

# OUR FUTURE SELVES

*A Mooloolaba professor is working at the highest level to help humanity embrace the technology that will create a better world. WORDS: Leigh Robshaw*

For many of us, the prevailing mood in our world today is one of uncertainty about the future, particularly after the shock election of Donald Trump as President of the US. But it's not all doom and gloom for Mooloolaba's Sohail Inayatullah.

The adjunct professor at the University of the Sunshine Coast (USC) is a futurist who spends his working life analysing scenarios that could play out in our world, so we can plan for them.

Inayatullah was recently appointed Chair on Future Studies at UNESCO (United Nations Educational, Scientific and Cultural Organisation), working with institutions in Malaysia, the Asia-Pacific, North America and elsewhere.

"This new role recognises the work of the community of futurists and the importance of future studies at a global level," he says. "It's really working out what to do with leaders who don't understand the emerging future.

"Big issues such as climate change and technology disruption can benefit from futures thinking. The aim is to devise long-term policy solutions and good governance for future generations by preparing people, businesses, communities and nations for transitions to different types of futures."

Professor Inayatullah's expectations of radical change in global education over the next 15 years were recently published in USC's 20th anniversary celebration book, *Visions*. His piece for the book was titled, *How Well Do You Get Along With Your Robot?*

The piece references the likelihood that artificial intelligence (AI) will make many jobs obsolete, but Inayatullah says we can use AI to our advantage, rather than fear it.

It's hoped the benefits of Inayatullah's UNESCO appointment will spread to the Sunshine Coast by encouraging PhD research at USC which would aim to help our region tackle future problems.

With AI and other advances in technology set to dramatically change the way we live over the next 50 years, we asked Inayatullah to comment on some of the most exciting changes we are likely to see.

## 1. DRIVERLESS CARS

Buckle up people, we're in for a fun ride. Robotic vehicles operated by AI are no longer the stuff of science fiction. Self-driving cars (with a human driver present) and completely driverless cars are lauded as the future of motoring – it's hoped they will make roads safer and reduce congestion.

Adelaide was the first Australian state to trial a self-driving car, the Volvo XC90, in November 2015 and the first self-driving car developed in Australia was unveiled in



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Professor Sohail Inayatullah

October this year, a joint venture by German multinational Bosch and the Victorian Government. It uses the shell of a Tesla with Bosch components and took a team of 45 people nine months to build.

US-based developer of software for self-driving cars, nuTonomy, trialled a driverless taxi service in Singapore in August (with a driver as backup) and Uber began public test rides of its automated fleet in the US city of Pittsburgh in September.

Tesla CEO Elon Musk says all Tesla cars built from now on will contain fully autonomous hardware (without the features activated at this point).

US company IHS Automotive, which analyses market trends, predicts that 10 per cent of all new vehicles sold 20 years from now will be self-driving. But there are a multitude of safety and ethical concerns to iron out before then – how does the car's AI software choose between protecting a driver or hitting a child who runs into its path?

The US government recently set guidelines for companies wishing to test self-driving cars on public roads, however Australia is yet to set similar guidelines. While numerous trials are underway, a future where we're all chillaxing in driverless cars on our way to work is a way off yet.

The US Society of Automotive Engineers defines stages of autonomous driving from none to level five, which is fully robotic. Toyota has said it will demonstrate an autonomous vehicle, with at least level four

capability, by 2020, in time for the Tokyo Olympics, but no one can say when we'll reach level five capability.

Professor Inayatullah says it's too soon to say for certain when we'll see driverless cars freely cruising Australian roads.

"We don't try to predict one future. We say, here's the technology, what are the possibilities? In one scenario, we could have 50 per cent of cars being driverless in Australia by 2040 and by 2030 in Singapore."

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One thing is for sure: driverless cars are going to herald a very different automotive life than any of us grew up with and it's not a matter of if, but when.

## 2. SOLAR GETS SEXIER

Launched two weeks ago, Tesla's solar roof tiles make something techy look sexy – a concept Apple cottoned onto years ago. But critics say the improvements are more about design and aesthetic than efficiency

and are unaffordable.

However, there's no denying they've gained enormous interest in a short space of time. At least two companies are planning to bring them to Australia, to be used in conjunction with the Tesla Powerwall 2.0 home battery.

Australian home insulation firm CSR Bradford is already working with builders to offer the Tesla Powerwall 2.0 as a standard in new home builds. Integrale Homes is a Sunshine Coast company building new homes in estates like Aura, Harmony Estate at Parkview and Parklakes 2. They're currently offering a complete solar PV system with a Tesla Powerwall for \$3000 in addition to the price of a new home, a move that has proven popular with homebuyers.

Brad Drinnan from Integrale Homes says, "Integrale Homes loves technology, full-stop. [The Powerwall] has an intelligent inverter that you can program to charge on a tariff that's cheaper, say at night. We're the first on the Sunshine Coast to offer the Powerwall and it has been really well received."

Inayatullah agrees Tesla's solar roof tiles and the Powerwall are an exciting development and that in 10 to 15 years' time, every home on the Sunshine Coast could be a producer of energy.

"We will have solar panels or tiles that are far more advanced than what we have now," he says. "If that's the case, what happens to traditional energy companies,

what happens to Origin in that environment? They can't be energy providers because energy is already being provided. They become the Uber of energy – providing energy sharing apps.

"With robots and AI systems when there are down times, you go high. Each home will be producing its own energy, have its own 3D printers... In that future things always go wrong. For companies like Origin, when things go wrong they provide the solutions. IBM went from producing desktops to producing energy solutions."

## 3. AI IS NOTHING TO FEAR

Humans have harboured a deep fear of AI for years, hence the popularity of Isaac Asimov's *I, Robot* science fiction stories published in the 1940s and '50s. More recently, physicist Professor Stephen Hawking was quoted as saying AI could be "either the best, or the worst thing, ever to happen to humanity".

Every tech company in the world is jumping on the AI bandwagon. Google has bought 11 AI companies and Facebook CEO Mark Zuckerberg has said one of the company's main goals is to "do world-class artificial intelligence research using all of the knowledge that people have shared on Facebook. Facebook is already using AI to identify spam, determine which Facebook user is in an image and make decisions on which posts and ads you can see."

But will humanity eventually be destroyed by AI? Not according to Inayatullah.

"AI taking over – I don't think that's the big game right now," he says. "I think that's overdone. Fear plays easy; we're trained for fear. If you don't give people a chance to vent the fear, they can't go to the good. But if you stay in the fear, you get 'defend', you don't get 'create'.

"The real issue is to create skill sets to use AI wisely. By 2020, 80 per cent of all news could be done by AI. But that's not the interesting part. The interesting part is the other 20 per cent. It's seeing news not just about information – it's community

making, bringing out new possibilities. News is creating the space for the big debates. Humans go upstream and the downstream is done by AI.

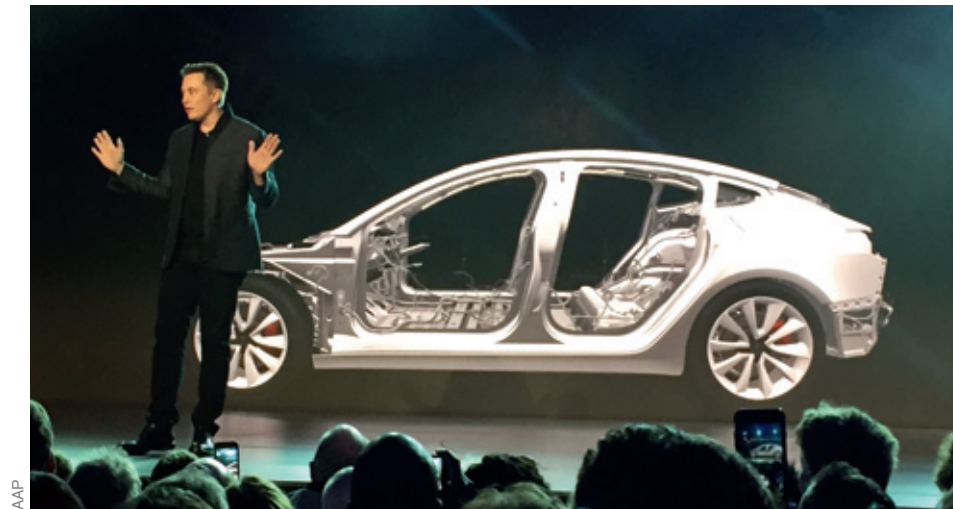
"My preferred scenario is, how well do you get on with your robot? The skill set is being able to use AI intelligently as opposed to being afraid of it.

"Elon Musk is an example of an early adopter who is young, innovative, creative and asks, how we can use technology to create the future we want? How do we create the same mindset of innovation in Australian mindsets?"

Inayatullah says while AI will replace some jobs, new jobs will be created and

"I've been tracking that for 15 years – it's a disruptor," he says. "The first burger cost \$325,000. It was a lab-grown burger invented by the Dutch – some of the scientists who came up with it were from Perth. Now it's dropped to \$16 and a new company wants to drop it to \$1.50. They're saying it tastes as good as a burger. Why pay \$5 for a burger when you can pay \$1.50?"

"The cultural early adopters will come from Sydney and Melbourne and it will take a while to reach regional areas, but it will catch on," he says. "I moved to Mooloolaba in 1999 and there weren't many vegetarian places to eat. Now they're everywhere on the Sunshine Coast."



Tesla Motors CEO Elon Musk says all Tesla cars will now come with driverless software

education systems will evolve to prepare our future workforce.

To meet our need for safety and security, a basic universal income could be introduced, a concept soon to be adopted in Finland.

## 4. CLEAN MEAT EATERS

It might sound gross, but we're going to be dining on lab-grown meat in the near future. NASA is 3D printing meat and an Israeli biotechnology start-up called SuperMeat is developing meat in a lab from the cultivation of animal tissue without harming any animals.

## 5. GENE TECHNOLOGY

When *My Weekly Preview* interviewed Dr Karl Kruszelnicki in February, the scientific breakthrough he was most excited about was CRISPR.

"CRISPR is going to be really big," he said. "It's genetic editing technology. You could have a child with cystic fibrosis and you could snip that out with CRISPR. We are in the first position ever that we can control our evolution. CRISPR will change genetics. What will we do with the increased population? What makes you think we're going to live on Earth? We are turning into a space-going race."



A lab-grown meat burger made from cultured beef, developed by Professor Mark Post (pictured) of Maastricht University in the Netherlands

## SOHAIL INAYATULLAH'S IDEAL FUTURE WORLD

- Global governance – I have little interest in nation states or national identity. That was useful for a few hundred years. It's not useful anymore. The best Australians I meet are all global citizens.
- Gender equity – You can't have real economic development real innovation without females being included.
- Post-meat society – I don't mean to scare meat eaters. Right now the norm is meat. By 2050 the norm should be vegetarian, unless you need it for health reasons.
- Renewable energy – Every home is an energy producer. It will be the end of oil as we know it.
- Spiritual evolution – My vision for the future is a far more deeply spiritual culture. My goal is to see meditation and mindfulness used to go to a more spiritual experience. Most people live with scattered thoughts and scattered energies.
- Neo-humanism – Right now, our lenses are 'othering'. People who are gender different, culturally different, are less than us. We're on a planet and you don't see people as less or more. We're all on the same journey and if you ask me, by 2050, that's the world I want to work towards.



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