

JUNE 2014

Designing for social impact: The D-Rev story

Krista Donaldson

Many companies target the world's emerging middle-class consumers. Fewer mirror nonprofit D-Rev, which aims to improve the health and lives of people living on less than \$4 a day.

For hundreds of millions of people in the developing world, the kind of medical care that is often taken for granted in developed nations is simply unaffordable. In 2007, nonprofit D-Rev (or "Design Revolution") was founded with the objective of designing and delivering medical products to people living on less than \$4 a day. In this interview, D-Rev chief executive officer Krista Donaldson tells McKinsey's Rik Kirkland about the company's evolution, products, and ambitions. An edited transcript of Donaldson's remarks follows.

Social need, market opportunity

D-Rev is short for Design Revolution. We design products that serve customers who live on less than \$4 a day. And they either improve health or they increase income. We are really looking for where there's high social need but where there's also market opportunity.

We're structured as a nonprofit, but most of our purchasers actually don't know that a nonprofit is behind the product. We design products that are often for customers who are seen as nontraditional, because while a lot of companies talk about serving emerging markets, what they really mean is that they're serving higher-income people in emerging markets.

We're really interested in people who live on less than \$4 a day. So lower-, middle-income, and really low-income people. One of our products is phototherapy. And phototherapy is just blue light to treat severely jaundiced babies. And a typical device in the United States, for example, would cost \$3,500. We've designed one that performs on par with or better for about \$400.

What we did with Brilliance, the phototherapy device, is we licensed it to the biggest maker of neonatal equipment in India, Phoenix Medical Systems. But as products have started to scale, one of the things we realized is once the product leaves Phoenix we don't necessarily have control over their price point.

We saw, for example, that a distributor in the Philippines sold a device that should be somewhere around \$700—by the time that \$500 device¹ gets through tariffs and taxes—being sold for \$2,300, \$2,400. It's really encouraged us to dig in and help with distributor selection. And this is something we didn't know we would be doing early with D-Rev.

Scale and training

The other product we have that's scaling is called the ReMotion knee. It's a prosthetic knee for above-knee amputees. That project started when the Jaipur Foot organization, in India, approached a Stanford biomechanical class and wanted a better knee—that's affordable, that they can use with their target population.

So the students designed a knee, and once the class was over there was really nowhere for them to go. Long story short, we absorbed them. And since then, we've looked at how to design a very good, high-performance knee that meets an \$80 price point.

A comparable knee is \$6,000 or more. How do you develop a high-quality, \$80 knee that can really reach any prosthetic clinic in the world? With the knee, we are going to manage the manufacturing distribution. But the market for the knee looks very different than the market for Brilliance. The market for Brilliance is hundreds of hospitals in low-income countries. With the knee, it's a finite number—300, approximately, clinics in various countries. Some countries have no more than one or two clinics in total.

One of the things that we've seen from our understanding of the number of clinics, but also the number of amputees who need knees, is that once we hit about 70,000 amputees served per year, we hit a new hurdle. And that's the number of skilled prosthetists who can fit the knees. So thinking ahead about that kind of barrier that we're seeing, we hope to work with prosthetics colleges to help with curriculum development around polycentric knees. The polycentric knee is the type of mechanism we use.

¹ The cost of the Brilliance device is around \$500 outside of India.

What the future holds

Some of the lessons I've learned—not just from D-Rev, but my life before, working in Iraq and working in Kenya—is that when we talk about innovation and disruption, we're often very focused on the technology. But really, it's the system that is often causing the disruption.

We focus the innovation on the physical thing. But how can we innovate the distribution channels? How can we improve some of these less sexy aspects of the product life cycle and delivery of the product, perhaps, to really make a dent in some of what we're seeing as huge social needs?

We leverage a lot of advisors. And we are very small for what we do. But in terms of how we grow, the short answer is we don't know how quickly we're going to grow. So we're going to stay in neonatal equipment. We're going to stay in mobility for at least the next year or so.

And we're building up a pipeline of products. D-Rev is doing a lot of new things. As an organization, our model is going through proof of concept. And I think we're getting close, but we're not there yet. We're hoping to see competitors. Because if we see competitors that are truly giving us a run for our money, then to me we're starting to solve the problem. □

Krista Donaldson is the chief executive officer of D-Rev. This interview was conducted by **Rik Kirkland**, senior managing editor of McKinsey Publishing, who is based in McKinsey's New York office.

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