# Design in the 21st century

**If you are a trained technologist, you might view "Design" as being about efficiency, usability, or structural elegance. I have spent the majority of my adult life wondering about this fundamental question: what exactly is (good) design? And I'm still asking.**

MIT Media Lab's John Maeda explains that some languages have different words for the different ways we think about design. For instance, in Japanese there is the word sekkei, which connotes designing a mechanism, system, or technology with rationalised metrics for quality. This is typically the methodology taught at schools of engineering worldwide. Dezain, on the other hand, goes beyond an object's function to how it makes us feel, which is the typical approach followed by schools for the built environment and information technology.

An object that has been sekkei-ed to be flawless from an engineering perspective can elicit an emotionally empty response. An architectural inspiringly dezain-ed object may incite passion, but if it is not sekkei-ed to be reliable, it will inevitably disappoint. Both sekkei and dezain are therefore deemed to be prerequisites for creating an object, service, or experience that is desirable in the marketplace. This is especially true today, as more and more products feature ever more sophisticated technology.

Marrying technology with feeling is the dream that design in the 21st century seeks to realise. But if one thing quickly surfaces when it comes to technology, it's the feeling that it is getting much too complex for everyone. We seek simplicity today in our interactions with all forms of technology, but we end up reading long-winded manuals or just giving up. The fine work reported on in this issue of Innovate is testament to University of Pretoria researchers' quest for simplicity in design and technology. And for the quest of beautiful form as well as functional excellence.

The production of knowledge in engineering, architecture and information technology is located both in science as well as in social life. Further, engineers/architects/IT professionals use not only scientific knowledge in their practice, but they also combine labour and capital in their application of this knowledge. Being employed in the private sector and working toward commercial ends, these professionals are both objects and representatives of corporate power. As such, engineers/architects/IT professionals are faced with ambiguities and issues concerning the use and abuse of power as opposed to other professionals. They also effectively see science as being value-neutral and ethical as opposed to judgements that are perceived as being expressions of emotions. This type of thinking of course helps very little in resolving social, personal, or ethical dilemmas. Dr Stefan Gruner's insightful feature article (p. 16) addresses the topical issue of innovation in technology that has triggered innovation in ethics, due to the "old" ethics not being sufficient anymore to cope with the moral problems of a "new" world created by the advent of new technology. This article, together with the other essays written by subject specialists, will hopefully aid our understanding of complex technological principles, and thus help foster and promote a climate of innovation, in the belief that innovation is a significant contributor towards competitiveness, growth and prosperity.

I trust that you will enjoy this 3rd edition of Innovate.

Leon Liebenberg

**Editor**

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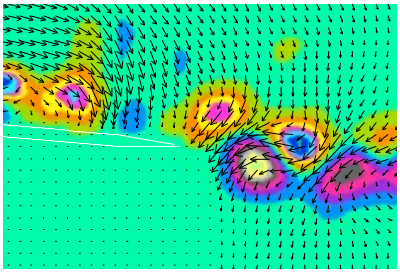

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