

THE FUTURE IS NOW

STORY Patrick Durkin ILLUSTRATIONS Steve Scott

The world of tomorrow is already unfolding. We asked the experts to predict what our lives will be like by 2030, from what we eat and where we live to how we learn and the places we work.

IMAGINE WAKING up to a world where a computer chip implanted in your body already knows what you want for breakfast. Where Mexico, South Korea and Indonesia are global economic powers and you can print a new part for your car using your 3D printer.

It could be a world where a new city is built every week, where the temperature is three degrees higher and where one-third of the population lives with water scarcity.

Such a future is not implausible or too far away, according to experts whose job is to identify future trends.

We have tracked down some of them and asked them to make specific predictions about our new reality by 2030 and the developments that will affect every aspect of our lives and work.

Australia's Future Projects says that the key drivers of these dramatic changes will be climate change, global conflict, demographic change, economic shifts, resource scarcity, virtual connectivity, lifestyles and, of course, technology.

Those of us who can adapt to this new world will thrive and flourish; those who cannot risk being left behind.

LEADERSHIP & THE WORKPLACE

Thomas Frey, futurist

More than 50 per cent of universities will collapse.

Eventually, four global universities will serve the entire world.

The forces driving this are: rising costs, demand for online courses, seeds of discontent (university graduates are working in minimum wage jobs), shifting trends (massive open online courses, reversal in the demand for cognitive tasks) and student loan backlash.

More than 2 billion jobs will disappear by 2030, roughly 50 per cent of all the jobs on the planet.

And there will be lots of new jobs we have not even thought of yet.

VIRTUAL

Adapt and survive

Ingo Susing, Johnson's leadership advisory team

There will be five generations of employees in large organisations.

Leaders will need to have very different ways of engaging with their workforce: because of the ageing population demographic, 16-year-olds will be working side-by-side with 70-year-olds. Workforces will be more geographically distributed and there will be much greater reliance on different communication modes and styles.

We will once again have a generation of Australian corporate leaders who will have experienced a recession in our country.

Today, this is not the case for leaders under the age of 42. The global financial crisis was a major disruptive event but did not cause Australia to go into recession. It is recog-

nised scientifically that leaders are both born and made, and that necessary skills can be identified and honed purposefully.

Richard Hall, associate dean, the University of Sydney Business School

You won't be the boss.

Formal authority and legitimate power will become less important and less effective as traditional employment relationships based on formal job roles, long job tenures and loyalty to organisations continue to erode.

PROPERTY & DESIGN

Juliet Bourke, national head of human capital, Deloitte

Employees will work for less than two years at the same company.

While the average length of employment is

currently around five years, that will fall to less than two. Chinese graduates are already cycling through organisations every two years and if they don't, their peers are asking why.

Bank branches will be cafes and office spaces, bars by night.

Umpqua, a regional bank with 65 branches in the US state of Oregon, tapped into the unmet desire for people to be "pulled back to the ground" through community. It redesigned one of its branches to feel more like a hotel lobby or coffee shop. It was so successful (returning more than \$US50 million in new deposits in nine months), it was rolled out to 162 stores. In the 2.0 version, branches have a community table, a community mosaic and conference rooms. Another firm reported being a consulting house by day and a wine bar by night.



LIFESTYLE

Ray Kurzweil, 65-year-old futurist, inventor and director of engineering at Google

We could live forever.

Medical technology will add a year of life expectancy every year. I think some of us will make it through. DNA is just one kind of information. So are the documents my father left behind and the memories residing in the brains of friends and family. In the virtual world, it will be possible to assemble an avatar more like my father than he ever was.

We will eat unlimited junk food.

We will be able to eat as much junk food as we want because we'll all have nanobots injected into our bodies which will provide all the proper nutrients we need while also eliminating the excess fat we'll gain.

**Dr Hugh Bradlow
Telstra chief technology officer**

There will be no road accidents or traffic jams.

There is currently technology being worked on that will see cars navigate autonomously on a smart city network mesh: cars will be able to communicate with each other, choosing the best routes using collision avoidance systems. Clever cars will plan ahead to avoid traffic jams and find car parks. Around 30 per cent of congestion is caused by people looking for parking.

Thomas Frey, futurist

A driverless car will win the Bathurst 1000.

Going driverless over the next 10 years, we will see the first wave of autonomous vehicles hit the roads and some of their first uses

will be vehicles that deliver packages and groceries. With more than 2 million people involved in car accidents every year in the United States, governments will be convinced they are a safer option. Driverless technologies will be blamed for destroying countless jobs: truck drivers, taxi drivers, bus drivers, limo drivers, car parking attendants and ambulance drivers.

DEMOGRAPHICS

**Ralph Ashton and Dr Fiona McKenzie
Australian Futures Project team**

Half the world's urban population could be living in city slums.

A study by Shell predicts population growth will require development equivalent to building a new city for 1 million people every week for the next 30 years. Without

such an investment (estimated at \$US350 trillion to 2040), as many as half the world's urban population could be left with limited access to power for heat and light. By 2030, Australian cities will need to cope with 30 per cent more people.

The world will face a 40 per cent shortfall in fresh water.

Without changes to current water consumption trends, the world could face a 40 per cent shortfall between global freshwater demand and supply by 2030, according to the 2030 Water Resources Group. Shell predicts an additional 2.3 billion people could be living in severely water-stressed river basins.

The global population will peak at 8 billion.

The rapid decline in fertility in urban areas means the global population growth will peak at 8.1 billion people by 2052, says Jorgen Randers. Work by Daniel Franklin and John Andrews, NIC and Shell predicts that 60 per cent of the world's population will live in urbanised areas by 2030 and 75 per cent by 2050. Megacities will proliferate, increasing from 19 today to perhaps 27 by 2025, claims Laurence Smith.

There will be as many people in Nigeria as the United States.

The relative size of countries will shift. Pakistan will have the sixth-largest population in the world, say Franklin and Andrews and Karen Ward, while roughly half the planet's extra 2.3 billion people will be African. Ethiopia will have twice as many people as projected for Britain or Germany, says Ward. Working populations will contract dramatically in developed countries, including Japan (-37 per cent), Russia (-31 per cent) and the euro zone (-29 per cent in Germany and -23 per cent in Italy).



SCIENCE & TECHNOLOGY

Dr Hugh Bradlow
Telstra chief technology officer

Your watch will tell you if you are catching a cold. Your health and wellbeing will be constantly monitored by biometric sensors built into watches, rings, wristbands and even clothing fabric. It will monitor people's heart rate, temperature, blood pressure and blood oxygen levels around the clock.

Beau Leese, general manager strategy, performance and flagships, CSIRO

Billboards will be individually tailored. Your clothes – or even computer chips embedded in your body (replacing Google glasses) – will connect you to the fully realised 3.0 web to provide tailored advertising and consumer preferences when you walk down the street. It will understand you and anticipate your needs. It will help you make choices and execute them for you.

You will download a spare part for your vintage 2013 Mazda using a 3D printer. A third industrial revolution will be in full force, based on the interplay of design and control software, automated processing technologies and developments in materials science and nanotechnology. The technology will fundamentally disrupt manufacturing and physical supply chains. For some high-end industrial applications, CSIRO's clients have estimated reductions in time by 80 per cent and costs by 50 per cent from our pilot projects.

BUSINESS & TRADE

Phil Ruthven, founder and chairman of IBISWorld

Only one European nation will remain in the world's 10 biggest economies. Germany is expected to be the only European country left in the top 10 world's biggest economies, compared with four in 2013 (Britain, France, Italy and Germany). The new entrants will be South Korea, Indonesia and Mexico. Australia will fall from 12th to 20th.

Forty per cent of Australian household budgets that would have been spent on transport will be spent on telecommunications. Consumers will also need much more data storage, with monthly data allowances likely to average 200 gigabytes by 2020 and poten-

tially five terabytes (5000 gigabytes) by 2030.

Beau Leese, general manager strategy, performance and flagships, CSIRO

There will be 3 billion new members of the middle class, mostly in Asia. China and India alone will represent 40 per cent of global gross domestic product, and 700 million new workers will move into the services economy.

SOCIAL MEDIA & COMMUNICATION

Jon Teo, managing director, venture capitalist, General Catalyst

You'll buy your newspaper on a tablet and then throw it away. If you want to read *BOSS*, you will pick up a tablet, key in your details and it will lock into your personal preferences. Once you finish you will throw it away or drop it off for someone else to use. While your mobile phone might now cost \$99, in five years it will cost \$2 and be disposable. Once hardware becomes as cheap to deliver as software, the world will change significantly. Applications may become hardware-specific. People won't even have to think about whether they want the next iPhone.

Jon Duschinsky, founder and CEO of The Conversation Farm

Facebook, Twitter and LinkedIn will lose their relevance. We will have realised what matters is not the channel we use to communicate, but what we have to say. Conversations that make a difference will spread like viruses. Those that don't will disappear into the information black hole. **B**