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Gaining a competitive advantage through design thinking

By Arna Ionescu



One person's treacherous-looking but creative solution to open small bottles with RA affected hands.

Arna Ionescu presented a workshop at AusMedtech 2009 on the topic of 'Design thinking'...

My colleague recently visited an elderly woman with rheumatoid arthritis (RA) for a contextual observation. In a phone conversation with the woman's daughter, we learned that although the mother was truly suffering from the disease, she was managing her myriad of medications well. Such a situation is far from typical – most people living with RA struggle to do a variety of at-home tasks, from opening prescription bottles to handling small pills. In fact, we were so surprised to hear about the elderly woman's ability to handle all her medications that we made an appointment to visit her. She greeted my colleague warmly at the door, and sitting in the kitchen, she assured him that all her medications were completely manageable.

Still, my colleague was curious and, following empathic research methods, asked her to demonstrate how she takes her medications each day. She obliged, and my colleague was floored. The woman retrieved a new medication bottle, one that was considered RA-friendly, and proceeded to the kitchen, where she used a treacherous-looking mechanical bread slicer to saw off the top of the bottle. This woman was truly ingenious, but this solution pointed to a significant unmet need in the design of her medication bottles: she was unable to open any of her medications outside of her kitchen, and once she did she could never seal them again.

Design thinking – a methodology that imbues the full spectrum of innovation activities with a human-centred design ethos – starts with carefully watching how people interact with the world around them. No matter how adamant they are, people don't always do what they say (or do what we expect, or even do what they think they do). It's our job to notice the interesting things that people do, often without thinking. These small details can lead to new features, new product ideas, or even new business sectors. During design research, our goal isn't to map out an entire market, but to find 'seeds' that give us insight and change the way we approach a challenge.

Biotechnology – from drugs, devices and processes to everything in-between – is ripe with seeds that could lead to real improvements in the lives of end users. Given the pace of discovery, numerous new products and services are introduced

each year. In the past, these therapies were often novel, but competition is now more commonplace. Furthermore, it is sometimes difficult for end users to distinguish benefits and differences amongst competing therapies. Often, a superior technology is no longer enough to stay ahead. For example, there are several medications now available to treat RA, and the best clinical profile does not necessarily win the most patients. With patients acting more like consumers, we see people being drawn by other aspects of therapy, such as better delivery devices, better materials to teach administration techniques, better programs to stay on a medications long-term for maximum therapeutic benefits, or better mediation of the many people teaming together to support therapy.

Figuring out which peripheral services a medicine's consumers require cannot always be foreseen in a lab or office. For this, we must watch consumers in their typical contexts for clues into what people might need and want.

It is critical that we look not only for needs, but that we also develop a rich understanding of our consumers and their behavior in hopes of understanding what they might want. Consider how many biotech companies are producing products and services that now require more intimate relationships with consumers. The drugs and procedures developed by this industry are generally used to treat fairly serious, life-altering conditions, and the medical devices developed by biotech are often used by physicians in high-stakes settings. Additionally, fields like genomics are changing the way we understand ourselves and the therapeutic choices we make. The companies that get ahead are likely to be the ones that can connect with their end users beyond basic usability and functionality. When a company strives to touch people emotionally and create deep and unexpected bonds to its offering, people will become evangelists – and their positive energy is likely to spread.

The proliferation of genetic sequencing companies is an example of companies striving to reach their consumers at a deeper level. Some of these companies have designed offerings that take their product out of the scientific world. Some go into the world of glamour and glitz, while others wander into the worlds of wellness and supportive hand-holding. In many cases, consumers are unlikely to unravel the complex scientific differences between the various offerings, and so companies strive to differentiate by something else that is compelling and meaningful to users.

At the AusMedtech 2009 workshop, we walked the audience through a series of exercises that showed how design thinking can be applied to the growing social challenge of teen obesity. In the workshop, we presented a video of obese teens in their typical environments to establish a research foundation. We then demonstrated how design thinking can help translate that research to



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hundreds of ideas that then lead to plans for potential new offerings. Any company can leverage this process, regardless of where its offer currently stands. Industry leaders can leverage design thinking to connect deeply with current customers and cement their loyalty. Emerging players can leverage design thinking to launch products and services that change paradigms and quickly draw attention to real benefits. Those in the middle can enhance their offering to maximise the positive impact on people's lives.

Regardless of whether your final audience includes patients, healthcare providers, scientists, technicians or regular consumers, the same design thinking principles apply. Get out there, spend time with your users, and understand what they really need. Resist becoming complacent or overly accepting of what your users tell you or what you think you know about them. Rely on design thinking to steer your company or organisation towards products and services that not only work and satisfy needs, but also genuinely attract end users. 