

# Toward a circular economy: Philips CEO Frans van Houten

A new economic model is helping the Dutch manufacturer improve its resource efficiency and financial attractiveness.

February 2014 | by Thomas Fleming and Markus Zils

**Two years ago**, we decided to embed circular-economy thinking in our strategic vision and mission, both as a competitive necessity and with the conviction that companies solving the problem of resource constraints will have an advantage. We believe that customers will increasingly consider natural resources in their buying decisions and will give preference to companies that show responsible behavior—something we are already seeing. Designing products and services for a circular economy can also bring savings to a company. The first impression people always have is that it adds costs, but that's not true. We find that it drives breakthrough thinking and can generate superior margins.

In our lighting business, for example, rapidly changing technology and the economic crisis made business and municipal customers reluctant to make big investments, because they felt uncertain. This led us to consider lighting as a service. After all, why do these customers buy light fixtures and luminaires? It's not for the fixture but for the light itself.

For business customers, we therefore now sell lighting as a service: customers only pay us for the light, and we take care of the technology risk and the investment. In many cases, we also take the equipment back when it's the right moment to recycle the materials or upgrade them for reuse. Similarly, for municipal customers we now have streetlight installations in Singapore and, more recently, a contract in Buenos Aires to replace the majority of the 125,000 existing streetlights there with LED luminaires over the next three years. We install the equipment, maintain it, and make sure that it runs for a very long time.

The benefits are substantial: the energy savings are anywhere from 50 to 70 percent, depending on the installation, so customers can pay us out of the savings for the light output. The LEDs have five times the lifetime of normal lights—which, in turn, means much lower maintenance and operating costs for us. We are putting networking capabilities in these lights, as well, essentially making them part of an IT network. This lets the community adjust the lights depending on the circumstances. For example, if there is low traffic density at night, then the lights can be turned further down. But if there is a soccer match one night, the lights can go up. And, of course, we can apply all sorts of algorithms as well to give customers even more control.

These kinds of innovations help us move away from selling products and toward selling higher-value solutions.

A second place we are using circular-economy principles is Philips Healthcare, where we establish leasing relationships with customers to take back equipment and upgrade it, then refurbish it and send it on to another customer. In the process, we might upgrade the first customer to a more state-of-the-art technology, and in doing so we make both customers happy. This is already a €200 million business for us.

### Meeting the external challenges

I don't want to make this sound easy. In our health-care business, for example, a lot of customers initially thought: *A secondhand product? We don't want it.* Of course, we are refurbishing it and guaranteeing it as new, but convincing a hospital customer, for example, is challenging and requires a major educational program. We still have much more to do given the size of the market, but as we work with hospitals and establish ourselves as technology partners—and not just sellers of a “box”—we can more easily convince customers of the mutual benefits of circular-economy principles.

Similarly, for municipal-lighting customers, the thinking around the tendering process needs to change. These customers are used to looking at the initial purchase price, not the total cost of ownership and the ecological impact. Changing the ownership of the lights is also tricky, as it often gets into legislative issues with municipal governments.

There are supply challenges in operating in this new way, as well. We need to get our products back. Streetlights are fairly simple because the lights don't walk away, but consumer lamps are another story. Here we work with partners to organize for collection, but even then it's very hard. Currently, in Europe we recover about 40 percent of our lamps, of which 85 percent are recycled for reuse.

### Changing minds at Philips

Above all, operating with circular-economy principles requires the people of Philips to challenge ourselves and to change. We can't think in terms of designing products that we throw over the wall to customers, but instead we need to design products that are upgradable and maintainable and that can be mined for materials and components that can be reused. Our mind-set needs to be 15 years out—not just “now”—and it requires us to think in an end-to-end way, involving our suppliers and sales force.

I'll admit this was challenging at first. Even though we have a longstanding focus on sustainability—a natural stepping stone toward a circular economy—people still tested us when we initially stepped up our circular-economy work. They wanted to make sure this wasn't "just words." But after seeing the KPIs on the Philips "dashboard" and learning that if you were in the red you could expect a call from the CEO, people said OK. People become resourceful and inventive when you challenge them.

In our innovation process, we have a program we call Design for Excellence. It comes in a number of flavors, such as designing for recyclability, upgradability, and serviceability. As part of the effort, we set criteria for every product in order to challenge the business-unit managers. To reach the targets, the businesses need to meet criteria associated with the circular economy, and we continuously raise the targets. For example, in our Consumer Lifestyle group, where we make domestic appliances, we are asking for 10 percent recycled materials in our total portfolio by 2015, compared with a 2 percent target in 2012. Meeting goals like these often takes the form of multiweek workshops where we tear down the entire value proposition of a product to see what we might change and how. We involve our suppliers in this activity so that it becomes cocreative and so that we can learn to design our value chains better.

To help accelerate the transformation to circular principles, we created a center of expertise—a permanent internal group that helps with methodologies and programs. The center is networked through the entire organization, and every business unit has a flag bearer there. This is important because the circular economy needs to be intrinsic in our end-to-end value chain and embedded in all our processes, metrics, and structures. This is integral to our strategy.

### Looking ahead

Even though we still have far to go, I see a real eagerness in the organization to think in these new ways, and business units are being quite creative in coming up with good solutions. The thinking is very much driven by the engineers on the ground, and they are very good at challenging themselves. It's rewarding to see how enthusiastic people can be when they learn what they can do from a circular-thinking point of view. That's when you know you've reached the tipping point inside the company—when the enthusiasm and creativity are self-reinforcing—and I'm convinced that's where we are headed.

Ultimately, we can do a lot on our own, but a circular economy on a worldwide scale will require a lot of players to change simultaneously, and that's a bit of a chicken-and-egg problem. It would help tremendously if governments took the lead and changed their procurement policies so that a certain proportion of what they buy—be it 50 percent, 25 percent, or some other figure—represented products manufactured according to circular-economy principles. We hope that we can play the role of catalyst and help to reach a much bigger tipping point by putting our weight on the entire value chain, as well as by educating customers and suppliers. We hope that by setting the right example, we can help encourage the right behavior. This is just the beginning.

#### **About the authors**

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