

专访荷兰循环设计专家Siem Haffmans: 以设计创造循环商业模式

INTERVIEW WITH DUTCH CIRCULAR DESIGN EXPERT
SIEM HAFFMANS: CREATING CIRCULAR BUSINESS MODELS
THROUGH DESIGN



“我的使命是让所有的产品和包装都成为循环经济的一部分。”

“My mission is to make all products and packaging part of a circular economy.”

当前，地球生态与环境治理面临严峻挑战，发展循环经济迫在眉睫。然而，我们应该如何发展循环商业模式？设计又该如何在其中发挥作用呢？很多人对此并不十分清楚。在今年六月的香港“设计智识周”（KODW）上，来自荷兰的循环设计专家Siem Haffmans特别分享了他在帮助企业和设计师打造循环商业模式与循环设计方面的经验。

Siem Haffmans毕业于荷兰代尔夫特理工大学工业设计专业，从事生态设计、绿色包装和循环经济的研究与开发已超过25年，对设计、营销、生产、材料和回收有着深入的理解。2004年，Siem Haffmans成为荷兰领先可持续创新咨询机构Partners for Innovation（创新伙伴）的合伙人和循环经济战略顾问，与机构同仁一起致力于为政府机构、行业组织、包装生产商、品牌所有者和零售商提供循环经济和可持续创新咨询服务，其大多数项目涵盖了从设计、生产到回收的整个循环经济价值链的构建。2019年，Haffmans出版了《流动的产品》（*Products that Flow*）一书，探讨了快速消费品行业的循环商业模式和设计策略。

在担任Partners for Innovation循环经济战略顾问的同时，Siem Haffmans还受聘为CIRCO循环设计课程的培训师。CIRCO课程是由荷兰基础设施和水资源管理部于2015年委托创意产业顶级部门——荷兰创意产业知识与创新网络CLICKNL为企业和设计师推出的一项课程计划，由CIRCO培训师网络负责实施，目的是“通过循环设计创造商机”，是荷兰政府实现其循环经济目标的重要工具。

多年来，Siem Haffmans与众多其他CIRCO培训师一起，采用经过验证的、独特的CIRCO设计思维和方法，为企业和设计师提供循环设计业务培训与建议，鼓励企业家和创意专业人士重新设计产品、服务和商业模式。迄今为止，CIRCO的培训师已经指导超过2000家企业，并培训逾800名创意专业人员，使他们能够在日常工作中运用CIRCO的方法和工具。

在“设计智识周”（KODW）2023上，Siem Haffmans和CIRCO国际项目经理Pieter van Os一起，开展了以“实践循环经济：创新商业价值”为主题的论坛。他们不仅带来了“re阶梯”（重新思考、再利用、减少、回收、更新）循环设计策略，还阐述了循环经济的商业模式、“产品即服务”的理念，以及“逆向物流”等循环机制，探讨了设计师在行业向循环转型的过程中扮演的角色，分享了应该怎样重新设计产品和包装，使其适应循环经济的发展。本期《包装&设计》特别对Siem Haffmans进行了专访，请他详细解读这些理念，并与读者分享。

Currently, the earth ecosystem and environmental governance are faced with severe challenges and thus the call for a transition to a circular economy is growing louder. But how should we develop circular business models? And how should design play a role in them? Many people are not very clear about this. At the Hong Kong Knowledge of Design Week (KODW) in June, Siem Haffmans, a circular design expert from the Netherlands, shared his experience in helping companies and designers create circular business models and circular design.

Siem Haffmans graduated from Technical University of Delft in the Netherlands with a degree in Industrial Design. He has been engaged in research and development of eco-design, green packaging and circular economy for over 25 years, with a profound understanding of design, marketing, production, materials and recycling. In 2004, Siem Haffmans became a partner and circular economy strategic consultant at Partners for Innovation, a leading Dutch sustainable innovation consultancy. Together with his colleagues, Haffmans is committed to providing circular economy and sustainable innovation consulting services to government agencies, industry organizations, packaging manufacturers, brand owners and retailers, with most of their projects covering the entire circular economy value chain, from design and production to recycling. In 2019, Haffmans published *Products that Flow*, a book that explores circular business models and design strategies for fast-moving consumer goods.

In addition to his role as circular economy strategic consultant at Partners for Innovation, Siem Haffmans is also a trainer for the CIRCO circular design course. The CIRCO course is a training programme for companies and designers commissioned by the Dutch Ministry of Infrastructure and Water Management in 2015 to Top Sector of the Creative Industry – CLICKNL, the Dutch Creative Industry Knowledge and Innovation Network, with the aim of “creating business through circular design” and executed with CIRCO Trainers network, as an important instrument of the Dutch government to achieve its objectives for a circular economy.

Over the years, Siem Haffmans, together with many other CIRCO trainers, has provided circular design training and advice to businesses and designers using the validated and unique CIRCO design thinking and methods. They encourage entrepreneurs and creative professionals to (re)design products, services, and business models. So far, CIRCO trainers have mentored over 2,000 companies and trained more than 800 creative professionals to help them apply CIRCO's methods and tools in their daily work.

Siem Haffmans, together with Pieter van Os, Program Manager CIRCO International, conducted a workshop at KODW 2023 with the theme “Closing the Loop: Creating New Business Value.” They not only introduced the “re-ladder” (rethink, reuse, reduce, recycle, renew) circular design strategy but also discussed circular business models, the concept of “Product as a service” and “Reverse Logistics” as well as other circular mechanisms, exploring the role of designers in the industry's transition to circularity and sharing how products and packaging should be redesigned to adapt to the development of the circular economy. This issue of *Package & Design* features a special interview with Siem Haffmans, inviting him to provide a detailed interpretation of these concepts.



Siem Haffmans (中) 在设计智识周 (KODW) 2023上, 与同样来自荷兰的CIRCO国际项目经理Pieter van Os (右) 和CreativeNL的中国协调员Monique Knapen分享循环商业模式的创建方法。

► **Q: Package & Design**

► **A: Siem Haffmans, Partner and Strategic Consultant at Partners for Innovation, Trainer for CIRCO**

What is Circular Economy

“Circular economy is more than just recycling. It is about rethinking the way we produce and consume, about finding new circular business models that will provide users with a service that is more satisfying with less environmental impact.”

Q: What problems do you see with the current linear economy?

A: Our current linear system is focused on production and consumption and we have become very efficient in this. But in the current linear system of “take-make-dispose”, a lot of value is lost, for example with production waste, logistics, unsold and discarded products. There are also “hidden costs” that are paid for by society, such as litter and environmental damage. If many people drop empty wrappers on the street, they will have to be picked up with high costs for the municipality. Cleaning up the beaches and oceans will come at an even higher cost. Furthermore, we are facing the boundaries of this linear system of “take-make-dispose” every day with growing problems such as climate change and plastic littering.

Q: How do you understand the concept of circular economy? Your work involves eco design, green packaging and circular economy. What are the difference between these three areas? And what’s the relationship between them?

A: Eco design and green packaging is mainly about reducing the impact of products and packaging on the environment. Although this is very much needed, it will only further optimize our current linear system. Circular economy is more than just recycling. It is about rethinking the way we produce and consume, about finding new circular business models (“resource - product - renewable resources” model) that will provide users with a service that is more satisfying with less environmental impact.

The Track of Circular Economy

“Design and design thinking can play a major role in implementing successful circular business models, as the user should be tempted to choose this circular solutions.”

Q: What do you think are the pathways to a circular economy? What are the challenges involved? What role does design play?

A: Circular economy starts with circular design of products and packaging, using recycled or biobased materials and

design for recycling. The second pillar is using products longer by reuse, share and repair. The last pillar is collecting, sorting and recycling. The challenge is to zoom-out and incorporate prevention of lost value and societal costs in your business model. The

government can facilitate this, for example with extended producer responsibility schemes, where producers are paying a fee for solving the “end of lifetime” problems of the products and packaging. Design and design thinking can play a major role in implementing successful circular business models, as the user should be tempted to choose this circular solutions.

Q: Referring to the circular business model in your presentation at the KODW 2023 workshop, you said, “The part of ‘Slow down’ includes Reuse, Refill and Product-as-a-service”, the first two of which are familiar concepts to most of us. Could you please give some examples about the design idea and key points of “Product-as-a-service”?

A: Product-as-a-service is about providing a service instead of selling a product. This starts with defining the basic need behind a product and thinking about different way to fulfill these needs. If you are providing people with a healthy lunch, can you do so without packing every single item? Because what clients need is healthy lunch, not complicated

“Sustainable production and consumption might seem more expensive on short term, but if you zoom out and incorporate the societal costs and upcoming regulations, then it will be the only way forward.”

Q: In 2021, together with NRK and other institutions, you drafted the Action Plan Application of Plastic Recyclate. What do you think is the most critical factor to solve the plastic waste problem? What would be the most effective action?

A: The most critical push to solve the plastic waste problem comes from brand owners. The plastic recycling business will be more successful if brand-owners are asking for the application of recycled content in their packaging. Coca-Cola for example is aiming for 100% recycled content in their PET bottles and this will have a huge effect on the recycling business. In some cases recycled PET is already more expensive than fossil PET. European legislation is also working

on a minimum recycled content for plastic packaging. packaging. If you are selling cleaning detergents, can you provide people with a clean house?

Q: Could you introduce the concept of Reverse Logistics as a part of Organizing the loops?

A: Our supply chains are organized in a very efficient way, but this is not the case for reversed logistics. Why can’t we send back our discarded products in the same easy way as they were delivered at our home? Lots of products that we are not using anymore are still functioning and there is a lot of value in these orphaned products.

Q: In which ways are materials recycled?

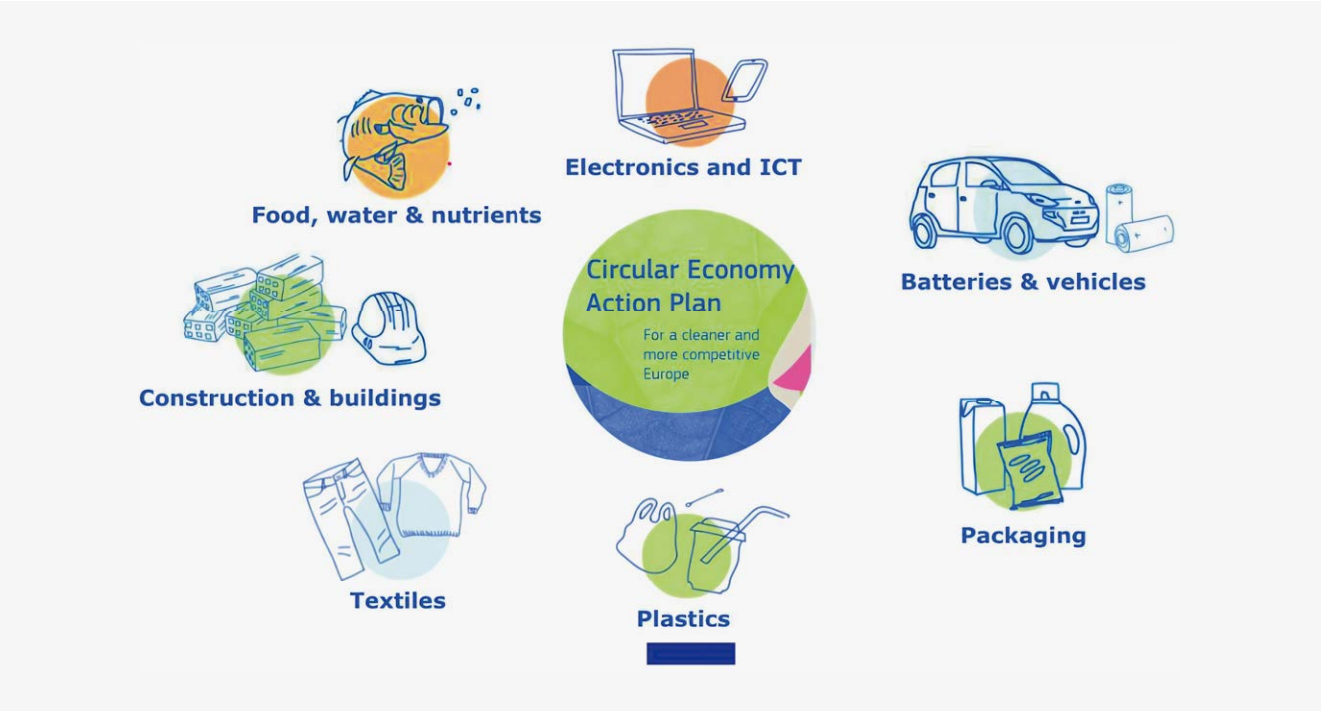
A: In a circular economy there are two basic cycles for materials, the technical cycle and the biological cycle, nicely explained by the Ellen MacArthur Foundation. The technical cycle is about “man-made” materials, such as plastics and metals, that should be collected and recycled at the highest possible level. The biological cycle is about biobased materials that can be given back to nature by digestion or composting.

on a minimum recycled content for plastic packaging.

Q: Generally speaking, people think environmental protection will increase the cost of production. Do you agree with that? And how should enterprises balance between environmental protection and the economic benefits of production?

A: Sustainable production and consumption might seem more expensive on short term, but if you zoom out and incorporate the societal costs and upcoming regulations, then it will be the only way forward, for companies’ sustainable design and business models will become their “license to operate”.





Impact of European Green Regulations on Business and Design

“Every company producing for and exporting to the EU will have to cope with this in a proactive way.”

Q: In your speech, you mentioned the European Green Deal, the EU Packaging and Packaging Waste Regulation (PPWR) and other relevant laws and regulations. How do you think the introduction of these regulations has affected the development of enterprises in the EU? What kind of exemplar does it provide for the development of circular economy in other regions of the world?

A: The European Green Deal is a package of policy initiatives, which aims to set the EU on the path to a green transition, with the ultimate goal of reaching climate neutrality by 2050. One of the main building blocks of the European Green Deal is the new Circular Economy Action Plan (CEAP), Europe’s

new agenda for sustainable growth. The EU’s transition to a circular economy will reduce pressure on natural resources and will create sustainable growth and jobs. The European Union is rolling out a train of regulations to facilitate the transition towards a circular economy, such as: the Ecodesign Directive, EPR – Extended Producer Responsibility, Packaging and Packaging Waste Regulation, SUPD – Single-use Plastics Directive and CSRD – Corporate Sustainability Reporting Directive. Every company producing for and exporting to the EU will have to cope with this in a proactive way, because this will strongly disrupt current markets.

Circular Design Strategies

“There are several good LCA tools with which designers and marketers can calculate the impact of different design options.”

Q: You have said that there are different design strategies that can be used to make consumables suitable for a circular economy. Would you explain your “re-ladder” (rethink, reuse, reduce, recycle, renew) circular design strategy with some practical cases?

A: The highest rung of the ladder is rethink. This is about asking yourself fundamental questions, such as: why are we

using this product or this packaging? Eosta, a producer of organic fruits and vegetables invented the process of “natural branding” to get rid of the plastic packaging on several of its products. With a laser, information, such as the brand name and barcode, is applied to the skin of the products. Reuse is about replacing single-use products and packaging by reusable products. This strategy is gaining momentum

with the very strict “single-use plastics” regulation in Europe. More and more consumers are choosing for reusable coffee cups, food containers and refillable bottles. Reduce is always a good strategy for optimizing the logistic process. For example, in the e-commerce sector the reduction of volume and weight of packaging can save lots of money, both on packaging materials and shipment costs. Recycle is about using recycled materials for your products and packaging and taking care that they will be recycled again after usage, thus making them part of the technical cycle. Renew is about using biobased materials and taking care that they will be recycled, digested or composted after usage, so that they are part of the biological cycle.

About Circular Design Workshop CIRCO

“CIRCO is a circular design program supporting both businesses and designers to engage with circular innovation.”

Q: At this year’s KODW, you attended a forum with Program Manager International of CIRCO Pieter van Os on the topic of “Closing the Loop: Creating New Business Value.” What kind of project is CIRCO? What kind of business are you mainly engaged in?

A: CIRCO is a circular design program supporting both businesses and designers to engage with circular innovation. We believe that a circular way of working will improve the long term competitiveness of a company while at the same time reducing its footprint and complying with upcoming regulation. Circular innovation demands new circular knowledge and a redesign of the product – service and business model of a company. As a consequence, it often is a challenge for both companies and designer to start with circular innovation and easy to postpone as other topics on the management agenda seem more urgent. The Dutch Ministry of Infrastructure and Water Management recognizes this importance and commissioned Top Sector of the Creative Industry CLICKNL (the Knowledge and Innovation Network of the Creative Industry) to launch a program for companies and designers in 2015. This program focused on circular business opportunities, collaboration, upscaling and knowledge sharing is called CIRCO which is executed with the CIRCO Trainers network. Specifically, we facilitate companies with our design methodology to develop a first circular proposition in a three-day workshop for companies as well as a 1-day class for design professionals. CIRCO has supported over 1,500 companies in the Netherlands. But as the circular transition is a global challenge, we make our methodology also available to other countries by training local partners. So far there are CIRCO-hubs in

Q: It’s difficult to scientifically calculate the carbon reduction benefits of circular economy activities. This involves many problems such as insufficient basic data, lack of methods and tools, non-uniform standards and imperfect statistical evaluation mechanism. How should designers calculate the carbon reduction of their design solutions?
A: In fact it is not that difficult anymore to calculate the carbon footprint of a product or packaging. There are several good LCA tools with which designers and marketers can calculate the impact of different design options. If you follow the ISO 14040 methodology and be clear about your assumptions and system boundaries, you can make a quick-scan calculation that can help you making the right decisions.

16 countries applying the methodology with about 80 local trainers. Pieter van Os has a career in proposition development and is co-founder of the CIRCO-initiative, he is responsible for methodology development and the international roll-out. In this role he personally trained more than 500 companies in the Netherlands and 12 countries abroad. We are aiming to start a Hong Kong Hub before the end of 2023.

Q: What is CIRCO methodology and CIRCO Tracks? As a CIRCO trainer, please explain the seven steps of the CIRCO Tracks.

A: The CIRCO method is based on an academic framework of the Technical University of Delft. It is called *Products that Last* and is written by Prof. Conny Bakker and Marcel den Hollander. This framework explains five circular business models and six circular design strategies. CIRCO expanded this framework with tools and insights, so it is useful and relevant for businesses. The method offers practical design tools, inspiring cases and examples, and it offers trainer support and interaction. The CIRCO method is applicable to both companies and design professionals. Companies are invited to participate in a three-day workshop that consists of three group sessions. During the workshop companies develop a circular proposition with a business model, a redesign of the product and accompanying services and a roadmap for implementation. Whereas design professionals can follow a 1-day class, allowing them to play their part in the circular transition as a circular change agent. Research shows that about 70% of the participating companies implement this circular proposition because during the workshops they get convinced that circularity will strengthen their business.



Siem Haffmans在设计智识周 (KODW) 2023上演讲。

- 问:《包装&设计》
- 答: Siem Haffmans, Partners for Innovation合伙人、循环经济战略顾问, CIRCO培训师

什么是循环经济

“循环经济以新的循环商业模式 (即 ‘资源-产品-再生资源’ 模式), 为用户提供更令人满意的服务, 同时减少对环境的影响。”

问: 您认为当前的线性经济存在哪些问题?

答: 目前, 生产和消费的线性系统已经非常高效 (编者注: “线性系统”是指通过大规模生产和消费刺激不断将“资源”变成“垃圾”的线性过程), 但在当前“获取-制造-废弃”的生产和消费线性系统中, 存在着大量的价值损失, 例如生产浪费、物流损失、未售出的产品和很多使用寿命结束前就被丢弃的产品。还有一些“隐性成本”是由社会支付的, 比如垃圾和环境破坏——假如经常有人在街上随意扔包装袋, 市政部门就不得不花费更多的钱, 雇人清理垃圾, 而清理海滩和海洋的成本就更高了。

此外, 由于气候变化和塑料垃圾等问题日益严重, “获取-制

造-废弃”模式的生产和消费线性系统每天都在面临更为严峻的挑战。

问: 您所理解的“循环经济”是什么样的? 您的工作涉及生态设计、绿色包装和循环经济, 这三者有何不同, 又有何关联?

答: 生态设计和绿色包装主要是指减少产品和包装对环境的影响, 尽管这是非常必要的, 但它只是进一步优化了现有的线性系统。循环经济不仅仅是回收利用, 它促使我们反思线性的生产和消费方式, 倡导以新的循环商业模式 (即“资源-产品-再生资源”模式), 为用户提供更令人满意的服务, 同时减少对环境的影响。

实施循环经济的路径

“在成功实施循环商业模式的过程中, 设计和设计思维应该发挥重要作用, 引导用户自愿选择循环解决方案。”

问: 您认为实现循环经济有哪些路径? 其中的挑战是什么? 设计可以在其中发挥怎样的作用?

答: 要发展循环经济, 首先要对产品和包装进行循环设计, 通过使用可回收或生物基材料来设计和制造产品与包装, 以便后续循环利用; 第二种是通过重复使用、共享和维修来延长产品的使用

时间; 第三种是回收、分类和再利用。

我们的挑战在于如何放眼全局, 将防止价值损失和社会成本损失纳入企业经营模式。对此, 政府可以发挥积极作用, 比如, 推出扩大生产者责任范围的政策措施, 让生产者对产品 and 包装“寿命周期结束”问题的解决支付费用。

在成功实施循环商业模式的过程中, 设计和设计思维应该发挥重要作用, 引导用户自愿选择循环解决方案。

问: 您在KODW 2023工作坊的演讲中提到循环商业模式时说:“减缓商品流动”(Slow down) 包括重复使用 (Reuse)、再填充 (Refill) 和“产品即服务”(Product as a service), 其中前两者是大家比较熟知的理念, 能否请您举例谈谈“产品即服务”的设计思路及设计要点?

答: “产品即服务”是指企业不仅销售产品, 而且提供服务。这需要我们学会洞察用户购买产品背后的真正需求, 并思考如何以不同方式满足用户的这些需求, 譬如你希望为人们提供健康的午餐, 是否可以不必每样食品都打包? 因为用户需要的是健康午餐, 而非复杂的包装。如果你销售的是清洁剂, 是否可以提供房屋清洁服务? 这就是“产品即服务”。

问: “组织循环”(Organizing the loops) 部分的“逆向物流”(Reverse Logistics) 是怎样的理念?

答: 现在的商品供应链非常有效率, 但是, 人们却没有同样有效率地做到“逆向物流”。既然商品可以用便捷的方式送到我们家里, 为什么企业不能以同样便捷的方式回收我们丢弃的产品呢? 很多我们不再使用的产品和被丢弃的产品依然有价值, 仍可发挥作用。

从短期来看, 可持续的生产和消费似乎更昂贵, 但是假如你放眼全局, 考虑到社会成本和即将出台的法规, 可持续将是唯一的出路。”

问: 2021年, 您与NRK和其他机构一起起草了《塑料回收物应用行动计划》。您认为解决塑料废弃物问题, 最关键的因素是什么? 最有效的行动又是什么?

答: 解决塑料废弃物问题, 最关键的是品牌所有者的推动: 如果品牌所有者要求在其包装中使用回收材料, 塑料再循环产业将更加成功。比如, 可口可乐公司的目标是该公司的PET塑料可乐瓶实现100%使用回收材料, 这将对再循环产业产生巨大影响。在某些情况下, 回收的PET塑料的价格已经高于化石基PET。欧洲立法机



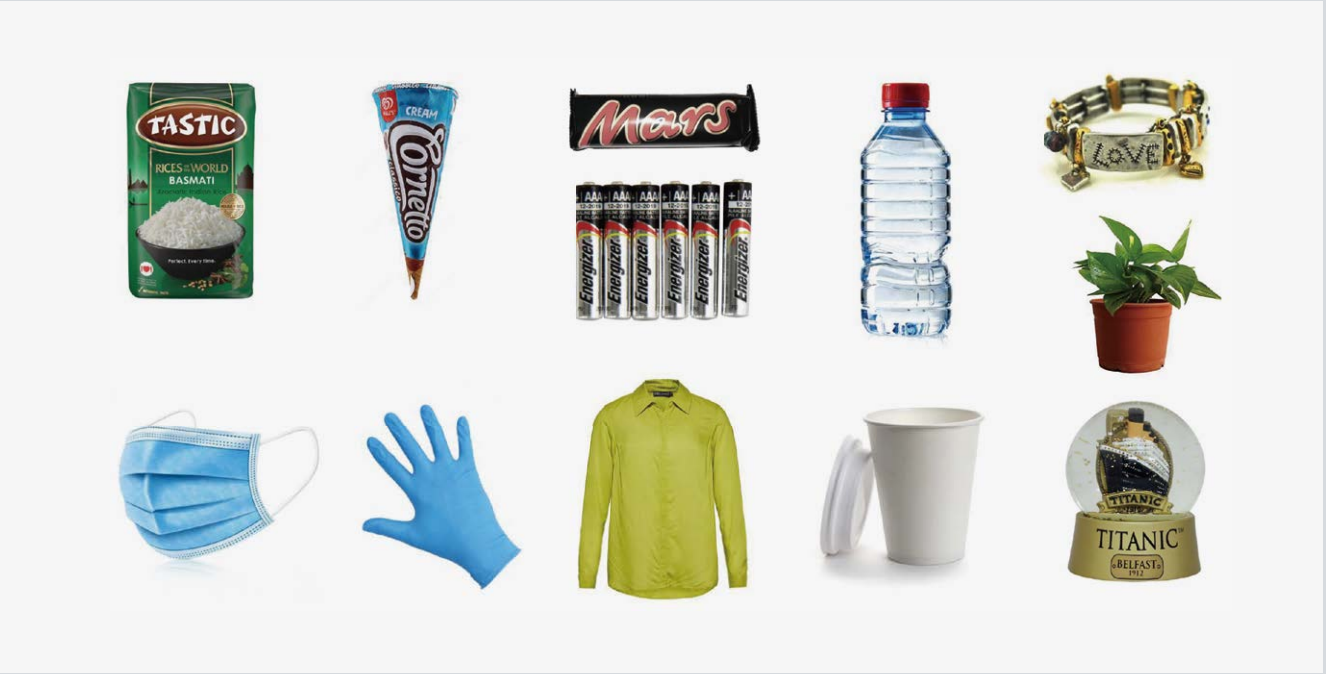
问: 材料的循环有哪些方式?

答: 在循环经济中, 材料有两种基本循环: 技术循环和生物循环。艾伦·麦克阿瑟基金会对这两种循环做出了很好的解释: 技术循环是指对人造材料 (譬如塑料和金属) 进行收集和回收; 生物循环是指对生物基材料进行分解或堆肥, 使其回归自然。

构也在制定塑料包装的最低回收材料含量标准。

问: 通常而言, 大家都认为环保会增加生产成本。您认为这种说法正确吗? 企业该如何平衡生产的环保性与经济效益?

答: 从短期来看, 可持续的生产和消费似乎更昂贵, 但是, 假如你放眼全局, 考虑到社会成本和即将出台的法规, 可持续将是唯一的出路。对于企业来说, 可持续设计和可持续商业模式将成为他们的“经营许可证”。





联合利华成功地在6年内将包装重量减少了15%。



seepje洗涤剂瓶由100%回收的包装材料制成，在使用后很容易被再次回收。

欧洲绿色法规对企业和设计的影响

“凡是为欧盟生产产品的企业和出口产品到欧盟的企业都必须积极应对这些法规。”

问：您在KODW的演讲中提及了《欧洲绿色协议》、欧盟《包装及包装废弃物法规》（PPWR）等相关法规。您认为这些法规的出台给欧盟企业的发展带来了怎样的影响？又为全球其他地区的循环经济发展提供了怎样的借鉴？

答：《欧洲绿色协议》提出了促使欧盟走上绿色转型之路的一系列政策举措，最终目标是到2050年实现气候中性（climate neutrality）。新的《循环经济行动计划》（CEAP）是《欧洲绿色协议》的主要组成部分之一，也是欧洲可持续增长的新议程。欧盟向

循环经济的转型将减轻对自然资源的压力，并创造可持续增长和就业机会。

欧盟正在出台一系列法规，促进企业和社会向循环经济转型，比如：《生态设计指令》、生产者责任延伸制度（EPR）、《包装和包装废弃物法规》《一次性塑料指令》（SUP）和《企业可持续发展报告指令》（CSRD）。凡是为欧盟生产产品的企业和出口产品到欧盟的企业都必须积极应对这些法规，因为这些法规会给当前市场带来很大震动。

循环设计策略

“设计师和市场营销人员可以使用一些很好的LCA（生命周期评估）工具，计算不同设计方案可能造成的环境影响。”

问：您曾经说过，针对不同的消费品，可以采用不同的设计策略，使其适用于循环经济。可否请您结合实际案例解释一下您的“re阶梯”（重新思考、再利用、减少、回收、更新）循环设计策略？

答：“re阶梯”的最高一层阶梯是“重新思考”（rethink）。在这个层面上，你需要问自己一些基本的问题，比如：我们为什么要使用这种产品或这种包装？举个例子，有机水果和蔬菜生产商Eosta创造了“天然品牌”生产工序，它有几种产品完全不使用塑料包装，而是用激光把品牌名称和条形码等信息直接打印到产品表面。

“再利用”（reuse）是指用可重复使用的产品取代一次性产品和包装。目前，随着欧洲实施愈发严格的“一次性塑料”法规，“再利用”已成为势不可挡的发展战略。与此同时，越来越多的消费者也在选择可重复使用的咖啡杯、食品容器和可以重装的瓶子。

“减少”（reduce）一直是优化物流流程的有效策略。比如，在电子商务领域，减少包装的体积和重量可以节省大量资金，无论是

包装材料费还是运输成本。

“回收”（recycle）是指在产品 and 包装中使用可回收材料，并确保它们在使用后会再次被回收，从而使回收成为技术循环的一部分。

“更新”（renew）是指使用生物基材料，并确保它们在使用后被回收、分解或堆肥，使它们成为生物循环的一部分。

问：循环经济活动的碳减排效益很难科学核算，这涉及基础数据不足、缺乏方法和工具、标准不统一、统计评价机制不健全等多方面问题。设计师应该如何计算设计方案的碳减排量呢？

答：事实上，计算产品或包装的碳足迹（某个时间段内日常活动排放的二氧化碳量）不像从前那么困难了。设计师和市场营销人员可以使用一些很好的LCA（生命周期评估）工具来计算不同设计方案可能造成的环境影响。假如你遵循ISO 14040方法，并清楚你的设定和系统界限，你就可以用这些工具进行快速计算，计算结果会帮助你做出正确的决策。

关于循环设计工作坊CIRCO

“CIRCO是一个帮助企业 and 设计师创建循环业务、进行循环创新的循环设计课程。”

问：在今年的KODW上，您与CIRCO国际项目经理Pieter van Os一起在以“实践循环经济：创新商业价值”为主题的论坛上当主讲嘉宾。请问CIRCO是一个怎样的项目？

答：CIRCO是一个帮助企业 and 设计师创建循环业务、进行循环创新的循环设计课程。

我们相信，循环工作方式既可以减少对环境的影响，还能提高企业的长期竞争力，同时符合即将出台的法规。但循环创新需要企业和设计师学习新的循环知识，还需要重新设计企业的产品——包括重新设计服务和商业模式，这往往让企业和设计师很难把循环创新摆在第一位，因为管理议程上的其他问题似乎更紧迫。

因此，荷兰基础设施和水资源管理部于2015年委托创意产业顶级部门——荷兰创意产业知识与创新网络CLICKNL为企业和设计师推出了一项名为CIRCO的课程计划，由CIRCO培训师网络负责实施，专注于循环商业机会、合作、升级和知识分享。

具体来说，CIRCO会为企业提供一个为期三天的工作坊，为设计师提供一个为期一天的课程，帮助企业和设计师用CIRCO方法初步创建出一个循环业务模式，并从中发现和探索商机。

截至目前，CIRCO在荷兰已经帮助了1500多家企业进行循环转型。循环转型是一项全球性挑战，因此，我们还培训了一些其他国家的合作伙伴，通过他们把我们的循环设计方法推广到其他国家。到目前为止，我们在16个国家拥有CIRCO培训中心，培养了约80名当地的CIRCO培训师。Pieter van Os是CIRCO的国际项目经理

理，也是CIRCO的联合创始人，他负责循环设计方法论的开发和国际推广，并亲自培训了荷兰和海外12个国家的500多家企业。我们的目标是在2023年底之前开设CIRCO香港中心。

问：请问什么是“CIRCO方法论”和“CIRCO实施路径”？作为CIRCO培训师，可否请您介绍一下CIRCO实施路径的七个步骤？

答：CIRCO方法论基于代尔夫特理工大学的学术框架，该框架出自Conny Bakker教授和Marcel den Hollander教授撰写的《持久的产品》（*Products that Last*）一书，诠释了五种循环商业模式和六种循环设计策略。CIRCO用多种工具和自己的见解扩展了这个框架，使其能够应用于企业，并产生相关的价值和意义。CIRCO方法提供了实用的设计工具、具启发性的设计案例和榜样，为企业和设计师提供培训支持和交流互动。

CIRCO方法论既适用于企业，也适用于设计专业人员。企业可以参加为期三天的、由三节小组课组成的“循环型企业设计”工作坊，学习如何重新设计循环业务模式、产品和配套服务，并制定循环设计实施流程图；而设计专业人员可以参加为期一天的“循环设计班”课程，学习如何在实践中进行循环设计。调查显示，约70%参与工作坊的企业确信循环业务模式能够加强其企业业务，因此在参加工作坊之后，他们纷纷在自己的企业实施了循环方案。

