这是“我的一小步，但是人类的一大步。”的确如此。但如今，我们的任务不是登上外星，而是拯救地球。这需要更多个一小步，节奏要不断加快，并且要一致坚定向前。但这也要求迈出一大步，因为这是人类历史上所面临的最大的挑战。这是我们这一代的登月工程。如果我们现在不做，可能就没有第二次机会了。■

布鲁娜·普瓦松：

法国生态与包容性转型部国务秘书

我们现在已经有了打造可持续未来的方法——我们的目标不是单纯的梦想。我们还知道，什么都不做要比抓住眼前的机会代价更高。如果我们现在采取行动，资金和科学都站在我们这一边

Six Transformations to Achieve the Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change call for deep transformations in every country, with complementary actions needed by governments, civil society, science, and business. Despite this, stakeholders lack a shared understanding of how the 17 SDGs can be operationalised.

Drawing on earlier work by The World in 2050 initiative, the authors of this working paper introduce six SDG Transformations as modular building-blocks of SDG achievement:



Education, Gender and Inequality
教育、性别和不平等



Health, Wellbeing and Demography
健康、福祉和人口学



Energy Decarbonisation and Sustainable Industry
能源脱碳和可持续产业

They are based on two overarching principles, guiding the way major trade-offs are addressed by the authors: (1) the Leave-No-One-Behind Principle and (2) the Principle of Circularity and Decoupling.

THE PRINCIPLE OF CIRCULARITY AND DECOUPLING

To achieve the SDGs, countries must change patterns of consumption and production to decouple human wellbeing from environmental degradation, including through actions that promote reuse and recycling of materials. Circularity and decoupling without lowering human wellbeing must underlie all SDG transformations.

The most important decoupling is decarbonisation, i.e. the reduction of net greenhouse gas emissions to zero by mid-century. Countries must also make material systems sustainable and dissociate the net release of nitrogen, phosphorous, chemicals, plastics, particulates, and other pollutants from human wellbeing. Similarly, the use of freshwater, land, and non-renewable resources needs to be decoupled from social and economic progress. Life-cycle approaches to electric vehicles and other key energy technologies are critical for reducing the resource intensity of Transformation 3 to decarbonise energy and make industry sustainable.

In agriculture and food systems (Transformation 4), circularity is widely applied, particularly for livestock management as well as food loss and waste. Similarly, cities and urban areas (Transformation 5) need to adopt principles of circularity in design and management of resource flows. The digital revolution (Transformation 6) is an important enabler of Circularity and Decoupling.

Each transformation identifies priority investments and regulatory challenges calling for actions by well-defined parts of government working with business and civil society. Transformations may therefore be operationalised within the structures of

实现可持续发展目标的六大转型

government while respecting strong interdependencies across the 17 SDGs.

The paper also outlines an action agenda for science to provide the knowledge required for designing, implementing, and monitoring the SDG transformations.

The UN Sustainable Development Solutions Network (SDSN) mobilizes

4



Sustainable Food, Land, Water and Oceans
可持续粮食、土地、水和海洋

scientific and technical expertise from academia, civil society, and the private sector to support practical problem-solving for sustainable development at local, national, and global scales. The SDSN has been operating since 2012 under the auspices of the UN Secretary-General. The SDSN is building national and regional networks of knowledge institutions, solution-focused thematic networks, and the SDG Academy, an online university for sustainable development. ■

The full report can be downloaded here https://irp-cdn.multiscreensite.com/be6d1d56/files/uploaded/190830-Six-Transformations_working-paper.pdf

可持续发展目标和《巴黎气候变化协定》呼吁各国进行深层次的变革,这需要政府、公民社会、科学界和企业采取相辅相成的行动。然而,利益相关各方对如何实施17个可持续发展目标仍缺乏共同理解。

借鉴“2050年的世界”倡议的早期工作,本工作文件的作者介绍了六种可持续发展目标的转型,作为实现可持续发展目标的模块构成。

5



Sustainable Cities and Communities
可持续城市和社区

它们基于两个基本原则,指导着作者处理重大权衡问题的方式:“不落下任何一个”原则;“循环与脱钩”原则。

循环与脱钩原则:

“为了实现可持续发展目标,各国必须改变消费和生产的模式,使人类福祉与环境退化脱钩,其中就包括促进材料再利用和循环使用的循环机制。在不减损人类福祉的情况下,循环和脱钩必须成为所有可持续目标转型的基础。

“最重要的脱钩是脱碳,即到本世纪中叶将温室气体净排放量降至零。各国还必须建立可持续发展的物质体系,消除氮、磷、化学物质、塑料、微粒和其他污染物净排放对人类福祉的影响。同样,淡水、土地和不可再生资源的使用也必须与社会和经济进步脱钩。电动汽车和其他关键能源技术的生命周期方法

对于降低转型3(能源脱碳和可持续产业)为脱碳能源的资源强度和产业可持续发展至关重要。

“在农业和粮食系统(转型4)中,循环被广泛应用,特别是在牲畜管理以及粮食损失和浪费方面。同样,城市和城市地区(转型5)在资源流动的设计和管理中也需要采用循环原则。数字革命(转型6)是循环和脱钩的重要推动者。”

每一个转型都确定了优先投资和监管方面的挑战,呼吁明确的政府部门与企业 and 公民社会合作采取行动。因此,在尊重17个可持

6



Digital Revolution for Sustainable Development
推动可持续发展的数字革命

续发展目标之间强大的相互依赖关系的同时,转型可能在政府结构内部运作。

本文件还为科学界规划了行动轮廓,以提供设计、实现和监测可持续发展目标转型所需的知识。

联合国可持续发展解决方案网络(SDSN)动员学术界的科学及技术专家、公民社会和私营企业支持在地方、国家和全球范围内解决可持续发展的实际问题。自2012年以来,SDSN一直在联合国秘书长的主持下运作。SDSN正在建立国家和区域知识机构网络、以解决方案为重点的专题网络和可持续发展网络学院——SDG学院。■

完整文件下载地址:

https://irp-cdn.multiscreensite.com/be6d1d56/files/uploaded/190830-Six-Transformations_working-paper.pdf

Closing the Loop: ASEM's Transition Towards a Circular Economy

SDG 12 aspires to ensure sustainable consumption and production (SCP) patterns across the globe.

As research for the Asia-Europe Meeting (ASEM) on SDG 12 for the Annual ENVforum Conference 2018, the Asia-Europe Foundation (ASEF), with the financial support of the Asia-Europe Environment Forum (ENVforum) consortium, published a report providing a bird's-eye view of how ASEM partner countries approach the implementation of SDG 12 targets and integrate them into strategies, target-setting, and monitoring activities. The report analysis also delivers key messages for sound implementation.

By taking a holistic and integrated approach and integrating the principles of SCP along the economic value chain, countries can transition to a circular or zero waste economic model. According to the definition of the European Commission, the "value of products and materials is maintained for as long as possible, waste and resource use are minimised, and when a product reaches the end of its life, it is used again to create further value: resulting in major economic benefits,

and contributing to innovation, growth and job creation" in a circular economy.

In order to better compare the status of each partner country, the review identified various sectoral strategy and policy documents relevant to the implementation of selected SCP issues in all ASEM partner countries, focused primarily on these key areas: Waste management, Environmental / Nature protection, Chemicals, Environmental technologies or eco-innovation, Green economy /Green growth, Raw material use/Resource efficiency, Food chain /Organic farming /Food waste, Public procurement policies.

Related to circular economy development, the review identified various SDG 12-related goals in overarching policy documents in almost all 51 ASEM Partner countries. These documents either offered sustainable development strategies with a long-term vision for sustainability or overarching national development plans.

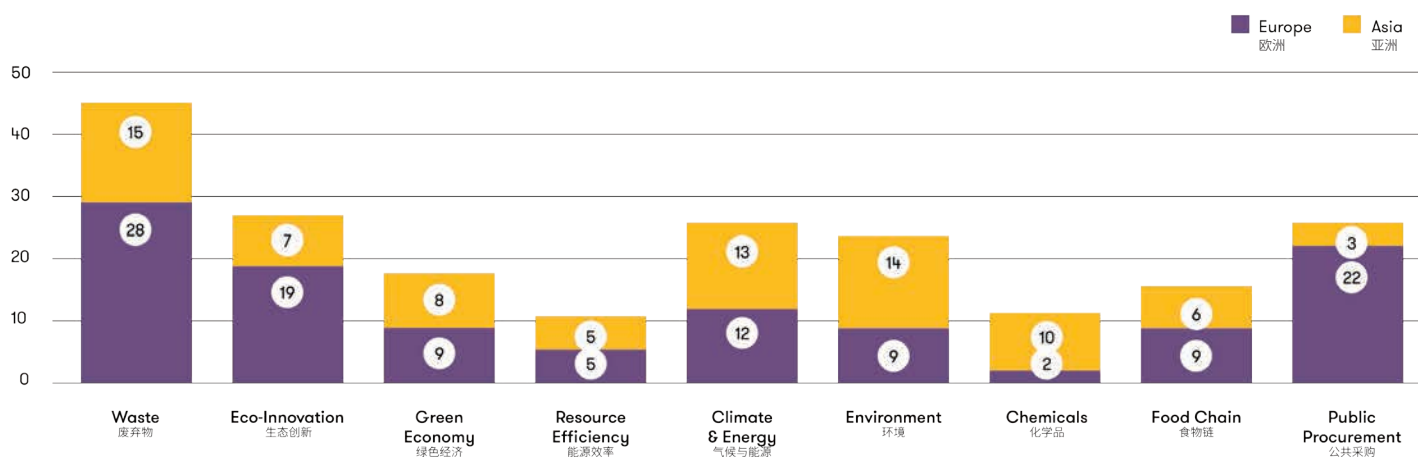
Circular economy/SCP objectives were also identified in various sectoral

strategy and policy documents, mainly in connection with waste management, environmental/ nature protection, environmental technology and ecoinnovation, and green economy/ green growth. However, these strategies were not necessarily well-connected to each other, resulting in potential fragmentation with regards to SCP objectives. Moreover, in most cases, they did not cover the full spectrum of relevant SCP issues.

It is clear that in order to achieve the targets of SDG 12, ASEM partners will need to address the full production and consumption cycle of natural resources and support a circular economy transition. As the government of Latvia noted in its 2018 Voluntary National Review, "the circular economy must be viewed as a system in its entirety, rather than a patchwork of measures". ■

The full report, titled "Closing the Loop: ASEM's Transition Towards Achieving a Circular Economy - Implementation Experience in ASEM Partner Countries with the Sustainable Development Goal 12 on Responsible Consumption and Production" published by Asia-Europe Foundation (ASEF) can be fully downloaded here: http://www.asef.org/images/docs/SDG12%20ASEM%20Publication_Digital.pdf

闭环：亚欧会议向实现循环经济转型



Number of ASEM partner countries where various sectoral strategies with linkages to SDG 12 were identified
实施与目标 12 相关的各种部门战略的亚欧会议伙伴国家数目

在亚欧环境论坛 (ENVforum) 联盟的资助下，作为亚欧会议 (ASEM) 为 2018 年年度亚欧环境论坛会议而做的针对可持续发展目标 12 研究的一部分，亚欧基金会 (ASEF) 发布了一份报告，为亚欧会议伙伴国家如何实现目标 12 的各项指标，如何将其纳入国家战略、目标制定和监测活动提供了全景视角。

该报告分析了亚欧会议伙伴国家如何实施目标 12，将其纳入国家战略、目标制定和监测活动中，并为妥善执行提供了关键信息。

目标 12 致力于确保全球范围内的可持续消费和生产 (SCP) 模式。

通过采取整体和综合的方法，并将 SCP 原则与经济价值链结合起来，一些国家可以过渡到循环或零浪费的经济模式。根据欧盟委员会的定义，在循环经济中“产品和材料的价值被尽可能长时间保持，废弃物和资源的使用被减少到最低限度，当产品达到其使用

寿命时，将通过再次利用创造进一步的价值：产生重大经济效益，促进创新与增长，并创造就业机会。”

为了更好地比较各伙伴国家的状况，审查确定了在所有亚欧会议伙伴国家中，与选定 SCP 问题实施情况有关的各种部门战略和政策文件，主要集中在这些关键领域：废弃物管理、环境/自然保护、化学品、环境技术或生态创新、绿色经济/绿色增长、原材料使用/资源效率、食物链/有机农业/食物垃圾、公共采购政策。

关于循环经济发展，报告确定了几乎所有 51 个亚欧会议伙伴国家的总体政策文件中与目标 12 有关的各项指标。

这些文件或者是提供了可持续发展长期愿景的发展战略，或者是国家整体发展计划。

各部门战略和政策文件也确定了循环经济/SCP 目标，主要涉及废弃物管理、环境/自然保护、环境技术和生态创新以及绿色经济/

绿色增长。然而，这些战略彼此不一定能很好地连接，会导致 SCP 目标方面出现分裂。此外，在大多数情况下，它们没有涵盖相关 SCP 问题的全部内容。

显然，为了实现目标 12 的各项指标，亚欧会议合作伙伴需要解决自然资源的充分生产和消费周期的问题，并支持循环经济转型。正如拉脱维亚政府在其 2018 年的自愿国家评论中指出的，“必须把循环经济看作是一个完整的系统，而不是一个拼凑起来的措施”。■

报告由亚欧基金会 (ASEF) 出版，题为《闭环：亚欧会议向实现循环经济转型——在亚欧会议伙伴国落实关于可持续发展目标 12 (负责任的消费和生产) 方面的经验》，全文下载：

http://www.asef.org/images/docs/SDG12%20ASEM%20Publication_Digital.pdf

The Small Picture

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Sustained by Sustainable Coffee

用可持续咖啡来醒神

By **Mauricio Cárdenas**
毛里西奥·卡尔德纳斯



NEW YORK – “Men’s natures are alike,” Confucius observed; “it is their habits that carry them far apart.” But there is one habit that unites people worldwide: coffee. The question, asked at the World Coffee Producers Forum in July, is whether the world’s coffee habit – and the industry that enables it – is sustainable.

As one of the world’s most popular beverages, coffee is crucial to the livelihoods of over 125 million people in more than 50 countries. Some 80% of the world’s coffee is grown on 25 million smallholder farms. For these producers, coffee typically represents the main, or even the only, source of income.

For smallholders, a bad crop or low prices translates into severe economic strain. This is what is happening today in Colombia and Central America,

parts of Africa, and Asia, as farmers confront the lowest international coffee prices in a decade, as well as serious production challenges, including those arising from increasingly extreme weather conditions caused by climate change.

In Ethiopia, for example, five million mainly smallholder, often poor farmers account for 95% of coffee production. According to the International Food Policy Research Institute, Ethiopian coffee trees traditionally have a biannual production cycle; but over the last decade, rising numbers of farmers report that for every good year, they experience two bad ones.

In this context, it is more important than ever for coffee farmers to find ways to increase profits. But this imperative cannot be allowed to

孔子曰：“性相近也，习相远也。”但有一种习惯可谓全世界皆有：咖啡。7月举办的世界咖啡生产论坛提出了一个问题：世界喝咖啡的习惯，以及满足人们这一习惯的咖啡产业，是不是可持续的？

作为全世界最流行的饮料之一，咖啡是50多个国家1.25亿多人的重要生计。全世界80%的咖啡由2500万小农种植。对于这些生产者，咖啡往往是最主要的甚至唯一的收入来源。

对小农而言，坏收成或低价格会带来严重的经济问题。这便是今天哥伦比亚和中美洲、非洲局部以及亚洲发生的事情，咖农需要面对十年来最低的国际咖啡价格，同时还要应对非常严峻的生产挑战，包括气候变化引起的极端天气条件。

比如，在埃塞俄比亚，主要由小农（通常是贫困农民）构成的五百万人生产了95%的咖啡产量。据国际粮食政策研究所的数据，埃塞俄比亚咖啡树收成周期通常是一年两次；但

MOST CONSUMERS DON'T KNOW NEARLY ENOUGH ABOUT WHERE THEIR COFFEE COMES FROM, LET ALONE HOW IT WAS PRODUCED

compromise sustainability. Fortunately, thanks to innovations in science and finance, profit and sustainability are no longer incompatible.

Consider the use of fertilizer and pesticides, which increase yields and protect crops from pests and diseases, but harm wildlife populations and damage human health. In a recent paper, Juan Nicolás Hernández-Aguilera – a postdoctoral researcher at Columbia University's International Research Institute for Climate and Society – and his co-authors offer a simple but promising alternative: shade.

By growing coffee under a forest-like canopy of trees, rather than in open fields, farmers can enlist the

pest-control services of birds. According to the study, a single bird could help save 23-65 pounds of coffee per hectare from pests every year. Using this method, farmers could avoid incurring the costs – financial and environmental – of pesticides.

Moreover, by fixing nitrogen in the soil, shade trees provide coffee trees with additional nutrients. And by reducing the temperatures in which the coffee trees grow, this method amounts to a powerful adaptation to climate change.

To be sure, shade-grown coffee trees produce lower yields. But even this loss could be offset, because, as Hernández-Aguilera and his co-authors point out, markets often regard shade-grown coffee beans as being of higher quality. If consumers are willing to pay a premium for shade-grown beans – whether for the sake of quality or sustainability – coffee producers can embrace an approach that is better for human health and the environment.

在过去十年中,越来越多的农民反馈说,一个好年头之后通常会跟着两个坏年头。

在此情形下,咖农比以往任何时候都更需要找到办法增加利润。但解决这一当务之急必然也不能损害可持续性。幸运的是,由于科学和金融方面的创新,利润和可持续性已不再水火不容。

以化肥和杀虫剂的使用为例,它们能够提高收成,保护庄稼免受病虫害,但也会危害野生动物,损害人类健康。在最近发表的一篇文章中,哥伦比亚大学国际气候与社会研究所博士后研究员胡安·尼古拉斯·赫尔南德兹-阿奎莱拉及合作者提供了一个简单但令人憧憬的替代方案:遮荫。

在森林一样的树荫底下种植,而不是在开阔地里种植,可以让农民利用鸟类控制虫害。根据这项研究,一只鸟每年可以拯救每公顷23~65磅的咖啡。用这种方法,农民就可以避免使用杀虫剂的代价,包括经济上的以及环境上的。

此外,通过固氮作用,乔木能为咖啡树提供额外的营养。而通过降低咖啡树生长环境的温度,该方法也对气候变化有极强的应对力。



大部分消费者都不知道他们的咖啡来自哪里,更不用说了解它们是如何生产的了,因此很难乐意或者有能力去奖励更可持续的种植方法。咖啡市场缺乏透明度和溯源能力,也没有建立起能帮助消费者了解产品基本信息的机制

The problem is that most consumers don't know nearly enough about where their coffee comes from, let alone how it was produced, to be willing or able to reward more sustainable approaches. Coffee markets lack transparency and traceability, and mechanisms that help consumers navigate essential information about other agricultural goods – covering, say, the complex interactions among environmental conservation, product quality, and differential yields – are not sufficiently developed for the industry.

In fact, many coffee consumers worldwide, still purchasing the same brand at the same or an even higher price, probably do not even realize that global coffee prices have dropped. Tellingly, green coffee (the type that producing countries export) accounts for just \$20 billion of the \$200 billion world coffee market.

But this challenge, too, can be overcome. Blockchain (distributed-ledger) technology can facilitate full traceability (where a raw product comes from, and how it was purchased, processed, and transported) and transparency (how much was paid for the product across the supply chain).

Such a system would make it easy for consumers to choose coffee grown by environmentally conscious farmers. Moreover, it would give farmers a digital identity – including information about their incomes, farm-production levels, and certification status – thereby

enabling them to access credit markets.

But environmental sustainability is not the only metric for responsible farming; compliance with labor standards should also be evaluated. And, in fact, the use of child labor remains pervasive in coffee production. In many parts of the developing world, and even in more advanced countries – such as Colombia, where child labor has been significantly reduced – adult workers often lack the most basic protections such as a minimum wage, to say nothing of social benefits, with only 4% receiving a pension contribution from their employers.

Governments must lead the way in evaluating and enforcing compliance with labor laws. But a blockchain-based system to boost transparency can help to create a virtuous cycle, by enabling consumers to reject products from farms that perform poorly in assessments of working conditions.

Drinking coffee is not a bad habit, but it can contribute to bad outcomes, including environmental degradation and labor exploitation. We have the knowledge and tools we need to make coffee sustainable. Let us start to use them. ■

Mauricio Cárdenas, a former Minister of Finance of Colombia, is a visiting professor at Columbia University.

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树荫下种植的咖啡树产量固然较低,但这一损失是可以抵消的,因为正如赫尔南德兹-阿奎莱拉等人指出的,市场会认为遮荫种植的咖啡豆品质更高。如果消费者愿意为此支付更高的价格——不管是为了品质还是为了可持续性,咖啡种植者就能采纳这一对人类健康和环境都更加有利的方法。

问题在于,大部分消费者都不知道他们的咖啡来自哪里,更不用说了解它们是如何生产的了,因此很难乐意或者有能力去奖励更可持续的种植方法。咖啡市场缺乏透明度和溯源能力,也没有建立起能帮助消费者了解其他农产品基本信息的机制,比如说环境保护、产品质量和差异收成之间相互影响的复杂关系。

事实上,全世界有大量咖啡消费者仍在以相同甚至更高的价格购买同样的品牌,也许根本没有意识到全球咖啡价格已经下跌。一个突出的事实是,在2000亿美元的世界咖啡市场规模中,绿咖啡(即生产国出口的咖啡)只占200亿。

但这一挑战也是可以克服的。区块链(分布式记账)技术能够实现充分可溯源性(原材料来自哪里,它如何被采购、处理和运输)和透明度(整个供应链为该产品付了多少钱)。

这一系统能让消费者更容易选择有环境意识的农民种植的咖啡。此外,它可以给农民一个数字身份(包括关于他们的收入、农场产量水平和资质状况的信息),让他们得以进入信用市场。

但环境可持续性并非负责任的农业的唯一指标;劳动法规的遵守情况也应该被评估。事实上,咖啡生产行业仍在普遍使用童工。在许多发展中地区,甚至在比较先进的发展中国家——比如童工数量已经大幅减少的哥伦比亚——成年工人常常缺少最基本的保护(比如最低工资),没有社会福利,只有4%的工人能获得雇主给的退休金。

政府必须引领劳动法规的守法评估和执法工作。与此同时,基于区块链的系统能够提高透明度,有助于形成良性循环,让消费者拒绝来自工作条件评估结果糟糕的农场的产品。

喝咖啡不是坏习惯,但它可能助长坏习惯,包括环境破坏和劳动剥削。我们拥有必要的知识和工具让咖啡变得可持续,那就让我们开始使用起这些知识和工具来! ■

毛里西奥·卡尔德纳斯:哥伦比亚前财政部部长,现为哥伦比亚大学访问教授。

Rossana Orlandi - Guiltless Plastics

无罪的塑料：意大利 “设计教母”奥兰迪的 崭新使命

by Zhong Ziwei
钟子澂



Many key cities across the world now have the strictest garbage classification regimes yet. Waste separation tops search results, with puzzles such as: what kind of waste is bubble tea? Does the lemon in a beer bottle need to be pulled out?

The original intention of waste sorting is to recycle resources to a maximum extent and reduce the amount of non-recyclable landfill waste. One should not underestimate the destructive power of garbage, or underestimate its “will to live.” Plastic products need between five hundred and a thousand of years to be broken down.

In 2007, China introduced a restriction on plastic use. Starbucks announced the phasing out of plastic straws. Today, 46 cities in China are implementing waste sorting. This changes the level of harm caused by discarded plastic products, but is plastic really to blame?

Plastic is widely used in consumer products and packaging. Since the

invention of plastic in the late 19th Century, more than 8 billion tons have been produced worldwide, of which more than 50% have been discarded or incinerated. As we enter the 21st Century, as this number continues to grow, the public’s awareness of relevant environmental issues is also growing. As researchers continue to develop biodegradable polymers, the design community is also advocating a range of initiatives to use recycled plastics. Designers are increasingly concerned about the reuse of materials and are trying to reduce the damage to the environment during their manufacturing process. Transformed plastics can also be a resource with great potential.

Rossana Orlandi, one of the leading figures in Milan’s design industry, launched a project called “Guiltless Plastic” during Milan Design Week to promote sustainable design via the RO Plastics - Masterpiece and the RO Plastic Prize and a range of related activities. The project combines many new generational design forces to explore the diversity of plastic recycling

从2007年中国出台“限塑令”、星巴克宣布逐渐淘汰塑料吸管，到今天国内46座城市全面推行垃圾分类，废弃塑料制品的危害众说纷纭，但有罪的真的是塑料吗？

塑料在消费品和包装中得到了广泛应用。自19世纪末被发明以来，全球已生产塑料超过80亿吨，其中50%以上被丢弃或焚烧。步入21世纪，随着这一数字仍在持续增长，公众对相关环境问题的认识也在不断增强。当研究人员不断开发可生物降解的聚合物时，设计界也在倡导一系列使用再生塑料的举措。设计师们越来越关注材料的重复利用，并且试图降低其制造过程中对环境的破坏。经过转化后的塑料，也可以成为一种具有巨大潜力的资源。

米兰设计界的领军人物之一罗珊娜·奥兰迪发起了一个名为“塑料无罪”的项目，在米兰设计周期间，通过“RO塑料大师杰作展”“RO塑料奖”以及一系列相关活动来促进可持续性的设计。该项目结合了众多新生代设计力量，探索塑料回收及其再利用方法的多样性，催生下一代的设计方式，并鼓励人们负责任地利用资源。

奥兰迪认为：“我的使命是让人们意识到使用塑料对环境带来的危害，同时促进相关研究的发展及资源利用的良性循环。因为想要达成高效的塑料回收，首先必须对其有深入的认知。”早在几个月前，奥兰迪便推出了克里斯·乔丹的艺术项目“我们给出数字”，该



Patricia Urquiola's "Wasting Time Daybed" is an ironic take on modern daybed that recalled the soul of a sneaker. It's entirely composed of recycled PET.

帕特里夏·乌尔奇拉设计的“打发时间的沙发床”，灵感来源于运动鞋。

and reuse methods, to promote the next generation of design, and to encourage people to use resources responsibly.

As part of the Guiltless Plastic project, the first RO Plastic Prize was officially launched. The award is open to the public and is divided into four categories: design, home textiles, packaging solutions and conscious innovation. "Design" focuses on the proposal to reintroduce plastics into everyday life. "Home textiles" refers to recycled synthetic fabrics that do not contain glue or chemical contaminants, re-invented reusable containers on the "packaging solution" side. The key element of innovation is based on social responsibility. Finalists' work was exhibited at the Rossana Orlandi Space in Milan. Each winner received 10,000 euros, to be used to implement the winning project.

Orlandi believes: "My mission is to make people aware of the

environmental hazards of using plastics, and to promote the development of related research and a virtuous cycle of resource utilization. Because you want to achieve efficient plastic recycling, you must first have in-depth understanding." A few months ago, Orlandi launched Chris Jordan's project, "We give figures (Diamo i numeri)." The artist uses real data to visually present the excessive use of environmental resources in images.

More than 300 entries were received from creators from around the world including Europe, Turkey, New Zealand, Australia, Brazil, Canada and China. "I think we should stop thinking about climate change as a problem of the future. We need to solve it now. We need to take up arms and wage a creative generational struggle. Plastic itself should not be blamed: it is full of potential. The real problem is our use of plastic has been wrong. I want to motivate young people to concentrate

项目从真实数据着手，以照片的形式直观地呈现了人类对环境的过度消费。

此次展览在离罗珊娜·奥兰迪艺术空间两个街区之外的米兰科技博物馆的铁路展馆举办。“从去年开始，我就一直感到该对包围着我们的塑料做些什么。”罗珊娜·奥兰迪说。该展览同样以再生塑料为主题，邀请了包括帕特里夏·乌尔奇拉、亚米·海因、布罗迪·内尔、彼特·海恩·伊克、Formafantasma工作室等来自世界各地的30余名设计师、建筑师和艺术家及团体参与。

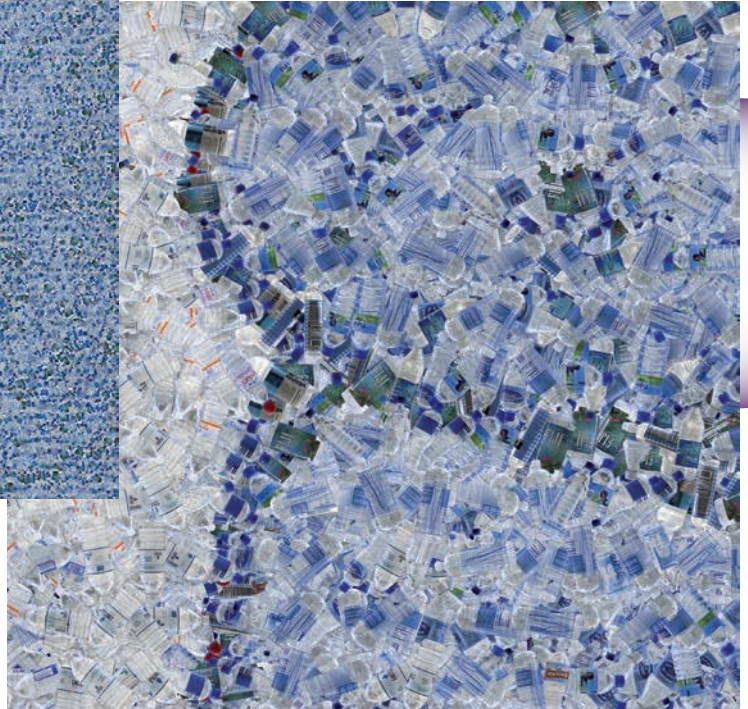
参展艺术家尼卡·祖庞克说：“我在作品中专注于挖掘再生塑料的多样用途，通过改变塑料的外观，赋予其诗意、动人的新价值。对于设计师而言，回收和再利用现有废旧材料是极其重要的一项工作。”这位来自斯洛文尼亚的女艺术家用回收塑料创作一个象征过去、展望未来的时钟，时钟表面的塑料装饰及海洋生物刺绣意味着采取行动的紧迫性。

伦敦设计师布罗迪·内尔展出的是一个沙漏作品：“这个沙漏装满了从海洋中收集的塑料，作为时钟警示着我们，保护已被破坏环境的时间有限。另外，沙漏中的塑料也寓意世界



"Blue" by photographer Chris Jordan, exhibition "Diamo i numeri", 2018.

摄影作品《蓝》局部, 克里斯·乔丹, "我们给出数字" 展览, 2018年。



on the huge possibilities of recycled plastic. This is an invitation for real learning and application, and an encouragement to return to nature."

"I hope that the innovation award will receive the highest level of participation, and that we can help young designers without resources come out and realize their vision. We aim for the continuation of the design project, and hope we can actively promote product and market relations and the plastic recycling business, so that plastics stop being thrown straight into the sea." Orlandi added that she helped select exhibitors and artists, and brought in sponsors and participating organizations. ECONYL by Aquafil, the Bicester Village Shopping Collection and Illy sponsored the award. Istituto Marangoni is an educational partner. "We may only need to start with the education that students receive. We need to involve schools, especially design institutes. This can create a virtuous circle in learning and stop people getting involved in negative projects. We need to embrace the

potential of design. Both designers and companies must recognize the impact proper waste disposal can have. We are part of the problem, and we need to become part of the solution."

The exhibition was held at the railway exhibition hall of the Milan Science and Technology Museum, two blocks away from the Rosanna Orlandi Space. "Since last year, I have always wanted to do something with the plastics around us," says Rossana Orlandi. The exhibition features recycled plastics and the work of more than 30 designers, architects and artists from around the world, including Patricia Urquiola, Piet Hein Eek, Formafantasma and Brodie Neill.

In fact, exhibitors are not limited to design planners in the field of recycled

上一些海滩的现状, 塑料已远远超过沙滩的长度。”

费尔南多·马斯特安杰罗的雕塑作品是“一件类似石碑的‘愤怒’作品, 人们可以坐在上面, 并认识到我们面临的严峻考验。这一由再生蓝色塑料制成的图腾被置于一列火车的正前方, 隐喻灾难迫在眉睫。”

帕特丽夏·乌尔奎拉联手莫罗索家居品牌和小智再生环保技术公司, 创作了“打发时间的沙发床”, 这是对现代沙发床的嘲讽。该设计灵感来源于运动鞋, 完全由回收PET塑料制成。

作为“塑料无罪”项目的一部分, 首届“RO塑料奖”也正式启动。该奖项面向大众, 分为设计、家用纺织、包装解决方案、有意识创新四个类别。设计类别注重提出将塑料重新引入日常生活的建议; 家用纺织品类别关注不含胶水或化学污染物的再生合成织物; 包装解决方案侧重重新发明的可重复使用的容器;

Brodie Neill's "Capsule" Ocean Plastic Hourglass

布罗迪·内尔使用从海洋中收集的塑料创作的沙漏，警示人类行为对环境的冲击及采取行动的迫切性。



plastics. Many well-known artists are also involved. They use universally applicable language to interpret the theme of the exhibition.

One exhibitor, Nika Zupanc, said: "I focus on tapping into diverse uses of recycled plastics in my work, adding poetic or moving new value to them by changing their appearance. For designers, recycling and reusing waste materials is an extremely important task." The Slovenian female artist uses recycled plastic to create a clock that symbolizes the past and looks to the future. The plastic surface of the clock and the marine life studded on it stand for the urgency of taking action.

The work of London designer Brodie Neill is rich in meaning. He explained: "This hourglass is filled with plastic collected from the ocean. It warns us that the time to protect the environment is limited. In addition, the plastic in the hourglass stands for the status of some of the beaches in the world, where plastic extends far beyond the sand.

The sculptures of Fernando Mastrangelo are also very eye-

catching. He said: "I wanted to create something "angry" like a stone monument, so that people could sit here and come to terms with the extreme test we face. This totem of recycled blue plastic is located right in front of a train, giving us the metaphor of imminent disaster."

Patricia Urquiola teamed up with Moroso and Miniwiz to plan the project, "Wasting Time Daybed," an ironic or teasing take on the modern sofa bed. The project is inspired by the sports shoe and made entirely of recycled PET plastic.

Orlandi says the project is something of a mission for her. "It's a comfort, as it shows that our fate is not predetermined, and that a more diverse world is on its way." Plastics are not at fault. It's us who have taken a wrong turn with our irresponsible lifestyles. Faced with this global problem, it should not just be designers and researchers who wrack their brains to come up with an answer to the waste sorting issue. We can also be part of the solution. ■

有意识创新重点关注在社会责任基础之上进行的创新。入围项目在位于米兰的罗珊娜·奥兰迪艺术空间展出。每个类别评选一名获奖者，每人可获得一万欧元的奖金，奖金用途将被限定于运作获奖项目。

该奖项收到了来自世界各地的300多份参赛作品。“我们不应该再把气候变化看作未来的问题。我们现在就需要解决这个问题。我们已经拿起武器进行了一场创造性的世代斗争。塑料本身不应受到指责；它可以成为一种充满可能性和潜力的资源。真正的问题是使用错误。通过这次比赛，我想激励年轻人以及其他所有设计者，集中精力于再生塑料的巨大可能性。”

“我希望奖项中的创新类能得到最高的参与度，我们将借此帮助尚没有资源的年轻设计师崭露头角。奖项与艺术展的宗旨在于实现设计项目的延续，并且希望能积极促进产品与市场的关系以及塑料的回收，避免塑料被直接扔进海洋中。”奥兰迪补充道。她也亲自参与遴选参展设计师及艺术家，并负责赞助商及参展相关组织的工作。ECONYL by Aquafil, The Bicester Village Shopping Collection以及Illy都是此次奖项的赞助商。Istituto Marangoni作为教育合作伙伴也参与其中。“我们需要教育开始，需要让学校特别是设计院校参与进来。这可以在学习中创造一个良性循环，避免对所谓‘坏’材料盖棺定论。我们需要拥抱设计的潜力，设计师和设计公司必须认识到它可能产生的影响。我们确实是问题的一部分，现在我们需要成为解决方案的一部分。”

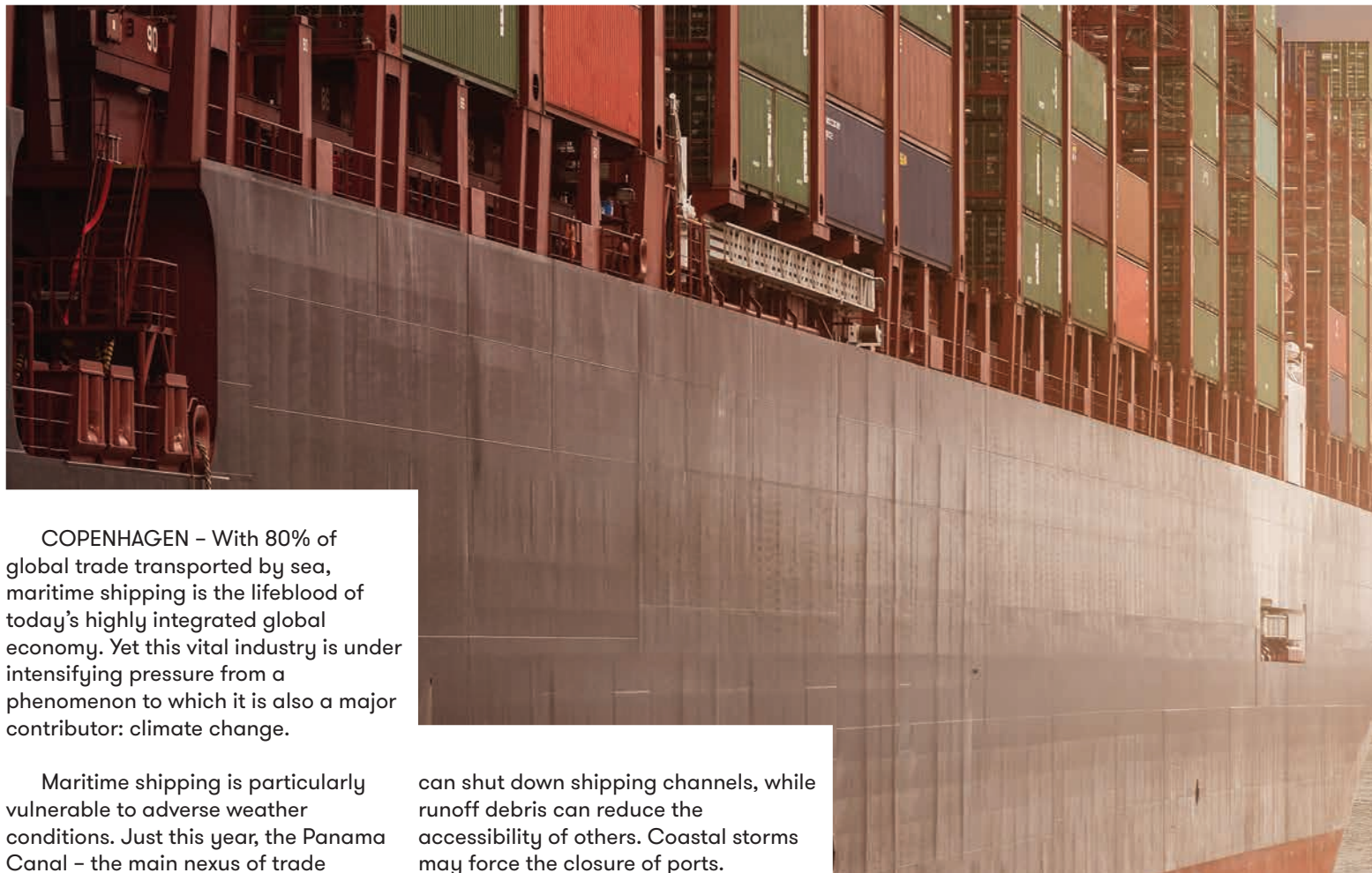
这个项目对奥兰迪而言更像是使命。“它对我是个安慰，让我知道我们的未来不是注定的，多样化的世界正在到来。”塑料无罪，有过失的是不负责任的生活方式。面对这一全球性问题，不仅设计师和研究员，积极思考垃圾分类的我们也可以是解决方案的一部分。■

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Making Shipping Sustainable

By John Kornerup Bang



COPENHAGEN – With 80% of global trade transported by sea, maritime shipping is the lifeblood of today's highly integrated global economy. Yet this vital industry is under intensifying pressure from a phenomenon to which it is also a major contributor: climate change.

Maritime shipping is particularly vulnerable to adverse weather conditions. Just this year, the Panama Canal – the main nexus of trade between the Atlantic and Pacific – has suffered the worst drought in its 115-year history. Water levels were so low that some ships had to unload part of their cargo to gain enough flotation to pass through the waterway.

Similarly, last year, a five-month drought in Germany sent water levels on the Rhine, Europe's main inland shipping route, to their lowest point in over a century. Ships carrying critical goods were unable to get through, disrupting supply chains for car manufacturing and other industries, and causing diesel prices to spike.

And drought is far from the only risk. Typhoons and hurricanes require vessels to be rerouted. Extreme flooding

can shut down shipping channels, while runoff debris can reduce the accessibility of others. Coastal storms may force the closure of ports.

Scientists overwhelmingly agree that climate change will cause such extreme weather events and disasters to proliferate. Along with the risks to human health and political stability, it is clearly unwise to accelerate a mechanism that already is disrupting the physical infrastructure and supply chains underpinning the operation of the global economy.

Yet the shipping industry is doing just that. According to the United Nations International Maritime Organization (IMO), maritime shipping accounts for 2-3% of global greenhouse-gas (GHG) emissions each year, putting it roughly on par with Germany. In a business-as-usual

scenario, continued economic development – and, thus, growth in trade – will cause GHG emissions from shipping to continue to rise.

Clearly, then, a business-as-usual scenario is not an option. That is why the IMO has set the ambitious goal of cutting GHG emissions from shipping by at least 50% (relative to 2008 levels) by 2050. Achieving it will require concerted action from shipping companies and governments alike.

At Maersk – the world's largest shipping company, which moves nearly 20% of all containerized trade each year – we know that we don't have the



**MARITIME SHIPPING
ACCOUNTS FOR
2-3% OF GLOBAL
GREENHOUSE-GAS
EMISSIONS EACH YEAR**

luxury of pretending climate change isn't happening. Already, we have led the way in adopting more sustainable ways of doing business, including, for example, reducing overlapping service and port coverage by deploying fewer larger vessels, and sailing at more fuel-efficient speeds.

Moreover, last December, Maersk committed to making our entire company carbon-neutral by 2050, without the use of offsets. This will be no small feat: it will require our ships to adopt new propulsion technologies. But we will achieve it, through radical but necessary changes in our own business model, as well as through collaborative

initiatives with other actors in our sector.

One such initiative is the Poseidon Principles, the first global framework for assessing and disclosing the climate alignment of shipping investment portfolios. The framework's initial signatories – representing \$100 billion of ship finance – have committed to begin aligning their lending with the IMO's emissions-reduction goal.

The Poseidon Principles provide a useful model for other sectors seeking to advance decarbonization, while signaling to governments that the business community is ready for

ambitious climate action. After all, while private-sector collaboration can have a powerful impact, achieving the progress that is needed requires supportive public policies.

In particular, governments must introduce measures that apply to all of the world's commercial ships, not just newly built vessels, which are designed to emit less and will drive long-term progress in propulsion technologies. And they must support rapid technological innovation and green industrial development.

Decarbonizing long-distance shipping and other heavy transport demands not only the continued acceleration of renewable-energy deployment, but also the transformation of the energy sector, so that alternative fuels can be accessed at competitive prices. For example, "electrofuels" – an emerging class of carbon-neutral drop-in replacement fuels – require large electrolysis plants, most likely located in existing port industrial clusters.

If done right, changes in the shipping industry can help to support broader progress toward a low-carbon economy. One can imagine power-to-liquid or power-to-gas technology – which generates a synthetic fuel using renewable electricity, carbon dioxide, or water – eventually helping to balance the electricity grid, as renewables take on a greater share of power generation. Excess renewable energy during peak hours would be converted into, say, a liquid, which shipping companies could then transport to wherever it is needed to offset seasonal shortages.

The global shipping industry is increasingly recognizing its responsibility to help tackle climate change. But we cannot do it alone. At this September's climate action summit, hosted by UN Secretary-General António Guterres, governments must commit to adopting policies that keep maritime shipping relevant in the low-carbon economy of the future. ■

John Kornerup Bang is Head of Sustainability Strategy and Climate Strategy at Maersk.

塑造更可持续的航运业

约翰·科尔内拉普·邦

80%的全球贸易通过海路运输，海运是当今高度一体化的全球经济的生命线。但这一至关重要的行业遇到了一个日益严重的现象的压力，而它本身又是这一现象的主要导致因素。这便是气候变化。

海运极易受到糟糕天气条件的影响。就在今年，大西洋和太平洋之间的主要贸易通路——巴拿马运河遭遇其115年历史上最严重的干旱，过低的水位让一些船只不得不卸掉部分货物，才能获得足够的浮力穿过这条水道。

类似地，在去年，德国五个月的旱灾导致欧洲主要内河航路莱茵河水位创下下一个多世纪以来的新低，装载着重要货物的船只无法通航，影响了汽车制造和其他行业的供应链，导致柴油价格飙升。

旱灾还绝非唯一的风险。台风和飓风来袭时，船只就必须改变航线；极端洪水可能毁掉船闸，径流碎物也可能降低可通行性；沿海风暴可能迫使港口关闭。

科学家几乎一致同意，气候变化将导致这些极端天气事件和灾难频发。除了它们给个人健康和政治稳定带来的风险外，加速一个已然在破坏实体基础设施和供应链、干扰到全球经济运行的机制显然是不明智的。

但航运业恰恰在这么做。据联合国国际海事组织 (IMO) 数据，海运产生了每年2-3%的全球温室气体排放，大约和德国的排放规模相当。如果放任不管，不断的经济发展以及进而带来的贸易增长，将导致航运业的温室气体排放继续升高。

放任自流显然不是选项。为此，IMO制定了一个雄心勃勃的目标：到2050年航运业至

少要减少50%的温室气体排放量（相较于2008年的水平）。要实现这一目标，需要航运公司和政府采取切实举措。

马士基是全世界最大的航运公司，每年负责运输近20%的集装箱贸易。我们深知绝不能假装气候没有发生变化，因此已经开始引领采取更加可持续的业务模式，比如减少重复服务和港口覆盖，减少大船数量，尽量以燃料效率最高的速度航行。

去年12月，马士基承诺到2050年实现全公司碳中和，并且不会使用抵消额。这不是一个小目标：这要求我们的船只采取新型动力技术。但是，通过对业务模式进行彻底的改造，并与业内其他行动方进行合作，我们可以实现这个目标。

其中一项计划是“波塞冬原则”，这是全球首个评估和披露航运投资组合气候一致性的框架。该框架的首批签署人代表了1000亿美元的航运融资，已承诺开始着手让贷款与IMO的减排目标相一致。

波塞冬原则为其他致力推动去碳化的行业提供了榜样，也向政府释放了一个信号：企业界已经为雄心勃勃的气候行动做好了准备。毕竟，私人部门合作固然可以起到强大的作用，但实现必要的进步仍需要公共政策的支持。

特别是，政府必须引入适用于全世界所有商业船只的措施，而不仅仅是适用于新造船只。新造船只在设计时就已经考虑到了减少排放，它们能够推动动力技术的长期进步。政府举措也必须支持快速的技术创新和绿色产业发展。



长途航运和其他重型运输的去碳化需要不断加快可再生能源的部署，也要求能源部门的转型，从而让替代燃料能够廉价获得。比如说，新兴的碳中和嵌入式替代能源类型“电动燃料”需要大型电解发电机，它们最有可能部署在现有港口行业集群中。

如果执行得当，航运业的变化就能够支持迈向低碳经济的整体进步。我们可以想象，电-液或电-气技术（用可再生电力、二氧化碳或水产生合成燃料）最终将有助于平衡电网，可再生能源将占据更大的发电比重。峰值期的过剩可再生能源可以转化为（比如）液体，

加速一个已然在破坏实体基础设施和供应链、干扰到全球经济运行的机制,显然很不明智——但航运业恰恰在这么做



然后由航运公司运往需要这些能源抵消季节性短缺的地区。

全球航运业日益认识到有责任帮助解决气候变化问题,但我们不能独自战斗。在今年9月由联合国秘书长古特雷斯主持的气候行动峰会上,各国政府必须做出承诺,将采取让海运在低碳经济未来中起到重要作用的政策。■

约翰·科尔内拉普·邦:马士基公司可持续性战略和气候战略主管。

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Shifting Sands

流沙

By **Sim Chi Yin**

沈绮颖

[Singapore, Malaysia, China, 2017 - on-going]

[新加坡、马来西亚、中国, 2017年——持续进行中]







All fotos: © Sim Chi Yin/Magnum Photos/IC photo

Singapore, 2017
新加坡, 2017年

In May 2019 UN Environment Programme presented its new report “Sand and sustainability: Finding new solutions for environmental governance of global sand resources”.

The report focuses on how shifting consumption patterns, growing populations, increasing urbanization and infrastructure development have increased demand for sand three-fold over the last two decades. Further to this, damming and extraction have reduced sediment delivery from rivers to many coastal areas, leading to reduced deposits in river deltas and accelerated beach erosion.

“The World is running out of Sand.[...] The global depletion of sand is driven by rapid urbanisation — especially in China and other parts of Asia — and land reclamation. Singapore, where I’m from, is the world’s largest importer of sand per capita. It has reclaimed almost a quarter of its territory over the last 60 years.

The story of sand is, to me, that of the global income gap writ large: wealthy states buy up land from their poorer neighbours and move it to where they want it.

I’m mapping and researching this on-going project on this looming global problem.”

- Sim Chi Yin

Shifting Sands has been supported by Pulitzer Center for Crisis Reporting, National Geographic Magazine, The New York Times Magazine, and the Exactly Foundation.

Sim Chi Yin (b. 1978) is a photographer and artist from Singapore, currently based in London and Beijing. Her practice integrates multiple mediums including photography, film, sound, text, archival material and performative readings. Combining rigorous research with intimate storytelling, Sim’s works often explore issues relating to history, memory, conflict and migration, and their consequences. She joined Magnum Photos as a nominee member in 2018 and is currently also a doctoral researcher on scholarship at King’s College London.

Learn more of Sim ChiYin’s work here:
chijinsim.com
Download UNEP report here:
<https://wedocs.unep.org>



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Malaysia, 2017
马来西亚, 2017年

2019年5月, 联合国环境规划署公布了最新报告《沙与可持续性: 为全球沙资源的环境治理寻找新的解决方案》。

该报告重点指出, 在过去二十年里, 消费模式的转变、人口的增长、城市化进程的加速和基础设施的发展, 已经使得对沙子的需求增加了三倍。此外, 筑坝和开采减少了河流向许多沿海地区的泥沙输送, 导致河流三角洲沉积减少, 海滩侵蚀加速。

“世界上的沙子已经接近枯竭。快速的城市化(特别是在中国和亚洲其他地区)和土地开垦将全球沙地引向枯竭。我的祖国新加坡是世界上人均沙子进口量最大的国家。在过去60年里, 它已经开垦了近四分之一的领土。对我来说, 沙的故事正是全球收入差距的鲜明写照: 富裕国家从较穷邻国购买土地, 然后把地转移到他们想要的地方。我通过摄影来描绘和研究这个迫在眉睫的全球性问题, 项目目前仍在进展中。”

——沈绮颖

《流沙》项目得到了普利策危机报道中心、《国家地理》杂志、《纽约时报》杂志和“Exactly基金会”的支持。

沈绮颖(生于1978年)是一位来自新加坡的摄影师和艺术家, 现居伦敦和北京。她的创作融合了多种媒介, 包括摄影、录像、声音、文字、档案文件和表演性朗读。沈绮颖将调研的冷静严谨和叙述表现的亲密性达成平衡, 探讨的命题通常围绕历史、记忆、冲突、迁徙及其后果来展开。她于2018年成为玛格南图片社提名成员, 目前亦是伦敦国王学院博士候选人。

在此了解更多沈绮颖作品: chiyinsim.com
在此下载联合国环境规划署报告: <https://wedocs.unep.org>





Malaysia, 2017
马来西亚, 2017年

Sustainable Living in Cities

城市中的可持续设计

Text **Emma**

Photo iF designworldguide

The construction of ecological civilization is a major issue for all mankind to face in the future. Under the banner of the concept of sustainable development, design is facing unprecedented opportunities and challenges. Sustainable design is a strategic design activity that develops sustainable solutions, which take into account economic, environmental, moral and social issues in a balanced way, so as to guide and meet the needs of sustainable production and consumption. The concept of sustainability includes not only the sustainability of the environment and resources, but also the sustainability of society and culture.

Sustainable design is embodied in four attributes: natural, social, economic and technological. In terms of natural attributes, it is to seek an optimal ecosystem to support the realization of ecological integrity and human desires, so that the living environment of human beings can be sustained. In terms of social attributes, it is to improve the quality of human life while living within the capacity of maintaining ecosystem capacity. In terms of economic attributes, it increases the net benefit of economic development to the maximum while maintaining the quality of natural resources and the services it provides. In terms of technology, it is a shift to cleaner and more efficient

technologies, minimizing the consumption of energy and other natural resources, and establishing that generate little waste and pollutants.

To be sure, "sustainable design" is different from the design that generally uses material products as output (e.g., industrial design or fashion design): It integrates products and services to build "sustainable solutions" to meet consumer-specific requirements. The demand to replace the consumption of material products with "results" and "efficiency" (e.g., to replace the possession of washing machines with clean clothing services), while at the same time reducing the resource consumption and environmental pollution, and improving people's social life quality as the ultimate goal. Therefore, "sustainable design" does not simply emphasize the protection of ecological environment, but provides a systematic and innovative strategy that takes into account user needs, environmental benefits, social benefits and enterprise development.

生态文明建设是全人类面向未来的重大课题,在可持续发展观的旗帜下,设计正面临着前所未有的机遇和挑战。可持续设计是一种构建及开发可持续解决方案的策略设计活动,均衡考虑经济、环境、道德和社会问题,以引导和满足可持续生产和消费的需求。可持续的概念不仅包括环境与资源的可持续,也包括社会、文化的可持续。

可持续设计体现在自然、社会、经济和科技四个属性上。就自然属性而言,它寻求一种最佳的生态系统,以支持生态的完整性和人类愿望的实现,使人类的生存环境得以持续;就社会属性而言,它是在不超过维持生态系统涵容能力的情况下,改善人类的生活品质;就经济属性而言,它是在保持自然资源的质量和其所提供服务的前提下,使经济发展的净利益增加至最大限度;就科技属性而言,它是转向更清洁更有效的技术,尽可能减少自然资源消耗,建立极少产生废料和污染物的工艺和技术系统。

在实际操作中,可持续设计与一般以物资产品为输出的设计不同,它要透过整合产品及服务去构建可持续解决方案,满足消费者的特定需求,以“成果”和“效益”来取代物质产品的消耗(例如以洁净衣物服务去取代对洗衣机的占有),同时又以减少资源虚耗和环境污染、改善人们社会生活品质为最终目标。因此,可持续设计并非单纯地强调保护生态环境,而是提供兼顾使用者需求、环境利益、社会效益与企业发展的一种系统的创新策略。



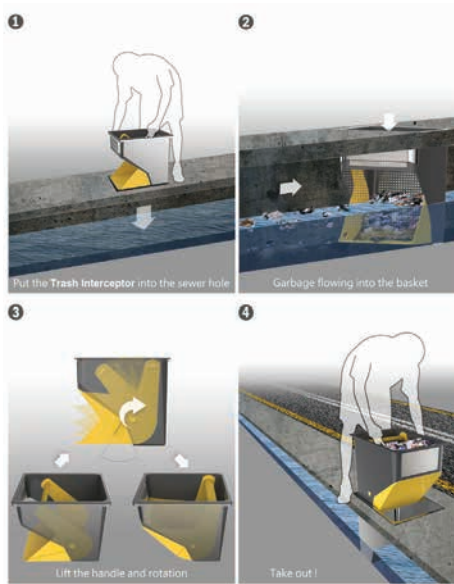
TRASH GRID 垃圾网格

Today, there are not enough trash bins in cities. If there is a special public event, people have to deal with even bigger amounts of trash and often cannot find a trash bin nearby. To solve this problem, convenient and portable trash bins are needed that can also be produced industrially. Trash Grid is designed to prevent the problem of people being inconsiderate and simply leaving their trash in the streets. The idea of collapsable, robust and easily portable trash containers is formally very convincing. The aesthetic and the materiality make it very practical and suitable for any urban setting.

Designers: Sangmyung university,
Cheonan-si, Cheongjik Kim, Seon Kim,
Jinyeol Lim, Seongjin Cheon

城市里似乎总是没有足够用的垃圾桶。我们需要方便、便携且能够工业化批量生产的垃圾桶。“垃圾网格”的设计就是为了防止人们为图一时方便而把垃圾随手丢弃在大街上。这个可折叠、坚固易携带的垃圾箱形态优美，又非常实用，适合于任何城市环境。

设计者：Sangmyung university,
Cheonan-si, Cheongjik Kim, Seon Kim, Jinyeol
Lim, Seongjin Cheon



TRASH INTERCEPTOR 垃圾阻断器

A lot of garbage often accumulates in urban sewer systems and cleaning staff need to open the fences to clear away the garbage, which is a difficult and time-consuming work. The Trash Interceptor offers a clean and fast way of cleaning. In just one single step workers can collect the garbage in the sewer. The container is mounted below the sewer cleaning hole and features an outside support structure. The inner collection basket is suspended in the water and collects garbage and sediment. When the basket is full, the cleaning staff can lift the handle with one hand, spin the reels to close the basket and dispose of the garbage.

Designers: Huafan University,
Huang, YI-Chang

在城市下水道系统中，清洁人员经常需要打开栅栏来清除垃圾，费时又费力。这个设计提供了一种干净快速的清洁方式，只要一步，清洁人员就可以收集下水道中的垃圾。容器安装在下水道清洗孔下方，配有一个外部支撑结构。内部收集篮悬浮在水中，收集垃圾和沉积物。收集篮满了的时候，清洁人员可以单手举起手柄，旋转卷筒来关闭篮子并处理垃圾。

设计者：Huafan University,
Huang, YI-Chang



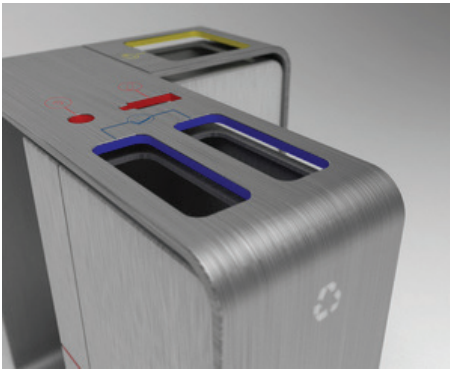
DA-TRASH-0901 废物箱

The DA-TRASH-0901, a litter bin for disposal wastes, is innovative street furniture for solving difficulties of trash and maintenance. It's a metal solid and beautifully curved shape litter bin type with a large capacity. The body consists of a well-smoothing cylinder made of steel plate, a half-circled wide mouth that is easy to throw wastes, and a aluminum cap on the top to avoid be wet inside and get dirty. The manufacturing system is mainly focused on minimizing steel plate at once by a press machine. The litter bin is moderate-colored and well assorted with urban places and will be the leader of clean city environment.

Designers: Design DADA Associates,
Yongsan-Gu Park, Seok hoon Oh,
Seung ho Hwang, Gyu youn

这是一款创新的街道家具，用于解决垃圾和维护方面的难题。采用金属材质，线条优美、容量大。主体是由钢板制成的平整圆筒，半圆形宽口易于投放垃圾，顶部的铝帽可避免内部潮湿和脏污。制造系统主要集中在用压力机将钢板一次最小化。采用中性配色，与城市环境良好搭配。

设计者：Design DADA Associates,
Yongsan-Gu Park, Seok hoon Oh,
Seung ho Hwang, Gyu youn



PUNTO LIMPIO 垃圾桶

Punto Limpio is a refuse bin with different compartments for metal, paper, batteries and watch batteries. There is no organic compartment as it was conceived for public buildings, where eating isn't allowed. It avoids large color areas that may disturb its surroundings and yet has a clearly defined place for each kind of waste material. It is extremely versatile: it may be placed on a corner, wall or as a stand-alone structure, it is very easy to empty and clean. Thanks to its materials, it is very durable and requires minimum maintenance. Mormedi was entrusted this project by the Castilla y León Spanish Regional Government.

Designers: Jaime Moreno, mormedi Team

“Punto Limpio垃圾桶有针对金属、纸张、电池和手表电池的不同隔间。没有设置有机隔间，因为它是为公共建筑设计的，在那里不允许进食。设计避免采用会对周围环境造成干扰的大面积色彩，但每种废弃物都有明确的位置。设计非常通用，可以放在角落、贴墙或独立摆放；也非常容易清空和清洁。基于其选材，这款垃圾桶非常耐用，仅需要最低限度的维护。

设计者:Jaime Moreno, mormedi Team



ECOPOD E1 SERIES 紧凑型回收设备

Ecopod asked BMW Group Designworks USA to translate their brand promise into a successful design for the first-ever aluminium can and plastic bottle compact recycler. Designworks USA applied their Intelligent Creativity methodology, beginning with a research phase. Next, they created a design language, translating ecopod's brand promise into product values. The design language focused on honesty, simplicity, social responsibility, and purity. The team then applied the product values to context, developing the mechanics for this unique aluminium can and bottle can compactor.

Designers: Designworks, a BMW Group Company

Ecopod要求宝马集团美国设计公司将他们的品牌承诺转化为第一款针对铝罐和塑料瓶的紧凑型回收设备。Designworks公司运用他们的智能创意方法论，从研究入手，然后创造了一种设计语言，将ecopod的品牌承诺转化为产品价值。团队将产品价值应用到实际语境中，为这种独特的铝罐和瓶罐压实器开发了机械装置。

设计者:Designworks, a BMW Group Company



DEGRADABLE STONE DUST GARBAGE BAG 可降解石尘垃圾袋

This bag is made from waste material produced by stone processing, recycling the dust which otherwise acts as a pollutant. The product naturally and safely degrades by three alternative methods: through the action of ultraviolet rays in sunlight; through combustion as it does not generate tar and toxic gas and the ash is composed only of inorganic powder; and through thermal oxidation when buried in soil.

Designers: Quanzhou Fantexi Smart Technology, Dongguan Fantexi Smart Technology, Chen Huicong, Chen Xiaocong, Lin Shanshan, He Jiaojie

该包装袋由石材加工产生的废料制成，回收灰尘以避免其成为污染物。该产品通过三种替代方法自然安全降解：通过阳光中紫外线的作用；通过燃烧，不产生焦油和有毒气体，灰分仅由无机粉末组成；埋在土壤中，通过热氧化降解。

设计者:Quanzhou Fantexi Smart Technology, Dongguan Fantexi Smart Technology, Chen Huicong, Chen Xiaocong, Lin Shanshan, He Jiaojie



T-PARK 自给式污泥处理设施

T-PARK is one of the most technologically advanced self-sustained sludge treatment facility of its kind in the world with power generation, educational and ecological facilities to showcase the benefits of the “Waste-to-Energy” approach in waste management. Since its opening in Jun 2016, T-PARK has already attracted more than 100,000 visitors, and become an important venue for environmental education as well as a leisure facility for the public.

Designers: Milkxhake, Javin Mo, Saki Ho, Joe Kwan, Thomas Siu, LAAB Architects

T-PARK是世界上最先进的自给式污泥处理设施之一，拥有发电、教育和生态设施，以展示废物管理中“废物到能源”方法的好处。自2016年6月开放以来，已经吸引了10万多名游客，成为环境教育的重要场所和公众的休闲设施。

设计者: Milkxhake, Javin Mo, Saki Ho, Joe Kwan, Thomas Siu, LAAB Architects



FLOATING COVER 浮动井盖

The FLOATING MANHOLE COVER is quite different from traditional ones. It has two parts: the cover part and the net part. The cover part is made of a special material which is lighter than water.

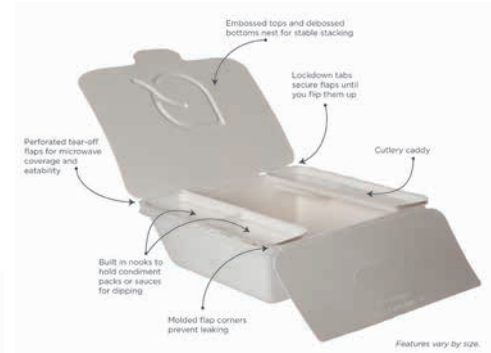
When a street is flooded, the water will lift the manhole cover to support drainage. The net part connects the manhole and the cover part. The net can efficiently prevent the accumulation of garbage from a clogged sewer.

During a flood, there are accidents that occur where people fall into missing manholes. This simple idea can prevent this accident and prevent the loss of life. Also, the lifting mechanism can enhance the drainage during a flood.

Designers: Zhejiang University, Leijing Zhou, Chunan Liao, Meng Chai, Muchuan Wang

浮动式井盖由井盖和网络两个部分构成：井盖部分由一种比水轻的特殊材料制成，当街道被水淹时，水会将井盖抬起来以支持排水；网络部分连接着井盖和井口，能够有效防止垃圾堆积阻塞下水道。这个设计能够帮助预防洪水期间人跌入下水井的事故，也能加强排水。

设计者: Zhejiang University, Leijing Zhou, Chunan Liao, Meng Chai, Muchuan Wang
设计者: Designworks, a BMW Group Company



FOLIA™ SUGARCANE CONTAINERS 甘蔗纤维外卖餐盒

With several design patents Folia™ Sugarcane Containers were developed to completely redefine the take-out and leftover experience. Innovative features include tear-away flaps for easier access to food, leak resistant side flaps that prevent spills and hold condiments and cutlery, and a full array of shapes and sizes that satisfy a broad scope of foodservice needs. Folia™ Sugarcane Containers maintain a clean, soft design with rounded corners to give them an organic feel. The containers are made from sugarcane fiber, a rapidly renewable and reclaimed resource. The natural beauty of sugarcane not only makes the package sustainable but also provides exceptional food presentation.

The clever modular concept allows for the separate accommodation of further food dishes, sauces as well as cutlery besides the main dish. This is extremely practical and presents an overall successful solution which completely convinces with its ecological aspect.

Folia™甘蔗餐盒保持了简洁、柔和的圆角设计，给人以有机的观感。甘蔗纤维是一种快速可再生能源和可回收利用的资源。甘蔗的自然美不仅使包装可持续，而且提供了特殊的食品展示。创新的功能包括可撕除上盖，让摄取食物更容易，防侧漏防溢出的侧包边，以及调味品和餐具的储藏空间，多种形状和尺寸能够满足广泛的食品服务需求。

设计者: Quanzhou Fantexi Smart Technology, Dongguan Fantexi Smart Technology, Chen Huicong, Chen Xiacong, Lin Shanshan, He Jiaojie

UNESCO Prizewinner Uses AI Tool to Detect and Collect Trash Worldwide

人工智能工具帮助检测和收集垃圾



© Let's Do It Foundation

Not everything that looks like trash is trash. That was the fundamental challenge when a UNESCO prizewinner from Estonia, the Let's Do It Foundation, had the idea to create an image-based trash detection system using Artificial Intelligence (AI).

In recent months, the laureate of the 2018 UNESCO-Japan Prize on Education for Sustainable Development (ESD) has been busy inventing an algorithm refined enough to distinguish trash in geolocated images and videos. The AI tool called WADE (Waste Detector) has been developed in collaboration with Microsoft and the data science company SIFR.

The foundation works by mobilizing millions of positive-minded, action-oriented people to tackle environmental and social problems related to mismanaged solid waste. The Let's Do It received the prize for two grassroots initiatives, World Cleanup Day and Keep It Clean, which address the global problem of mismanaged waste and stimulate sustainable social and environmental change.

World Cleanup Day's aim is to inspire volunteerism in local communities around the world; develop and empower a network of leaders; and empower countries, particularly developing ones, to deal resiliently with litter now and in the future. National and regional leaders – 'cleanup advocates' – build local

并非所有看起来像垃圾的东西都是垃圾——当爱沙尼亚Let's do it基金会决心使用人工智能技术设计一个基于图像识别的垃圾检测系统时，这是他们面临的最基本问题。该基金会是2018年联合国教科文组织可持续发展教育奖得主。

他们发明了一种精准度高、能够区分地理位置图像和视频中的垃圾的算法，与微软和数据科学公司SIFR合作开发了这项名叫WADE（废弃物探测器）的人工智能工具。

Let's do it基金会的工作在于动员数百万积极思考、以行动为导向的人解决与固体废物管理不当有关的环境和社会问题。该基金会曾获得“世界清洁日”和“Keep It Clean”这两项基层倡议奖，这些奖项的宗旨都是解决废弃物管理不当问题、促进可持续的社会和环境变化。

“世界清洁日”致力于在世界各地的社区鼓励志愿服务，发展当地组织者，使各国（尤



networks to run nationwide cleanups in which anyone can participate by using a mobile app which maps waste around the world. From its start in Estonia ten years ago World Cleanup has evolved to become a worldwide movement with around 36 million volunteers in 169 countries. Preparations are underway for the next World Cleanup Day on 21 September 2019.

TRASH IS HARD TO DETECT

Of the newly refined WADE system Technology Manager Kristiina Kerge said: “Trash is actually a complicated object to detect. Imagine a restaurant table with cans of soda on it, people having fun, eating and drinking. In that context, cans are not trash. When those cans are discarded on the street, they can most likely be considered trash. In fact, trash is a word people use for an object that lacks purpose, and the purpose of an object is often not obvious in the images we use for teaching an algorithm to spot trash.”

WADE allows for the identification and mapping of waste much faster and more accurately than people can.

“We started with a sample of images, trained the model, and analyzed the results. Based on the results, we determined what images we had to add to the next iteration of training,” said Kristiina.

“Now for example, citizens using five different mobile apps can map 121 waste points per day. At the same time, WADE is able to analyse more than eight million images a day. Collecting data about mismanaged waste is important not only for visualising the global trash problem but also to give academics, policy-makers, educators and businesses information about where the hotspots are, why they are there and what might be the solutions to stop waste ending up in nature or on streets.”

In the coming months, the foundation will be focusing on engaging stakeholders to start using WADE, with the aim to make at least 1 billion people in the world aware of the trash problem. The data collected by WADE will be integrated into ESD train-the-trainer programmes giving trainers visualisation tools to better explain the extent of the waste problem and also localise it in order to find solutions.

JOIN THE TRASH DETECTION MOVEMENT

“Collecting reliable data about waste, specifically about mismanaged waste, has been a challenge in the past but I hope that when we bring new innovative solutions to data collection and visualisation, it helps to bring more data scientists and citizens to join us making waste visible,” said Kristiina. ■

其是发展中国家)将来有能力灵活地应对垃圾处理问题。由全国和地区层级的组织者(即“清洁倡导者”)建立地方网络在全国范围内开展清洁工作,任何人都能够参与其中,他们借助移动应用程序来识别世界任何地方的垃圾。十年前在爱沙尼亚发起的世界清洁日如今已经发展成一项世界性运动,拥有来自169个国家的3600万名志愿者。

垃圾检测并非易事

技术经理凯奇说:“人们用垃圾这个词来形容没有用途的物品,我们通过图像教会算法识别垃圾,而这些图像中物品的用途往往不明显。”

WADE可以比人类更快、更准确地识别和定位垃圾。

“我们由图像样本出发,进行了模型培训和成果分析。根据研究结果,我们判定出下一轮训练中需要添加的图像。”

“如今,通过使用5种不同的移动应用程序,市民们每天可以检测到121个废弃物所在点。WADE每天可以分析超过800万个图像。收集与管理不当的废弃物有关的数据不仅对全球垃圾的可视化来说十分重要,还可以向学者、决策者、教育人士和企业提供信息,让他们清楚垃圾存在的热点位置、存在原因和潜在处理方案,以防止废弃物破坏自然环境或出现在马路上。”

接下来,Let's do it基金会将致力于说服各利益相关者使用WADE,让世界上至少有10亿人意识到垃圾问题。WADE收集到的数据将被整合到“教育助力可持续发展(ESD)”培训师培训方案中,并为培训师提供可视化工具,使其更好地了解与废弃物相关的问题,并对废弃物进行定位以找到解决方案。■

Making Fashion Circular

打造时尚循环

Circular Fashion Summit (CFS) powered by Lablaco is the first Collective Action Summit for Fashion supporting United Nations SDGs 2030. It took place in Station F, the largest tech hub in the world, located in Paris, the absolute fashion capital, during Paris Fashion Week 2019 on September 28th 2019.

It has a clear aim to tackle environmental issues and accelerate digital transformation of the fashion and textile industry, by uniting industry leaders to share their knowledge. CFS is committed to encouraging everyone to collectively take measurable actions within a 1-year time frame.

In September the Summit included 15 speakers, 3 moderators, and 12 catalysts. The official website of the events states: "3 panels, 3 goals, to discuss and act collectively by 2020". Panels' topics include:

PANEL 1: "DESIGN", UPCYCLING FOR GOOD / GOAL: UPCYCLING

Lablaco teamed up with Yama Saraj, Founder of Sensai, Station F based startup committed to Circular Economy, Sustainability, Technology and Social Justice. Thanks to his former background of Boxing champion, he is currently dedicating to a social-technology initiative for underprivileged kids in the war zone. By upcycling car tires, Yama is experimenting with building IOT punching bags connected to a mobile application which acts as a virtual personal coach. The mission is to provide youths with sports activities and opportunities. Together with Lablaco, they aim to crowd-source 1,000 upcycled sneakers for children in

Kabul, Afghanistan, to fully support this social empowerment initiative!

PANEL 2: "TECHNOLOGY", BLOCKCHAIN AND TRACEABILITY / GOAL: TOKENIZATION

Transparency and Traceability is one of the most "it" topics for the fashion industry at the moment. Yet very few brands have enough knowledge of usage and effective execution. Blockchain is a valuable technology to digitalize the fashion industry by tokenizing single products (SKU) with traceable information and ownerships, in a decentralized and secure network, such as Ethereum.

Thanks to the first pilot with LUXARITY of

The Lane Crawford Joyce Group in HongKong, Lablaco aims to provide an open platform for all brands to bring Blockchain tokens to consumers for the first time, exercising practical adoption. Lablaco aims to tokenize 10,000 fashion items collectively with brands and retailers worldwide.

PANEL 3: "SUSTAINABILITY", THE POWER OF RECIRCULATION / GOAL: RECIRCULATION

"By doubling the average number of times a garment is worn, we can almost halve the fashion industry greenhouse gas emissions". by Ellen MacArthur Foundation

Increasing product re-circulation, such as swapping, sharing, rental, and reselling, is considered the most effective way to lower fashion footprint and waste issues. Though the "bottom-up" approach, Lablaco provides individuals, brands and organizations a useful tool to re-circulate pre-owned products within the global community,

with automatic logistics integrated and impact calculation. Lablaco aims to enable recirculation of 100,000 fashion items to save estimated 2,000 Tons of CO₂ and 3,000,000 Liters of Water from landfill.

As the first Circular Fashion Social Platform powered by blockchain, Lablaco's mission is to accelerate the digitalization and eventually transition towards the Circular Economy of the Fashion Industry. By providing the open platform as a technology enabler, Lablaco aims to create a 360° ecosystem introducing new sustainable business models and re-defining the relationships between retailers, brands, designers, influencers, content creators and consumers within a single platform. With this tool, both businesses and individuals can easily manage to a new closed-loop consumption system with impact measurement.

The organizers believe that with innovation and technology the transition towards a Circular Fashion System can effectively be accelerated. It will be a valuable step in reducing overall environmental impact. For this reason, Lablaco decided to launch the first edition of Circular Fashion Summit in Station F, the largest tech hub in the world, during Paris Fashion Week 2019. This is a great opportunity to implement solutions and initiatives that will make the change happen.

#CFS Circular Fashion Summit is committed to supporting United Nations Sustainable Development Goals 2030: SDG12 Responsible Consumption and Production, SDG9 Industry, Innovation and infrastructure and SDG10 Reduced Inequalities, with concrete, easy-to-achieve actions collectively by industry leaders and community. ■

一件衣物的穿着次数只要增加一倍,我们就能将时尚产业的温室气体排放减少近一半

由Lablaco推动的循环时尚峰会(CFS)是首个支持联合国2030年可持续发展目标的时尚集体行动峰会。它于2019年9月28日巴黎时装周期间,在世界最大的科技中心——Station F举行,Station F位于绝对的时尚之都巴黎。

CFS有一个明确的目标:通过团结行业领导者分享他们的知识,来推动解决环境问题,加速时尚和纺织行业的数字化转型。CFS鼓励所有人以一年为周期,集体实施可取的行动。

9月的峰会邀请了15位演讲嘉宾、3位主持和12位行业变化驱动者。活动的官方网站上称:“到2020年将会有三个论坛、三个目标,共同讨论和行动”。论坛主题包括:

论坛1: “设计”,彻底升级/目标:升级

Lablaco与Sensai的创始人Yama Saraj合作,这家位于Station F的初创公司致力于循环经济、可持续发展、技术和社会公正。Saraj曾是拳击冠军,所以他目前正在进行一个致力于帮助战区贫困儿童的社会技术计划。通过升级汽车轮胎,Saraj正在尝试制造与移动应用程序连接的物联网沙袋,该应用程序充当虚拟私人教练。计划目的是给青少年提供体育活动和机会。他们与Lablaco一起,打算以众包方式为阿富汗喀布尔的儿童筹集1000双升级运动鞋,以全面支持这项社会赋能倡议。

论坛2: “技术”,区块链和可追溯性/目标:标记化

透明性和可追溯性是当前时尚界最重要的议题之一。但是,很少有品牌足够清楚该如何使用和有效执行。

区块链是一项有价值的技术,通过在分散和安全的网络(如以太网)中标记具有可追踪信息和所有权的单一产品,实现时尚产业的数字化。

通过与香港连卡佛伊士集团在LUXARITY上的首个合作试验,Lablaco尝试为所有品牌提供一个开放的平台,首次将区块链代币带给消费者,并进行实际采用。Lablaco

的目标是与全球品牌和零售商一起共同标记1万件时尚商品。

论坛3: “可持续性”,再循环的力量/目标:再循环

“一件衣物的平均穿着次数只要增加一倍,我们就能将时装业的温室气体排放量减少近半,”艾伦·麦克阿瑟基金会称。

通过交换、共享、租赁和转售等方式增加产品循环流通,被认为是减少时尚足迹和浪

费问题的最有效方法。通过这种“自下而上”式的方法,Lablaco为个人、品牌和机构提供了一个有用的工具,可以在全球范围内重新流通二手产品,并实现自动物流整合和影响计算。Lablaco的目标是实现10万件时装的再循环,也就是从垃圾填埋场中省下大约2千吨二氧化碳和300万升水。

作为第一个由区块链支持的循环时尚社交平台,Lablaco的任务是加速数字化并最终过渡到时装业的循环经济。通过提供开放平台作为技术支持,Lablaco的目标是创建一个360度的生态系统,引入新的可持续商业模式,并在单个平台内重新定义零售商、品牌、设计师、影响者、内容创建者和消费者之间的关系。借助此工具,企业和个人都可以通过影响评估轻松地管理新的闭环消费系统。

组织者相信,通过创新和技术,可以有效地加速向循环时尚系统的过渡。这将是减少总体环境影响的重要一步。因此,Lablaco决定在2019年巴黎时装周期间在全球最大的科技中心 Station F举办第一届CFS。这是实施解决方案和举措的绝佳机会,它将推动实现这一变革。

CFS循环时尚峰会致力于支持2030年联合国可持续发展目标:目标12“负责任的消费和生产”、目标9“工业、创新和基础设施”和目标10“减少不平等”,并由行业领导者和社区共同采取易于实现的具体行动。■

www.lablaco.com
www.circularfashionsummit.com

Lablaco还开发了一个时尚足迹工具,见:
www.fashionfootprint.org

Illustration by LAVA Beijing

Fohm.Life: Green Chemistry for a Sustainable System

Fohm.Life: 可持续发展系统的绿色化学

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



For the past 5 years the Brazil based design company Coletivo Amor de Madre has been working together with green chemist Lauro Cuevas to develop his research into a viable solution for one of the world's major environment issues, the pollution and diseases caused by the presence of oil in the water.

Fohm.Life is an organic foam that absorbs hydrocarbons in both water and dry land. Made mainly from vegetable oils or any other organic source that holds sugar within itself, it leaves both water and land clean. Once absorbed the oil is inoculated offering no harm to the environment. The waste can be mixed in the soil to be used as

an organic fertilizer in both natural way or after oil absorption, germinating life from leftovers. Marketed in both liquid and expanded form it facilitates transport and can hold disasters cleaning oil spills in any scale from freight ships across the seas until small home tragedies, such as cleaning your pot and letting the cooking oil run down the drain.

Fohm.Life is 100% biodegradable, non toxic, non flammable, hydrophobic, harmless to life, non oxidant, non abrasive, alkaline and vegan, it absorbs 28 times its size and biodegrades in 28 days.

Read more on www.fohm.life

过去五年里,巴西设计公司 Coletivo Amor de Madre与绿色化学家 Lauro Cuevas一直致力于针对水中含有石油所造成的污染和疾病这一世界性重点环境问题,进行可行性解决方案研究。

Fohm.Life是一种吸收水和旱地中烃类的有机泡沫。它主要由蔬菜油或其他含糖有机原料制成,可清洁水和土壤。石油在被吸收之后即可分解,避免了对环境的危害。废物可以混合在土壤中通过自然的方式变成有机肥料以供使用,或在吸收石油后变成有机肥料滋养生物。销售时采用液体或其他延伸形式,有利于运输,它能够帮助处理从海上石油倾泻到家庭日常等各种规模事故,比如可用来清洁锅具,将烹饪油从下水道冲走。

Kering's Commitment to Sustainability

开云：奢侈品行业的可持续转型

Care, Collaborate, Create. Three pillars to develop a more sustainable and responsible type of luxury. Three pillars that shape Kering's 2025 Sustainability Strategy in a world where reducing resource consumption and respecting people are absolute necessities. Three pillars that embody and drive our ambition: to craft tomorrow's luxury.

Kering is taking steps to reduce its environmental footprint and preserve the planet and its natural resources by using innovative tools, new practices, and original methodologies and by applying stringent standards. Kering is developing tools to gain a better understanding of its environmental footprint and to prioritize its choices based on its sustainability strategy. The group sources raw materials in a sustainable way, preserving biodiversity, and meeting the highest standards of health, safety, and animal welfare.

By promoting sustainable design, Kering is reducing the environmental impact of its products, from the sourcing of raw materials to their manufacturing, transportation, and other activities. The group has made a commitment to reduce its EP&L (Environmental Profit and Loss account) across its supply chain by 40% between now and 2025. This proprietary methodology used to measure and assign monetary value to the environmental footprint of its entire supply chain has received praise and awards.

Kering is also targeting a 50% reduction in its carbon emissions by 2025 within Scopes 1 to 3 of the Greenhouse Gas Protocol*. Beyond its commitment to reducing emissions across its business, Kering has a pioneering offset program through REDD+ projects that supports the conservation of some of the world's most bio-diverse forests while contributing to the livelihoods of local communities.

The group also promotes new sustainable practices related to water consumption, air and water pollution, waste, and land use, such as the Clean by Design program, whose first phase ended in 2017 following audits to improve energy efficiency and optimize resource consumption of 24 textile plants that work with them. A new phase focused on six plants in China is now underway. Numerous audits have been conducted since early 2017, resulting in an annual reduction of several thousand tons of carbon dioxide emissions.

“奢侈品行业与可持续发展俱为一体”，是弗朗索瓦-亨利·皮诺坚定不移的信念，也是开云集团的战略核心。这不只是道德上的需要，更是因为可持续发展是开云集团及旗下品牌和所有利益相关者创新和价值创造的驱动力。

关爱、合作、创新，是开云发展更可持续性和更有责任心奢侈品行业的三个战略纲要。它构建了开云2025年可持续发展战略，即在全世界范围内减少资源消耗和尊重人是至关重要的。三个战略纲要推动着开云“致力打造奢侈品行业的美好明天”这一宏伟愿景。

开云正采取行动，通过使用创新工具、尝试新的实践操作，落实原本的方法论及严格的标准，努力减少其环境足迹、保护地球及其自然资源。开云正着手研发创新工具，从而对环境足迹有更好的认知，并根据其可持续发展战略确定各类选择的轻重缓急。以可持续方式选用原材料、保护生物多样性，以符合健康、安全和动物福利方面的最高标准。通过宣传可持续设计理念，开云从原材料选择及生产到物流运输和其他活动中正在减少产品对环境的影响。

开云承诺从现在到2025年将其供应链的EP&L环境损益降低40%。开云还开发了一套环境损益计算方法论，能够精确衡量企业整个供应链上环境足迹并将之量化成货币价值，这套方法赢得了行业内众口赞誉和多个奖项。

开云还计划在2025年之前在温室气体议定书的1至3范围内减少50%的二氧化碳排放量。除了承诺减少整个企业的排放量之外，开云还通过REDD+项目开展了一项开拓性的抵消计划，该项目支持保护世界上一些生物多样性最丰富的森林，同时也为当地社区的生计做出贡献。

开云集团也就水消耗、空气和水污染、废弃物排放和土地使用率等推广新的可持续实践方法。这是“Clean by Design”项目目标，该项目的第一阶段于2017年结束，计划内容是对24家与开云合作的面料工厂进行审计，旨在提高能源效率和优化资源的使用消耗。新阶段锁定了六家中国的工厂，项目已在进行中。自2017年初以来，多次审计显示，该项目现已达到每年减少数千吨二氧化碳排放量的成果。

Impossible Foods: How Eating Can Help You Save the Planet?



Pet Brown, the founder and CEO of Impossible Foods (IF), started the company in 2011 after leaving his job at Stanford University, with the vision “to make the global food system sustainable by replacing animal-based foods with delicious, nutritious and affordable meat and dairy foods, made directly from plants” – he writes in IF’s 2017 Sustainability Report.

With a culturally mixed team of 150 employees including scientists, engineers, chefs, farmers and foodies, IF has grown into a full-fledged enterprise with an environmental mission at its heart, one that takes the impact of its processes and products very seriously. A read through their latest report offers wealth of details about their assessment methodologies and data resources aimed at drastically reducing and improving the footprint of their makings, from water and waste to packaging (the report is downloadable at their site).

**AMERICANS
CONSUME ABOUT 10
BILLION POUNDS OF
GROUND BEEF PER
YEAR AND THE
AVERAGE PERSON EATS
THREE HAMBURGERS
EVERY WEEK**

The first signature product is the Impossible Burger, chosen because beside being “beloved and iconic” among Americans it is also the one with the highest environmental impact. Data unveils that Americans consume about 10 billion pounds of ground beef per year and the average person eats three hamburgers every week—nearly 50 billion burgers per year and about half of this is consumed in restaurants. In order to supply this much meat, around three quarters of all agricultural land in the U.S. is devoted to cattle and the crops they eat. Reliance on livestock and feedcrops is essentially not only impoverishing the land and generating massive waste, but dangerously displacing other animals and plants, thus decimating other species. Global biodiversity is being altered at a skyrocketing pace, with 58 % decline in global populations of fish, birds, mammals, amphibians and reptiles, between 1970 and 2012. The ingredients and processing methods of the Impossible Burger are all plants and heme, an essential molecular

building block of life, found in all plants and animals, the magic ingredient that makes meat taste like meat and provides a uniquely bioavailable source of iron.

In short, the Impossible Burger looks, taste and “bleeds” like a real one, but uses about one quarter of the water, 5 % of the land and contributes 13 % of the emissions compared to a burger

from cows.

With its burger already served in a variety of award-winning restaurants in the United States and with a factory launched in 2017 in Oakland, California, the company is expected to produce 1.1 million pounds of plant-based meat per month — 250 times more than the current production, enough for a million burgers every week. The company works also very closely with farmers, many of its employees have relevant backgrounds, in an effort to collectively “find new and better ways to sustainably feed 10 billion people by 2050”. ■

Learn more at www.impossiblefoods.com

怎么吃才能帮助拯救地球？



“不可思议的食物”（IF）公司由帕特·布朗在2011年创立，根据他在IF 2017可持续发展报告中所写，其愿景是“通过直接将植物转化为美味、营养且经济实惠的具有肉质口感的食品及乳制品，来代替依赖动物供应的肉类，使全球食品系统能够持续发展”。

公司迄今已发展成为一个以保护环境为使命的成熟企业，IF报告中详细阐述了其评估方法和数据资源，旨在大幅减少和改进他们创造食物的足迹，从水和废物到包装（报告可在IF网站上下载）。

公司的第一款标志性产品是素肉汉堡。数据显示，美国人每年消耗大约100亿磅的碎牛肉，平均每人每周吃三个汉堡——相当于每年消耗近500亿个汉堡，其中约有一半是在餐厅消费的。为了提供这么多的肉，美国有3/4的农田被用于养殖牛以及种植饲料。对牲畜和饲料的依赖不仅消耗了土地，产生大量废弃物，而且严重危及了其他动植物的生存。全球生物多样性正在急速变化，1970年至2012年间，全球鱼类、鸟类、哺乳动物、两栖动物和爬行动物的数量下降了58%。IF素肉汉堡的成分和加工方法都采用植物和亚铁血红素，这是在所有动植物生命中都存在的一个分子结构，它是能让肉具有肉的口感的魔法成分，提供了独特的可生物获取的铁元素。

素肉汉堡看起来、吃起来、“渗血”的样子

对牲畜和饲料的依赖不仅消耗了土地，产生大量废弃物，而且严重危及了其他动植物的生存

都和真实汉堡一样，但它仅使用了用于生产真实肉类所需的约1/4的水、5%的土地，产生的排放量仅为13%。

IF的素肉汉堡已经在美国各知名餐厅出售，2017年IF在加利福尼亚州奥克兰开设了一家工厂，预计每月生产可110万磅的素肉——相当于目前产量的250倍，每周可以提供一百万个汉堡。IF也与农民密切合作，“寻找更好的可持续性办法，以便到2050年能喂饱100亿人口”。■

更多详细信息可见

www.impossiblefoods.com

Really: “Circular” Materials

Really: 可循环设计材料

Founded by Wickie Meier Engström, Klaus Samsøe and Ole Smedegaard in 2013, Really is a company devoted to salvaging end-of-life textiles and engineering them into a new material, the Solid Textile Board, a high-density compost made from recycled cotton and wool from the fashion and textile industries, laundries, households as well as Kvadrat’s selvedge waste. In fact as of 2017 the Danish company leader in textile manufacturing, has acquired 52 % of Really’s stakes, taking the company’s potential outreach and impact to a next level.

During Milan Design Week 2017 an exhibition curated by London based consultant Jane Withers, unveiled the first outcomes of this newly-established partnership with a beautifully orchestrated set of creative contributions to explain the aims and

possibilities of the endeavour and the material. “The first Really project is as much about asking questions as presenting material answers. The two commissions – by Christien Meindertsma and Max Lamb – are designed not simply to showcase the properties of a new material made from a familiar old one, but also to start a dialogue about the shift in perception, processes and logistics needed as we grapple with upcycling waste” she says.

The Solid Textile Board’s mechanical properties allow it to be used as substitute for wood and composites in furniture and architecture, therefore truly generating a circularity for the use of normally downcycled materials in the textile industry like cotton and wool and thus for them to be input a sustainable new production channel.

Max Lab has been the first designer to test the material, resulting in a series of decorative and furnishing objects from benches to tables and chairs. The presentation included also works realized by Christien Meindertsma with photographer Mathijs Labadie and film maker Roel van Tour that explore the making process of the board in a beautifully crafted limited edition book and animation.

www.reallycph.com

Really品牌携手欧洲领先纺织品设计和制造商Kvadrat, 在2017年的米兰国际家具展上正式推出用废旧纺织品升级再造的Solid Textile Board (实心织物纤维板) 可循环材料。这是一种高品质的坚硬板材, 由废旧棉布和羊毛纺织品制成, 原料来自时装工业、纺织工业、工业洗衣、一般大众家庭以及Kvadrat的裁剪废料。整个制造过程不使用染料、水或有毒化学品, 且生产过程中产生的废弃物都可再被循环利用。这种板材甚至可以再被升级改造, 仅需要研磨成颗粒, 便可塑成新的材料。

Really委托两位设计师通过创作来展示这种材料。Christien Meindertsma的作品展现了材料的制作及循环特性: 他研究了工业洗衣店(制作实心织物纤维板的废旧棉布来源之一)和无纺布技术, 并与摄影师Mathijs Labadie和电影制作人Roel van Tour合作, 将材料故事精简成准确传达所有技术细节的优美动画短片和限量版图书, 展示了废旧茶巾、床单和抹布如何转变为一块板材。Max Lamb则设计了12款长凳, 这既是他个人的实验性探索, 也向设计师和制造商展示了实心织物纤维板的潜力, 以及它与其他板材的特性比较。作品中有一款长达3米的长凳, 显示出板材的最大标准尺寸的可能性。

实心织物纤维板的合成反映了纺织品废物物流的可用性。取决于具体应用, 它可以成为各种现有材料的替代物。



Really: “Circular” Materials from
Textile to Architecture

Next Nature

另一种自然

ECO COIN

Would the rain forest still be destroyed if we could pay people to let the trees stand? The ECO coin is an alternative currency to express environmental value. This is how we connect economy and ecology. If we have to deal with environmental issues like deforestation, decreasing biodiversity and climate change, we need to articulate environmental value in economic terms.



生态币

如果我们付费让树木避免被砍伐，雨林是否仍会被毁？生态币是一种体现环境价值的替代币种，我们借此将经济与生态挂钩。在解决森林被伐、生物多样性持续下降及气候变化等环境事宜时，我们需要通过经济学术语来对环境价值进行表述。

Concept and design: Next Nature Network (2016-present)

概念和设计: Next Nature Network (2016年至今)
Additional information of all projects can be found at www.nextnature.net
所有项目更多信息请见 www.nextnature.net



MEAT THE FUTURE

Some scientists believe in vitro could become a sustainable and animal friendly way to produce meat. But before deciding if we are willing to eat meat from the lab, we need to explore the food culture it brings us. Using the format of the cookbook as a storytelling medium, the In Vitro Meat Cookbook is a visually stunning exploration of the new “food cultures” lab-grown meat might create. This award-winning publication features dozens of recipes that are delicious, uncanny, funny and inspiring. The delightful and weird recipes are complemented by fascinating interviews and thought-provoking essays from scientists, activists, philosophers and chefs. As the ultimate conversation starter about the future of food, it will redefine not just how you think about lab-grown meat, but how you think about the ways we produce meat right now.

The Meat the Future Exhibition is set up as a restaurant of the future and serves 30 exquisite signature dishes cooked to the highest standards using a revolutionary new ingredient: in vitro meat.

Bistro In Vitro is Next Nature's virtual restaurant that explores the potential impact of in vitro meat on our culinary culture. Select your menu today and make a reservation for the year 2028.

In Bistro In Vitro's mobile Ice Cream Cart we already give you the chance to

taste one recipe from the In Vitro Meat Cookbook. You can choose among six flavors: meat fruit, polar bear, bacon, ice queen, dragon and chocopanda. The aim is to discuss with you what your opinion is on the future of in vitro meat.

肉制品的未来

有些科学家相信实验室培育的人造肉会成为一种可持续的、动物友好型的获取肉的方式。但是在确定人们是否愿意吃人造肉之前，我们需要探讨一下这种情况对饮食文化的影响。

《体外肉类食谱》运用食谱作为叙述媒介，对实验室生产肉类可能带来的新“饮食文化”进行了探索，视觉大胆。这本获奖出版物里提供了数十种美味、非罐装、有趣且极具启发性的菜谱。除了这些有趣又怪异的菜谱，还附着对科学家、活动家、哲学家及厨师们的趣味采访及各类有深刻见解的文章。它是对食物未来发展的终极探讨，不仅改变了人们对于实验室生产肉类的理解，还改变了对于现有肉类生产方式的认知。

“肉制品的未来”展览现场被设计成未来餐厅的样子，提供以实验室人造肉为材料，按照最高标准制作的30种代表性菜式。

“人造肉小饭馆”是Next Nature创建的虚拟餐馆，旨在探索人造肉对厨房文化的影响。你可以今天就选好菜品，然后预定2028年就餐。

在“人造肉小饭馆”的移动冰激凌推车上，我们提供了《体外肉类食谱》上的餐点，有六种口味可供选择：肉水果、北极熊、熏肉、冰激凌皇后、恐龙和乔科熊猫。目的是了解你如何看待实验室人造肉的未来。

概念和设计: Next Nature Network (2015)
摄影物品: NichonGlerum



Inhabitants of this residential area of Yangon (Myanmar) make a living by collecting waste from neighboring communities. 在缅甸仰光的这个居住区，人们以捡拾相邻社区的垃圾为生。

© Nicola Longobardi, November 2015



China Logs

中国日报

Sustainability with Chinese Characteristics

中国特色的可持续 发展道路

By **Stephen S. Roach**
斯蒂芬·罗奇



Stephen S. Roach, a faculty member at Yale University and former Chairman of Morgan Stanley Asia, is the author of *Unbalanced: The Codependency of America and China*.

斯蒂芬·罗奇：耶鲁大学教员、摩根士丹利亚亚洲前董事长，著有《失衡：中美相互依赖》一书。

NEW HAVEN – In the here and now of climate change, it is easy to lose sight of important signs of progress. China, the world’s biggest emitter of greenhouse gases, is a case in point. By changing its economic model, shifting its sources of fuel, developing new transportation systems, and embracing eco-friendly urbanization, China’s sustainability strategy is an example of global leadership that the rest of the world should consider very carefully. In the rush to demonize China over trade, the West has missed this point altogether.

In the past 12 years, China’s economic structure has shifted dramatically from excessive reliance on smokestack manufacturing industries to low-carbon services. Back in 2006, the so-called secondary sector of GDP – largely manufacturing but also including construction and utility production — accounted for 48% of Chinese GDP, while the tertiary, or services, sector accounted for just 42% of GDP. By 2018, the shares had been reversed – 41% of GDP for the secondary sector and 52% for services.

For large economies, structural changes of this magnitude in such a short period are virtually unprecedented.

This shift was no accident. In March 2007, former Premier Wen Jiabao famously warned of a Chinese economy that was becoming increasingly “unstable, unbalanced, uncoordinated, and unsustainable.” This sparked a vigorous debate over sustainability risks that had a major impact on China’s most recent five-year plans and reforms. The leadership concluded that the Chinese economy could no longer afford to stay the energy- and pollution-intensive course set by Deng Xiaoping’s hyper-growth gambit in the early 1980s.

Consistent with this dramatic structural transformation, China has been aggressive in shifting the mix of its fuel consumption away from carbon-intensive coal to oil, natural gas, hydro, and renewables. Although coal still accounted for 58% of China’s total primary energy consumption in 2018 – more than three times the 18% share

in the rest of the world – that is down sharply from 74% in 2006, the year before Wen’s “Four Uns” first drew serious attention to sustainability.

Significantly, China is leading the world in embracing non-carbon renewables such as wind, solar, and geothermal biomass. In 2018, China’s renewables consumption was 38% larger than that in the United States and triple that of Germany. While renewables still account for just 4% of China’s total primary energy consumption, they have been growing by 25% annually over the past five years (including 29% growth in 2018). If China remains on this path, then renewables could hit 20% of China’s total energy consumption by 2025 – a major breakthrough on the road to a cleaner, less carbon-intensive economy.

China’s rapidly changing transportation model is a third key component of its sustainability strategy. China has the world’s largest high-speed rail network, the fastest-growing subway system, and is leading all efforts in the rush to embrace



electric vehicles. According to World Bank estimates, China is expected to exceed 30,000 kilometers (18,641 miles) of installed high-speed rail by next year, up from more than 25,000 kilometers by 2017, and to add considerably more in the years ahead. This energy-efficient mode of long-distance connectivity stands in sharp contrast to the carbon-intensive transportation network created the US interstate highway system in the 1950s and 1960s.

Finally, the urban environment – obviously critical to any sustainability challenge – is especially important in China where rapid urbanization still has about three decades to go, with the urban share of its population likely to rise from nearly 60% at present to 80% by 2050. Yes, as in other countries, roads in China’s major cities are severely congested. But China is doing something about it, boasting seven of the world’s 12 longest subway networks. Moreover, China’s electric vehicles (EV) market dwarfs those elsewhere, with

sales of over 500,000 EVs in 2017, versus slightly less than 200,000 in the US and Europe. And China’s EV lead is projected to widen considerably over the next decade.

China also stands out for its focus on a new eco-city urban model, featuring low-energy construction materials, light mass transportation, and well-planned “green space” urban pockets. The Xiong’an New Area, planned as a “subsidiary center” south of Beijing, is particularly noteworthy in this regard, as is the existing Sino-Singapore Tianjin Eco-city and Hainan’s recently announced plan to shift to all clean-energy vehicles. According to one recent estimate, China currently has plans to construct over 250 eco-cities. As a relative latecomer to urbanization, China has the opportunity to rely on new models of city planning and energy efficiency that were not available to the first movers in the industrial world.

Is all this enough to make a difference for China and the planet? The good news is that China’s share of global emissions has flattened out, albeit at a high level. China’s share of global carbon dioxide emissions doubled from 14% in 2001 to 28% 2011, but has not increased since. While China’s CO₂ emissions did rise by 2.2% in 2018, that was less than in the US (2.6%), Russia (4.2%), and India (7.0%) while falling well short of outright declines of 1.6% and 2% in Europe and Japan, respectively.

Alas, the good news in China is probably not good enough for a planet that many judge to be already in crisis. It’s one thing to bend the curve and stabilize the emissions share. It’s a different matter altogether to achieve the 20% reduction in the level of emissions as originally stipulated in the 2015 Paris climate agreement. Nonetheless, by shifting away from carbon-intensive manufacturing to low-energy services, and embracing EVs, high-speed rail, and eco-friendly urbanization – and likely to stay the course on all these trends – China is setting a high bar for the rest of the world.

BY SHIFTING AWAY FROM CARBON-INTENSIVE MANUFACTURING TO LOW-ENERGY SERVICES CHINA IS SETTING A HIGH BAR FOR THE REST OF THE WORLD



Illustration by LAVA Beijing

通过从高能耗制造业向低能耗服务业转变, 拥抱电动车、高铁和生态友好型城市, 并极有可能保持住这一趋势, 中国正在为世界上的其他国家设定一个高标准

在气候变化带来威胁的当下, 人们很容易忽视一些重要的进步迹象。作为全球最大温室气体排放国的中国便是一例。通过经济模式转型、改变燃料来源、建立新的交通系统、建设生态友好型城镇, 中国的可持续发展战略是全球领导力的典范, 值得其他国家认真考量。然而, 因急于在贸易问题上妖魔化中国, 西方世界完全忽略了这一点。

在过去的12年里, 中国的经济结构已经从过度依赖粗犷型制造业, 迅速转向低碳型服务行业。2006年, 所谓GDP中的第二产业(主要为制造业, 但也包括建筑业与公用设备生产) 占据了GDP总量的48%, 而第三产业(即服务业) 仅占比42%。时至2018年, 这一

比例发生了逆转: 第二产业占据GDP总量的41%, 而服务业的占比则达到52%。对大型经济体而言, 在这么短的时间内进行如此大规模的结构性转变, 是前所未有的。

这种转变绝非偶然。2007年3月, 时任中国国务院总理温家宝曾发出警示, 称中国经济正变得愈发“不稳定、不平衡、不协调, 以及不可持续”(以下简称“四不原则”)。这引发了一场关于可持续发展风险的激烈争论, 并对中国当期的五年计划与改革产生了重大影响。领导层得出结论: 20世纪80年代初期提出的高速发展策略以牺牲环境为代价, 中国经济已无法继续保持这一策略。

与这种巨大的结构转型相一致, 中国也在积极将其燃料消耗的混合模式从碳密集型(煤炭) 转移到石油、天然气、水力发电以及可再生能源上。2018年, 虽然煤炭仍占中国一次性能源消费总量的58%, 并超过世界其他国家18%的市场份额三倍有余, 但对比2006年(也就是时任中国国家领导人予以重视, 并提出“四不原则”的前一年) 的74%, 这一比率已然大幅下降。

值得注意的是, 中国在风能、太阳能以及地热生物质等非可再生能源方面正处于世界领先地位。2018年, 中国的可再生能源消费比美国高出38%, 是同期德国消费量的三倍。尽管可再生能源仅占中国一次性能源消费总量的4%, 但在过去五年中, 中国的可再生能源年平均增长率达25%(包括2018年29%的增长率)。如果中国继续坚持这一道路, 到2025年, 可再生能源占中国能源消费总量的比例将达到20%, 这也将是中国在实现更清洁、更为低碳密集型经济道路上的重大突破。

同时, 中国快速变化的交通模式, 成为其可持续发展战略的第三个关键组成部分。当前中国拥有世界上最大的高速铁路网、增长最快的地铁系统, 并且正在不遗余力地将电气化车辆与之紧密结合。据世界银行估计, 到明年, 中国的高铁铺设里程数预计将超过3万公里(合18, 641英里), 超过2017年的逾2.5万公里, 并将在未来几年持续大幅增长。这种节能高效的长距离连通模式, 同上世纪五六十年代美国州际公路系统的碳密集型运输网络形成了鲜明的对比。



While the trade war is important, China is winning the far more important battle for sustainability. To its credit, China is focusing on this battle at a point when its per capita output is barely more than one-third the level in the so-called advanced economies. A relatively poor country has made a conscious choice to shift its focus from the quantity to the quality of growth.

What about the rest of us? ■

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最后，城市环境对于中国尤其重要，而对任何的可持续性挑战也至关重要，因为中国的快速城市化进程仍将持续近三十年的时间：至2050年，中国城市人口的比例或将从目前的近60%上升至80%。确实，同其他国家一样，中国主要城市的道路仍非常拥挤，但中国正在采取措施，而且拥有全球12条最长地铁线路中的7条。此外，中国的电动汽车市场令其他国家相形见绌：2017年，中国电动汽车的销量超过50万辆，而同期美国与欧洲的销量则略低于20万辆。预计在未来10年，中国在电动汽车领域的领先地位会大幅拓宽。

不仅如此，中国对新型生态城市模式的重视也十分引人注目。该模式使用低能耗的建筑材料，并具备轻型大批量运输的特点，还有精心规划的城市空间——“绿色空间”。作为北京南部一个附中心的雄安新区在这一方面尤其值得注意，另外还有中国—新加坡天津生态城以及海南省最近宣布的新计划，即转向全清洁能源汽车。据一项最新估计：中国目前正在计划建设250多个生态城市。作为城市化相对较晚的国家，中国有机会依靠新的城市规划模式与能源效率，这些都是工业世界的先行国家没能获得的。

这一切足以改变中国与整个世界吗？好消息是：尽管处于较高水平，但中国在全球排放中所占的份额已趋于平稳。在全球二氧化碳排放所占的份额中，中国从2001年的14%翻了一番，达到了2011年的28%，但此后一直没有再增长。虽然中国的二氧化碳排放量在2018年确实增长了2.2%，但仍低于美国

(2.6%)、俄罗斯(4.2%)以及印度(7.0%)，不过也远比不上欧洲和日本分别下降了1.6%和2%。

对于一个许多人认为已经陷入危机的星球来说，中国的好消息或许还不够好。一方面，碳排放增长势头已经受到遏制，并趋于平稳；另一方面，实现2015年《巴黎气候协定》最初规定的20%减排目标，已经遥不可及。尽管如此，通过从高能耗制造业向低能耗服务业转变，拥抱电动车、高铁和生态友好型城市，并极有可能保持住这一趋势，中国正在为世界上的其他国家设定一个高标准。

虽然贸易战至关紧要，但中国正在赢得更重要的可持续发展之战。值得称道的是，中国专注于这场战斗，是在它的人均产出只及所谓发达经济体1/3多一点的时候。一个相对贫穷的国家已经做出了有意识的选择，把经济增长的重点从数量转向质量。

其他国家又当如何做呢？ ■

Shared Ladybird — A Micro Movable Library for Kids

共享瓢虫——可动的微型儿童书屋

by Luo Yujie
罗宇杰



1. REFLECTION ON “SHARING”

Though born of good intention (resources conservation, green commuting and making life more convenient), shared bicycles are becoming monsters under unbridled commercial sprawl. They have gobbled up raw materials, encroached on scarce urban public space and been dumped in massive piles.

A large number of shared bicycles, without any quality problems, have been forced to retire. Do we have any better solutions to handle this problem instead of recycling them in such a crude manner? As a designer living in the city, I have often wondered how these abandoned bikes can be better reused.

2. A MOBILE MAKER CLASSROOM FOR CHILDREN

I have a friend who specializes in

children's maker education. His self-made teaching props often need to be moved in and out of his office. He usually ties them to a grocery cart and wheels them to school to explain to the children and parents. Having seen this, I wanted to create a small and ingenious storage cart to support his endeavour.

By using an abandoned bicycle, discarded iron car sheets, and leftover materials from eco-friendly boards, it was possible to create a mobile maker classroom for children. The goal was to make it creative, interesting and lively, and bring hope for the reuse of industrial waste in a natural and artistic way.

The shared bicycle was transformed into a tricycle with a large loading capacity, in order to display more items. To protect the items and stop them moving around, we designed a

共享的反思

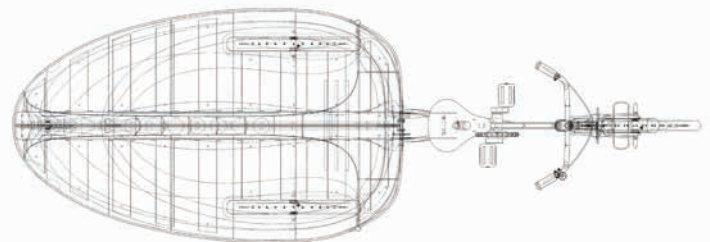
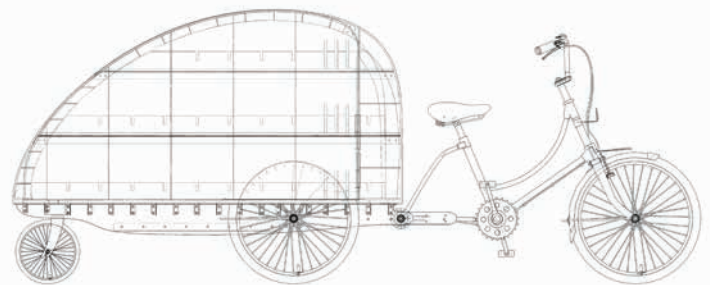
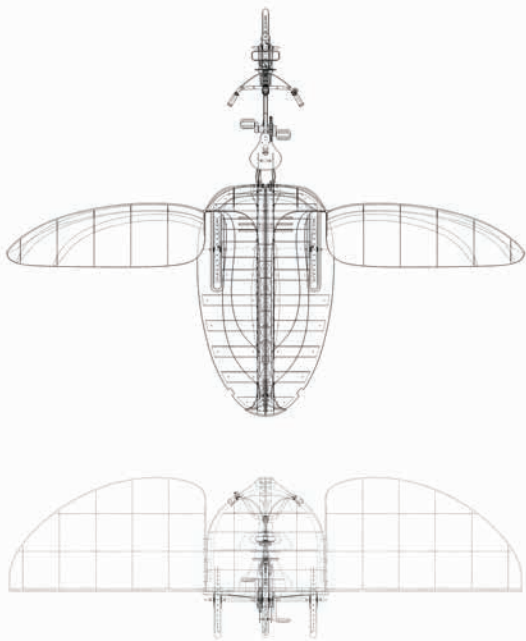
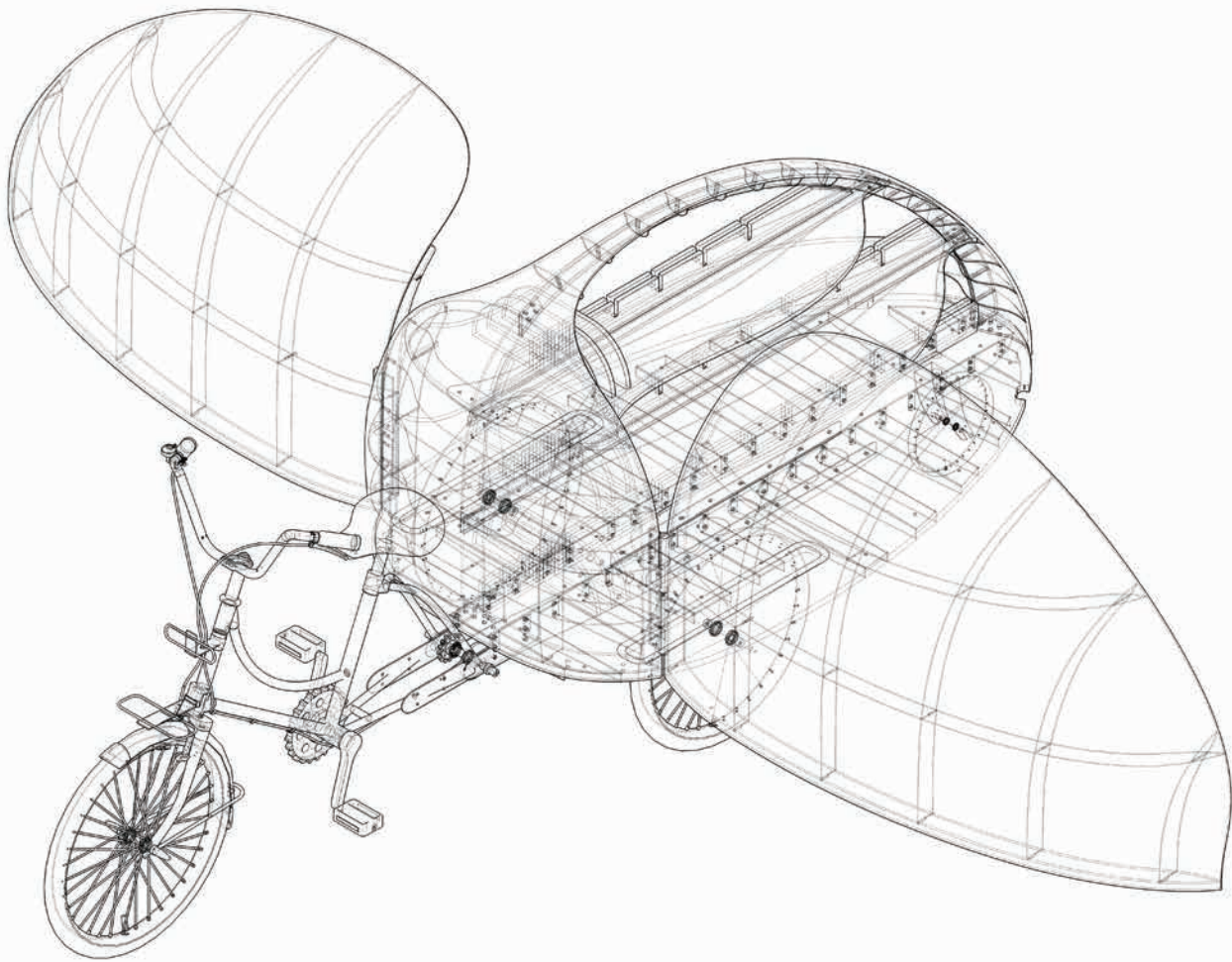
基于节约资源、让绿色出行回归、带来生活便捷的共享单车，在无节制的商业化运作下，从一个健康的状态变成一个怪物。它耗费了大量的工业原料，侵占掉稀缺的城市公共空间，堆放出一个又一个“巨型工业坟场”。

面对这些非产品质量问题而被迫“退役”的共享单车，有没有比简单粗暴的回收处理更积极的办法？作为一个生活于城市的设计造物者，是否可以用自己的所能去营造一种善意的再利用？

移动的儿童创客课堂

我的好朋友阿甘，专门为儿童进行创客教育。他自制了一些教学道具，要经常从办公空间搬出搬进，用一个买菜的小推车，捆绑着这些创客材料，到学校周围为孩子和家长进行解说。我特别希望为他建造一件具有创客精神的小型储物车，助力他的儿童创客教育。

利用废弃的共享单车、城市报废的汽车铁皮、环保板材边角料，完全可以去实现一个移





special cover on the shelf, which drew inspirations from ladybirds, a beneficial insect that kids are familiar with. The way that these beetles open and close their wings was applied to the cover, appealing and creative. Because of the beetle-wings-shaped cover, the shelf needs to be relatively long. With a view to ensuring the stability of the tricycle, we added an auxiliary omni wheel to its end. For the enclosed inner space, a multi-layer display structure was designed, which strengthens the whole installation and makes it more convenient to store items. From top to bottom, the layers gradually become larger, with the lowest one suitable for kids to sit and lean on.

3. A MICRO SHARED LIBRARY

Although it was originally designed to be a children's mobile maker classroom, I also hoped to endow it with multiple functions. The interior space for displaying items has been flexibly partitioned into several smaller storage areas by plates, which can be freely adjusted according to user needs. All the partitions can also be removed, forming a big integrated space. The installation can be customized based on different needs, making it versatile and "universal".

For example, it can be used as a micro shared library, where second-hand books collected from my friends are arranged. Each friend provided one

or more books, and they were invited to write a sentence in the books they shared. This tiny shared library can be placed in somewhere in the city. Everyone are allowed to read the books and put their used books here to replace their loved one.

Shared bikes have been abandoned in the cities. However, this offers tantalizing possibilities for book sharing.

4. SHARED LADYBIRDS IN THE UNKNOWN CITY

Urban development constantly creates new things, which may bring hope or cause great disappointment.

Facing the unknown trajectory of development in the city, we should stay positive, strive to turn waste into treasure and tackle the changing situation responsively, so as to better take care of the city and the earth.

The Shared Ladybird, is like a "beneficial insect" walking on the "urban leaf", which can be used as a mobile library, a stall, or a maker classroom for kids.

Or, it is merely a well-meaning reflection of the unknown quantity in urban development. ■

Design and production team: LUO Studio
Designers: Luo Yujie, Lu Zhuojian
Size: 3180 x 3100 x 1400mm
Photographer: Jin Weiqi
Design time: December 2018
Completion time: March 2019

动的儿童创客课堂,它一定要有想象力和趣味,要生动,化城市工业垃圾为自然感、艺术性的再利用“希望”,这就是共享瓢虫的初衷。

要陈放多一些的物品,将共享单车改造成承载量大的三轮车架。避免来回搬运物品和安全性,要对储物架进行遮盖。一个有意思的遮盖、一种更具创意的打开方式被充分想象。七星瓢虫是小朋友们相对比较了解的有益甲虫,选择将瓢虫翅翼打开的方式,运用到三轮货架的遮盖开合理念上。这种开合状态使得货架相对较长,为了综合稳定性,在整车尾部增加了一个万向的辅助轮。根据封闭的内空间合理设置陈放层台,多层的设计方便储物也增强了整车结构,结合上层小、下层大的特点,首层板宽度大,设置了可以坐靠的空间。

通用性之一:微型共享书屋

虽为儿童移动创客课堂的初始,也希望拓展到多重功能。将陈放格物的内部空间,设置灵活的安插分隔板,使用者可根据需求进行大、小储物空间的自由调整,也可以完全取下隔板,变成一个完整的大空间。使一个基于定制造物,变得通用化。

作为通用的延展功能之一:“微型共享书屋”。这里面的书籍都是通过向好朋友们征集闲置的二手书籍而来,每人提供一本或多本图书,在图书中可增加关于共享此书的一句话。共享微书屋可放置在城市的某个空间,他人可以随意阅读,也可以将自己闲置的书籍放置于此,或替换取走自己喜欢的书籍。

城市单车的共享荒废了,让大家的闲置书籍分享起来。

未知城市里的共享瓢虫

城市发展中新事物的创造可能是希望,也可能带来巨大的失望。面对未知的发展,我们应保持希望,化废为宝,见招拆招,关照城市,关照地球。

共享瓢虫,就像行走在“城市叶片”上的“益虫”,它可以是一个移动的书屋,或一个儿童创客课堂,或一个便利摊。

或者,它只是带给人们对城市未知进程的一次善意思量。■

设计及制作团队:罗宇杰工作室
LUOstudio
设计人:罗宇杰、卢焯健
尺寸:3180×3100×1400mm
摄影师:金伟琦
设计时间:2018年12月
完成时间:2019年3月

Meituan Shared Bikes: the Rebirth of Mobike

美团单车：摩拜的重生

By **Yang Biqiong**
杨碧琼

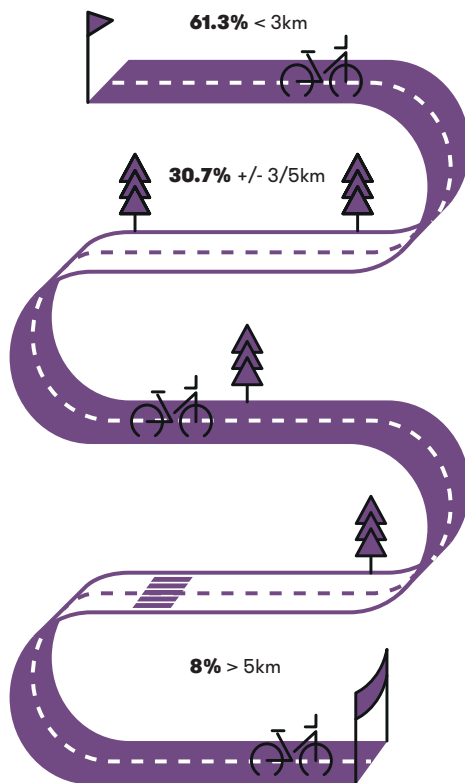
Founded in 2015, Mobike was the first Chinese tech company to launch a dock-less bike-sharing service in the country. Thanks to a proprietary IoT bike and AI-informed system, users could swiftly borrow and return Mobikes via an app. The last-mile of riding had become easy and affordable. In April 2016, Mobike officially entered operations, becoming the top bike-sharing brand in the PRC in terms of capillarity, brand image and usage.

That was then. Fast forward to recent times, and the latest evolution in shared bikes is Meituan's acquisition of Mobike in 2018. People will remember the battle of Mobike and ofo. Today, ofo is on life support, while Mobike is being reborn. More crucially, these brands have bid goodbye to the era of burning money and robbing users of deposits, and welcomed in an era of potential profits.

From October 9th, Meituan shared bikes, which used to be Mobike, began to adjust their pricing regime in Beijing. In fact, Meituan's price hike was not the

only one in the sector. Since March this year, many shared bike platforms raised prices across China's cities. For example, Didi's little blue bikes and Qingju bikes now cost more to ride in Beijing, while Hello bicycles have updated their billing standards and regulations in Beijing, Shanghai and Zhengzhou.

Behind the collective price hike is the longstanding question of profitability in the shared bicycle sector. With no-threshold deposit-free bicycles, the earlier profit model that relied on deposits shifted to a dependence on riding and advertising fees. Taking Meituan as an example, according to their 2019 second quarter report, operating losses have greatly narrowed, mainly due to the expiration of the use period of certain bicycles in the current season, no longer depreciating expenses and a smaller bike replacement exercise. Meituan has said it will continue to optimize its pricing strategy and increase the cost of each ride and introduce a monthly subscription fee in several cities.



Shared bike use by distance
共享单车骑行距离

70%

Intend to use bike sharing often
经常用

Will bike sharing become your future long term travel choice?
共享单车会成为你未来的出行选项吗?

28.7%

Intend to use bike sharing occasionally
偶尔用

No intention to use again
不打算用

1.2%

In reality, the recent price hike at Meituan has more to do with the company's internal situation, and its limited confidence in shared bike operations.

On October 8, the rankings of the top three Chinese Internet companies switched, making Meituan, with a pre-IPO growth rate of 5% and market value of 516.8 billion Hong Kong dollars (about 65.9 billion US dollars), the third largest Chinese internet company after Alibaba and Tencent. In the second quarter of this year, it made its first profit. In the third quarter, its market value soared into to become one of the three new giants. This kind of brand and profit harvest is something in which Meituan shared bikes plays a big role.

When Meituan acquired Mobike in April 2018, the shared bike company was exhausted after several rounds of financing battle with ofo, and the market had already placed it on restrictions. The acquisition of Mobike was feasible and significant to Meituan, with its expansion strategy in travel. Short-distance trips greatly enhance user activity on the platform. Just as Meituan founder Wang Xing said, the new business area "helps improve transaction numbers and user stickiness."

In the low-end shared bike market, commercialization and open source operations have a relatively small window, and the greatest value is as a supplementary business. This is true for Meituan and Didi. In the 2018 financial report, Meituan termed shared bicycle and connected cars its new business focus. Like with the acquisition of Mobike, Meituan's launch of pilot

connected cars also increases high-frequency services on the platform. When Meituan took over Mobike in April 2018, it was already exploring connected cars. But unlike Didi, Meituan needed a travel link to its shopping experience.

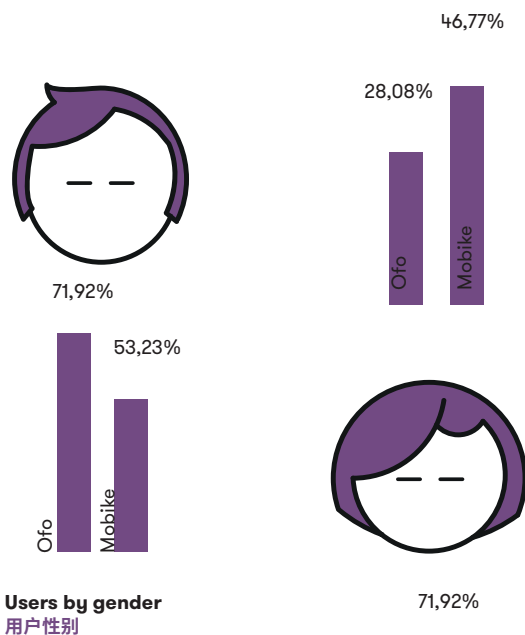
Judging from the market value of Meituan today, its acquisition of Mobike appears to have worked. The market value surge is the best proof of this. Mobike bicycles have entered the history books, but relying on rich patterns of living, Meituan bikes may have create more synergistic value for the group. ■

Data come from the first Chinese White Paper on Sharing Bikes and the Urban Development, published in April 2017 by Urban Travel Open Research Institute, founded by Mobike in collaboration with eleven domestic institutions and colleges including the Highway Research Institute of the Ministry of Transport, Tsinghua University and the Chinese New Urbanization Research Institute among others.

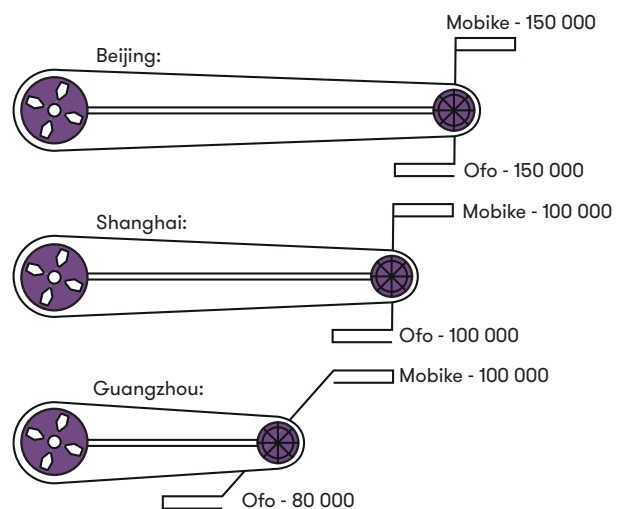
图上数据来自中国首部《共享单车与城市发展白皮书》，2017年4月由摩拜单车联合交通运输部公路科学研究院、清华大学中国新型城镇化研究院等国内十一家部委直属的研究机构、科研院所，共同成立的城市出行开放研究院发布。



Ofo bikes in circulation (thousands)
oFo单车投放数量(千)

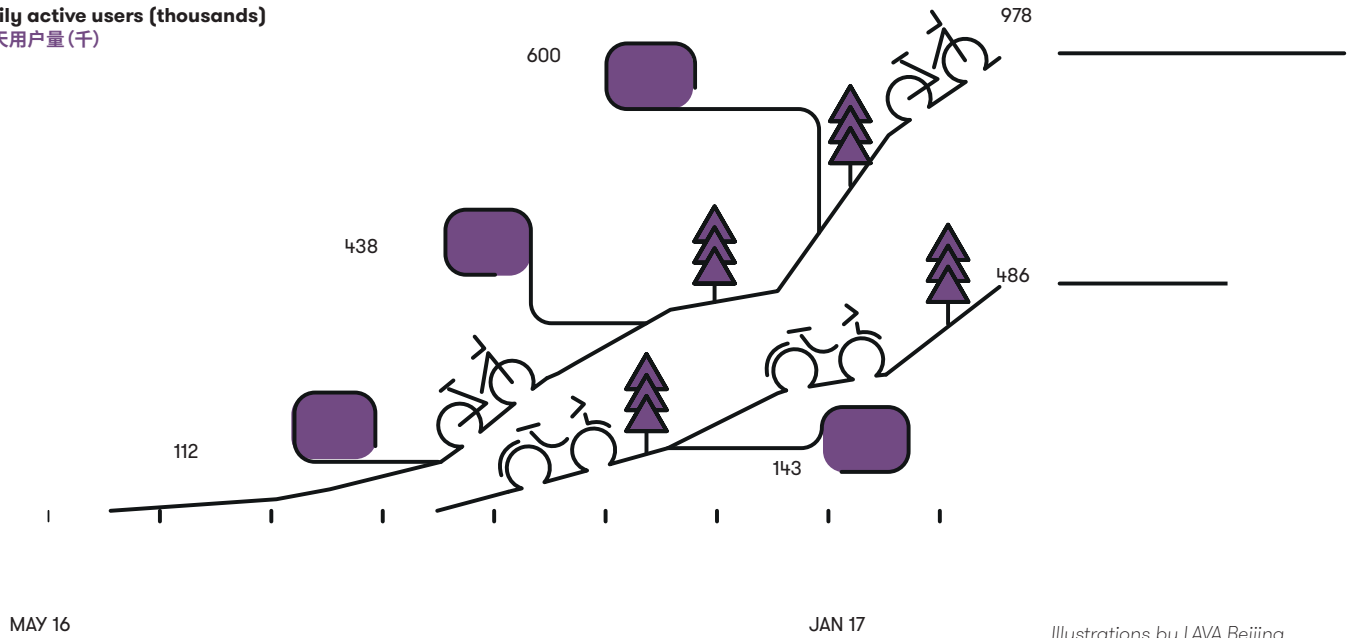


Users by gender
用户性别



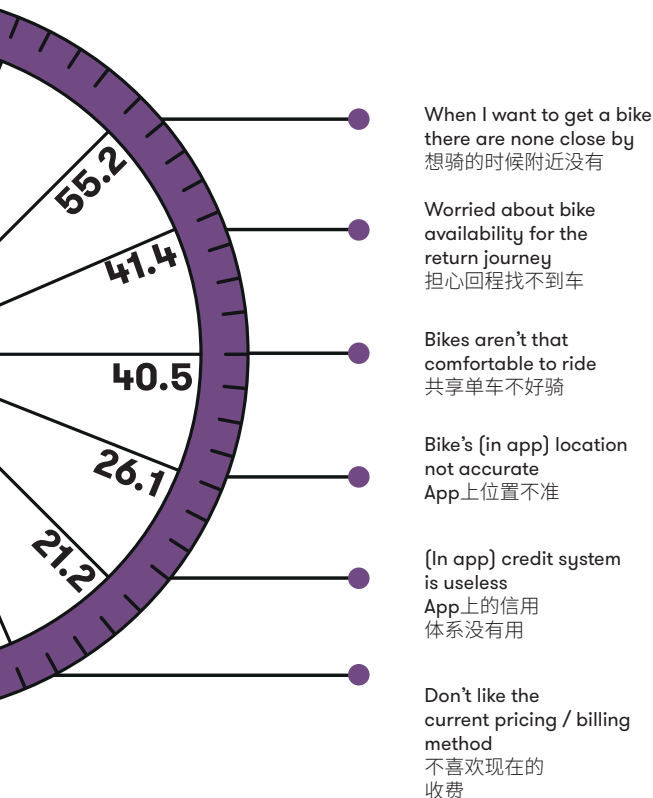
How many bikes?
各地有多少辆共享单车?

Daily active users (thousands)
每天用户量(千)



Illustrations by LAVA Beijing

Which aspects are you not satisfied with?
哪些方面不满意?



告别了烧钱抢用户的时代，更多的是向加钱收割靠拢。

10月9日起，美团单车，也就是曾经的摩拜单车，开始在北京调整计价方式。实际上，涨价的不止这一家。今年3月以来，多家共享单车先后在全国多个城市上调价格，比如滴滴出行旗下的小蓝单车和青桔单车在北京、上海、郑州等地更新了计费标准或实行新计费规则。

集体涨价的背后是共享单车企业深陷盈利难的困局。随着共享单车企业推行无门槛押金政策，共享单车的盈利模式已由此前依靠押金和骑行费用，变为依靠骑行费和广告费用获取利润。以美团单车为例，据美团点评发布的2019年第二季度财报显示，环比经营亏损大幅收窄，那主要归功于当季若干单车的使用期限已到期，不再产生任何折旧费用以及尚未大量投放新的替代单车而令折旧大幅减少。美团称，会继续优化定价策略，并开始适当增加若干城市的每次骑行费及每月订购费。

但美团单车最近一次涨价，与美团此时的处境以及美团对于共享单车的运作信心有很大的关系。

10月8日，中国互联网公司三甲排位正式变更，美团点评以超过5%的盘前涨幅达到市值5168亿港元(约合659亿美元)，成为继阿里、腾讯之后，市值排名第三的中国互联网公司。今

年二季度首次盈利，第三季度市值飙升成为中国互联网的新三巨头之一，这种品牌和利益双丰收的局面，美团单车起着很大的作用。

2018年4月美团收购摩拜时，正值摩拜在和ofo经历过几轮融资烧钱之后已然精疲力尽，而且市场已经推出了限制投放的通告。收购摩拜对于美团来说是可行且必要的。因为美团有出行需求拓展的布局，而短途出行可以极大提升用户在平台的活跃度，正如美团创始人王兴所说，新领域业务“有助于提高以用户的交易次数和黏性”。

共享单车这个底层业务，自身进行商业化变现、开源的可能性相对较小，其最大的价值还是对场景的补充，对美团、滴滴都是如此。美团在2018年财报中，把共享单车和网约车并称为新业务。和收购摩拜的逻辑一样，推出试点网约车服务也是为了增加美团平台上的高频服务。值得一提的是，2018年4月收购摩拜时，美团就已经进行了网约车业务的探索。但和滴滴做外卖不一样，美团的到店场景需要出行来衔接。

从当下美团的市值来看，美团对于摩拜的收购布局成效已经显现，市值暴涨就是最好的证明。摩拜单车已然成为历史，但靠着对生活场景的丰富，美团单车或许能为美团创造更多协同价值。■

Upcycling Shared Bicycles

Text and Images: YUUE, 751 International Design Festival

图文: YUUE, 751国际设计节

As a critique and an idea of saving resources, YUUE uses design as a method to convert bicycles parts wasted from the current booming bicycle sharing industry into elegant and functional furniture pieces.

Traveling has never been so convenient thanks to the advancement of the internet-powered sharing economy. However, it has also led to massive pollution and waste of resources. This issue has caught the attention of YUUE, who has decided to use design as the solution. Bicycle parts of wasted shared bicycles are collected and made into elegant and functional furniture pieces. They are then exhibited on the streets of Berlin, Milan, and Beijing. By doing this, YUUE criticizes sharing economy's ignorance of environmental consequences.

YUUE is a Berlin-based design studio that reimagines objects for daily life.

YUUE对共享单车的再利用

位于柏林的产品设计工作室YUUE将废弃的共享单车部件重新改造成美观的家具产品,为资源再利用提供了一种新思路。

互联网共享经济在给人们带来便利的同时,也造成了资源的浪费和对环境的污染。YUUE关注到共享单车行业的大量浪费现象,决定用设计作为工具,对废弃的共享单车进行重新挖掘,将其部件改造成实用美观的家具,并在柏林、米兰、北京的街头展出。通过这一行动,YUUE希望表达对漠视后果的经济行为的批判,表达出设计师应有的社会责任态度。

YUUE是由翁昕煜和陶海悦在2015年成立的,通常设计重新想象日常,用设计探索人与物的关系,挖掘设计中的互动性与情感因素,也用设计介入环境及社会议题并表达独立态度。YUUE已受邀参加过米兰家具展、科



隆Imm展、法兰克福Ambiente展、斯德哥尔摩家具展、设计上海、北京设计周、巴黎M&O展等国内外多个展览。

Personality Attitude Bags

包有态度



Sigita Truksane is the creator of sustainable real newspaper bags created from meaningful memories that express attitude, status, and personality. Sustainability, recycling, upcycling, support to art, zero waste lifestyle are the company's top priorities. Fashion industry's dramatic negative impact on the environment inspired Sigita to create upcycled handbags made from real newspapers and magazines in the attempt to raise awareness in society and try to change people's mindset and habits. These handbags are made from newspapers and magazines printed in the 19th century till today. The handbags include prints and drawings created by various new artists from Latvia, Sigita's home country.

**56 MILLION
NEWSPAPERS ARE
PRINTED EVERYDAY,
OF WHICH ONLY 30%
IS RECYCLED**

56 million newspapers are printed everyday, and of which only 30% is recycled. To solve this issue, we paint newspapers and magazines with a waterproof, mold-resistant, durable coating and create handbags from this

material. Up and coming artists handpaint the bags with pictures and inspirational quotes, or print quotes and drawings as designs. But why newspaper

bags? What is the significance? Newspapers and magazines are media devices. Users of our product are wearing these media devices, thus becoming ambassadors, influencers, spreading the idea of sustainable fashion, environment friendly lifestyle, recycling and upcycling, and zero waste lifestyle. The project utilizes magazines and newspapers from

拉脱维亚设计师楚希吉创作的可持续报纸包袋,非常鲜明地表达了她对资源再利用的态度。可持续发展、循环利用、升级改造、支持艺术、零浪费的生活方式在她看来是首要任务。

商业对环境的巨大负面影响促使楚希吉使用报纸和杂志制作了升级版包袋,吸引社会关注并试图改变人们的思维方式和习惯。使用这些包袋的用户携带着报纸等媒体工具,随时传播可持续时尚的生活理念。这些包袋的材料来自19世纪至今印刷的报纸和杂志,包袋上印着的图案,是拉脱维亚各类新生态艺术家创作的作品。

设计师说:“每天有5600万份报纸发行,其中仅有30%被循环利用。这是个问题。我们的解决办法是在报纸和杂志上图一层保护层,让它们变得耐用、防水、耐腐蚀,然后用这种材料制成袋子,再由新生代艺术家在袋子上手工绘图或书写鼓舞人心的标语,或者是印上去。为什么选择报纸袋?它的意义是什么?因为报纸和杂志是媒体工具。使用我们产品的人也就变成了媒体传播者、大使、意见影

Text and Images: 751 International
Design Festival
图文:751国际设计节

different areas of interest, such as fashion, art, business, daily news, sports, cars and other fields.

In 2019 751 International Design Festival, Chu Xiji (Ningbo) Creative Design Ltd and 751Design Store held an exhibition named Personality Attitude Bags. In their opinion, design and production of upcycled and recycled fashion and design products, promoting a lifestyle that is environment-friendly, sustainable, unique, artistic, customized and fashionable. Their mission is to reduce fashion waste in China by changing people's mindset and producing sustainable fashion products. Their vision is to become one of the top

sustainable fashion and design companies in China. Their values: sustainability, culture and history, responsibility to the society and changing mindsets, upcycling and recycling, personalization, uniqueness, supporting art. Their company has an international team of European designers and Chinese partners. Their products have original intellectual property and competitiveness. European designers contribute to product innovation, design, quality, and style, while Chinese partners are responsible for product localization and successfully marketing the brand in China. ■

响者, 会向全社会传播关于可持续时尚、循环利用和升级改造的理念。包袋具有历史、文化和艺术价值, 因为它们是用19世纪至今出版的杂志和报纸制作的, 内容涵盖了时尚艺术、商业、日报、体育、汽车等不同领域。”

在2019年9月的751国际设计节上, 楚希吉(宁波)创意设计有限公司和751设计品商店联合主办了“包有万物”展览, 希望通过展览, 促进人们的回收利用意识, 改变人们的心态, 生产可持续的时尚产品, 最终减少中国的时尚浪费。楚希吉(宁波)创意设计有限公司拥有一支由欧洲设计师和深谙中国市场的合伙人组成的国际团队, 欧洲设计师致力于产品创新、设计、质量和风格, 中国合伙人负责产品本地化和品牌在中国市场的推广。■

每天有5600万份报纸发行,
其中仅有30%被循环利用



The Production of Culture: Weaving the Social Fabric

By Catherine McMahon,
Co-Founder ATLAS Studio



Educated as designers, and socialized as late-capitalist consumers, we often find ourselves entering the realm of sustainable lifestyle solutions via material culture. This perspective engenders an inherent duality, one where we look outward to the marketplace for clothes, daily objects, or artifacts that align with a certain set of ethics and values, and one where, when failing to find what we seek, we attempt to create it ourselves and in doing so hope to gain an understanding of what ethical

production and by extension, living, can look like. This lands us somewhere on the continuum between production and consumption as agents of change. In our current society, frustration stems from the transactional nature of individual identity and lifestyle that is shaped by what one purchases and how skillfully one navigates a sea of increasingly culturally homogeneous consumer goods—goods that are stricken with various forms of ethical malaise arising from waste, disposability, short-term thinking, unsafe working conditions, opaque

labor practices, hidden supply chains, and questionable materials, amongst other things.

With a studio based in Beijing, there still exists an opportunity for designers to creatively learn from existing traditional cultural practices in China that embody values at the root of many contemporary sustainable production and consumption principles. These values are extensive, but three key aspects are the conscious use of materials and minimal waste, integrated production and relation to

文化生产： 编织社会纹理

凯瑟琳·麦克马洪 (ATLAS 工作室联合创始人)



化的信仰体系紧密地联系在一起。我们最初打算研究侗族文化，后来慢慢发展成了一个农村发展项目，其重点是将传统纺织品生产与当代市场连接起来，并在该村新兴的旅游经济中致力于女性纺织工匠的未来发展。

近年来，全球对手工制品的需求有所增长，预计将成为许多发展中国家的一个强劲增长点。但它基本上仍属于一种非正式经济，相关数据难以获得，许多由个人或组织编制的的数据往往包括了不相符合却有所重叠的类别，例如家庭雇工或手艺人、工匠或分散的制造者等。一些机构，比如总部位于曼哈顿的Nest，以及阿斯彭研究所工匠联盟，一直致力于让这个全球手工艺经济的范畴更加明晰，并为这个劳动力整体的需求和价值建立通用描述符。Nest列举了这些手艺人（主要是女性）在家工作的主要益处：能够将育儿和其他家庭责任与手工工作灵活结合起来；能够留在农村而无需到城市的工厂里打工；家庭现金收入转移给女性，从而改善了性别平等和消费特权情况。包括这几点在内的所有这些益处，有助于证明在研究全球范围内可持续生产模式的更广泛框架时，手工艺行业值得研究。有趣的是，我们还可以看到越来越多的小型初创企业和一些大品牌，在向城市精英消费群体提供手工打造、文化根植（但往往经过重新设计）的商品。这些商业行为在市场成败方面可能存在很大差异，在遵守社会性目标和影响力的知情评估方面也可能存在差异，但终端消费者往往没有途径了解这些差异。

纺织品及其生产方式的多样性，与人类的经验一样，在不同历史时期也是不同的。拉贾斯坦邦的多代雕版印刷厂有着不同的贸易、生计和生产文化背景，不同于苏州的定制绣庄，或马里的村庄靛蓝染坊。了解某一特定工艺的社会语境至关重要。在侗族社区，纺织传统是个人化的，通常是非商品化的，同时也是传统的、富有艺术性的、多样的。换句话说，这些纺织品是为个人、社会和家庭目的生产的，是身份的表达，而不是用于贸易或出口。如今，因为年轻一代外出打工，工业化量产商品更易替代手工制品，这些传统的延续受到威胁。然而，对于祖祖辈辈生活在大利、年龄基本在四十岁以上的女性来说，不论功能结果如何，手工纺织仍然具有重要的象征、社会以及仪式意义。

近年来，特别是在女性中，随着整个地区逐渐摆脱纯粹维持生计的生活方式，该地区越来越需要以现金为基础的生计。2016年，我们工作室开始与大利村的一个妇女小组合作，测试一种更集体化的工作模式，尝试将当地纺织品的用途和形式向当代产品类别转变，并在销售这些商品的同时，开始努力在城市市场上传播关于这种独特文化的故事。与可持续设计平台Klee Klee的合作富有成效，巩固并扩大了这些成果。然而虽然这种方法取得了相对成功，但它也明显阻碍了项目的长期可持续发展。此外，它也忽视了由于地方政府最近对当地生态旅游方面的投资而带来

接受过设计师教育，同时也是社会中的消费者，我们经常发现自己借由物质文化进入了可持续生活方式解决方案的领域。这种视角带来了一种根本的二元性：一方面，我们把目光投向市场，寻求符合某种伦理和价值观的服装、日常用品或手工艺品；另一方面，当未能找到想要的东西时，我们就试图自己去创造，希望在此过程中能够了解什么是合乎伦理的生产，进而理解什么是合乎伦理的生活。这让我们处于生产和消费之间连续不断的变化中。在我们当前的社会中，挫败感源于个人身份和生活方式的交易性质，塑造生活方式的是人们购买的东西，以及一个人如何巧妙地游弋在日益增长的文化同质的消费商品海洋中。这些商品通常纠缠着各种形式的

伦理问题，包括浪费、可处置性、短期思维、不安全的工作环境、不透明的劳动操作、隐藏的供应链、可疑的材料等等。

由于工作室设在北京，设计师们仍有机会从中国现存的传统实践中创造性地学习，这些传统文化实践也是许多当代可持续生产和消费原则价值的根源所在。这些价值范畴广泛，其中三个关键方面是：有意识地使用材料与浪费最小化、综合生产和与劳动的关系（即工艺），以及从传统框架内出发对产品的概念化，这些框架重视仪式/社会价值、使用年限、高质量和艺术表现。为了探索这个领域，我们工作室来到了贵州一个叫作大利的小山村。这里是一个侗族村寨，他们的生活方式与传统的农业、建筑、纺织品生产和仪式



have been working to bring clarity to the scope of the overall global handcraft economy and to create common descriptors for the needs and values of this workforce as a whole . Nest cites key benefits of home-based work, done primarily by women, as the ability to combine childcare and other domestic responsibilities with craft work in a flexible manner, the ability to stay in rural settings rather than migrating to urban centers for factory work, and the shifting of cash incomes in the household to women thereby improving gender parity and spending prerogatives. The benefits, amongst others, help make the case that

in Mali. Understanding the social context for a particular craft is critical. In the Dong community the textile traditions are personal, usually non-commodified, and while traditional, artistically expressive and diverse. In other words, the textiles are made for individual, social, and family use as expressions of identity rather than for trade or export. Today the continuation of these traditions is threatened as the younger generations migrate out of the village for work and industrial goods are more easily substituted for handmade ones. Still for the generations of women living in Dali who are roughly above the age of forty, it remains symbolically, socially, and ritually important for them to continue these practices regardless of functional outcomes.

labor, i.e. craft, and conceptualization of goods from within traditional frameworks that prioritize ritual / social value, longevity of use, and high quality coupled with artistic expression. The urge to explore this terrain brought our studio to Dali, a small mountain village in Guizhou that is home to a Dong community whose lifestyle remains closely tied to the land through traditional agriculture, architecture, textile production, and ritualized belief systems. What initially began as research into Dong culture, has evolved into a rural development project whose focus is on bridging traditional textile production with the contemporary marketplace, as well as developing futures for the female textile artisans in the village's emerging tourist economy.

Global demand for handcrafted goods has expanded in recent years and is projected as a robust space of growth for many developing economies. Data on this largely informal sector is difficult to come by and has been compiled by various individuals and organizations along often incommensurate but overlapping categories, such as homeworkers or craftworkers, artisans or decentralized makers, etc. Organizations such as the Manhattan based organization, Nest, and the Aspen Institute Artisan Alliance,

the handcraft sector is a worthwhile area to include when looking at the broader frameworks of sustainable production patterns globally. Anecdotally we can also see a growing trend of small start-ups and some large brands, that are focused on bringing handcrafted, culturally rooted (but often redesigned goods) that have the ambition of an attendant social mission, to elite urban consumers. These initiatives can vary widely in terms of market success or failure, and in terms of adherence to social goals and informed assessments of impact, yet the end consumer often has few ways of understanding these differences.

Textiles and the diversity in their means of production are as varied across the spectrum of history as the human experience. A multi-generational block printing workshop in Rajasthan has a different history of trade, livelihood, the cultural context for production, than a bespoke embroidery house in Suzhou, or village indigo dyers

In recent years there has been a growing need in the region, especially amongst women, to access to cash-based livelihoods as the area as a whole proceeds to move away from purely subsistence lifestyles. In 2016, our studio began working with a small group of women in Dali village to test to a more collective work model, to experiment with a shift in the use and form of their textiles to contemporary product categories, and to begin an effort to communicate a narrative of this unique culture in the urban marketplace alongside the sale of these

IN OUR CURRENT SOCIETY, FRUSTRATION STEMS FROM THE TRANSACTIONAL NATURE OF INDIVIDUAL IDENTITY AND LIFESTYLE THAT IS SHAPED BY WHAT ONE PURCHASES AND HOW SKILLFULLY ONE NAVIGATES A SEA OF INCREASINGLY CULTURALLY HOMOGENEOUS CONSUMER GOODS

goods. A fruitful collaboration with the sustainable design platform, Klee Klee, helped to solidify and expand these efforts. While this approach had relative success, it also made evident significant roadblocks to long-term sustainability for the project. Additionally, it overlooked the

opportunity that was arising directly in Dali Village as a result of the regional government's recent investments in local eco-tourism. What initially began as research into material culture and community from the point of view of design, quickly evolved into a more complex initiative as it became evident

在我们当前的社会中，
挫败感源于个人身份和生活方式
的交易性质，塑造生活方式的是人们
购买的东西，以及一个人如何巧妙
地游弋在日益增长的文化同质的
消费商品海洋中



的可以直接在大利村发展的机会。最初从设计角度出发对物质文化和社区进行的研究，很快演变为一项更为复杂的倡议，因为显然需要一套完整和系统的方法来解决整个生产生态系统的问题。

项目的第二阶段始于2017年该村的另一个开发项目。该项目的资助伙伴——全球遗产基金开始在大利建设一个小型社区中心，它将能够提供必要的社会功能，并成为将现代化建筑空间与传统建筑实践相结合的典范。社区中心由ATLAS工作室设计，紧凑的建筑结合了社区功能规划的多种元素，其中有一层专门用于纺织项目，既可用作工坊，也可用于当地销售。社区中心建成后不久，项目将重点从生产和设计过程转移到培养纺织工匠的个人创造力上。这有双重目的：一是强调当地销售的增长，从而让当地控制项目；二是探索深化传统文化美学和正在制造的新手工艺品之间的联系。通过对整个过程的反思，我们不

断提出关于文化保护的方法论、目标和工作定义的关键问题。

今年，在荷兰主办的国际亚洲学者会议上，印度尼西亚纺织组织“生活之线”的创始人之一威廉·英格拉姆简要阐述了这些问题。他问道：“自从向当地社区引入以市场为基础的倡议，将全球市场和在地社会相互矛盾的价值体系结合在一起，我们如何在保持文化完整性的同时发展生计机会？”20多年来，生活之线和Bebali基金会已经开发了一种可行的传统纺织品销售商业模式，并展示了在文化保护、民族植物学和农村发展等领域发展严格知识和方法的途径。英格拉姆认为，那些赞美传统工艺，但又解构工艺以满足当代市场需求和美学的企业，忽略了创造文化韧性的重要联系。他解释说：“物质文化的许多方面，特别是纺织工艺，在主题、视觉结构、制作和使用中体现了社会和精神信息及意义。它们也是故事、诗歌和神话的助记符号，这些故

事、诗歌和神话扎根于一个民族的历史、社会和生态语境中。一致概念将在物质文化的不同方面反复出现，并在不同尺度上表达出来，例如，织机的结构与织布机上织物的视觉结构、纺织品与纺织品储藏室建筑的视觉结构，以及房子的建筑与房子所在村庄的布局、村庄的布局与它所处的景观的神话、景观与该风景中植物有关的故事、与织布机材料相关的植物故事，以及所有这些在社会机构的结构中具有相似性的部分。”

因此，传统工艺语境下的设计或再设计，必须设法推动文化保存和创意概念的复杂目标。贵州有句俗语：“侗族服装是一种生活方式。”意思是说，如果婆婆和儿媳吵架，她们需要尽快和解，以便第二天一起织布。换句话说，物质文化和社会秩序是相辅相成的，在工艺的真谛中密不可分。■

that an integrated and systematic approach was needed that could address the entire ecosystem of production.

The second phase of the project began after another development in the village in 2017. The project's funding partner, the Global Heritage Fund, initiated the construction of a small community center in Dali that would provide needed social functions as well as serve as a model for blending modernized architectural space with traditional building practices. Designed by ATLAS, the compact building combined multiple elements of community programming, with one floor dedicated to the textile project to be used as both workshop and for local sales. Shortly after the completion of the center, the project shifted focus in the production and design process onto cultivating more individual creative expression amongst the textile artisans. The aim of this was twofold, one to place more emphasis growing local sales and therefore local control over the project, and the second to explore a desire to deepen linkages to traditional cultural aesthetics and the new artifacts being made. Reflection on the process throughout has constantly raised critical questions regarding methodology, goals, and the working definition of cultural preservation.

William Ingram, one of the founders of the Indonesian textile organization, Threads of Life, succinctly frames these issues in a recent talk on endangered

textile design, at the International Convention of Asia Scholars hosted this year in the Netherlands, when he asks "[...] Since introducing market-based initiatives to indigenous communities brings together the conflicting value systems of the global market and the indigenous society, how do we develop



livelihood opportunities while seeking to maintain cultural integrity?" Over more than two decades of work Threads of Life and the Bebal Foundation have become leaders by creating both a viable business model for traditional textile sales, as well as demonstrating the way to develop rigorous knowledge and methodology in the fields of cultural preservation, ethnobotany, and rural development. Ingram argues that enterprises that wish to celebrate traditional craft, yet deconstruct the craft to meet contemporary market demands and aesthetics, miss

important linkages that create cultural resilience in the first place. He explains,

"Many aspects of material culture, particularly the textile arts, embody social and spiritual information and meaning in their motifs, visual structures, making, and uses. They are also mnemonics for stories, poetry and myths that root a people in historical, social and ecological context. Congruent concepts will occur over and over in different aspects of material culture and be expressed on different scales connecting, say, the structure of a loom to the visual structure of the cloth made on the loom, and the visual structure of the textile to the architecture of the house in which the textile is kept, and the architecture of the house to the layout of the village the house is part of, and the village layout to the mythology of the landscape it sits within, and the landscape's myths to the stories associated with the plants in that landscape, and plant-related stories to the materials of the loom, and with aspects of all this having parallels in the structures of social institutions."

Design, or redesign, in the context of traditional craft therefore must grapple with the complex goals propelling cultural preservation and concepts of creativity. In Guizhou there is a saying that, "Dong cloth is a way of life," and is explained to mean that if a mother-in-law and her son's wife have a fight, they will need to reconcile quickly in order to be ready to thread the loom together the next day. Put another way, material culture and social order produce each other and are inextricably woven together in the true meaning of craft. ■

mYak

Andrea Dominici and
Laura Trombetta Panigadi
Pictures @Daniele Dainelli

mYak is an Italian socially responsible enterprise founded in 2011. It has developed a sustainable and ethical supply chain of Tibetan fibres, with the goal of supporting the Tibetan nomad economy by establishing a business and generating profit.

The idea behind the project is combining two strengths: the valuable undercoats of young Tibetan yaks, cashmere goats and sheep, and the tradition of the Biella district in Italy where the rich textile culture is centuries old.

The project initiators have had almost 20 years of experience working with Tibetans herders on the plateaux, and this has generated a special relationship with these communities based on mutual trust and confidence. Wool is sourced directly from over 1200 nomadic herder families organized in cooperatives. By eliminating the need for a middleman, mYak can make a significant contribution to the well-being of local communities by paying more for the fibres than market price.

Working together with these communities of Tibetan herders in their traditional productive activities, we have built a business that provides additional value to already existing local resources such as yak down, Tibetan cashmere and sheep's wool.

On the Qinghai-Tibetan plateau, yaks, cashmere goats and sheep are raised in the semi-wild by nomadic herders, following practices developed over a thousand years of traditional Tibetan pastoral living, and in harmony with the delicate ecosystem of the high altitude grasslands. Protecting and preserving this ecosystem is for us a fundamental concern.

By sourcing the raw material directly from these Tibetan herders communities, we help enable them to continue to live and work on their land,



giving them an opportunity to thrive and prosper in modern times. We have sought to promote what the nomads have been producing since time immemorial while adding value by having the fibre spun in Italy.

It is from here journey that our certified, traceable, and sustainable industry chain starts. From sourcing on the Tibetan plateaux to processing in Italy, our fibres are totally traceable. The raw material we source is the soft undercoats of baby

yak, Tibetan cashmere and sheep's wool. Baby yak down is warmer than the best merino wool and as soft as cashmere. This thermal layer is able to keep these animals warm even when

the temperature outside drops to 40 degrees below zero, and furthermore is hypoallergenic.

PROTECTING AND PRESERVING THE QINGHAI-TIBETAN PLATEAU'S ECOSYSTEM IS FOR US A FUNDAMENTAL CONCERN

Our cashmere is obtained from the spring combing of Tibetan cashmere goats, reared by families who belong to our cooperatives and live in the most desolate areas. Our sheep's wool comes

from an ancient breed of sheep that roams freely on the grasslands of the Tibetan plateaux, over 3500 meters above sea level. Once washed and dehaired in Qinghai, the wool is shipped to Italy to a group of artisan mills in the Biella Textile district, where many top luxury brands have production sites.

The mills with which we work not only guarantee quality production but also have a very advanced and efficient waste water purification system especially for the dyeing process, meaning the impact production on the environment is very low.

Our production is mainly represented by hand knitting yarns, in 100% baby yak, yak & silk and cashmere that we export all over the world from the US to Russia, Japan and Europe. We also produce accessories such as scarves, stoles, throws, and blankets. ■

More details on our website: www.myak.it



青藏高原上的牦牛、绒山羊和绵羊是由牧民在半野外状态下饲养的，他们遵循着几千年来传统的藏族牧羊习俗，与脆弱的高海拔草原生态系统保持着协调

mYak是一家意大利的社会责任企业，成立于2011年，迄今已经建立了一个可持续的、负责任的西藏纤维供应链，其目标是通过盈利业务来支持西藏游牧民族的经济。

项目背后的理念是要把两项优势结合起来：一方面，幼年藏牦牛、西藏绒山羊和藏绵羊产出的绒质量极佳；另一方面，意大利比耶拉地区的纺织文化和传统已有数百年历史，以品质优良著称。

mYak的经营者已与青藏高原牧民社群合作近20年，建立起了相互信任的特殊羁绊。mYak从1200多户西藏牧民家庭中直接采购羊毛。这些家庭是以合作社形式组织的，没有中间商，因此纤维收购价比市场价要高，能为当地社区福利做出贡献。

通过与这些西藏牧民群体在其传统生产活动上的合作，mYak成功为当地已经存在的资源（牦牛毛、西藏羊绒和绵羊毛）提供了更多价值。

青藏高原上的牦牛、绒山羊和绵羊是由牧民在半野外状态下饲养的，他们遵循着几千年来传统的藏族牧羊习俗，与脆弱的高海拔

草原生态系统保持着协调。维持这一生态系统对mYak来说至关重要。mYak直接从牧民处采购原料，使牧民更有可能继续在这片土地上生活劳作，并有机会在现代社会里发展壮大。

这里正是mYak经过认证的、可追踪的可持续产业链的开端。从青藏高原的采购到在意大利加工，mYak的纤维全程可以追踪。

mYak纤维原料来自幼年牦牛、西藏绒山羊和西藏绵羊的柔软底毛。幼年牦牛的绒毛比最好的美利奴羊毛还要暖和，像克什米尔羊绒一样柔软，即使外面的温度降到零下40度，这种热层也能使这些动物身体保持温暖，而且它还是一种低变应原纤维。mYak的克什米尔羊绒是从西藏绒山羊的春季精梳中获得的，这些绒山羊由合作社里一些生活在青海最荒凉贫瘠地区的家庭饲养。mYak羊毛来自一种古老品种的绵羊，它们自由漫步在海拔3500多米的青藏高原草原上。

羊在青海被清洗剪毛后，羊毛就被运往意大利比耶拉纺织区的一些手工艺工厂，这里是高端纺织品区，许多顶级奢侈品牌的产品

都是在这里生产的。mYak合作的工厂不仅能够保证高质量生产，而且他们使用了先进有效的废水净化系统，特别是针对染色加工环节，对环境的影响被降至最小。

mYak产品主要是手织绒线，100%由幼年牦牛的绒毛、丝绸和西藏羊绒纺织而成，出口到欧美、俄罗斯、日本等地。另外还生产围巾、披肩、盖毯等配饰。■

更多详情可见官网：www.myak.it



YAKS, CASHMERE GOATS AND SHEEP'S ARE RAISED IN THE SEMI-WILD BY NOMADIC HERDERS, FOLLOWING THOUSAND-YEAR-OLD TRADITIONAL TIBETAN PASTORAL PRACTICES AND IN HARMONY WITH THE DELICATE ECOSYSTEM OF THE HIGH ALTITUDE GRASSLANDS



SUP Atelier's Sustainable Approach

素朴的可持续建筑设计

By **Song Yehao**
宋晔皓

One basic fact is universally acknowledged about the concept of sustainable development: it requires a combination of social and economic development and environmental protection. Which means that sustainable design rests on a consideration and response of the designer in the design process that considers all three factors. Designers may have different focuses and responses in each specific design case.

Architects who practice sustainable design can be roughly boiled down to two types: one strictly benchmarks, seeking to achieve design sustainability by way of certification; the second tries to interpret what they understand about sustainable design that is not subject to rules and regulations. From an architectural perspective, both of these methods have met with success in the field.

In my own learning and practice, I have noticed certain types of cases that can be used as examples from which we can understand sustainable design from an architectural perspective. The first category is represented by the Egyptian architect Hassan Fathy, adapted to climate change through local technological transformation. The second category is represented by British architect Alan Short, making full use of the natural ventilated architectural vocabulary.



Song Yehao is a professor at Tsinghua University's School of Architecture and founder and architect of SUP Atelier.

宋晔皓:清华大学建筑学院教授,素朴建筑工作室创始人兼主持建筑师

The third category is represented by Chinese academic architect Cui Wei, and rooted in local green building practices.

The sustainable design of SUP Atelier is actually influenced by systemic ecology, focusing on the energy and material needs of the environmental side of sustainable design. On the energy level, a key point is climate adaptability of the building. We want buildings to provide users with better bioclimatic comfort during the change of seasons and adapt to the climate during not non-transitional periods so as to minimize heating and cooling energy demands. If energy consumption during operation and maintenance can be reduced we can use renewables. The material level consists of two points: one is building parts, and the other is the diversity of the materials used. The former is about detailed design, while the latter focuses on the relationship between architecture and plants. For our

sustainable design, we emphasize natural daylight and ventilation, rainwater utilization and vegetation systems.

In the design process, we make full use of advanced software and hardware to make predictions about various building properties, and judge whether our strategy will satisfy our expectations, or need to be adjusted. Using weather data packages and simulation software, we can fairly accurately understand building performance and energy and material consumption throughout the life cycle of the building. We simulate wind, light, acoustic and thermal environments, and use BIM technology for accuracy.

The development of new materials and technologies is an important aspect of architecture in the 21st Century. Take the environmental aspects of sustainable design as an example. The use of resources throughout the life cycle of a building – including energy and materials



Passive Pavilion of Longfor Sunda, 2017
龙湖超低能耗建筑主题馆

- depends on new energy production and utilization, as well as material processing and utilization. In terms of renewable energy, solar power will undoubtedly have an impact on the energy requirements of a building. New materials can also be an important means of reducing energy consumption.

As our practice expands, SUP Atelier has begun to increase our focus on the sociological attributes of architecture in sustainable design, and have taken on rural projects. What we focus on in the urban environment is the means of solving problems in developed regions, and how particular buildings contribute to the urban environment. In the countryside, our focus is different. We need to consider improvements in traditional climate adaptation strategies and technologies, efforts to adopt the latest technology and upgrade traditional technologies,

对于可持续发展概念,大家公认的一个基本点是:它是由社会发展、经济发展和环境保护三者共同作用确定的。所以可持续设计原则也就是设计者在设计过程中展现出来的对于社会、经济、环境三个方面的考量和应答。每个设计者在每个具体的设计案例中,都会有不同的侧重和应答方式。

在可持续设计领域实践的建筑师大致可以归结为两种倾向:一种是严格对标,通过获得某个体系的认证来体现自己设计的可持续性;另一种是尝试诠释自己所理解的可持续设计,并不受制于要对标各种条条框框。从建筑学角度分析,这两种理解都各自有非常成功的实践,可谓各擅胜场。

我在自己学习和实践中注意到有几类案例,能够为我们从建筑学角度出发理解可持续设计提供样本。第一类以埃及建筑师哈桑·法赛为代表,通过乡土技术改造适应气候;第二类以英国建筑师阿兰·肖特为代表,充分利用自然通风的建筑语汇;第三类是以中国建筑师崔愷院士为代表,扎根于本土的绿色建筑实践。

素朴建筑工作室所做的可持续设计,实际上是受系统生态学影响,关注与可持续设计

的环境方面相关的能源和物质两个层面。在能源层面,一个关键点是建筑的气候适应性,我们期望建筑在过渡季能为使用者提供更好的生物气候舒适性,在非过渡季也能通过气候适应性,尽量减少供热和制冷的能源需求。这样,在能够使用可再生能源之前,我们可以尽量减少运维过程中的能耗。物质层面则包含两点:一是建筑部品,二是建筑内物质的多样性。前者是细部设计,后者主要关注建筑与植物的关系。在我们的可持续设计案例中,自然采光和自然通风是特别重要的设计对策,雨水利用和植被体系也是设计要点。

我们在设计过程中也会充分利用先进的软件和硬件,对各种建筑性能进行预决策,也就是判断选择的设计策略是否能达成设计预期,需要模拟辅助决策。利用气象数据包和模拟软件,我们已经可以相当精准地知道某一种建筑解决策略可能带来的建筑性能,以及在全生命周期中运营和维护的能源和材料消耗。我们可以模拟建筑的风环境、光环境、声环境和热环境,还可以利用BIM技术精确运维建筑。

新材料与新技术的发展是21世纪建筑学应该关注的一个重要方面。以可持续设计关



Swirling Cloud Pavilion, 2018
云在亭——北京林业大学花园节信息亭

Indoor Playground of Yueyang County No.3 Middle School, 2017 ▶
岳阳县第三中学风雨操场兼报告厅

maximizing the use of local materials, as well as the local workforce.

Our Anhui project in Shangcun Zhupeng Town won the highest award in the annual US Architizer A+ Awards this year. Rooted in China, the project focuses on three rural issues, bringing architects and villagers together to build beautiful homes at low cost with social significance. The project also received the

Architectural+Community Category Professional Review Award from the Architizer A+ Awards, indicating that rural Chinese construction issues have gained traction in the international community, and that our design solutions have been recognized internationally.

Although the concept of sustainable development was proposed by former Norwegian Prime Minister Brundtland in 1987, in reality, the burgeoning of modern sustainable design took place earlier. After the oil crisis of the 1960s, various alternative energy sources and

technologies, especially solar energy and the use of earth in architecture, became hot research topics, also in ecology, sociology and environmental

science. At that time, many programmatic guidelines were developed. While sustainable design took root early, it somehow still had a weak impact on architectural design? Perhaps the answer is straightforward: architecture is a perfect combination of technology and art, and unfortunately at the time, architects who focused on sustainable design were not producing work to the same standard of spatial application, material utilization, color, design concept, while the grand masters of architecture were far more advanced. For this reason, improving design quality both domestically and abroad remains the primary task of sustainable design. ■

This article is an excerpt from an interview with Prof. Song Yu from Design magazine (second half of August) Editors: Li Jie, Li Ye

THE SUSTAINABLE DESIGN OF SUP ATELIER IS ACTUALLY INFLUENCED BY SYSTEMIC ECOLOGY, FOCUSING ON THE ENERGY AND MATERIAL NEEDS OF THE ENVIRONMENTAL SIDE OF SUSTAINABLE DESIGN

注的环境方面为例,建筑全生命周期中对于资源的利用——包括能源和材料,仰仗新的能源生产和利用技术,以及材料的加工和利用技术。对于可再生能源而言,太阳能利用技术的更新和发展,毫无疑问会影响到建筑的能量获得。而各种新材料,同样可以成为建筑运营过程中减少能源消耗的重要手段。

随着工作室设计实践类型的扩展,我们逐渐开始增加可持续设计中对建筑的社会学属性的关注,并且在中国农村项目中进行了尝试。我们在城市环境中关注的是在发达地区能够获得的解决问题的手段,关注单体建筑如何为城市环境做出贡献。在乡村环境中侧重点就不一样,考虑的是对传统气候的适应性策略和技术进行提高改进,即努力采用最新的技术,对传统技术进行改造和适度升级,并且最大限度地利用当地的材料,甚至是当地的劳动力。

我们在安徽的尚村竹篷学堂项目,今年获得了美国Architizer A+ Awards中荣誉最高的年度项目奖。这个项目扎根中国本土,聚焦三农问题,是建筑师与村民共同建设美丽家园的项目,造价低,社会意义也显著。这个项目还获得Architizer A+ Awards中的建筑+社区类别专业评审奖,这说明中国的农村建设问题同样受到国际社会的关注,而竹篷学堂项目中反映出的设计解决对策以及最终的设计呈现,也获得了国际建筑界的认可。

虽然可持续发展的概念是1987年由挪威前首相布伦特兰夫人正式提出的,但实际上,现代可持续设计的萌芽要早于这个时间。60年代的石油危机之后,各种替代能源和技术,尤其是太阳能和覆土在建筑中的应用,成了



建筑学是一个技术和艺术结合的学科，可持续建筑作品同样需要在建筑学本体领域内达到高品质

热门研究课题并且取得了很大的成果，与生态学、社会学、环境学的交叉研究在当时也达到了一个很高的高度，提出了很多纲领性的导则。但为什么可持续设计那么早就有萌芽和发展，而它在建筑设计中影响却相对薄弱？其实答案很简单，因为建筑学是一个技术和艺术完美结合的学科，不客气地说，当时关注可持续设计的建筑师建成的作品，其建筑学品质，包括空间、材料的利用、色彩、设计意向等，也就是说，其在建筑学本体领域的品质，距离同时期的建筑大师相差太远。所以现在无论国内国外，提升设计品质，依然是可持续设计的首要任务。■

注：本文摘编自《设计》杂志“中国设计·大家谈”栏目对宋晔皓教授的采访，原文以《宋晔皓：可持续设计的首要问题是提升品质》为题，收录于《设计》杂志2019年8月下半月刊（编辑：李杰 李叶）

Tech-powered Waste Solutions in China

— Opportunities and challenges in smart garbage collection

By **Yang Biqiong**

Waste sorting policies now being enforced all over are opportunities for “Internet + Garbage Separation and Recycling” companies, but even more so perhaps, challenges.

The “Internet + Garbage Separation and Recycling” industry saw a frenzy of entrepreneurship beginning in 2017. Two major changes fueled this. First, imported foreign garbage was banned in July 2017, when an inter-ministerial coordination group was established between 14 ministries including the General Administration of Customs and the former Ministry of Environmental Protection to combat the bulging industry. Second, in October 2017, the aim to “enhance solid waste and garbage disposal” was clearly stated in a report to the Nineteenth National Congress. From that moment on, compulsory waste sorting took off across the country.

On June 6, 2019, the Ministry of Housing and Urban-Rural Development, the National Development and Reform Commission, the Ministry of the Environment and other departments issued a Notice on the Comprehensive Implementation of Domestic Waste Separation in cities at or above national level, and decided that by 2020, 46 key cities would have established domestic waste separation systems. In 2025, a garbage separation system would exist in all cities. On July 1, Shanghai implemented “Regulations on the Management of Domestic Waste” and became the first city in China to make waste separation compulsory.

Orient Securities reported that the if the Shanghai model were extended to the entire national urban population it

would have huge market potential, estimated to be worth 196 billion RMB. Related sectors are new opportunities, drawing in large numbers of companies.

Classified by type of service, we have two categories of company: consumer facing companies such as Little Yellow Dog, Yidairong on the Alipay platform, Beijing’s Aifenlei, and Hangzhou’s Tiger Bros. Little Yellow Dog uses a front-end smart recycling machine, and the others involve ordering a recycling service to your door. On the B-end we have Stupid Bros. (Bengege), acquired with cash and equity by Little Yellow Dog in December 2018), and Xiaodou Recycling, among others. They tend to have their own sorting centers, and sell sorted waste on by category. There are also companies with both consumer and business aspects, such as Aifenlei, and Uncle Waste.

Take Little Yellow Dog as an example. In June, October and December of 2018, the company received a total of 1.35 billion RMB in financing from ZEG, East Group and Macrolink Group. At the same time, its urban business spanned 20 cities, gobbling up cities at a rate of two cities per month on average. Its model is building waste recycling machines for the community. Users find the nearest recycling machine on an app and deliver waste for environmental protection money. The company sends garbage personnel to take the waste to the sorting center or resell it themselves. For a time, media reports were positive, with officials and scholars from all over the world scrambling to find out more. Little Yellow Dog was hailed as the

各地强制执行的垃圾分类政策,对于那些“互联网+垃圾分类回收”企业来说,既是机遇,但也许更多的还是挑战。

“互联网+垃圾分类回收”行业内公认的创业爆发期是在2017年。这一年有两件大事发生:一是2017年7月的洋垃圾禁令,包括海关总署、原环境保护部在内的14个部委之间成立了部际协调小组,打击洋垃圾进口的力度始料未及;二是在2017年10月,“十九大”报告中明确要求“加强固体废弃物和垃圾处置”,在此之后全国各地强制垃圾分类的进程也纷纷开始加速。

2019年6月6日,住建部、发改委、生态环境部等九部门联合印发《住房和城乡建设部等部门关于在全国地级及以上城市全面开展生活垃圾分类工作的通知》,决定:2019年在全国地级及以上城市全面启动生活垃圾分类工作,2020年46个重点城市基本建成生活垃圾分类处理系统,2025年在全国地级及以上城市基本建成生活垃圾分类处理系统。7月1日,《上海市生活垃圾管理条例》正式实施,上海成为国内首个强制垃圾分类的城市。

东方证券曾发布报告指出,以上海模式向全国城市人口推广,中国分类垃圾市场规模超过1960亿元,市场潜力巨大。垃圾分类和回收相关行业被认为是新的风口,许多企业纷纷进入。

如果按照服务群体分类,互联网+垃圾分类回收创业公司可以分为两类:面向公众的C端,和面向回收人员或企业客户的B端。C端包括“小黄狗”、依托于支付宝平台的易贷扔、北京的爱分类、杭州的虎哥回收等。其中,小黄狗是通过智能回收机完成前端回收,其他几家是通过网络下单,再由回收人员上门完成。B端则包括“笨哥哥”(2018年12月被小黄狗以现金+股权方式的收购)、闲豆回收等企业,它们一般有自己的分拣中心,根据不同品类分拣后出售给废物利用企业。此外也有创业型企业同时做C端和B端,比如爱分类、废品大叔等。

以一度高歌猛进的小黄狗为例。2018年6月、10月、12月,小黄狗分别获得了中植集团、易事特集团和新华联的融资总计13.5亿元人民币。与此同时,小黄狗的城市业务一口气扩张至二十多个城市,以平均每月进驻两个城市的速度,迅速完成了在全国主要一二线城市的版图铺设。

小黄狗的模式是在社区建设废品回收机,用户借助小黄狗APP寻找距离其最近的回收机,将废品投递到回收机内,获得相应的环保

智能垃圾回收的机遇与挑战

杨碧琼

benchmark for the Internet + waste separation and recycling industry. However, in March 2019, main shareholder Tang Jun was suspected of illegally obtaining cloud funds from Tuandai.com, a loan company. In the following month, Little Yellow Dog felt the impact of major shareholder concerns, funding was halted, and wages withheld. Mass layoffs ensued.

Little Yellow Dog's problem was in fact already clear. It was hard to see the profit model. Differential pricing should have been the obvious route to profit, yet while the company boasted of 200 RMB gross profits per machine per day, in practice, it was earning far less. Media report indicated that recycling machines lacked regular attention, and often broke down. Not to mention, public habits were hard to change, and people used the machines rarely. On top of this, the threshold for earning environmental protection money was too high. To earn just 10 RMB for most categories of garbage, you would have to gather 50 kilos or more, clearly a huge amount. Although Little Yellow Dog supports both offline and app-made appointments, recycling earnings are much lower than for traditional garbage collection, and many machines are even less efficient.

Little Yellow Dog is not the first to use smart recycling machines on the consumer side. Beijing-based renewable resource company Yingchuang Recycling was established in 2003, and had its first domestic waste recycling machines up and running by 2012. Waste Uncle and Aifenlei also tried their luck with smart recycling machines, but both experiments ended in failure.



To date, the best run operations work in cooperation with the government. Increasingly, local governments have issued bids to private firms. Hangzhou's Tiger Bros has signed a waste procurement contract for the entire Yuhang district. According to a public notice Yuhang district Finance Department, in the first quarter of 2018, Tiger Bros. received 10.84 million RMB in district-level subsidies.

There is also Beijing Aifenlei, working in cooperation with Changping district streets, collecting domestic garbage within the district's coverage area. At present, its main source of income comprises of subsidies for the government to transport wet garbage, and resource utilization differentials.

Garbage separation in China is still primarily led by the administration. Front end consumer practice has to be encouraged by government leadership, and involves incentives and promotion based introduced by the state, but in the end this sector is likely to develop into a profitable market, with a large and dynamic industry chain to sustain itself. ■

金。小黄狗再派专门的清运人员将废品运送到分拣中心,或由清运人员自行转卖。

一时之间,媒体报道铺天盖地,各地官员学者争相考察,小黄狗被誉为互联网+垃圾分类回收行业的标杆。然而,到了2019年3月,小黄狗公司的实际控制人唐军因名下另一家实控主体“团贷网”涉嫌非法吸收公众存款而被采取刑事强制措施。此后一个月,小黄狗内部受大股东影响,资金中断,工资一度无法发出,开始大规模裁员。

而实际上,在此风波之前,小黄狗的问题就已隐现。最大的一点就是很难看清小黄狗的盈利模式。最简单的思路应该是赚差价。小黄狗公司曾经宣称,每台机器每天毛利可以达到200元。但在实践中,日均收获量远远达不到预期水平,承包商无利可图。有媒体记者实地考察过小黄狗垃圾分类回收机的使用情况后发现:第一,回收机缺少专人管理,故障频发;第二,由于市民长期以来的习惯,智能回收机的使用频率极低,基本无人使用;第三,环保金提现门槛高,不足以鼓励大众。小黄狗设定环保金10元起提,但要达到10元及以上的收益,大多数类别的垃圾要达到50公斤以上,显然门槛过高。

虽然小黄狗支持线下和APP预约上门回收两种模式,但回收价格相比传统的垃圾回收价格要低很多。如今,作为智能回收垃圾设备的小黄狗,许多无法正常使用。

靠智能回收机做起来的C端创业,小黄狗并不是第一家,成立于2003年的北京再生资源回收企业——盈创回收,早在2012年就研发出国内首款智能回收机。废品大叔和爱分类都尝试过智能回收机,均以失败告终。

目前来看,运营较好的垃圾回收企业都是通过与政府合作的模式。越来越多的地方政府开始发出招投标公告,像虎哥回收,就签到整个杭州余杭区的垃圾分类采购合同。根据余杭区财政局的公示,仅2018年一个季度,虎哥回收就获得了区级补助资金1084万元。

还有北京的爱分类,和昌平主城区的街道合作,对覆盖范围内的生活垃圾照单全收。目前,爱分类公司的主要收入来源有两部分:一部分是政府给湿垃圾运送的补贴,另一部分是回收物品资源化利用的差价。

我国目前垃圾分类主要是由行政机关主导,垃圾分类的前端应该是国家政策引导公民分类。相信在国家相关部门的促进和带动下,未来整个产业会发展成为一种市场行为,催生出现庞大的产业链。■



Less Is Love

少即是爱

In September, architect Sun Dayong (Founding partner of Penda China) was invited to design an installation work for the Design China Beijing exhibition. He chose to reflect an ecological design concept and advocate a new “Less is Love” attitude to life.

Every year, people dump 8 million tons of garbage into the ocean, jeopardizing not only ocean life but also our own. Faced with this serious ecological problem, we have to change our way of living. “Less is Love” is about



每个人少一些浪费、少制造一些垃圾，就会给其他生命多留一些空间和机会，同时我们也会更加珍惜我们的拥有

cans. There are six types of domestic waste, i.e. kitchen waste, disposable bamboo & wood tableware and tissue paper, plastic foam, printed matter, metal & glass, hazardous and dangerous items, that, if they can be effectively separated from source, recyclers will have a much easier job. This is about behavioral change. With elaborately designed classification signage in enlarged characters and attractive images, our trash cans are no longer a byword of dirt and mess. The designer wishes to make these trash cans into a beautiful rainbow and adopts a semi-circular structure for his installation, turning his idea into structural rationality.

This work was first presented at the main venue of Design China Beijing at the National Agricultural

Exhibition Center, and then invited to a themed exhibition Dear Trash during Beijing Design Week. All trash cans will be given away to communities implementing waste classification after the exhibition, thus encouraging the engagement of more citizens in waste classification.

Less wastage and less waste will leave more space and opportunity for other creatures on the planet, and will help us cherish what we own at the same time. This is indeed a kind of love. ■

九月，在设计中国北京展览上，建筑师孙大勇 (Penda China 创始合伙人) 受邀设计了一件体现生态设计理念的装置作品，提倡一种新的生活理念：“少即是爱”。

人类每年向海洋倾倒 800 万吨垃圾，不仅危害着海洋生物，也危害着人类自己。面对垃圾这一严峻的生态问题，人类必须改变传统的生活方式，本件作品名称“少即是爱”，就是提出一种新的生活理念，减少不必要的垃圾产生，同时提倡大家进行垃圾分类。垃圾是放错了位置的资源，只有我们重新认识垃圾，合理地循环利用垃圾，才能从源头上减少垃圾的产生，减轻人类对环境造成的负担和压力，最终的受益者将是人类自己。

装置尺寸 8 米 × 8 米 × 4 米 (高)，由金属脚手架结构和 60 个垃圾桶组成。垃圾桶根据生活垃圾的种类分为六种：厨余残食、一次性竹木餐具和手纸、塑料泡沫、印刷品、玻璃金属、有害及易伤害品。这些是我们日常生活中最常见的垃圾物品，如果能从源头有效分开放置，就会减轻社区回收人员的工作，从最初的行为改变做起。垃圾桶的分类标识也经过了设计，放大的字体和可爱的形象设计都让垃圾桶一改脏乱的形象，设计师希望能让垃圾桶变成城市里一道美丽的彩虹，所以装置采用了半圆形的结构设计，在合理的结构形式背后还暗含着设计师的美好愿望。

这件作品首次展出于北京农展馆“设计中国北京”的主展场，之后受邀参加了北京设计周“亲爱的垃圾”主题展览。展览后所有垃圾桶将捐赠给垃圾分类社区，鼓励更多的人参与到垃圾分类的行动中来。

每个人少一些浪费、少制造一些垃圾，就会给其他生命多留一些空间和机会，同时我们也会更加珍惜我们的拥有，这就是一种爱。

主创设计：孙大勇、万书言

团队：槃达中国 建筑事务所

材料：钢管、垃圾桶

摄影：夏至

视频链接：v.qq.com/x/page/b3001qwolla.html

reducing unnecessary waste and encouraging people to sort their waste. These are actually misplaced resources. Only by correctly understanding and reasonably recycling waste can we reduce it from the source, relieving the environmental burden and pressure caused by humans, and eventually benefit ourselves.

The four meter high installation is made of metal scaffolding and 60 trash

F2N MARKET: From Farm to Neighbor

从农场到邻居

The F2N MARKET in Beijing promotes a sustainable lifestyle by offering local eco-agricultural products, healthy processed foods, zero-waste daily and inventive goods. It is also the first such market in China that promotes the United Nations Sustainable Development Goals (SDGs) as a development strategy, incorporating four SDG indicators into its business philosophy.

GOAL 2: ELIMINATE HUNGER

Corresponding actions: The F2N Market supports small local eco-farms by establishing a platform for face-to-face communication between producers and consumers, which aids in the establishment of mutual trust. So far, it has helped dozens of farms gain a stable sales channel and customer base. Small-scale eco-farms in the F2N market are the most risk-resistant form of agricultural production, being diverse, not using chemical fertilizers

and pesticides, guaranteeing biodiversity, and resulting in truly healthy and nutritious foods.

GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Corresponding actions: The market advocates sustainable consumption, by prioritizing the selection of eco-friendly and responsible businesses to join. On an ad hoc basis, the market plans activities related to sustainable consumption as a promotion exercise. Merchants adhere to a sustainable production model and cooperate by recycling packaging to create conditions for sustainable consumption.

“SUPPORT LOCAL PRODUCERS, BECAUSE ONLY IF THE PEOPLE AROUND YOU DO WELL WILL THE ENVIRONMENT AROUND YOU BE GOOD”

“人总是喜欢把自己看作是独立的,但事实上我们就是生态系统的一部分”

F2N MARKET (从农场到邻居)是北京一个推广可持续生活方式的时尚市集,致力于分享本地生态农产品、健康加工美食、零废弃生活用品以及匠心文创产品。它也是中国首家以推动联合国可持续发展目标 (SDG) 为发展战略的市集组织,将四项SDG指标融入其经营理念。

目标 2: 消除饥饿

对应经营理念:支持本地生态小农。支持本地小规模生态农场,建立生产者与消费者之间面对面沟通的平台,促进彼此信任与消费关系。至今已帮助数十家农场建立稳定的销售渠道和客群。F2N市集的小规模生态农场是抗风险程度最高的农业生产方式,物种丰富,不使用化肥农药,保障了生物多样性,收获的食物真正做到健康营养。

目标12: 负责任的消费和生产

对应经营理念:倡导可持续消费。F2N优先筛选拥有环境友好和负责任理念的商家加入市集,并不定期策划与可持续消费有关的活动,向消费者倡导可持续的生活理念。市集的商户坚持可持续的生产模式,配合回收包装,为可持续的消费观念创造了条件。

目标14: 保护水下生物

对应经营理念:减少海洋塑料污染。F2N不向顾客提供新的塑料袋,鼓励顾客自备购物袋和容器来买东西,或者将家中积攒的袋子捐到市集服务台的“共享袋小站”,供有需要的人循环使用。市集的商户在生产中避免塑料微粒,在包装上尽量摒弃塑料制品。对于市集上产生的塑料包装,顾客可以选择将之洗净带回市集,它们在这里将被分类回收,避免进入环境。





“支持本地的生产者，因为只有你周围的人做得好，你周围的环境才会好”

“PEOPLE TEND TO SEE THEMSELVES AS INDEPENDENT, BUT IN FACT WE ARE PART OF THE ECOSYSTEM”

GOAL 14: PROTECT SEA CREATURES

Corresponding actions: F2N practices the reduction of marine plastic pollution by not providing customers with new plastic bags, encouraging customers to bring their own containers or donate bags from home to a “shared bag station.” Merchants are encouraged to avoid plastic in their products and reject plastic packaging as far as possible. For packaging used at the market, customers may wash and return them, where they will be sorted and recycled so as to not enter the environment as waste.

GOAL 15: PROTECT TERRESTRIAL LIFE

Corresponding actions: F2N advocates a plant-based diet, but committing itself to the idea: “eat less meat, eat better meat”, providing alternatives to animal proteins to mitigate the negative impact of animal farming on deforestation, water pollution, food consumption and greenhouse gas emissions. Producers



for the F2N Market are encouraged to avoid animal products, meat or dairy products in selecting raw materials.

The F2N market is held regularly (usually every weekend) in Beijing’s Chaoyang embassy quarter. Since its start in 2014, it has hosted more than 380 markets and worked with more than 100 merchants. It has become the preferred shopping place for Beijing’s environmental protection pioneers, health professionals and international families in their attempt to pursue a better quality of living. On average, more than 2,000 people shop at the F2N Market every week. ■



目标15: 保护陆地生物

对应经营理念: 倡导植物性饮食。F2N致力于提倡“少吃肉、吃好肉”的植物性饮食概念, 提供多样化的动物性蛋白质替代方案, 以缓解畜牧业对森林砍伐、水源污染、粮食消耗和温室气体排放的负面影响。市集的生产者在原料选择上会避免动物制品、肉类或乳制品, 为减少畜牧业、保护森林与野生动物提供了更多可能性。

F2N市集定期(通常是每周末)在北京朝阳区官舍举办, 自2014年创立以来, 至今已举办380多场市集, 培育了百余家商户。F2N MARKET官舍市集已经成为北京环保先锋、健康达人和国际家庭追求生活品质的首选采购地, 每周平均客流量可达2000余人。■

Take-out Platforms Promote Sector-wide Environmental Protection

外卖平台推动行业环保治理

By **Yang Biqiong**
杨碧琼

In September 2017, Chongqing Green Volunteers Association took three takeaway dining platforms to court on the grounds of resource waste and environmental pollution, which aroused widespread concern in society. The Fourth Intermediate Court of Beijing ordered the defendants to change their business model on the grounds of wasting resources and jeopardizing the environment. Today you will see, in a prominent position on their homepages, an option to pay for disposable plates, plastic bags, and chopsticks, plastic bags. The defendants were also ordered to make up or bear the costs of the ecological damage they had caused.

Public interest litigation such as this be described as a legal attempt to solve the issue of take-away pollution. In terms of responsibility, although take-out platforms provide intermediary services, they do not directly produce or abandon plastic waste. However, as online organizers and profit-seekers, it is hard not to fault them for generating plastic pollution. The “Who pollutes must clear it up” rule applies to major take-out platforms that should assume their social responsibility and environmental protection obligations.

In response, take-out platforms have launched their own environmental protection plans. Eleme, now has a “Blue Planet Project”, with a “no need

for cutlery” option, eco-points and other measures, and cooperate with the Food and Drug Supervision Department to conduct random inspections. For users, points can be used to spend in public welfare, exchange for green bags. Businesses get free environmental cutlery samples, and can add an eco label to their restaurant page, or even be added to an eco-restaurant channel, with preferential rankings for top eco-performers.

In June 2018, Eleme’s “no need for cutlery” option was connected to the personal carbon account set up by Ant Financial called Ant Forest. Users who select the no cutlery option get green energy points on Ant Forest, and this option has experience 7 times over growth. As of the end of March 2019,

2017年9月,公益组织重庆市绿色志愿者联合会以造成资源浪费和环境污染为由,将国内三大外卖平台告上北京市第四中级法院,引起了社会的广泛关注。诉讼请求法庭判令被告改变浪费资源、危害生态环境的经营模式,在其平台提供的订餐界面首页显著位置设置是否有偿使用一次性餐具、是否使用塑料袋选项,并对一次性筷子、塑料袋等明码标价、收取费用;并判令被告对其已造成的生态环境损害进行修复或承担修复费用。

此次公益诉讼可谓解决当前外卖污染问题的一次法制尝试。从责任上说,外卖平台虽然只提供订餐中介服务,并未直接生产和抛弃塑料垃圾,但作为网络外卖的组织者、获利者,显然对外卖塑料污染的形成难辞其咎。所谓“谁污染谁治理”,各大外卖平台理应承担起应有的社会责任和环保义务。

作为回应,各外卖平台相继推出各自的环保计划。饿了么发布“蓝色星球计划”,推出“无需餐具”、环保积分等措施,并与食药监部



Illustration by LAVA Beijing

外卖平台虽然只提供订餐中介服务，并未直接生产和抛弃塑料垃圾，但作为网络外卖的组织者、获利者，显然对外卖塑料污染的形成难辞其咎

TAKEOUT PLATFORMS DO NOT DIRECTLY PRODUCE AND DISCARD PLASTIC WASTE, BUT AS ORGANIZERS AND PROFITEERS OF TAKEOUT INDUSTRY, THEY ARE OBVIOUSLY NOT UNBLAMABLE

“no need for cutlery” had attracted nearly 1.74 million consumers, and more than 74 million orders, the equivalent to 1.18 million kilos less in carbon emissions. Just a small attempt to reduce waste, with China’s current take-out volume, any environmentally friendly measures release huge amounts of energy.

In the same year, Meituan launched a “Qingshan Plan”, promoting environmental protection in four aspects: concept advocacy, path research, closed-loop exploration, and public welfare. Initiatives include:

- Setting up a Meituan take-out environmental protection day; advertising on the app and on bus and underground

- Collaborating with Tsinghua University to produce objective working standards and paths through quantitative research and qualitative analysis

- Packaging upgrades, recycling classification and recycling, and other aspects to develop new solutions, work with the government, NGOs, packaging companies, businesses, schools, scientific research institutions and other relevant parties across the industry chain to promote the development of a closed loop

- Establishing the first environmental protection public welfare fund for F&B delivery, and investing 3 million RMB.

Meituan launched its Qingshan public welfare business on its own platform. As of June 2018, more than 10,000 merchants have chosen to participate.

After recalling its year one experiences, Meituan launched a partner program to last until 2020, which hopes to join hands with more than 100 take-away packaging partners to develop new packaging solutions. Meituan will work with over 100 recycling partners to carry out garbage recycling pilot schemes, that variously include reusing Mobike bicycle fenders and calendar covers. These are all part of Meituan’s scheme to engage with downstream partners, and find ways to recycle mainly PP and PE plastic packaging.

It is naturally a good thing for the take-out platform to actively promote sector-wide pollution control, but we still need to realize that the disposal of take-away garbage should start from a consideration of the entire supply chain. Platforms, merchants, consumers, and government environmental protection departments; none can be left out of the equation. ■

门合作，对全平台商户使用的一次性餐具进行抽检。针对用户，在积分商城开设环保专区，供用户使用积分认领荒漠公益林、兑换环保袋；针对商户，免费提供环保餐具试用，并为其餐厅页面添加“环保标签”，甚至增设“环保餐厅美食”频道，据此优化排名权重等。

饿了么的“无需餐具”备注功能于2018年6月与支付宝蚂蚁森林打通，用户在叫外卖时主动点选“无需餐具”即可获得蚂蚁森林绿色能量，此举直接引导此功能的使用量增长超过7倍。截至2019年3月底，“无需餐具”累计吸引近174万消费人次的参与，送出的无需餐具订单累计超过7400万单，相当于减少了118万千克碳排放。“无须餐具”功能虽然只是减少垃圾的一次小小尝试，但以中国当前的外卖体量，任何一次环保性的举措，都将释放出巨大能量。

美团外卖当年也启动“青山计划”，从理念倡导、路径研究、科学闭环探索、环保公益推动四个方面推动行业环保化进程。举措包括：设立美团外卖环保日；进行APP下单引导，公交、地铁广告投放；与清华大学展开合作，试图通过定量研究及定性分析，产出客观科学的工作标准及路径；在源头减量、包装升级、回收分类与循环利用等多个环节开发新型解决方案，尝试与政府、NGO、包装企业、商家、学校、科研机构等全产业链内各个相关方共同协作，推进科学闭环的构建；建立餐饮外卖行业首个环保公益专项基金，并先期投入300万元人民币。

2018年，美团外卖基于“青山计划”实施一周年的经验，启动了“青山合作伙伴计划”，提出到2020年，希望携手100家以上外卖包装合作伙伴，寻求新的包装解决方案，尽可能地减少塑料外卖餐盒的废弃；联合100家以上循环经济合作伙伴，开展100家以上垃圾回收与循环利用试点，探寻行业可持续发展之路。用外卖塑料餐盒循环利用制成摩拜单车挡泥板、用餐盒回料再生制作成《物种日历》日历外壳等都已成为美团寻找下游合作伙伴、对以PP、PE等塑料材质为主的餐盒进行回收再造的案例。

外卖平台积极推动行业污染治理自然是好事，但我们仍需认识到，外卖垃圾的处理需要从全供应链角度入手，平台、商家、消费者，以及政府环保部门，谁也不能坐视。■

Fake Meat in China

国产人造肉势头渐盛

By **Yang Biqiong**

杨碧琼



Artificial meat has caught on in China and is gaining immense popularity.

In May 2019, artificial meat brand Beyond Meat was listed on NASDAQ, and its market value soared. In the same month, Barclays Bank released a report predicting that artificial meat might gain a 10% share of the meat market in the next 10 years, and be worth as much as 140 billion USD. Soon after, domestic capital and entrepreneurs moved in, turning their attention to the industry.

According to public news:

In July, pea protein artificial meat company Precious Meat (a play on the word real in Chinese) gained millions in seed funding, with angel investments from Wang Zhan and his team.

On August 16, Precious Meat (Beijing) Food Technology Co., Ltd. was incorporated (according to Tianyancha). Legal representative Lu Tiecheng has been the legal representative of Lauterbo Health Technology Co., Ltd. (Hangzhou) since September 5, 2017. Lauterbo is the operator behind Precious Meat.

DOMESTIC CAPITAL AND ENTREPRENEURS ARE CROWDING INTO ARTIFICIAL MEAT INDUSTRY, BUT ARE WE REALLY READY FOR THIS ALTERNATIVE YET?

On September 4, Yantai Twin Towers Food Co., Ltd. announced a strategic cooperation agreement with Precious Meat to establish a comprehensive relationship in a plant protein meat project. At the same time, it disclosed the development of the first ever pea protein mooncake. On the morning of September 5, a “French-style” vegetarian mooncake was launched on the Twin Towers Tmall flagship store, selling out in minutes.

On September 6, Precious Meat began selling its mooncakes on e-commerce channel, priced at 88 RMB a box, six per box, limited to 3,000 boxes. Just over half way through the three day sale, they acknowledged that the plant protein came from Twin Towers.

September 11 was Taobao Makers Festival and Hong Kong-based Right Treat's new brand Omnipork was unveiled on the mainland, offering hamburgers, southern style meatballs, and Mexican rolls to try, with a scheduled launch on Tmall in October.

On October 11, Jinzi Ham came out with the first artificial meat patties in China. The product had been pre-sold

人造肉最近在中国很火。

2019年5月, 国外人造肉品牌Beyond Meat在纳斯达克上市, 市值飙涨。同月, 巴克莱 (Barclays) 银行发布研究报告, 预测未来10年人造肉有可能拿到肉类市场10%的份额, 规模升至1400亿美元。一时间, 国内资本和创业者闻风而动, 迅速将目光投向了人造肉行业。

据目前已知的公开消息:

7月, 豌豆蛋白肉企业“珍肉”完成了数百万种子轮融资, 投资来自天使投资人王展及团队自有资金;

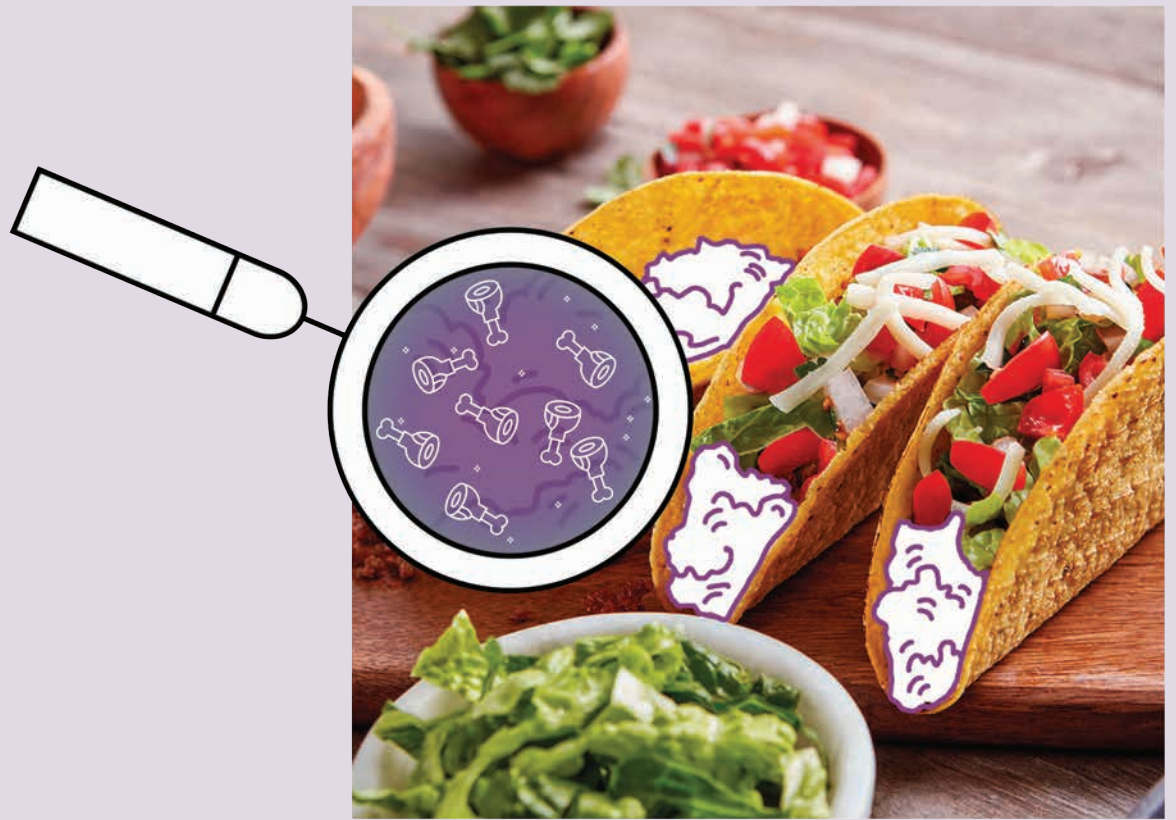
8月16日, 珍肉 (北京) 食品科技有限公司注册成立 (据“天眼查”), 法定代表人吕铁成同时也是成立于2017年9月5日的劳特博 (杭州) 健康科技有限公司的法定代表人, 劳特博也是“珍肉”品牌背后的运营方;

9月4日, 烟台双塔食品股份有限公司宣布与珍肉 (北京) 食品科技有限公司签署《战略合作框架协议》, 双方将在植物蛋白肉项目建立全面、深入的合作关系。同时披露研制出国内首款以豌豆蛋白为原料的素肉月饼。9月5日上午, 双塔天猫旗舰店上开始售卖这款“法式素肉月饼”, 几分钟后即显示售罄;

9月6日, 珍肉在电商渠道推出人造肉月饼, 售价88元/盒, 每盒6个, 限量3000盒, 三天销售过半; 据称此人造肉月饼是由双塔食品提供植物蛋白原料;

9月11日淘宝造物节上, 香港食物科技公司Right Treat旗下品牌Omnipork新猪肉首次在内地亮相, 现场提供了猪肉汉堡、狮子头、墨西哥卷等试吃产品, 并计划10月起在天猫平台上开售;

10月11日, 金字火腿股份有限公司推出国内首款人造肉植物肉饼。该产品已在金字火



on Jinzi Ham's Tmall store, priced at 118 yuan for four patties, to be shipped in late October. The previous day, the company said on the SSE E interactive platform that the company's plant meat products had been in process for a while, product standards had just been passed, the production license reviewed, and production begun.

Artificial meat is so popular these days, that there are bound to be more big events soon. But leaving these aside for a moment, does artificial meat already actually satisfy Chinese appetites?

Currently, there are two main types of artificial meat around the world: one is plant-based meat like Beyond Meat and Impossible Foods, which use pea protein, soy, wheat, potato and vegetable oil to recreate the texture and taste of animal meat. The current batch of domestically produced artificial meat products basically belong to this type. The other is animal meat based on animal cells and reproduced as cultures in the lab - this technology is still at an experimental stage. Netherlands researchers at the University of Maastricht are working hard to mass produce artificial meat this way.

Among the brands that have already appeared, Precious Meat emphasizes 5D simulation, recreating

the meat feel from all sides: using pea protein as the main raw material, extracting the protein essence naturally using coconut oil and olive oil, and adding cellulose to the raw material. The end result has a fibrous texture. And one last step, plant hemoglobin, combined with bio-fermentation technology, gives it the blood color of real meat.

It is worth noting however that according to a public report on August 10, Precious Meat have said they will work with Li Jian, associate professor of the School of Food and Health Research at Beijing Technology and Business University, to develop the first generation of artificial meat in China.

与国际人造肉代表企业相比,国内多数此类企业尚不具备核心技术能力,国家政策、技术发展程度都将影响未来行业走势。

腿天猫旗舰店预售,售价为118元4片,并将于10月下旬发货。此前一天,金字火腿在上证E互动平台表示,公司的植物肉产品经过长时间的准备,产品标准已经完成备案,生产许可已经通过审查,现已开始生产。

依人造肉在A股市场的火爆程度来判断,这个事件列表恐怕很快就会被更新。但抛开这些事件不谈,人造肉真的要开始颠覆中国人的胃口了吗?

目前,全球范围内主要有两种不同类型的人造肉:一种是像 Beyond Meat 和 Impossible Foods 那样的植物性素肉,用豌豆蛋白、大豆、小麦、马铃薯和植物油来还原动物肉的质地和口感,国内面世的人造肉产品基本都属于这种类型;另一种是以动物细胞为基础,用培养皿复制出来的动物肉——该技术尚在实验环节,据悉荷兰马斯特里赫特大学的研究人员正在为实验室人造肉的量产而

In the company's special mooncake promotional material, they mentioned a R&D team including Nobel Prize researchers, and cooperation with two universities in China and the United States. A joint laboratory reserve technology formula division was in the works. But who does this Nobel Prize team consist of?

Until now, Twin Towers Foods has mainly been in the business of making vermicelli noodles. They are made with pea starch, and the pea protein ends up in the waste water. After extracting this protein slurry as a raw material in edible

protein, the company found a new profit point. Twin Towers claims that 80% of its edible protein is exported and supplied to Beyond Meat through distributors.

Omnipork has had a smoother start. It was developed by a Canadian research team over two years and was first launched in Hong Kong last year. Omnipork looks like minced meat and tastes like pork. The main ingredients are peas, non-GMO soybeans, mushrooms and rice. According to reports, this plant meat contains zero cholesterol, no antibiotics, and no hormones. Compared with real pork, it has 86% less saturated fat, and 66% fewer calories. Instead it has more fiber, 260% calcium and 127% more iron. Right Treat plans to launch two more products in the next six months, and they will not look like minced meat.

The first Chinese meat patties are actually the result of a cooperation between Jinzi Ham and DuPont, and are made from plant proteins such as non-GM soybeans. According to the product introduction, the patties have a beef texture and taste. They contain 11.7g of protein per 100g, and are being promoted for fitness, vegetarianism and health.

Most of the above have not introduced new core technology. Compare them to Impossible Foods and Beyond Meat, supported by mature technology and plentiful capital. Founded in 2011, Impossible Foods is led by a Stanford University professor of biochemistry, Patrick Brown, co-founder Tal Ronnen and

cheese maker Monte Casino. About one-third of the 330 employees are scientists. Beyond Meat's founding team also has an academic background. Founder Ethan Brown collaborated with Dr. Xie Fuhong from the University of Missouri and Harold Huff to develop artificial meat. The latter two have been studying heating, cooling, and pressure for a long time. The plant protein has been given the fibrous structure of meat by an 60-strong team of innovators.

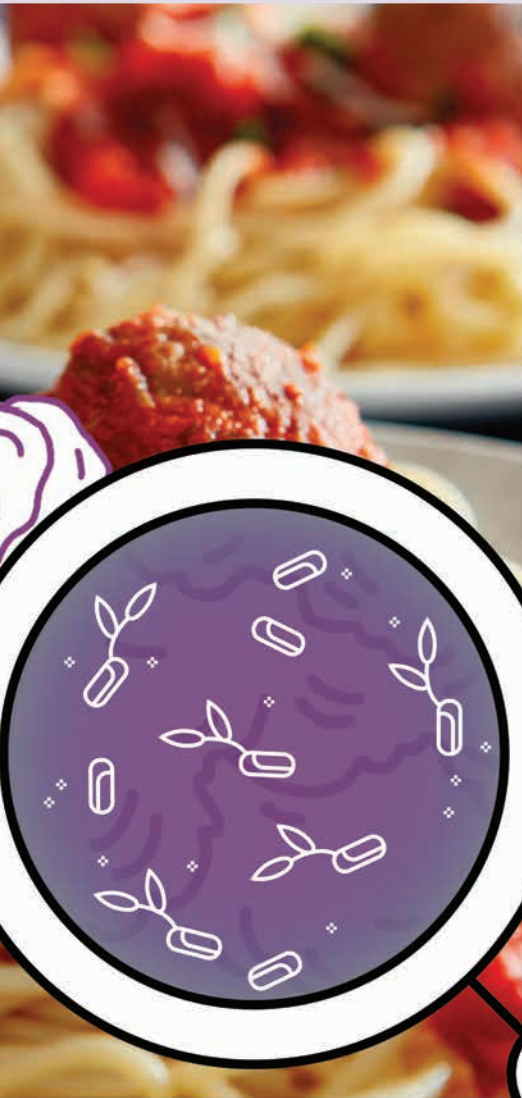
In contrast, the domestic artificial meat industry is still far away. Food analysts show that

many companies do not have the ability to produce artificial meat. Chinese food companies are involved in making vegetarian produce, but more in the way Twin Towers ships pea protein to the US and Canada as semi-finished products. In other words, Chinese companies currently do not have the core technology of artificial meat. Although the dividend trajectory is clear, factors such as the implementation of relevant national policies, technology maturity, and cost control will be instrumental in where the market is heading. ■

CHINESE ARTIFICIAL MEAT INDUSTRY IS STILL FAR AWAY. FOOD ANALYSTS SHOW THAT MANY COMPANIES DO NOT HAVE THE ABILITY TO PRODUCE ARTIFICIAL MEAT.



2019年5月, 国外人造肉品牌 BEYOND MEAT 在纳斯达克上市, 市值飙涨。同月, 巴克莱银行发布研究报告, 预测未来10年人造肉有可能拿到肉类市场10%的份额, 规模升至1400亿美元。一时间, 国内资本和创业者闻风而动, 迅速将目光投向了人造肉行业



努力。

已然亮相的品牌中，珍肉强调5D仿真概念，从各方位仿真动物肉：以豌豆蛋白为主要原料，通过自然分离提取豌豆浓缩蛋白，以椰子油、橄榄油作为脂肪，将纤维素加入到原料当中，使其具有肌肉的纤维感，再提取植物血红蛋白，结合生物发酵技术，赋予其真肉的“血色”效果。

但值得注意的是，据8月10日的公开报道，珍肉称将与北京工商大学食品与健康研究院副教授李健实验团队合作研发中国第一代人造肉；在人造肉月饼产品介绍信息中，珍肉提到研发团队中包含“诺贝尔奖研发团队”，又表示与中美两所大学有合作，拟建立联合实验室储备技术配方和科技人才，并未提及上述“诺贝尔奖研发团队”所指何人。

而双塔食品之前一直主营龙口粉丝，制作粉丝需要用豌豆淀粉，豌豆蛋白则沉淀在废水中，后经提取蛋白浆液作为原料生产食用蛋白，找到了公司新的利润增长点。双塔食品自称，其食用蛋白80%为出口，且通过经销商向Beyond Meat供货。

Omnipork相比之下要顺风顺水得多。它由加拿大食物科研团队历时两年研发而成，最早于去年在香港推出。Omnipork形态类似肉馅、对标猪肉口感，主要原料是豌豆、非转基因大豆、冬菇和米。据介绍这种植物肉含零胆固醇、无抗生素、无激素，与真猪肉相比，其饱和脂肪要低86%，热量低66%，却能提供更多膳食纤维、260%的钙质和127%的铁质。Right Treat 计划在未来半年内再推出两款产品，而且将不是肉馅形态。

刚刚面世的“国内首款人造肉饼”则是由金字火腿与美国杜邦公司合作生产的，以非转基因大豆等植物蛋白制成。据产品介绍显示，其以非转基因大豆等植物蛋白制成，有牛肉质感和口感，每100g含11.7g蛋白质，主要面向健身、素食及养生人士。

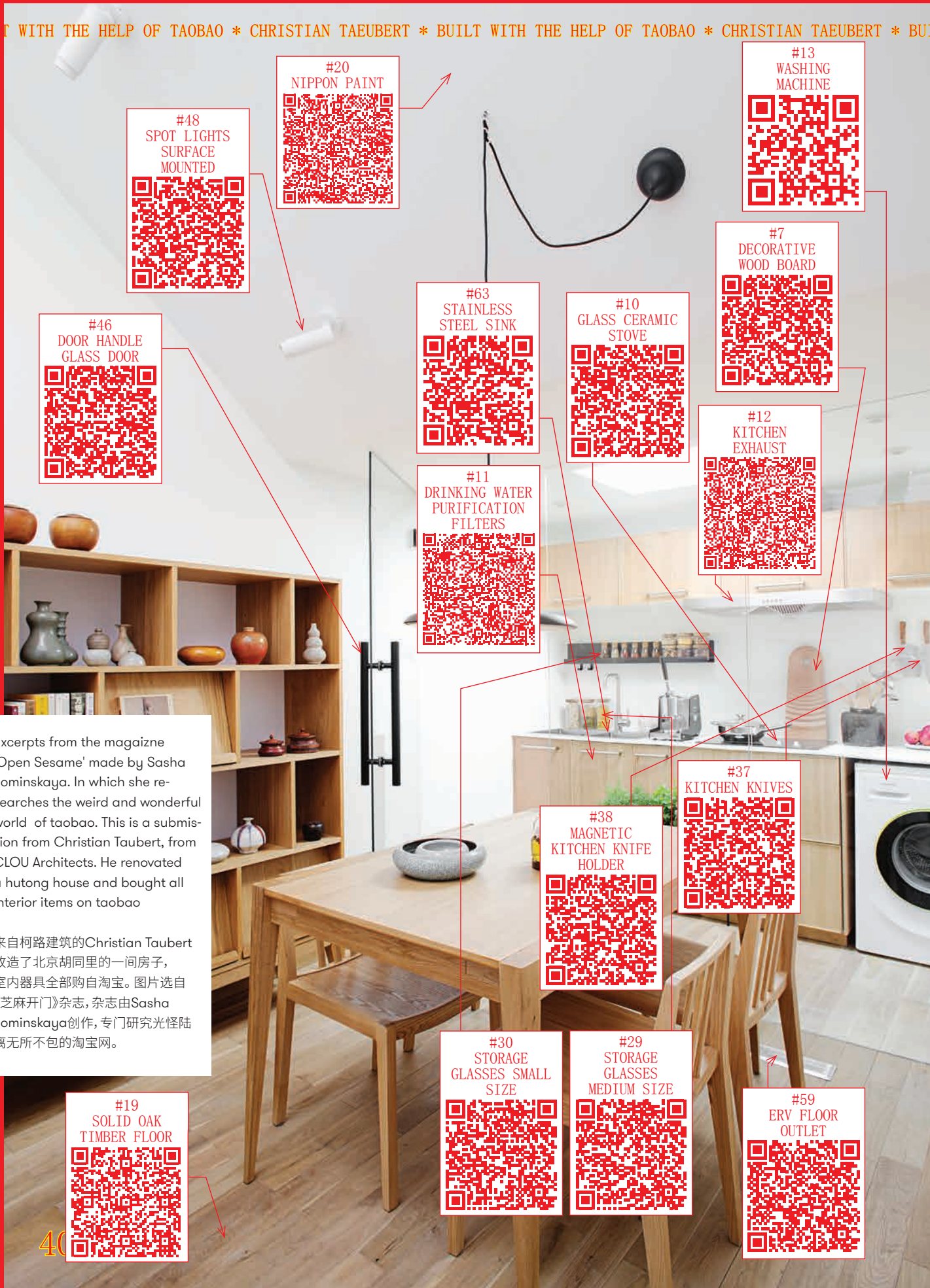
上述这几家，多数尚不具备核心技术能力。再来看国际人造肉的代表企业如Impossible Foods和Beyond Meat，均有更成熟的技术和强大的资本力量支撑。2011年创立的Impossible Foods由斯坦福大学生物化学教授帕特里克·布朗主导，联合厨师Tal Ronnen和奶酪制作者Monte Casino共同创办，现有330名员工中约有三分之一是科学家。Beyond Meat的创始团队同样具有学术背景，创始人伊桑·布朗与密苏里大学的谢富宏博士、哈罗德·赫夫合作研发人造肉类，后两位长期在研究使用加热、冷却、压力等方法将植物蛋白重新排列成肉类的纤维结构，创新团队超过60人。

相比之下，国内人造肉行业还相去甚远。食品产业分析人士称，目前很多公司都不具备生产人造肉的能力，中国的食品公司在这一领域做素食较多，例如双塔食品出口到美国和加拿大的豌豆蛋白也是属于半成品。换句话说，中国企业目前没有掌握人造肉的核心技术。尽管市场的红利趋势明显，但国家相关政策的落地、技术成熟与否、成本控制等因素都将影响这个市场。■



文化视觉

**Visualize
Me**



#48
SPOT LIGHTS
SURFACE
MOUNTED



#20
NIPPON PAINT



#13
WASHING
MACHINE



#7
DECORATIVE
WOOD BOARD



#10
GLASS CERAMIC
STOVE



#63
STAINLESS
STEEL SINK



#12
KITCHEN
EXHAUST



#11
DRINKING WATER
PURIFICATION
FILTERS



#46
DOOR HANDLE
GLASS DOOR



#37
KITCHEN KNIVES



#38
MAGNETIC
KITCHEN KNIFE
HOLDER



#30
STORAGE
GLASSES SMALL
SIZE



#29
STORAGE
GLASSES
MEDIUM SIZE



#59
ERV FLOOR
OUTLET



#19
SOLID OAK
TIMBER FLOOR



Excerpts from the magazine 'Open Sesame' made by Sasha Fominskaya. In which she re-searches the weird and wonderful world of taobao. This is a submission from Christian Taubert, from CLOU Architects. He renovated a hutong house and bought all interior items on taobao

来自柯路建筑的Christian Taubert改造了北京胡同里的一间房子，室内器具全部购自淘宝。图片选自《芝麻开门》杂志，杂志由Sasha Fominskaya创作，专门研究光怪陆离无所不包的淘宝网。

#51
DINING TABLE
PENDANT LAMP



#14
PLASTER
BOARD



#53
CONCEALED
SPOTLIGHT




#45
DOOR HINGES
BLACK



#20
NIPPON PAINT



#71
TIMBER PICTURE
FRAME



#44
DOOR HANDLES
BLACK



#39
TEAPOT DINING
ROOM



#2
INDOOR PLANTER
BOX



#70
CLEANING
SERVICE



#27
DINING ROOM
SHELF



#25
DINING TABLE



#26
DINING CHAIRS



#7
DECORATIVE
WOOD BOARD



#43
RUBBER WHEELS
FOR LADDER





#20
NIPPON PAINT



#33
DECORATIVE
PILLOWS



#14
PLASTER
BOARD



#50
DESK LAMP



#5
XXL BEAN BAG
PILLOW



#22
SOFA



#71
TIMBER PICTURE
FRAME



#28
SIDE TABLE



#44
DOOR HANDLES
BLACK



#28
SIDE TABLE



#19
SOLID OAK
TIMBER FLOOR

#14
PLASTER
BOARD



#20
NIPPON PAINT




#49
BEDROOM
CEILING LAMP



#48
SPOT LIGHTS
SURFACE
MOUNTED



#71
TIMBER PICTURE
FRAME



#44
DOOR HANDLES
BLACK



#43
RUBBER WHEELS
FOR LADDER



#19
SOLID OAK
TIMBER FLOOR



#31
BED SHEETS
(ADULTS)



Adapt

Adapt (@adapt_____) is a climate club using art and design to combat climate change.

We make design focused work about environmental issues using humour and contemporary culture to demystify climate change and provide simple and accessible solutions for action.

Some of our activities since launching in summer 2018 have included our Fossil Fool campaign (promoting clean energy), an climate focused exhibition with 50 artists called Sadness is a no gO-zone, Climate Change Speed Dating at Tate Lates, a Nicer Tuesdays talk and our latest campaign to plant 5000 trees with Ecosia. We are currently working on more exciting projects, both independently and in collaboration with other people and organisations!

Adapt is mainly volunteer led run by Josie Tucker and Richard Ashton. As a non-profit we have received funding from LUSH cosmetics and Oatly which has gone towards funding our campaigns and outreach.

www.adaptivecapacity.world

Adapt是一个利用艺术和设计来对抗气候变化的气候俱乐部。

我们创作与环境问题相关的设计作品,利用幽默和当代文化来解密气候变化,并为行动提供简单易用的解决方案。

自2018年夏季启动以来的活动包括:“化石愚人”运动(推广清洁能源)、一个有50名艺术家参与的气候主题展览“悲伤是禁区”、在泰特大学进行的“气候变化速配”、一次“更好的星期二对话”,最近我们还与Ecosia合作发起种植5000棵树的行动。我们目前正在进行的项目都很令人兴奋,有独立进行的,也有与其他人和组织合作的。

Adapt主要是一个志愿者组织,由乔西·塔克和理查德·阿什顿主持。作为一个非营利组织,我们得到了LUSH化妆品和Oatly的资助,资金已经用于活动和推广。

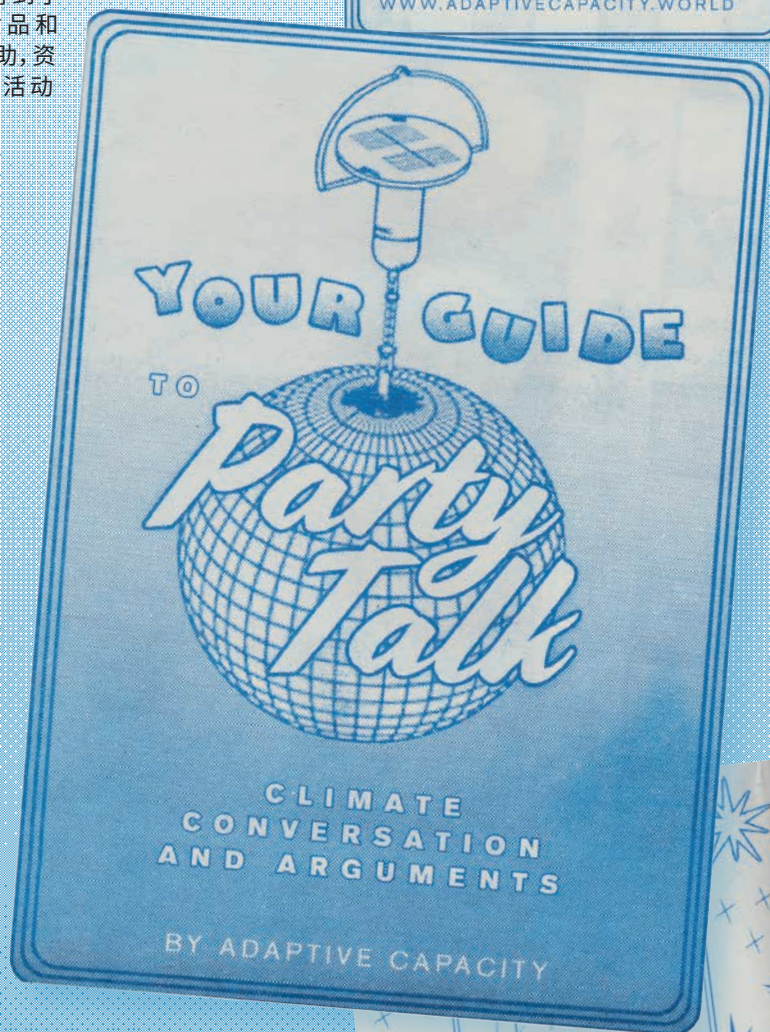
THIS HANDY GUIDE will be your trusty companion through testing conversation, arguments and plain stupid comments about climate change over the party season.

We get that climate change isn't usually dinner party conversation, but it can be. When conversation strikes, pull out your pocket guide and arm yourself with thoughtful responses to the most testing remarks.



Adaptive Capacity are a group that combine design & humour to create an accessible conversation and promote action around environmental issues.

@ADAPTIVE_CAPACITY
WWW.ADAPTIVECAPACITY.WORLD



She Says: "Global warming is obviously not something I need to worry about right now, like, I don't ever even hear anyone talking about it."

Don't say: "Your main source of news is Kim K and she's not exactly a climate scientist."

Do say: "There is a huge lack of conversation about climate change in the media at the moment, meaning the majority of the UK is very unaware of the facts. It's worth searching for the information yourself."

Tinder Date

Layla



She Says: "If the worst is expected anyway, and we're all fucked, then what's the point in trying to save the world?"

Don't say: "Guess you're not expecting a second date then, Layla?"

Do say: "There is hope! It's true, global warming effects are taking place, but if we act now, we can still avoid the worst. If everyone stopped being negative and started doing something, we could be OK."

Your Uncle

TONY



He Says: "If climate change is such a terrible threat, then why is it snowing?"

Don't say: "Read a fucking book, Tony, that's obviously not how it works"

Do say: "Global warming and local weather are not the same thing. The world temperature can rise due to greenhouse gases, meaning that weather patterns become more extreme. This sometimes means it gets colder than usual."

Your Grandad

ERIC



He Says: "Why won't you eat the turkey your nan made? What are you, a chicken?"

Don't say: "Because I don't eat meat you old codger"

Do say: "The UN said that a global shift towards a vegan diet is vital to save the world from hunger, fuel poverty and the worst impacts of climate change. Plus nut roasts taste better than they look."

IT Guy

AJAY



He Says: "We could all do with a bit more sunshine, in the UK, am I right?!"

Don't say: "YEAH, and, AJAY, I guess we could all do with more flooding, food shortages, poverty and migrant crises?!"

Do say: "Climate Change is more than sunshine! Crops are failing which leads to food shortages, and our services (like the NHS) can't cope with increase of extreme weather related issues. Plus, more people will move here due to devastation in their countries."

Your Great Aunt

Jill



She Says: "The world has naturally warmed and cooled for millions of years, it's not a problem"

Don't say: "Who gave you your science degree, Jill? What are you basing your theories on, wishes and dreams?"

Do say: "The world has changed temperature over time, but never this rapidly or drastically. 98% of scientists agree that global warming is definitely caused by humans, and if we act now, we can limit it."

PLANT 700 MILLION

NEW TREES IN THE UK



NEW TREES IN THE UK

PLANT 700 MILLION

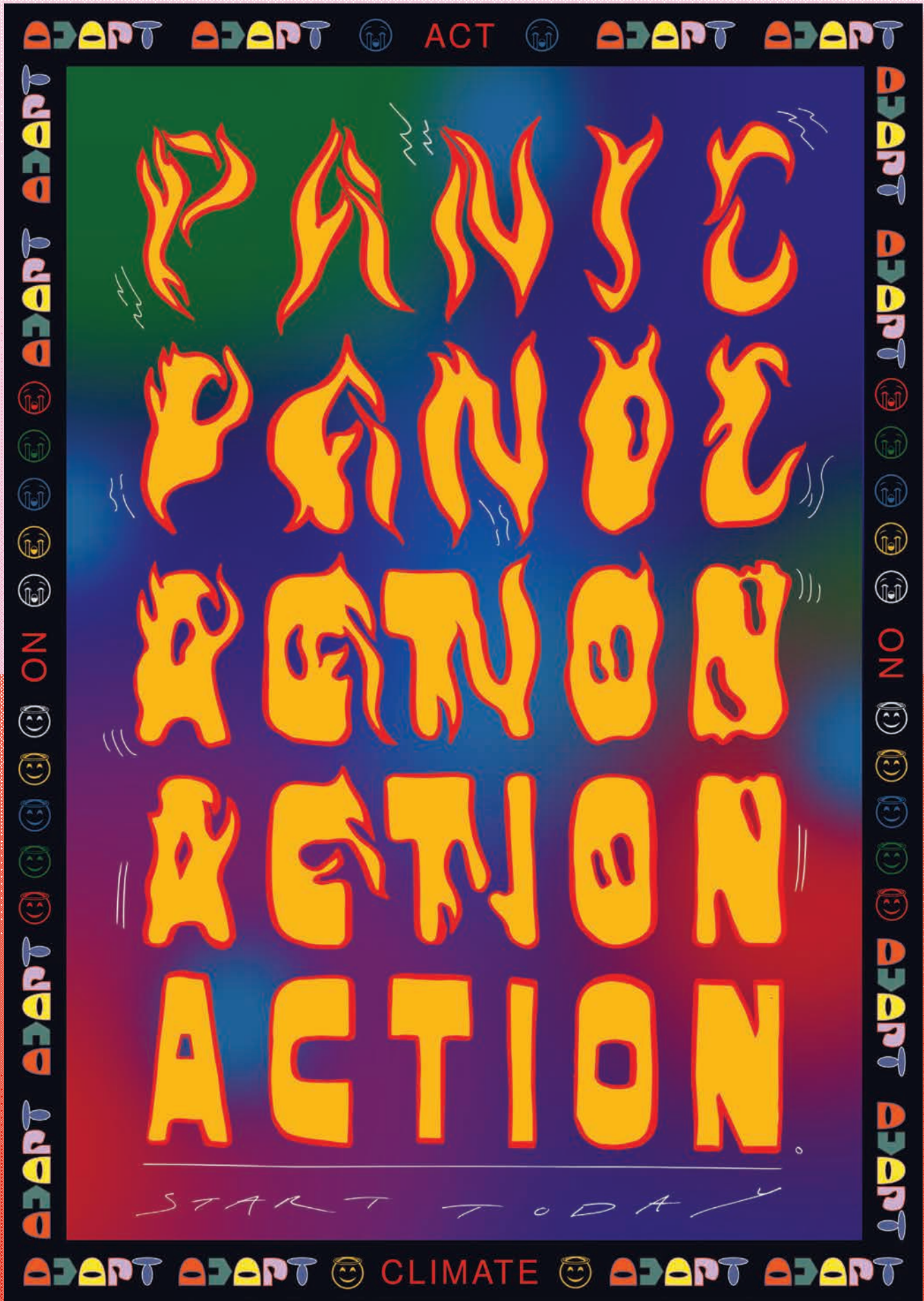
INTRODUCE TAX FOR

FREQUENT FLYERS

INTRODUCE TAX FOR

FREQUENT FLYERS







IS THERE A LOT OF AIR POLLUTION?

BECAUSE YOU LEAVE ME BREATHLESS



I HOPE YOU ARE SUSTAINABLE

BECAUSE YOU KEEP TURNING ME ON

Schweppes
Out to sea

"Gin and Chronic plastic pollution"

- Litter from plastic drinks bottles: 7%
- microplastic discovered in human stools: 100%
- Increase in plastics over the next decade: 10x
- Fossil fuels used to make plastics: 4%

It takes 500-1,000 years for plastic to degrade.





张欣 Zhang Xin
Student from BIFT (Beijing Institute for Fashion Technology) visualized a poem with fruit in different stages of decay to show the passing of time

北京服装学院的学生张欣用不同腐烂程度的水果创作了一首视觉诗, 以表达时间的一去不返。

Serial Innovators

对话
创新
者

China's Material Lady: an Interview with Lyla Wu

中国新材料先驱： 对话Neuni创始人吴迪

A conversation with **Lyla Wu**
杨碧琼对话吴迪



Lyla Wu is a maker, architect, designer, art exhibition designer, educator, founder and CEO of Neuni Group.

吴迪：连联集团创始人、首席执行官，也是一名创客、建筑师、艺术家、策展人和教育者。

What motivated you to start Neuni Form back in 2013?

When I returned from abroad in 2013, I found that the domestic construction market was mostly dominated by large design institutes and companies. Most of the customers only want replicas of existing success. Large construction companies seemed have lost the ability to innovate. There were very few research-based companies, and small firms mostly centered around star designers and stylized designs. The environment was not ideal, so I decided to establish a cross-border design company that does not pursue visual style, but rather seeks to solve industry problems based on researches.

In 2015 you founded Neuni Lab, and the next year you collaborated with MateriO and founded Neuni Materio China in Shanghai. So Neuni is now involved in different processes from design, fabrication to materials. Is this what you had envisioned back in 2013?

No, not at all. I knew nothing about China's social environment, design environment, manufacturing, or Internet system when I started the business in 2013. All I wanted to do was to create something interesting. Later I found out that communication with factories can cost a lot if you want to tailor make something. So I thought why not have a place where I could experiment myself. This place gradually became Neuni Lab when I discovered that many other designers and companies also have similar problems as I did.

Then after a year or so, we hit some bottlenecks, one of which was materials. We had very limited access to and use of materials, also very few good channels to find materials. There was no database in China at that time that specialized on innovative materials but also independent of any material suppliers, so we made one.

After that, we spent four years combing materials,

intelligent manufacturing and design together. That's where innovation power comes from.

Neuni's online library houses over 10,000 material references and aims at bridging designers and manufacturers. How does China's design profession embrace these new materials?

We received quite a lot of attention after the opening of Neuni MateriO. But I have to say, most Chinese designers are not very knowledgeable about basic materials science. Although they are excited when they see innovative materials, they are more concerned about cost and implementation. We saw the significance and necessity of new material education right there.

At present, we are working with brands, designers and factories from industries like automobiles, clothing, home appliances and consumer goods. The acceptance of new materials in different industries is very different. Generally speaking, large and traditional construction industry responds relatively slowly, while the fast iterative products are more sensitive.

How does Neuni help transform more traditional materials, especially when we should be more environmentally conscious?

Sustainability is an important criterion for “new materials” in our material library. More than 80% of the materials in Neuni MateriO are sustainable. I believe all future innovative materials must be sustainable.

Compared with developing brand new materials, I am more interested in using existing knowledge and production systems to do cross-studies, introducing methods and special formulations of new materials into traditional ones in order to lift their values.

Neuni has started a series of community waste recycling and research programs since last year, hoping to raise awareness of material innovation. The materials recovered include fabrics, food waste, plastics and other materials. We are also incubating a range of bio-based materials.

We encourage “material thinking” rather than “design thinking”, because design thinking is based on and caters for user’s needs, it even feeds user’s desire during the process. This is obviously not sustainable or responsible. Neuni’s “material thinking” is a design method based on supply chain, sustainable materials, and production methods. Only by using material-driven design can we make the most of China’s manufacturing industry and make Chinese-style innovation. This is where we think we can help traditional industries.

Neuni has been a pioneer in terms of studying and introducing novel materials to China’s design world. How do consumers take design products using new materials?

We opened a retail store two years ago in order to get more direct feedback from consumers. We can see that consumer preferences have changed a lot in recent years. The younger generation is no longer blindly pursuing famous brands. Instead they are more independent thinking, more self-regarding, and more environmentally conscious.

New visual language and experience of new materials have a lot potentials and they attract the Z generation. It’s a tool for them to express their personality and their own views. For older generations, the convenience and experience of innovative materials will drive more luxury and health-related products to be iterated.

China’s consumer goods market faces problems such as homogenization, low quality, and easy plagiarism. Innovative materials may provide an alternative for products and companies that are willing to invest in R&D.

Is it easy for products using new materials to go big?

Most of our self-developed products have only achieved small scale production. For example, furniture and stationery made of coffee grounds, bags made of colorful fabrics, and shoes made of environmentally friendly fabrics. Cases of mass production are mostly in cooperation with companies, such as Chanel’s high-end clothing made of concrete fabrics.



What’s your goal for Neuni Group moving forward?

First, help reform design education. Many of the industry problems I mentioned are actually about education. It’s true that design and development of new materials are still dominated by the west at present, but by providing material library services for universities, we try to help establish a theoretical system for new materials in China.

Another focus will be on the marketization of sustainable materials. This topic began in Western countries but never prevailed. We hope to achieve that in China through Neuni’s unique ecology.

What do you think of current situation of social entrepreneurship in China?

Ice and fire, that may be the suitable phrase I can think of. China’s desire for innovation is unquestionable, and the government is pushing for innovation and entrepreneurship. I have seen lots of investment trends in the past few years, but rarely on innovation of physical economy and traditional industry. Neuni may not be the favorite for investment, but seen from another perspective, we also have more possibilities and a bigger market. Put it this way, the entrepreneurial environment in China is not easy, but we cannot imagine doing this in any other country.

You are also teaching at Tongji University as a visiting professor. What do you think of our education in digital design and digital fabrication?

I started teaching digital design five years ago. At that time there were only a handful of people who taught in this area. Now every well-known university has a parametric design and an intelligent manufacturing lab. But I stopped teaching in this area three years ago. The main reason is that parametric design cannot solve many core design problems, let alone to solve China’s industrial problems. Secondly, the only thing — apart from AI and big data — that can break through the bottleneck of intelligent manufacturing is new materials. I’d like to dive into more in-core researches, linking new materials and digital design is one of the directions I’m working on.



What is your wish for the urban world of 2030?

Blue sky, clean food, air and water. Young people don't have to worry about housing. Cities have become hotbeds for innovation... and we have 48 hours a day. ■

你是国外接受的教育，毕业后曾在多家知名的建筑设计公司里工作。是什么促使你在2013年决定创立Neuni Form呢？

2013年刚回国的时候发现国内建筑市场更多是大型设计院和设计公司所垄断的，大部分的客户也只是追求在既有的成功案例上进行复制。大型建筑公司缺乏创新，生存环境也不太理想。研究型的设计公司比较少，小型事务所大都以明星设计师、风格化的设计为主。我希望建立一个从设计研究的角度出发，不追求视觉风格，真正解决行业问题的跨界设计公司。

你在2015年创立了 Neuni Lab, 2016 年又和法国 MateriO 合作，在上海创立了MateriO，成为国内第一个专注全球新材料培训、孵化和交易的创新平台。这样Neuni就已经涵盖了从设计、工艺到材料的多个环节，你2013年创业的时候已经有了这样的构想了吗？

完全没有。2013年创业的时候，我对中国的社会环境、设计环境、制造业、互联网等体系一无所知。当时纯粹想要做点有意思的设计。在设计的过程中发现如果要做个性化的东西，和工厂沟通打样的成本非常高。一开始只是想有个自己可以做实验打样的地方，后来发现很多设计师和企业也有相似的困扰，所以萌生了做Neuni Lab的想法。

但是在运营了一年之后遇到一些瓶颈，其中一个就是材料。我们对于材料的获取和使用非常受限，也缺乏好的渠道和平台去找材料。我们在寻找平台的过程中发现中国并没有一个专注新材料、同时又独立于材料商的数据库，所以我们就自己做了一个。

之后我们用了四年时间把材料—智造—设计三个环节融合在一起，发现真正的创新力量来自于这三者的结合。

如今的Neuni MateriO线上线下有上万种新材料，你觉得国内设计界对新材料的接受度如何？哪些行业的设计师更常与Neuni合作？

Neuni MateriO开业后我们收到了雪花般的邀约和邮件。无论我们做任何活动或者展览，都受到诸多设计师的关注。但是，大部分中国设计师对于基础材料学的认知还是不太够，他们看到创新材料的时候虽然很兴奋，但是更多的是对于价格和落地性的担忧。这让我们看到了新材料教育的重要性。

目前我们和汽车、服装、家电、消费品类的品牌、设计师及工厂都有不同程度的合作。不同行业对于新材料的接受度其实非常不一样，比较大而传统的建筑行业的反应相对会慢一些，而快速迭代的产品对于创新的敏感度会高一些。

除了给设计师带来新材料的灵感外，Neuni如何帮助传统材料实现创新，尤其是在当下更注重可持续生产的语境下？

可持续性，在我们的材料库中是“新材料”的重要标准。我们数据库中超过80%的材料都具有这个特点。所以我相信未来的创新材料都必须可持续的。

相对于开发完全新型的材料，我更热衷于利用现有的知识体系、生产体系进行交叉研究，植入新型材料的加工方式、特殊配方，提升传统材料的价值。

为了让更多人对于材料创新产生兴趣，Neuni从去年开始了一系列的社区废料回收再造的工作坊和研究项目，回收的材料有织物、食物废料、塑料等材料。目前我们也在孵化一系列生物基的材料。

另外我们也提倡设计行业从“设计思维”转向“材料思维”，因为设计思维是以用户需求为核心的设计模式，这个思维其实是和可持续相悖的，从满足用户欲望甚至是放大欲望角度出发而产生的设计很多时候是不可持续的。Neuni 提出的“材料思维”是从供

供应链、可持续材料、生产方式出发的设计方法，只有用材料驱动设计，才能利用中国制造业优势，做出中国式创新。这也是我们认为可以帮助到传统行业的地方。

Neuni填补了国内新材料研究、开发以及培训的空白。几年下来，你感觉消费者对新材料产品的接受程度如何呢？审美和需求是否也随着材料的创新有了更新？

我们两年前开了一家零售商店，目的是为了直面消费者，和他们沟通对话，这也是为了让我们不要闭门造车，做空中楼阁。

消费者的喜好在近几年发生了很大的变化，年轻一代不再一味追求名牌，他们有独立的思考，专注自我，也更为关注环境。

新材料所带的新的视觉语言和体验有着无穷无尽的可能。对Z世代的消费者来说这非常有杀伤力，也是他们可以表达个性和自身观点的工具。对于相对年长一些的消费者，创新材料带来的便利和体验上的改革会推动更多奢侈品及大健康相关产品进行升级迭代。

当下中国的消费品市场有着同质化严重、质量低下、容易被仿冒抄袭的问题。创新材料或许可以为产品打开一扇不同的大门，也让一些愿意投入研发的企业有更高的行业壁垒。

Neuni迄今开发的产品规模如何？

我们自主研发的产品大部分都只实现了小批量生产。比如有咖啡渣做的家具和文具、炫彩面料做的包包、环保面料做的鞋子。更多已经量产的案例是和企业合作的，比如香奈儿用混凝土织物做的高端服装。

现在的Neuni Group已经发展成为一个包含Lab、MateriO、Shop的生态系统。接下来的目标是什么？

一方面为更多设计院校实现设计教育的改革。前面提到的很多行业问题其实也是教育的问题。目前全球新材料的设计和开发还是由西方学术圈主导，我们希望为更多高校提供材料库服务，并且定义和建立来自中国的新材料的理论体系。

另外是专注可持续材料的市场化。这个议题始于西方国家，但是目前鲜少有环保材料成为主流材料。我们希望用互联特有的生态让这个不可能的任务在中国实现。

你觉得目前国内社会创业现状怎样？

冰火两重天可能是我想到的状态。中国对于创新的渴望毋庸置疑，政府也大力推动创新创业。在过去很多年中我看到无数风口，但是很少聚焦实体经济和传统产业创新的。我们可能一直都不是风口上的企业，但是从另外一个角度看，我们也拥有更多的可能性，更大的市场。总体来说，中国的创业环境虽然不容易，但是我们不能想象在任何其他国家做同一件事情。

你目前也在同济大学担任客座教授，你认为国内数字设计和数字智造的研究及教育前景怎样？

五年前我开始数字化设计方面的教学，当时从事这方面教学的人屈指可数。现在每个知名高校都有参数化设计和智造实验室，普及率可以说是进步了很多。

但是我从三年前开始就不再从事这方面的教学，主要原因是我觉得参数化设计不能解决很多核心的设计问题，更加不能解决中国的产业问题。其次，可以突破智能制造瓶颈的，除了人工智能和大数据，就是新材料了。我希望从事更为内核的研究，把新材料和数字设计联系在一起，目前也是我的研究方向之一。

你对2030年城市世界的希望是什么？

蓝天，清洁的食物，空气和水源。

年轻人可以不用为住房烦恼。

城市成为创新的温床。

如果一天可以有48个小时…… ■



Google pledges to use Recycled Materials for Consumer Devices

谷歌承诺将再生材料用于消费设备

Alphabet Inc's Google announced it would neutralize carbon emissions from delivering consumer hardware by next year and include recycled plastic in each of its products by 2022.

The new commitments step up the competition among tech companies aiming to show consumers and governments that they are curbing the environmental toll of their widening arrays of gadgets.

Anna Meegan, Head of Sustainability for Google's devices and services unit, said that the company's transport-related carbon emissions per unit fell 40% last year compared to 2017 by relying more on ships rather than planes to move phones, speakers, laptops and other gadgets from factories to customers across the world. The company will offset remaining emissions by purchasing carbon credits, Meegan said.

Three out of nine Google products for which the company has detailed disclosures online contain recycled plastic, ranging from 20% to 42% in the casings for its Google Home speakers and Chromecast streaming dongles.

In a blog post, Google committed to introducing some recycled plastic to 100% of products by 2022.

Meegan acknowledged that Google's 3-year-old hardware business trails far larger hardware rival Apple Inc in some sustainability efforts.

Apple, which in 2017 committed to "one day" only using recycled and renewable materials, has at least 50 percent recycled plastic in some parts of several products, recycled tin in at least 11 products and recycled aluminum in at least two.

But sustainability standards are now a part of Google's hardware planning, Meegan said. Devices cannot clear the second checkpoint in the company's design process unless they show that sustainable packaging and materials and ease of repair have been considered.

"We are fundamentally looking to build sustainability into everything we do," she said. "It's going to take us time to demonstrate progress."

今年8月初, Alphabet Inc.旗下谷歌宣布,将在明年之前消除交付消费硬件所产生的碳排放,并在2022年之前将再生塑料纳入其每一种产品中。

这些新承诺加剧了科技公司之间的竞争,旨在向消费者和政府表明,它们正在遏制不断扩大的电子产品种类对环境造成的影响。

谷歌设备和服务部门的可持续发展主管安娜·米根在接受采访时说,与2017年相比,谷歌的单位运输碳排放量在2018年下降了40%,这是由于在将手机、扬声器、笔记本电脑及其他产品从工厂运送给世界各地的客户时,谷歌更多地依靠船只而不是飞机。

米根表示,谷歌将通过购买碳排放额度来抵消剩余的排放。

该公司在网上详细披露的9款谷歌硬件产品中,有3款含有可回收塑料,谷歌家用扬声器和Chromecast流媒体转接器外壳的塑料含量从20%到42%不等。

在一篇博文中,谷歌承诺到2022年将一些再生塑料100%应用到产品中。

米根承认,谷歌硬件业务在一些可持续发展方面已比竞争对手苹果公司落后了3年。

苹果公司在2017年承诺“有一天”将只使用可回收和可再生材料,到目前在一些产品的某些部件上至少使用了50%的可回收塑料,在至少11种产品中使用了可回收锡,在至少2种产品中使用了可回收铝。

但米根说,可持续发展标准现在已经成为谷歌硬件计划的一部分。硬件设备如果不符合可持续包装和材料原则、未考虑到维修的便利性,将无法通过公司设计流程中的第二道关卡。

她说:“我们从根本上希望把可持续性原则纳入我们的所有产品中。我们需要时间来做出成绩。”

Petit Pli



Petit Pli is a London-based material innovation and Fashion-Tech startup which creates clothes that grow with your child by embedding a patent-pending structure that expands bi-directionally to fit children aged between 9 months and 4 years.

Imperial College London and Royal College of Art graduate and trained Aeronautical Engineer Ryan Mario Yasin founded London-based Petit Pli in 2017

at the age of 23 while he was still a Global Innovation Design Student, with the vision of designing innovative & sustainable garments for our world's most extreme athletes: children! He drew inspiration from deployable nano-structure satellites he worked on at Imperial, as well as his new-born nephew Viggo.

In April 2019 Petit Pli was named one of 5 2019 Global Change Award (GCA) Winners, and was chosen from 6,640 entries from 182 countries.

GCA is an innovation challenge initiated by the non-profit H&M

Foundation in 2015, and has been dubbed the 'Nobel Prize of Fashion'. By catalysing early innovations that can accelerate the shift from a linear to a circular fashion industry, it aims at protecting the planet and our living conditions.

A SOLUTION THAT IS MORE INNOVATIVE, MORE SUSTAINABLE AND HAS HIGH QUALITY TECHNICAL FABRICS AS CHILDREN ARE EXTREME ATHLETES

Petit Pli contributes to making the fashion industry circular and reduce waste by: Reducing waste at production (fewer offcuts)

Transportation (fewer

sizes) Petit Pli have gone above and beyond to source & use recycled fabrics (Petit Pli suits are made from recycled plastic bottles & are easier to recycle at the end of their use) Keeping clothing in use for longer (the Waste & Resources Action Programme (WRAP) and the Ellen MacArthur Foundation have identified that extending the life and use of clothes is one of the most significant opportunities the fashion industry has to reduce carbon emissions, waste generation and water consumption) Inspiring the next generation to reframe the value of clothing Designing a solution that is more innovative, more sustainable and

has high quality technical fabrics as children are extreme athletes.

On winning the award, Founder Ryan Mario Yasin shared:

"Petit Pli places absolute focus on macro and micro needs of humanity - how can we improve people's lives while placing a strong consideration on the sustainable and ethical implications. "Clothes that grow" was designed to answer the needs of parents & children, retailers & manufacturers and the environment by offering the opportunity to make the sustainable option more desirable - and able to be implemented today."

Along with the GCA, Petit Pli has won 11 awards which include Fast Company's 100 World Changing Ideas, 2019 Red Dot Product Design Award, 2017 UK James Dyson Award and recently beat Google for the 2018 Dezeen Award for Best Wearable Design. Petit Pli has been working with NB Studio in London to develop a well thought-through brand identity and reusable, recyclable and gamified packaging. ■

petitpli.com

孩子是这个世界上最极端的运动员,他的目标就是要为孩子们设计具有创新性且可持续的服装



Petit Pli是一家总部位于伦敦的材料创新和时尚科技初创公司,他们设计研发的儿童服装内部嵌入了一种专利结构,能够随着孩子的成长而自动伸展,适用于九个月到四岁大的孩子。

毕业于帝国理工学院和皇家艺术学院的航空工程师Ryan Mario Yasin在2017年创立了Petit Pli,当时他23岁,还是全球创新设计专业的一名学生。他认为孩子是这个世界上最极端的运动员,他的目标就是要为孩子们设计具有创新性且可持续的服装。设计灵感来自于他在帝国理工学院研究的可伸展纳米卫星,以及他刚出生的侄子Viggo。

2019年4月, Petit Pli 从 182个国家的6640名参赛者中脱颖而出,成为2019年全球创新奖(GCA)五位获奖者之一。

GCA是由非营利的H&M基金会于2015年发起的一项创新挑战,被称为“时尚界的诺贝尔奖”。通过孵化刚萌生的创新理念,加速时尚产业从线性向循环的转变,最终目标是保护地球和我们的生存环境。

Petit Pli通过以下方式促进时装业的循环发展并减少浪费:减少生产中的浪费(减少边料);运输(尺码较少);Petit Pli在材料方面已经超出了回收面料的范围(服装是由回收的塑料瓶制成的,在使用结束后更易回收);使服装更耐用(废弃物与资源行动计划<WRAP>和艾伦-麦克阿瑟基金会都已确认延长服装的寿命和使用时间是时尚界减少碳

排放、废弃物和用水的重要途径之一);鼓励下一代重新审视服装的价值;设计出了一种更创新、更可持续的解决方案,而且使用了高质量技术面料,因为孩子们都是极限运动员。

创始人Ryan Mario Yasin称:“Petit Pli的唯一重点就是人类的宏观和微观需要——如何改善人们的生活,同时对可持续和伦理影响给予高度考虑。‘成长的衣服’的设计回应了父母和孩子、零售商和制造商以及环境的需求,它提供了一个机会,让可持续选择变得更可取,并且在今天就能够实施。”

除了GCA, Petit Pli 还获得了11项大奖,包括《快公司》的100项改变世界创意奖、2019年红点产品设计奖、2017年英国詹姆斯·戴森奖,以及最近击败谷歌获得2018年Dezeen最佳可穿戴设计奖。Petit Pli还与伦敦NB Studio合作,开发出了一款经过深思熟虑的品牌标识和可重复使用、可循环利用和游戏化的包装。■

petitpli.com

Creative Senses

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ICCSD Held High-level Seminar on Strategic Development

创意中心举办战略发展高层座谈会

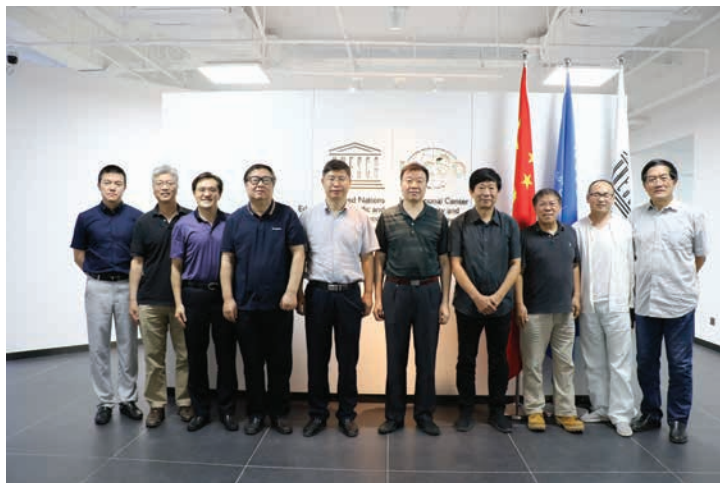
On August 30, 2019, International Center for Creativity and Sustainable Development under the auspices of UNESCO (the "ICCSD") held a high-level symposium on its strategic development. Renowned experts and scholars from academia, scientific research institutions and officials from National Commission of the People's Republic of China for UNESCO visited ICCSD and discussed with the staff of ICCSD on the development strategy and key issues of the center. The forum was moderated by Xiao Lan, Executive Director of ICCSD.

Experts at the meeting raised their expectations on the formation of a relevant indicator system and the establishment of think tank platform by ICCSD. They also put forward useful suggestions for the center in terms of cooperation and training, based on their own experience and the advantages of the institutions where they serve.

Zhou Jiagui, Deputy Secretary-General of National Commission of the People's Republic of China for UNESCO, said in the panel discussion that sustainable development is an important global agenda. Focusing on creativity and sustainable development, ICCSD should put science, technology and culture first, and disseminate concepts of UNESCO. The center should also serve the national development strategy, support the construction of "four centers" in Beijing, pass on China's wisdom and ideas to become a bond of cooperation between China and UNESCO.

"The center is a very good platform," said Liu Zhongfan, an academican of the Chinese Academy of Sciences and President of the Beijing Graphene Institute, "Based on this platform, we should spread our solutions, voices and wisdom, bring in foreign wisdom and resources to build a good platform for cooperation and exchange."

The following guests also attended the seminar and made their speech: Han Ziyong, President of Chinese National Academy of Arts; Lou Wei, Vice President of the Palace Museum; Wang Pengfei, Deputy Director of the Technical Institute of Physics and Chemistry, Chinese Academy of Sciences; Zhang Xiaoming, Deputy Director of the Chinese Culture Research Center, Chinese Academy of Social Sciences; Wang Min, Deputy Director of the Academic Committee of Central Academy of Fine Arts; Xu Yingqing, Director of the Department of Information Art & Design, Tsinghua University; Zhang Zhiyi, Director of the Center for Science and Art, Institute of Automation, Chinese Academy of Sciences; Shen Yubiao, Director of the Science and Culture Department at the secretariat of National Commission of the People's Republic of China for UNESCO; Lou Xiaohong, Deputy Director of Beijing Industrial Design Center. ■



2019年8月30日,联合国教科文组织国际创意与可持续发展中心(以下简称“创意中心”)举办战略发展高层座谈会。来自学界、科研机构的知名专家学者与中国联合国教科文组织全国委员会领导到访创意中心,与创意中心员工就中心发展战略与重点业务进行研讨。座谈会由创意中心执行主任肖澜主持。

中国联合国教科文组织全国委员会副秘书长周家贵在座谈中说:可持续发展是全球的重要议程,创意中心要以创意和可持续发展为立足点,以科技、文化为重,传播好教科文组织理念;服务好国家发展战略;支持北京四个中心建设;传递中国智慧、中国理念,成为中国和教科文组织合作的纽带。

中国科学院院士、北京石墨烯研究院院长刘忠范发言表示:创意中心是一个非常好的平台,要立足该平台把我们的方案、声音、智慧传播出去,同时把国外的智慧与资源请进来,搭建好合作交流平台。

中国艺术研究院院长韩子勇、故宫博物院副院长娄玮、中国科学院理化技术研究所副所长汪鹏飞,中国社会科学院中国文化研究中心副主任张晓明,中央美术学院学术委员会副主任/“长江学者”特聘教授王敏、清华大学信息艺术设计系主任/“长江学者”特聘教授徐迎庆、中国科学院自动化研究所科学艺术中心主任张之益出席了本次座谈会并做交流发言。■

Beijing Design Week 2019: Industrial Motivation

2019北京国际设计周 再次展示“设计之都·智慧城市”

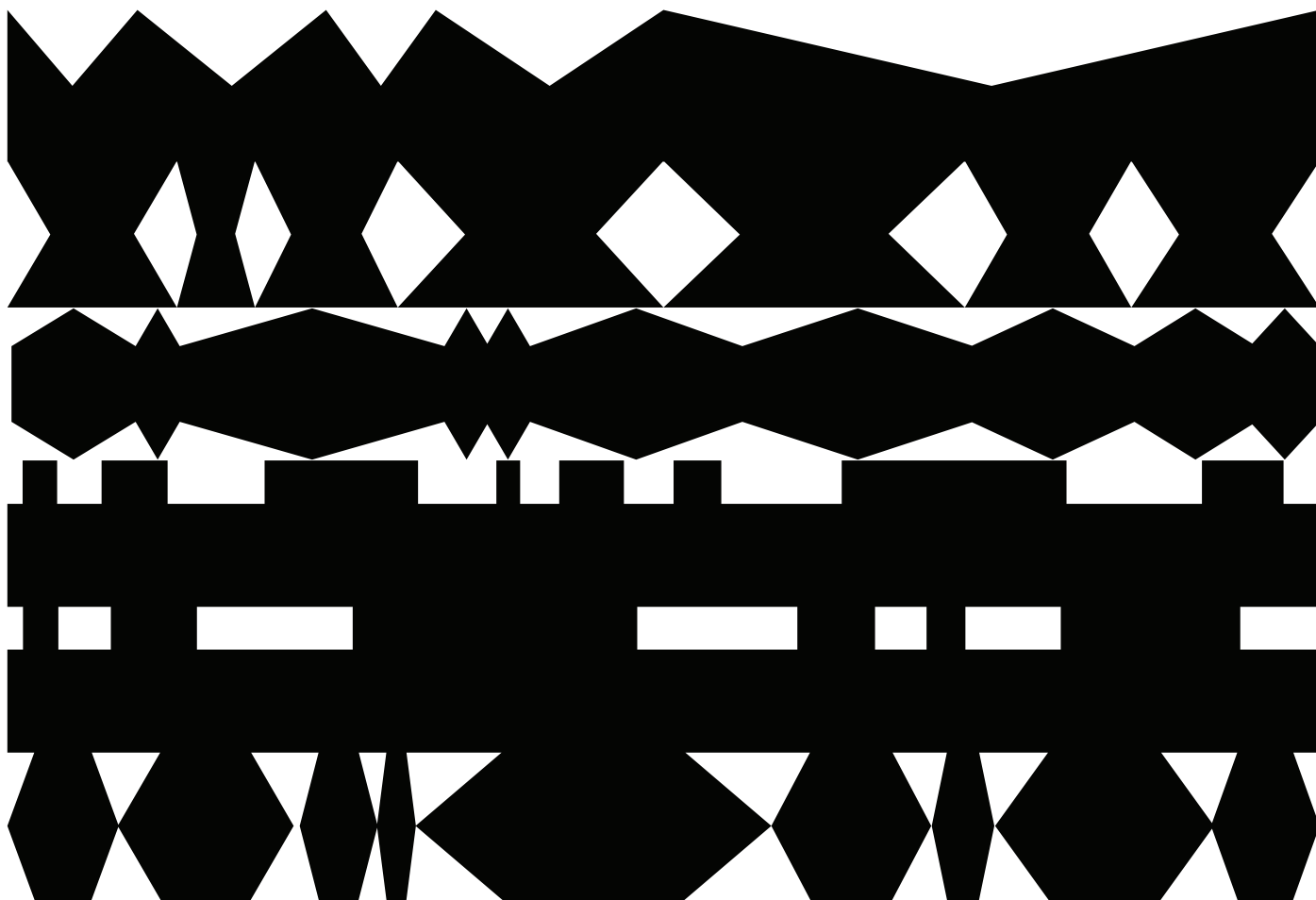
The annual Beijing Design Week was held from Sept. 5 to Oct. 7, 2019. During the month-long event, there was 45 branch venues in 10 districts of Beijing, making it convenient for local people to experience the power of design in their neighborhood.

By continuing the philosophy of “Design City, Smart City”, Beijing Design Week 2019, with the theme of “Industrial Motivation”, served as an innovation pioneer in such fields as promotion of transformation and upgrading of manufacturing industry, trade development of “The Belt and Road”, relieving non-capital function of Beijing and construction of an innovative city, and industrial innovation of excellent Chinese traditional culture. All these are conducted by focusing on “design leads industrial upgrading”, “design guides consumption trends”, “design drives trade

prosperity” and “design empowers urban innovation”.

This year also marks the 70th anniversary of the founding of the People’s Republic of China. In order to commemorate and celebrate this important moment, theme exhibitions such as Exhibition of National Image Design at the Beginning of the Founding of the People’s Republic of China (1949-1959) and Imprint China Theme Seal Engraving Design Exhibition were held during Beijing Design Week, to create good atmosphere from the perspective of innovative design in line with National Day activities. Beijing Design Week strictly controlled content of activities during the design week with careful plan and thorough arrangement, and greeted the 70th birthday of motherland with actual deeds.

First launched as a pilot effort in 2009, Beijing Design Week has quickly become the leading international platform for design in China. In 2012, UNESCO name Beijing an “international design capital,” recognizing the city’s effort to foster innovation and be a leading smart city in China. The purpose of Beijing Design Week is to raise public design awareness as well as to help develop stronger design infrastructure and discourse in Beijing. BJDW is an initiative of the Ministry of Education of the PRC, the Ministry of Science and Technology of the PRC, the Ministry of Culture of the PRC, and the People’s Government of Beijing Municipality. It is undertaken by Beijing Gehua Cultural Development Group and Beijing Industrial Design Center. ■



9月5日至10月7日期间,2019北京国际设计周圆满举行。今年的设计周继续秉持“设计之都·智慧城市”的理念,以“产业策动”为主题,以设计引领产业升级、设计引导消费趋势、设计驱动贸易繁荣、设计赋能城市创新为四条主线,在促进制造业转型升级、一带一路贸易发展、北京疏解非首都功能与创新型城市建设、优秀中华优秀传统文化的产业化创新等领域发挥创新引领作用。

2019北京国际设计周重点聚焦于:一是聚焦文创园区建设,优化产业空间布局,助力城市副中心建设。精细化提升青龙文化创新街区,特别是推进中丹创新中心的规划建设,同时重点打造东城园及整个街区的营商环境。聚焦北京城市更新、工业遗址改造、街区保护利用等相关内容,特别是推动北京国际设计周全球资源落地城市副中心,在张家湾设计小镇启动区规划建设北京国际设计周主题园区。同时举办城市更新全球经验高峰论坛暨张家湾设计小镇建设研讨会,邀请国际国内城市更新领域的专家、学者、机构代表分享全球城市更新经验与案例,共同探讨北京在城市更新等方面的话题,特别是在城

市副中心规划建设北京国际设计周主题园区的发展模式与路径。

二是加快设计产业化发展,促进产业转型和消费升级。设计周期间围绕主题“产业策动”开展了多项主体活动:北京设计奖特设“文博设计奖”,助推北京市文博系统文化创意产品的提质增效,鼓励、表彰和促进文化、文物单位的文创产品的创意、设计、制作和市场化营销工作;创新设计服务大会通过设计推动创意产业与其他产业融合发展,帮助和引导设计人员设计出具有新颖性、创造性和使用性的新产品,为传统生产制造业、服务业附加文化附加值;北京设计博览会的户外主题展“梦创花园”聚焦设计与产业相联接,采用联合“知名设计师+家居建材行业企业+院校”的全新合作模式,探索公共艺术、城市更新的新方式、新路径;设计论坛以“设计引领产业转型升级”为主题,围绕“智慧设计,AI赋能”、“奥运设计与市场开发”等话题开展讨论,促进设计引领产业转型与消费升级。

三是稳步推动设计周国际化进程,提高品牌国际影响力,实现合作共赢。本届北京国际

设计周邀请墨西哥城作为主宾城市,将墨西哥传统工艺创新、城市和建筑设计发展趋势、当地设计机构的文化创意理念呈现给北京观众。此外,本届设计周在国内城市公共服务设计领域中推动深度合作,为京津冀地区在城市功能规划设计、旧城区环境改造、老旧工业园区转型升级方面引入国际成功经验,有效嫁接国内外供需平台达到双赢。

北京国际设计周作为经中央批准在京举办的国家级大型年度文化活动,由文化和旅游部与北京市人民政府联合主办,致力于成为国际一流的城市创意活动。2019北京国际设计周恰逢中华人民共和国成立70周年的喜庆日子,设计周精心策划了庆祝中华人民共和国成立70周年主题的相关展览和活动,从创意的角度描述、分享中华人民共和国成立以来“壮丽70年、奋进新时代”的宏伟画卷。■

莱奥尼亚每天都在更新自己：清晨，人们在新鲜的床单被单中醒来，用刚从包装盒里拿出的香皂洗脸，换上崭新的浴衣，从新型冰箱里拿出未开启的罐头，打开最新式样的收音机，听听最新的歌谣。

在马路边的人行道上，昨天的莱奥尼亚的废弃物包在塑料袋子里，等待着垃圾车。除了挤过的牙膏皮、烧坏了的灯泡、报纸、容器、包装纸，还有热水器、百科全书、钢琴、瓷器餐具。莱奥尼亚的富足，与其以每日生产销售购买量来衡量，不如观察她每天为给新东西让位而丢弃的物资数量。你甚至会琢磨，莱奥尼亚人所真正热衷的究竟是享受不同的新鲜事物，还是排泄、丢弃和清除那些断出现的污物。

— 伊塔洛·卡尔维诺，
《看不见的城市》摘自译林出版社2006年版，
译者：张宓

The city of Leonia refashions itself every day: every morning the people wake between fresh sheets, wash with just-unwrapped cakes of soap, wear brand-new clothing, take from the latest model refrigerator still unopened tins, listening to the last-minute jingles from the most up-to-date radio.

On the sidewalks, encased in spotless plastic bags, the remains of yesterday's Leonia await the garbage truck. Not only squeezed tubes of toothpaste, blown-out light bulbs, newspapers, containers, wrappings, but also boilers, encyclopedias, pianos, porcelain dinner services.

It is not so much by the things that each day are manufactured, sold, bought, that you can measure Leonia's opulence, but rather by the things that each day are thrown out to make room for the new.

So you begin to wonder if Leonia's true passion is really, as they say, the enjoyment of new things, and not, instead, the joy of expelling, discarding, cleansing itself of a recurrent impurity. ”

— Italo Calvino,
Invisible Cities

Creativity 创意
2030

Responsible Consumption and Production

负责任的消费和生产



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



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



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