

A SNAPSHOT OF THE WORLD IN 2038

# BIG BROTHER GOES GREEN

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The effects of climate change are increasingly real, and both governments and savvy consumers demand that companies meet high environmental standards. Public fear around automation – in terms of safety and job losses – has led to so much red tape that businesses are reluctant to invest. China dominates a fragmented world in which political leaders focus on nationalistic interests and shun the global marketplace.

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PART FOUR OF A FOUR-PART SCENARIO SERIES

# BIG BROTHER

**IN A NUTSHELL:** It is the year 2038. A rising tide of nationalism across the globe has put an end to the idea of a global free market and led to the formation of distinct trading alliances. China remains a global power, but increasingly trades with other Asian nations at the expense of countries aligned with the United States. Governments play a big role in day-to-day life worldwide. In Australia, the government has taken a lead role in seeing exports as strategically important. But intervention has also led to a red-tape burden; public fear about the rise of the machines has slowed the development of new technologies and Australia, following the lead of the United States, has put measures in place to protect low-skilled workers from automation. Our borders are more closely monitored than ever before, and lower migration has put extreme upward pressure on labour costs. The growing reality of climate change has led to its own regulatory burden, as both governments and consumers demand action. The logistics industry is increasingly consolidated, and supply chains have turned to digital developments such as blockchain and data-sharing in a bid to cut costs. Consumers still have high expectations, including immediate delivery, which have led to increased congestion in already crowded cities.

In 2038, climate change dominates global discourse: its effects are being felt vividly and globally. Scientific evidence is now unequivocal – things are getting very bad, in a hurry, and humans are to blame. This awareness has led to a world where the public is putting increasing pressure on governments and companies to take decisive action towards minimising the environmental impact of industrial and commercial activities.

The price of fossil fuels is very high as carbon and other greenhouse gas emissions are taxed, capped and traded in global and local markets. Most supply chains and freight lanes are expected to achieve a carbon footprint of zero, by either reducing or offsetting their emissions. Hybrid, electric, fuel-cell and other alternative fuel engines are widely adopted in cars, trucks, trains, ships and even planes. Their utilization is maximized: futile, empty and half-empty trips are reduced or eliminated. Being green is a requirement to stay in business, and those organisations that don't meet the expected

sustainability criteria are almost guaranteed to fail. Products are expected to be long-lasting, repairable, reusable and recyclable. In fact, most single-use products that create unrecyclable trash are now banned in developed countries. Packaging materials are also expected to be reusable and recyclable. Manufacturers are expected to minimise their water and waste footprints.

Indeed, the young consumers of today – born in the new millennium – resent the environmental abuses of the previous generation and pride themselves on having a different set of values. They are extremely well informed, have more choice than ever, and are determined to wield their power over companies by voting with their wallets. They expect the highest standards in quality, service and corporate responsibility, and will be loyal to organisations that deliver on these, while shunning and shaming those that do not.

To make sure they meet these expectations in a transparent way, to earn them the good will of young

# GOES GREEN

consumers, the leading supply chain operators have embarked on a concerted program of visibility and traceability. Governments and customers both demand a visible chain of custody to ensure there is no fraud, substitution or adulteration – complete end-to-end traceability of products. The technology powering this transparency is that of distributed ledgers, including *blockchain*, which is widely used to track freight movements and financial transactions. Distributed ledgers have replaced paper-based documentation and regular databases, providing a permanent record that enhances end-to-end visibility.

One thing that both new and old consumers have in common is their love for online shopping. Most shopping nowadays is done online. Brick-and-mortar stores haven't disappeared completely: many of them serve to showcase physical goods that are then bought online. This type of click-and-mortar hybrid store is very popular, along with multichannel and omnichannel approaches for delivery. Urban consumers expect 24/7, short-turnaround delivery for just about everything, from groceries, to technology, to furniture. No matter the size, weight or value of the goods, the consumers expect these products delivered to their homes, office, or any place they choose.

In this complex environment, the most successful supply chain operators are those that have embraced the digital revolution. Global data standards for freight and supply chains have been widely adopted, allowing huge amounts of high-quality data to be routinely collected by companies and governments. These data – about goods, vehicles, people and transactions – are shared extensively and used productively, while still respecting privacy and commercial confidentiality.

In stark contrast to the success story of big data adoption, the revolutionary promise of automation technologies has failed miserably in being the game-changer that many people had predicted. Fear has dominated government policy-making, be it a fear

of autonomous vehicles causing road chaos, or a fear of robots forcing humans out of the workforce. This fear has created a regulatory environment that is hostile to automation. Businesses are extremely cautious of investing in areas such as robotics, artificial intelligence, autonomous vehicles or automated facilities. Heavy regulation has also stymied any widespread use of an “Uber model” (namely the shift from full ownership of assets to the renting or leasing of assets) for labour or facilities, due to concerns for the long-term wellbeing of the people providing the services.

Worldwide, the middle-class population has increased quickly. Hundreds of millions of people can now afford more. Most of this growth has occurred in Asia, but there are positive signs on the horizon for South America and Africa as well.

There is an increase in the political and military tensions between many nations, and even blocks. Against this backdrop, China has emerged as a superpower in an increasingly fragmented world. The politics of nationalism and populism have made a comeback in many countries, riding a wave of scepticism about the benefits of globalisation and international collaboration. Protectionism rises and stronger borders follow. Many governments are implementing tougher tariff regimes and higher duties. Several nations have implemented self-serving policies. Trade increasingly occurs within trusted blocs formed on the basis of either common geography or common history. While some see this fragmentation as a step backwards, it has led – paradoxically – to a relative calmness around the globe; the risk of terrorism or war is as low as it has been for a generation.

China enjoys unparalleled global influence. Through its Belt and Road plan, and other initiatives, China has strong land and maritime connections with South East Asia, the Middle East and Europe, improving passenger and freight infrastructure and boosting its importance in trade. Unchallenged in the Eastern hemisphere, China has asserted its

authority over the South China Sea, now the world's most important waterway.

To survive in this environment, the Australian Government increasingly sees exports as a matter of national importance and crucial to the nation's GDP. It is now a strategic imperative to facilitate the timely and cost-effective movement of exports – be they agricultural, manufactured goods or minerals – by sea and air. However, despite having a long-term approach to exports, long-term planning in general is not as healthy. The short political cycle has made Australians apathetic towards politicians, who are perceived as only interested in short-term political gain. Bipartisan agreement is almost unheard of, and the divide between federal, state and local governments is as disruptive as ever. All tiers want to influence policy, but often have goals that conflict with each other. The struggle to balance these competing aims is often to the detriment of long-term problem-solving.

Australia's population is centred firmly in the big cities; new houses on the fringes and increased apartment development in inner areas make for larger and denser cities, which makes the movement of people and goods more challenging. Densely populated urban areas, the high demands of millennial consumers, and the fragmented geopolitical landscape, translate into end-to-end supply chains that are more complex than ever. With this increased complexity, managing supply chains requires a different employee skill set, including soft skills (such as strategic thinking) and hard skills (such as optimisation). Algorithms are used extensively for optimisation, as businesses look to exploit opportunities for improved productivity.

There is now a strong push into a more coordinated freight supply chain that includes road, rail, sea and air. From the point of view of users, freight is becoming an integrated end-to-end service, one that is simple to use, with a single point of contact and improved traceability and reliability. The consolidation of the shipping industry worldwide has continued apace, as container ships and other vessels are larger than ever before. The logistics industry has also consolidated: the remaining logistics players are larger and more powerful, willing to take on more roles within supply chains, and ready to invest in facilities, technology and personnel.

In Australia, that investment in personnel is critical.

## THIS IS A WORLD CHARACTERIZED BY...

- Extensive use of data
- Distributed ledgers (e.g. blockchain)
- Loss of low skilled jobs
- Relatively little automation
- Some exports of minerals and batteries
- Some growth of the middle class globally
- The rise of China
- Online retail, direct delivery
- Visibility and traceability
- Climate change impact
- Energy and carbon footprint
- Green as a requirement
- Urban congestion
- Geopolitical fragmentation
- Short political cycle
- Federal vs state conflicts
- Exports seen as strategic
- High customer expectations
- Workforce issues
- End-to-end freight
- Consolidation of the logistics industry
- Complexity/collaboration in supply chains

The workforce is more diverse than ever in terms of gender and ethnicity, but too few young people come into freight and supply chains to replace existing workers. Australia's population growth has tapered, meaning low-skilled jobs, both manual and intellectual, are moving offshore; however, companies face shortages in highly skilled roles, leading to rising labour costs and greater casual employment. Desk workers do their work from home and might never be seen in the office. Drivers' work hours are logged automatically.

The brightest light on the horizon for Australian manufacturing in 2038 is a renewed interest in producing high-end equipment and devices related to *green* energy. This is the result of a worldwide boom in the adoption of renewable energy sources, such as wind and solar power generation. Australia, seen as an environmentally and socially responsible manufacturer, has made moves to take advantage of the growing market for advanced batteries. ■

# NOTES

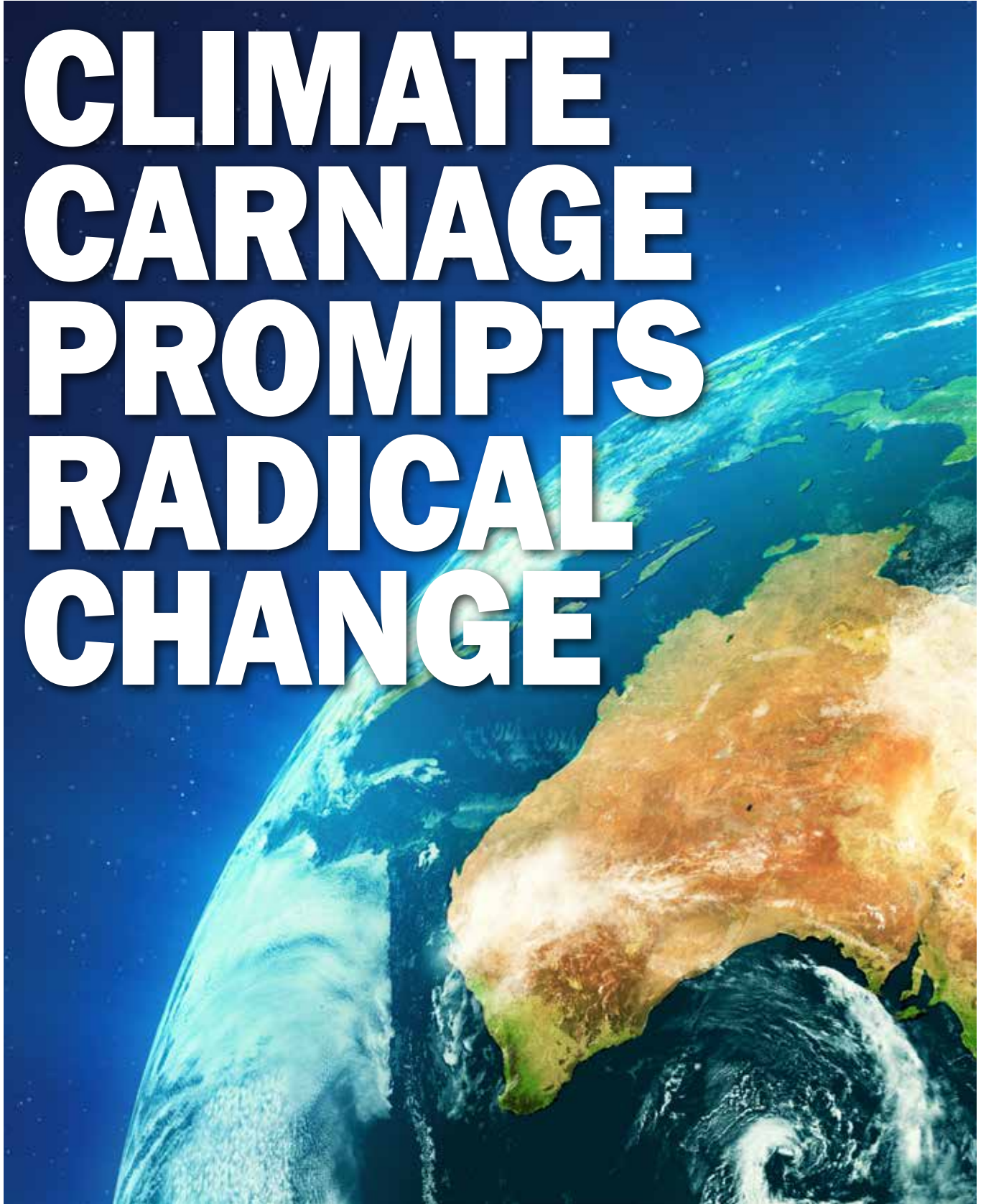
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**Disclaimer:** The present scenario describes one of many potential visions of the future. It has been designed as an aid to facilitate a strategic discussion of Australia's freight and supply chain strategy. The present scenario is not a forecast or a prediction, and should not be interpreted as a preferred or official version of the future.



# NEWS FROM 2038

## CLIMATE CARNAGE PROMPTS RADICAL CHANGE



THE GREENS will form Government for the first time after Australians delivered a shock result in yesterday's Federal Election.

Spurred by a drastic deterioration in the world's climate during the past two years, voters yesterday delivered a result that seemed impossible just 12 months ago.

But a string of natural disasters at home and shocking reports from overseas have led the electorate to draw a line in the sand and deliver power to Prime Minister-elect Hannah Morris-Townsend.

The Greens victory comes on the back of a year of dire consequences for the global climate, which led to Green victories in both the United Kingdom and Germany, joining the long-standing Green Scandinavian cohort.

"The big-ticket item was the complete thawing of the Siberian permafrost," leading climate scientist Daisy Li said. "That caused the world to sit up and take notice; it released unimaginable amounts of methane into the atmosphere, and that's a gas that has 20 times the global warming impact of carbon dioxide.

"The Pacific island nation of Kiribati is almost gone, a victim of rising sea levels. It hasn't rained in South Sudan for three years. But it's now that climate change has really started having a big impact on the G20 nations and their trading partners that people have really stood up and taken notice. China, Indonesia and the Philippines have all suffered massive crop losses from acid rain, while the United States is still picking up the pieces from Hurricane Jerry, the worst hurricane they've ever seen over there.

"The huge drought that hit Spain really brought the problems home

## A year of natural disasters

- Major mining industry disruptions after Cyclone Ava devastated North Queensland
- Dairy and fruit shortages due to flooding on the Goulburn-Murray system in Victoria and southern New South Wales
- Beef, lamb and wheat in short supply due to the ongoing drought in NSW and southern Queensland
- Nearly \$800m worth of damage to ports in north-west Western Australia due to rising tides and associated storms
- Tasmania recorded its coldest year on record



to Europeans. Spain has become Europe's food bowl and produces a disproportionate amount of Europe's fresh produce, and last year's drought really proved how reliant countries such as Germany, France and the UK are on Spanish agriculture.

"Twelve months ago it seemed voters saw Australia as being a bit isolated from all this havoc and were unlikely to make a major swing towards the Greens. But I think the electorate has really come to understand over the past year that world events can have a massive impact on us."

Political analyst Benjamin Lopez said Australians faced a period of uncertainty while they came to understand how the Greens policies

were going to affect them. "We're in for a period of unprecedented policy adjustment," Mr Lopez said. "How quickly will we see the policy shift? Well, that will depend on how Hannah Morris-Townsend's government functions when it takes power.

"But we should assume that this won't be business as usual. Shifting from a Labor government to a Liberal one, or vice-versa, rarely brings about a seismic shift in government policy. Shifting to the Greens, we're likely to see some really big changes ahead.

"Don't get me wrong – I think the electorate knew what it was doing. I think voters have embraced the need for change. But that doesn't mean that it's going to be easy."



**Community leaders call for a fresh approach to democracy**

# START AGAIN

A GROUP of high-powered Australians has come together in an audacious bid to reform the country's political system, which they say is outdated and inefficient.

The Australians for Constitutional Reform group includes business leaders, community figures and even a couple of ex-politicians, pushing for "modernisation" of the country's democratic institutions.

The group isn't tinkering around the edges: it wants major change, now, to ensure Australia remains relevant in the second half of the 21st century.

ACR is looking to the public for reform ideas, and is urging people to start with a "completely clean slate."

"We are currently operating under a model introduced in 1901; the first Model T Ford hadn't even been produced. And we're trying to apply that model to the digital age? Ludicrous," ACR chairman and entrepreneur Syd Mandelbaum said.

"No wonder the population has switched off from politics."

Dr Mandelbaum said two issues

went to the heart of the malaise: short political terms, and the three-tiered system.

"First of all, the three-year terms for the Feds. Seriously? My executives present me with 20-year plans for their businesses, but these guys in Canberra can barely see past the end of next week. They've only just been elected and they're out pork-barrelling to make sure they're re-elected," Dr Mandelbaum said.

"And if one mob actually does make a decision, the other mob just gets in and changes it all anyway. They disagree for the sake of disagreeing. How can you operate a business in that environment?"

"Secondly, three tiers of government. The Americans aside, we must be the most over-governed mob in the world. And they can't even work out who's responsible for what. Each one of them wants to have their own say on health, on education, on transport, on social policy.

"Many of the state governments have upper and lower houses. Why?

To snipe at each other? To further complicate decision-making?

"Meanwhile, try doing business either side of a state border. My operations on the Gold Coast require more administration than anywhere else, simply because sometimes my people cross into Tweed Heads. We have a community split up the middle thanks to a line drawn on the map in the 1850s by people who had never even been there."

Despite his personal opinion – "the states are pointless. They need to go." – Dr Mandelbaum said ACR was yet to settle on a preferred model of change.

"There is no point to a bunch of old people sitting around in a room and saying 'this is how it must be'," Dr Mandelbaum said.

"We bring a certain level of knowledge to the table, certainly. But doing it without engaging the electorate just brings us back to the untenable position that we now find ourselves in."

The group is inviting public submissions on the reform process at [submit@acr.org.au](mailto:submit@acr.org.au).



**App helps consumers track their food from paddock to plate**

# OPEN SOURCE

AUSTRALIAN consumers are being offered unprecedented access to information about the origins of their food.

The Australian Government has launched an app called Origins, which allows consumers to discover more about their products.

Participating manufacturers hope the app will allow more transparency and strengthen Australia's standing as one of the world's greenest and most ethical food producers.

Consumers use the app to scan a product's barcode. They can then see where the ingredients – and packaging – came from.

One of the technology's early adopters is NSW pie-maker Constables. Scan the barcode of, for instance, a packet of the company's frozen steak and onion pies, and you'll see that the beef was sourced from producers in either the Tamworth or Bathurst regions of NSW; the wheat sourced from farms in the Riverina district; dairy ingredients sourced from two suppliers on the NSW south coast; onions from south-west Victoria; and sugar from Queensland.

Constables CEO Alexandra Johns said making origin information available to consumers wasn't a huge leap.

The company has used block-chain technology for several years to keep track of its suppliers; the tracking system allows faster supply chain management when things go right, but also permits a quick response if a problem arises.

"It's information we had anyway, so all we had to do was allow the Origins technicians to tap into our supply chain APIs," Ms Johns said.

"Transparency has become so important to consumers. Buyers are smarter than ever. They want to be sure that the cattle producers we use raise their animals in the right way; they want to be sure that the wheat producers we use are kind to the environment; and they want to be sure that we're using environmentally sustainable packaging as much as possible.

"Transparency is also very important in the export side of the business. We export to Japan, and yes, you can get cheaper frozen pies in Tokyo.

"But where has the beef come from? Was the water source clean? Are the factory workers treated ethically?

"By opening up our supply chain data, we're answering those questions. Not only can you see where the beef comes from, but you can click through and find out that those farms adhere to the industry's best practice; you can see that our wheat-growers are pesticide-free. The idea is full end-to-end transparency that keeps customers informed, and keeps everyone in our supply chain accountable."

The push for greater transparency is partly a response to recent international supply chain controversies. Last year, Chinese authorities cracked down on traders who were labelling locally produced goods such as beef, plums and asparagus as "imported" in a bid to improve profit margins. World beef markets have also suffered at the hands of meat adulteration, where unscrupulous operators inject or add water or an aqueous solution to meat to increase its weight.

# INSIDE THE NEW ORDER

LAST century, it was the space race – the battle of the world's two superpowers, the USA and the USSR, for supremacy in spaceflight capacity. Today, the battle for world domination uses more traditional means: rails, roads and ships. As international tensions rise and the geopolitical landscape rapidly changes, countries are forging new allies, often based around the mutual benefits of major infrastructure projects. With the help of Dr Frank Roberts from Advance University, we take a look at how the big players are changing the world, one major project at a time.

## CHINA IN AFRICA

"China saw this coming long before anyone else," Dr Roberts says. "They could see that infrastructure was a way to influence foreign governments into doing what they wanted."

China's major infrastructure investment in the past 40 years has focused on three main supply chains.

In Africa, the Chinese have invested heavily in rail, finally completing the missing sections of the Cairo to Cape Town Railway, a concept first put forth in the 19th Century. "China loves Africa for two reasons: a vast wealth of natural resources within a poorly developed regulatory framework; and more than 50 favourable votes on the floor of the UN," Dr Roberts says.

"Unlike the colonial superpowers of the 19th century, the Chinese haven't gone into Africa and tried to replace existing regimes. Frankly, they don't care who is running the country. They just let their money do the talking."

While the Cairo to Cape Town project is an impressive feat in itself, its real value lies in its connections to Dar es Salaam, Port Sudan and Djibouti, which connect China's African interests to the rest of the world. "The Chinese have significant mining investments in Africa, but for many years were hampered by the inefficient and often dangerous pathways to get the supplies out. But they now have a significant degree of control over the operations of these railways, which has led to a far more robust supply chain. This has led to China coming to value African resources far more than its relationships with other resource-rich states such as Australia."

## CHINA IN ASIA

China's African investment goes hand-in-hand with its signature Belt and Road policies – forging freight links into Europe. The Belt – a land-based network of rail and road links through Central Asia, Iran and Turkey into Europe – particularly captured people's imagination earlier this century. But it's more likely the Road – the sea routes linking China to Indonesia, Malaysia, Singapore, Bangladesh, Africa's east coast and Europe – that will lead to long-term benefits. "It might seem counter-intuitive, but the sea lanes are the more nimble supply chain," Dr Roberts says. "China can move resources out of Africa, back to their manufacturing bases at home or in Bangladesh, then easily transfer those manufactured goods to consumers around the world."

## THE US IN NORTH AMERICA

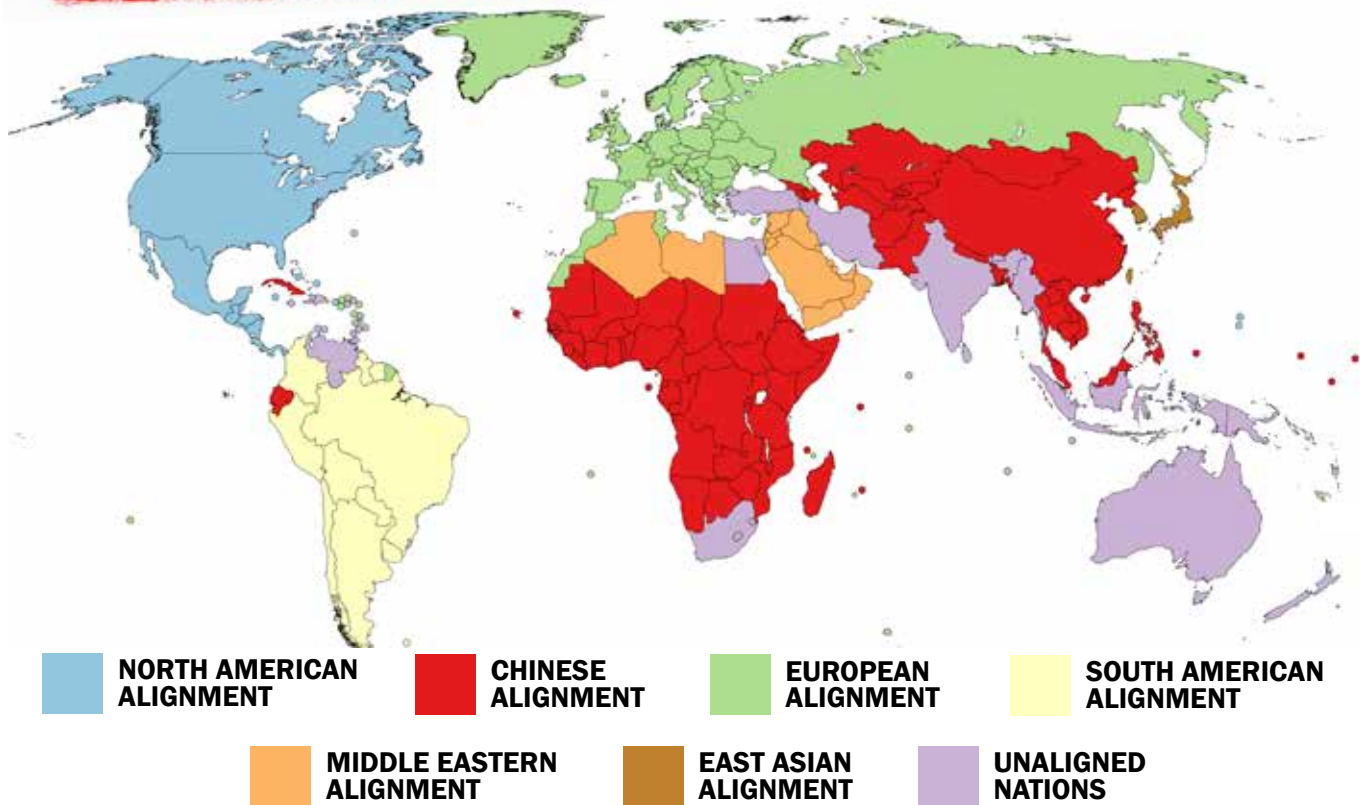
"The US was slower on the uptake when it came to infrastructure diplomacy," Dr Roberts says. "The Trump presidency was all about building walls at a time China was trying to break them down. But subsequent administrations saw the value of the assets they had in Central America, right in their back yard."

Unwilling to rely on China but unable to afford its own manufacturing industries, the US looked south and started investing heavily in the Pan-American Highway. Once little more than a series of local roads linking Central American cities, the US has pumped millions of dollars into creating a reliable supply chain. "That road, combined with strong shipping lanes between Panama and US ports on the Gulf of Mexico, forms the backbone of manufacturing for the US and Canadian markets," Dr Roberts says. "The flow of people and goods through Central America has had a significant impact on living standards in the region, buys the US influence that it let slip during the Trump era, and solves a lot of economic problems for them as well."

## RUSSIA IN EUROPE

"The rise of China forced Russia to play nice with its European neighbours," Dr Roberts says. "The Russians

# CARVING UP THE GLOBE



realised that they were becoming more and more isolated as China exerted its dominance in Asia and Africa.”

Russia, in the Putin era, had seen value in developing a loose network of support within the Arab world. But the constant tensions and unpredictability of that region forced it to look to the west to maintain relevance. “While China and the US have top-down relationships with other countries in their blocs, the Russia-EU relationship is more symbiotic,” Dr Roberts says.

“Ditching the rouble and switching to the Euro broke down so many trade barriers. Could we one day see Russia as a full member of the EU? Well, 40 years ago it would’ve seemed fanciful but today, not so much.”

Again, infrastructure has helped bring Russia into the tent. The EU and Russia have both worked hard to raise the standard of Eastern European rail and road infrastructure, which decades after the fall of the iron curtain was still a long way behind the West. “Both parties saw that they needed to unlock the capacity of the Eastern states,” Dr Roberts says.

## BRAZIL IN SOUTH AMERICA

Brazil would like to see itself as the South American version of a superpower, but currently lacks the economic clout to follow the lead of the US and China. “South America is a difficult case,” Dr Roberts says. “There’s no single dominant player that can provide the

investment necessary, and it’s so geographically isolated from the other major markets. The US has shown limited interest in investing down there, because it’s got the balance right with its Central American economies.”

## UNALIGNED NATIONS

The new colonisation has left a handful of major players without a true economic alignment. India and Indonesia remain too wary of their neighbours to meaningfully break down barriers. Australia’s value as a source of minerals for China has been usurped by Africa, leaving it to rely on agriculture to compete in the global marketplace. Japan, South Korea and Taiwan have formed closer ties amongst themselves, but remain outsiders, with no allegiance to other major players. And despite having physical links to Chinese-backed projects, South Africa, Egypt and Turkey refuse to completely buy into the Chinese way of thinking.

“Being out on your own isn’t necessarily bad, if you play it right,” Dr Roberts says. “It’s all about positioning yourself to be useful to anyone at any time, and having the diplomatic skills to remain friendly with all the big players.

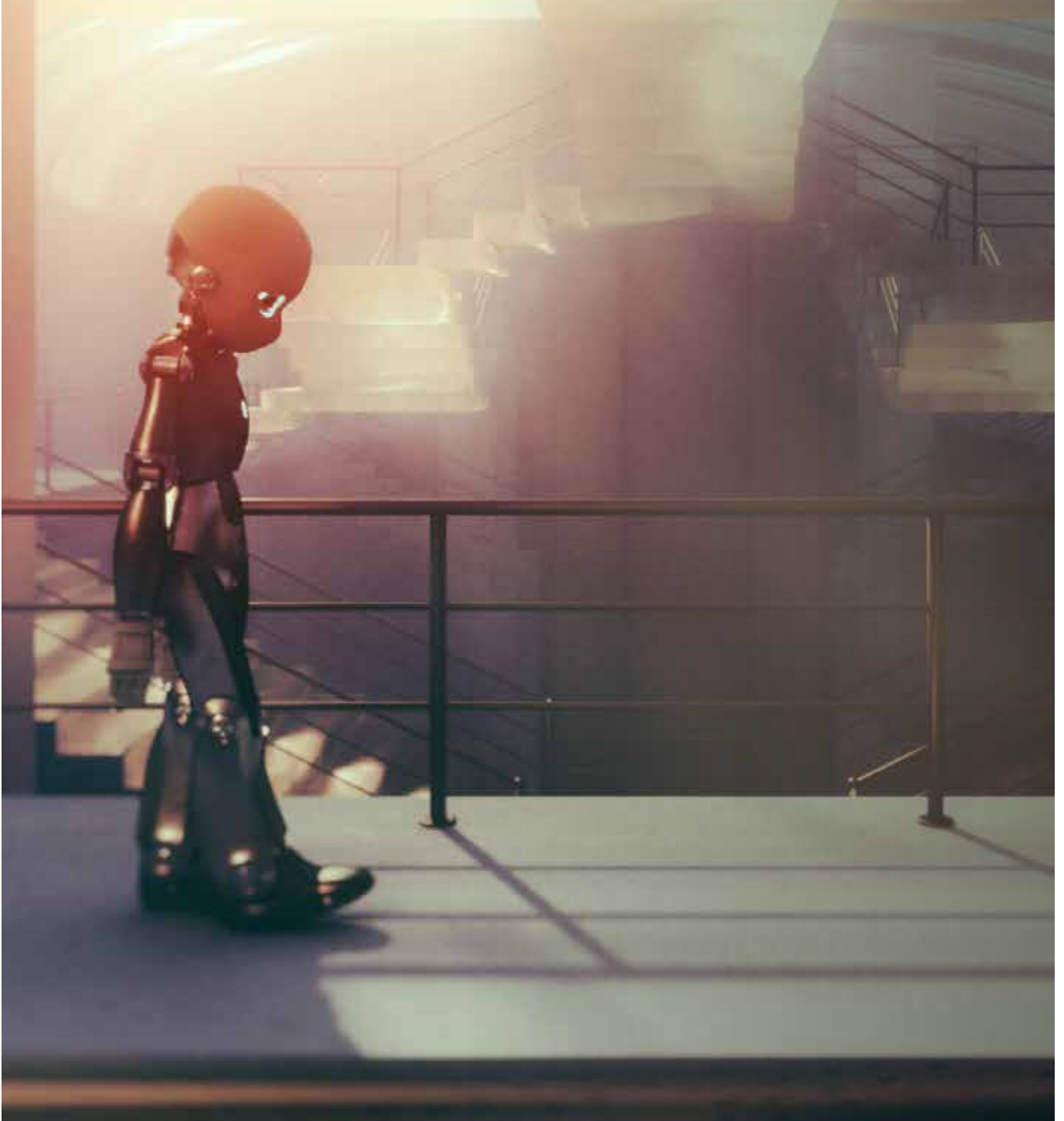
“If you do, say, one thing well, but it’s something that no-one else is capable of doing to the same degree, then you become strategically important on the world stage.

“The flip-side to that, though, is that if a particular well dries up, then you’re out on your own with no means of support. It’s a difficult balancing act.”



Premier rules out changes to Automation Safety Act

# ROBOTS MUST WAIT IN LINE





THE STATE government is refusing to review its controversial restrictions on automation technology, despite pressure from major freight companies and supermarket chains.

The big supply chain players were hoping to make automation an issue at November's election, but Premier Ayesha Rafiq last night said the Automation Safety Act was not up for discussion.

"I'm willing to review the Act when we see some evidence that automation is neither a threat to human lives, nor human jobs," Ms Rafiq said.

"Currently, the weight of evidence is well and truly on the side of caution. We've seen too many incidents overseas where automation has gone wrong. The sanctity of human life is too important to mess with without solid evidence suggesting that these developments are safe and socially sustainable."

Australian Consolidated Workers Unions chief Harry Alexopoulos said there was a strong economic case against automation.

The ACWU has been particularly militant in the face of automation, pulling its members from worksites where companies planned large-scale technological changes.

"Our freight industry employs thousands upon thousands of people who then spend their incomes in stores across this state," he said.

"More than 80 per cent of last-mile deliveries are done by mum-and-dad operators with one or two vans, who rely on this business to put food on the table. I say to the supermarket owners, who seem to be particularly vocal on this issue: Who is going to spend money in your stores if

you actively support putting thousands of small operators out of businesses?

"Who's going to pay the income taxes that pay for the roads that your vehicles drive on, the schools that your kids go to, the pensions that your parents collect? Because if thousands of people – from dockside workers, to delivery drivers, to warehouse staff – are put out on their backside and replaced by machines, it's a double whammy; the tax pool decreases while the dole queue grows."

Australian Grocers Association chief Alkawari Clark accused Ms Rafiq of putting politics ahead of Australia's prosperity.

"All Ms Rafiq is doing is shoring up her party's support, because robots don't vote," Ms Clark said.

"To compete on the international stage, we need to keep our costs down, and automation must form a key plank in that strategy. By and large, the casualty rates for automated technologies are far lower than for human-controlled activity.

"The supply chain industry struggles to attract young workers. The unions would know this first-hand; they must see that the average age of their membership is up in the 50s now. There will come a time where we can't fill these positions.

"Our members would love to invest in emerging technologies to future-proof their businesses, but in the current regulatory environment they simply can't stump up the sort of capital required because there's no guarantee of ever getting a return on their investments."

## AUTOMATION FAILURES

The Automation Safety Act was introduced after a year of high-profile overseas incidents involving automation:

**IRKUTSK, RUSSIA:** 221 people died when two planes collided in heavy snow after automated air traffic control and collision warning systems both failed;

**MADRID, SPAIN:** The crash of a self-driving freight train killed 34 people when the train ran off elevated tracks in an urban area;

**LOS ANGELES, CALIFORNIA:** The five-day shutdown of the Port of Long Beach in California caused havoc for the world's shipping channels after a computer virus infiltrated the port's operating system and left automated cranes and straddles inoperable;

**SHANGHAI, CHINA:** At least 29 road deaths have involved self-driving trucks;

**TOOWOOMBA, QLD:** The loss of millions of dollars worth of stock when robotic pickers malfunctioned in a distribution centre, while the human supervisor had fallen asleep;

**FAYETTEVILLE, NORTH CAROLINA:** The US Postal Service's high-profile trial of automated last-mile delivery services proved an embarrassing flop and cost the government millions of dollars in compensation after successful delivery rates plunged to below 30 per cent;

**SCANDINAVIA:** Several casualty accidents where self-driving cars failed to see white objects – such as the side of a truck – when the sun was low on the horizon;

**BANGKOK, THAILAND:** Sixteen people died during a violent riot by assembly-line workers who were told their jobs would be replaced by machines.



# WHY YOU **MUST** GET TO KNOW THE ALPHAS

**T**HEY are the most educated cohort to ever walk the planet, yet many an old-timer would accuse them of having no idea what is going on around them.

They've never been more connected, but may never have actually met any of their friends.

They are, paradoxically, both the most loyal and most fickle con-

sumers to have ever kept marketing managers awake at night.

We're talking about Generation Alpha, loosely defined as those born between 2000 and 2020. They're now at the peak of their spending power, making them a very interesting proposition for retailers and marketers.

"They are something of a conundrum to us," leading advertising

executive Haleigh Chapman says.

"On one hand, we know every damn thing about them. They grew up in the public eye; their births were announced on Facebook, their mothers sat around playing with their phones while feeding them as babies. Alphas can't comprehend the concepts of privacy and personal space.

"So you'd reckon that we'd be able

to second-guess their every move. But I'm the first to admit that we can't. It's nearly impossible to guess what fad they'll follow next. Food, fashion, entertainment; I don't think picking trends has ever been harder because these guys aren't only influenced by what's happening here in Australia, or in the US or UK; they can find out at the push of a button what the next big thing is in Chile, or Morocco, or Jamaica.

"They're always looking for something different or unique; ironically, once they find it, a gaggle of followers usually isn't far behind.

"But on the flipside, once they get rusted onto a brand, it takes a PR disaster of epic proportions to dislodge them. Take Apple for example – they grew up seeing that logo on the back of the phones in mum's and dad's hands, and now you simply cannot shift them away from it – 80 per cent of Alphas in the US own some sort of Apple product."

**K**NOWLEDGE is currency to Generation Alpha. They have grown up with phones in their hands, the vast majority of human learning at their fingertips, 24/7. They've never understood the feeling of not being able to find something out. Whereas the Gen Ys and Millennials before them saw going to university as a right, the Alphas see it as a bare minimum; a Master's degree is usually necessary to get them into any sort of high-earning job.

That need for knowledge influences their buying habits.

"I remember when shoppers were happy with a list of ingredients on the back of a packet," says supermarket tsar Tony Parker, an industry veteran of 46 years. "Then we started doing recommended daily intake. Then we started doing health labels. Now, buyers want full knowledge of the source of the ingredients; they insist on knowing where every ingredient came

from, so they can then check that the source – let's say, a dairy farm – treats its workers, animals and the climate properly.

"It's not that they're going out of their way to be difficult. It's just that all their lives, they've had instant access to untold amounts of information, and so it's just second-nature to them."

The evidence suggests that if you're a brand manager who delivers on that expectation, you're safe. But betray them, and you're burned for good.

"Like any generation, Alphas can be a bit on the lazy side and don't mind cutting the odd corner here or there," Ms Chapman says. "Prove that you meet their requirements, and they'll bookmark your site and keep using it over and over.

"But if something goes wrong, if you break that trust, you'll be deleted forever. It really keeps companies on their toes."

**A**LPHAS aren't just used to getting their knowledge quickly; they're used to getting everything quickly. They were still in nappies when UberEats first made a big impact in Australia. They are the first generation to shop more online than in-store. They want it, and they want it now.

Research shows that four in 10 Alphas have never set foot in a clothing store. Three in 10 visit a supermarket less than once a month. Four in 10 never cook at home. Entire department store empires have collapsed because Alphas are happier ordering a Bangladeshi-made garment from a Swedish website than they are popping down to the local mall.

"Developing a supply web that caters to those needs has been vital for us," Mr Parker says. "We used to talk about supply chains; the movement of a product from a starting point to an end point. That's a luxury

we can't afford any more; now we talk in terms of a web. If you look at our delivery movements on a map, in real time, it looks nothing like a chain; it's a very tangled web that evolves depending entirely on the whims of customers with phones in their hands."

**I**T'S those phones, and the associated technology – the wearables, the augmented reality – that define the lives of Alphas.

They've had online social networks since they were in primary school. More than 20 per cent of them are only children, meaning they're used to being on their own. In fact, they're infamously not keen on leaving the house – 75 per cent work from home at least one day a week, and 13 per cent go into the office less than once a month.

"These concentrated online presences make them hard to reach," Ms Chapman says. "Every one of them is on social media, but there are only a handful of social media platforms, so only the really big operators – your Apples, your Cokes, your Netflixes – can afford to advertise there.

"In the past, advertising consumption was more fragmented. We could put ads on a TV station. Not many of them left now. (Nearly 90 per cent of Alphas say they never watch free-to-air TV). Outdoor billboards? Basically useless for Alphas, they never leave the house. We used to push new products into supermarkets or clothing stores, and pay big bucks to have them up the front with big gaudy signs that made sure that everyone who entered the store got a chance to see and touch the goods.

"Now, OK, you can put a big flashing ad on a website, but Alphas grew up with them as kids; they were tuning them out before the age of 10.

"Never has a group of people been so connected to the whole world, but been so hard to reach."

This scenario is one of four prepared by the Centre for Supply Chain and Logistics at Deakin University, as part of a scenario planning project for the Department of Infrastructure, Regional Development and Cities, to inform Australia's National Freight and Supply Chain Strategy. The PDF for this and the other three scenarios can be downloaded from <http://cscl.space/scenarios>

**Centre for Supply Chain and Logistics**  
Deakin University  
221 Burwood Hwy  
Burwood 3125  
Victoria, Australia  
[www.deakin.edu.au/cscl](http://www.deakin.edu.au/cscl)

