

# Clean Revolution

## Dutch design for a better world

“Take Ambition to the Next Level” is the slogan of the Global Climate Action Summit in San Francisco. Designers can and must play an active role in guiding us on the road to a better future. They can think of concepts, create products, develop services, and build environments that are not only functional, useful, aesthetically pleasing, and user-oriented, but also sustainable and contribute to a circular economy.

This exhibition shows examples of designers from the Netherlands who take up the challenge to minimize the use of non-renewable resources, create sustainable products and reduce the amount of waste, when possible to zero. One example is closing the cycle by transforming trash into new products. They do this with the typical characteristics of Dutch Design: minimalistic, experimental, innovative, unconventional, and with a sense of humor.

### **Waste doesn't exist**

We extract resources from Mother Earth for production and use products until we dispose them of as waste. This is the linear economy.

In a circular economy, material extraction and energy use are reduced by reusing and recycling (parts of) products and materials, or by applying renewable resources.

From plastics to minerals in bottom ash from incinerators, all of these can be reused or transformed into new products. Even dust from traffic air pollution can be recovered. Waste doesn't exist.

### **Dirty, ugly, useless**

Insects provide a unique source of protein for food and feed. Rejected potatoes are an excellent base for beer, and polluted soil can still be used to create tableware. If treated well, fish skin ends up as a special kind of leather. And the stomach of a cow can be turned into handbags with a unique aesthetic.

Designers can create awareness or inspire a conversation about the value of under-appreciated and everyday materials. They can seduce the consumer by showing the beauty or revealing the taste of materials that are considered as dirty, ugly or useless.

### **Create new value**

We separate and collect waste paper, glass, metal and textiles for recycling. But often the recycled material is of lower quality and functionality than the original material. We call this downcycling.

The opposite is upcycling. Not only better technology but also the creativity of designers can improve the process by transforming by-products, waste materials, and useless or unwanted products into new materials or products of better quality and higher value.

Waste paper can be turned back into a wood-like product. Scrap wood can be the base for stylish furniture, used leather can be transformed into new parts for automotive.

### **Design for reuse and recycling**

How do we increase the efficiency and effectivity of the circular life cycle of products? By designing products in such a way that they last longer (durability), both physically (robustly and easy to repair) and emotionally (increasing user bonding).

But also by designing products in such a way that the production leaves minimal waste, that they can be reused better, and that disassembly or recycling is made easier. Such as performance rain ponchos or porcelain for zero-waste manufacturing.

### **Tap into the unlimited sources**

A coffee machine, a car, or plant production — often the stage of use has much more impact than the product or the system itself, mainly because of the amount of energy and water needed during that stage.

Life-cycle assessment is the method of determining the environmental effects associated with all the stages of a product's life: from raw material extraction through materials processing, manufacture, distribution, use, repair and recycling.

Designers' creativity can lead to new products, processes and systems that minimize the use of energy and water or even run fully on renewable natural resources like solar power or electricity from plants.

## **For planet and people**

Inclusive Economic Growth is one of the key issues of the Global Climate Action Summit in San Francisco. This challenge focuses on business climate leadership, and how bringing everyone on board can generate good jobs, spur global development, and leave no one behind.

More and more Dutch designers dedicate themselves to socially engaged projects that embody social, cultural, and economic values. Or create new and unexpected collaborations between people, from painting a favela in Rio de Janeiro to empowering people and creating social and economic value in a neighborhood.

## **Towards a circular economy**

We are on our way to a circular economy. A regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing energy and material loops.

Achieving a sustainable world does not necessarily require changes in the quality of our lives, nor does it require loss of revenues or extra costs for manufacturers and other economic agents.

A circular economy requires another mindset. It provides new challenges, chances, and business opportunities. Why not lease jeans and create products for more than one season? Slow fashion.

## **Learn from nature**

Without even intending to, we have created massive sustainability problems for future generations. Fortunately, nature has already solved many of the problems we are grappling with.

Animals, plants and microbes are the consummate engineers. After billions of years of evolution and development, what surrounds us is the secret to survival. Failures are fossils.

Nature provides us with excellent examples of design and smart use of natural resources. Palm leaves can be turned into leather, and pine skins can have useful applications. Even mycelium, the branching, threadlike hyphae of any fungus, can help us to create textiles or chairs.