

: Embracing technology trends to satisfy consumers' wants

 By [Leigh Andrews](#)

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'Altered Realities', a World Design Cape Town 2014 initiative, presented by Popular Mechanics in association with Autodesk and BMW, last week, gave a glimpse of the techie future...

Following on from [yesterday's overview of the FutureTech conference](#), next up was Imraan Lambat of headline sponsor Autodesk, which is a 3D CAD software company. He spoke of 'Using technology to change the way things are done', and laughed off glitches at the start of his presentation by quipping "Apologies, it's not my software."



Lambat spoke of social media's role in sport by pointing out that the 2010 FIFA World Cup was one of the first times such a huge, global audience gave running commentary on the matches. This was enhanced in this year's World Cup, with the amount of streaming of content in a non-TV environment via FIFA apps at almost 130 million people. He points to this as a sporting phenomenon that's been around for decades evolving as technology evolves.

When it comes to entertainment and design in games and movies, Lambat says gaming isn't just an end-result coincidence, the coders need to think of the end-result before they start coding. And while the design-phase took months before, it is now instant, created with different media and involved digital design and print-outs, as well as collaboration on design through cloud technology.

This enhances consumer power, with everyone wanting to customise and personalise the end-result. For example, you can [customise your personal design of Converse sneakers](#) and have them shipped to you.

Added to this, 3D printing lowers the cost of ownership - it simply depends on the availability of and access to the printer. We need to readjust to the concept of printing as merely a 'flat' thing, to create books and pages.

This brings the world of the consumer and the manufacturer ever closer, with manufacturers actively seeking feedback and making what their customers expect. Lambat ended by speaking of Tesla, which looks to enhance user experience by

offering the best quality products and allowing for customisation of the dashboard. By following these tips, he says manufacturers can reduce the average of 6.9 prototypes per product to a maximum of three by embracing technology.

Think of capacity before developing data tech

Following a morning tea break, Professor Andrew Forbes of the CSIR's national laser centre spoke of using photonics for a brighter tomorrow - important as 2015 is being heralded as 'the international year of light'.

Because they store information in particles of light, Forbes says lasers will always be cool. And because it's fast, accurate and contact-free, he calls the photon the electron of the 21st Century. Just think of how light is rapidly replacing TV in technology - yet studies show the average laser is accurate to less than 1%, so there's a real need for greater accuracy. But that's not stopping advancement, with lasers now fitted to microchips that can help slow down and cool matter. He cautions that data use comes at a price, as we need the capacity to actually handle the amount of raw data flowing.

Using technology to put the inner workings of prosthetics on display

Taking things internally, UCT's Dr George Vicatos and MSc candidate Severin Tenim were at the podium next, speaking about how they used technology to create an affordable and truly functional prosthetic hand.

Vicatos spoke of the skeleton, saying that without it we'd just be a lump of jelly with a brain. The average amputee faces a choice of a basic hook or pincers if they're not willing to spend thousands. In the face of technology, Vicatos' team broke real (dead) fingers to see how they work and used springs and cables to echo their mechanism.

Tenim added that current mechanical designs are outdated, and a literal 'pain in the axila' (armpit). Together they provided fascinating insights into how technology emulates and enhances nature. Now, thanks to advances like these, wearing prostheses, which was a stigma in the old days, is being moved purposely away from the natural to actually show the mechanisms involved and not hide them.

Communicate wherever you are... even/especially in your car



Seeing under the all-important hood © Leigh Andrews, Twitter

Deena Govender of BMW, the second headline sponsor of the day, spoke on automobility converging. This was one of the event drawcards, with almost all attendees tweeting photos of the rather remarkable BMWs on display, with the i3 used as a shuttle between the event parking and the SSISA, where the conference was held.

Govender spoke of how the BMW group aims to shape the future in positive ways, with global trends driving the future of sustainable personal mobility. For example, it's expected that 60% of the world's population will live in cities by 2030. Think of the fight for resources that'll ensue. This also points to the need for greater IT and media convergence, with communication channels advancing rapidly and so vastly different to what they were just a decade ago. We now demand information and the ability to communicate wherever we go - I did this myself by sneakily getting the conference organisers to let me recharge my tweet-flattened phone and provide the area's [Wi-Fi password](#) so that I could continue tweeting while my handset recovered.

The [Internet of Things](#) and rise of electric vehicles, in particular [Tesla](#), was a top talking point of the day, pointing out that while you "can't swing a small cat without hitting a fuel station," finding a recharge station for your electronic car is an issue at the moment, mainly because we are in dire need of Type 2 AC sockets in South Africa.

This new breed of cars is in fact changing the point of communications, with in-car displays and smartphone app interactivity letting you speak 'to' your car and it in turn letting you know when it needs a charge and how far you are from the nearest charging point.

Govender ended by highlighting the importance of South Africans in the techie realm, stating: "Without Elon Musk and Mark Shuttleworth, we wouldn't have the e-commerce we have today."

Didgeridoo loops, Costa Concordia secrets and localising tech

Following lunch we were entertained by the sounds of 'Wild Lettuce' - veritable one-man band Reinhardt Buhr spoke of his love of music and how he went from busking in markets to creating a unique sounds through live loops and blending the sounds of a Spanish guitar with Australian didgeridoos. It's quite something, click on the link below to listen and see how it's done:

The day ended off with more presentations from keynote speaker Captain Nick Sloane, behind the 22-month operation to raise the Costa Concordia which sank off the coast of Italy. He said some thought he'd lost the plot when he accepted the challenge and packed as much information that hadn't been heard elsewhere as possible into an hour-long talk on the tragedy - for example, did you know they had to relocate giant clams near the site, and that area was declared a crime scene until the last missing body was found? I didn't.

Professor Peter Dunsby also gave a detailed description on one of Duggan's favourite topics, dark energy. It was a little too detailed for my non-engineering brain so late in the day but intriguing nonetheless, with Dunsby showing a blank screen to explain "What we know about dark energy". He also spoke of quantum fluctuations and the age of the universe.

Following tea, Craig Shackleton and Wayne Ellis of Cape Town-based audiovisual firm Afterlife delved into the 3D animation and video mapping they use to create performance art smoke and mirrors; and James Fisher, CEO of Nautic, expanded on the innovation dilemma and future tech of our seas and the need for African solutions to African problems.

All in all, a most enjoyable, at times mind-blowing day packed with information on how technology's coming to change our lives, whether we're ready for it or not...

ABOUT LEIGH ANDREWS

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