

Future City SG

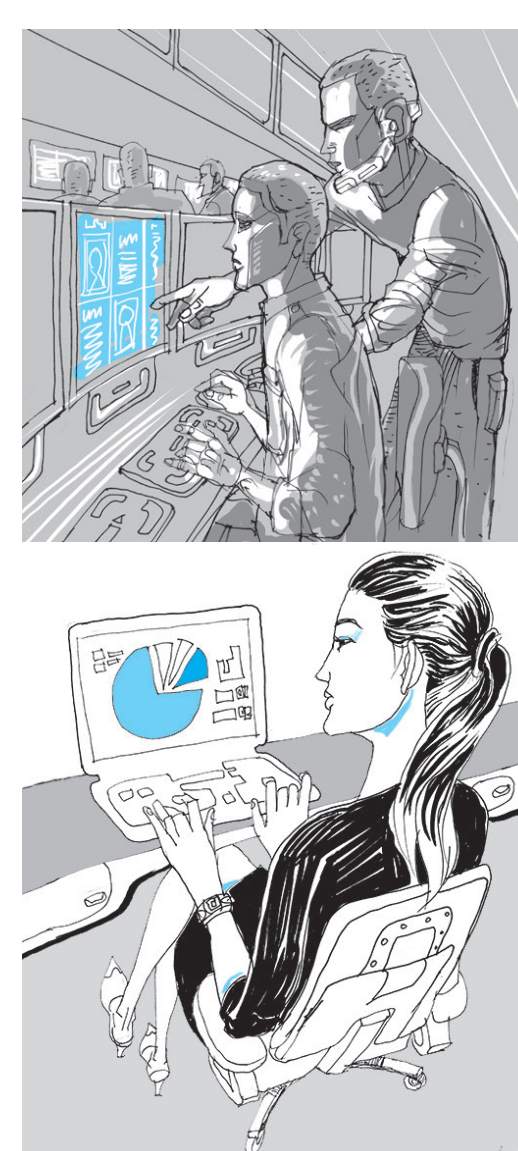
How would Singapore look 13 years after the Committee on the Future Economy released seven strategies to take the country forward? Insight imagines the future.



Getting to work: Self-driving taxis allow passengers to work on the go. Other commuting options include electric buses and the new Cross Island Line and Jurong Region Line.



Office in the Jurong Innovation District: The 600ha district is Singapore's industrial park of the future. It integrates Nanyang Technological University with the surrounding areas. Companies there house research and development and prototyping labs, as well as advanced manufacturing and robotics, among other things.



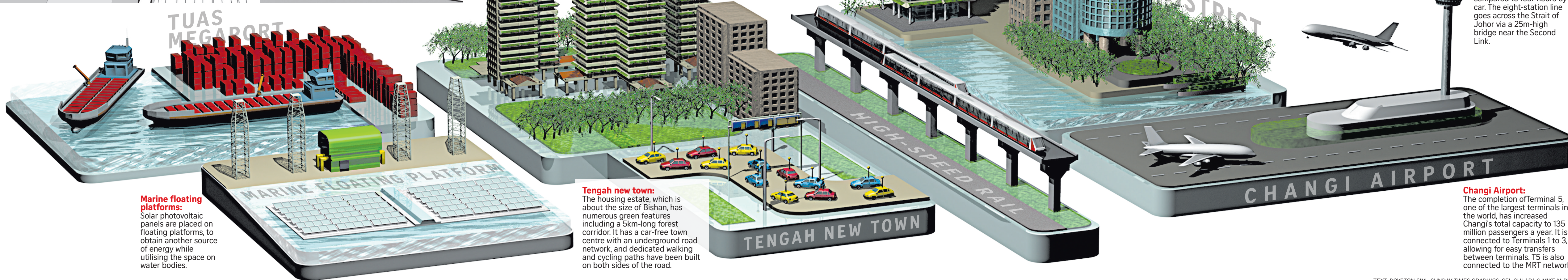
Cybersecurity during national service: New vocations in the Singapore Armed Forces train national servicemen in cyber security skills.

Skilling up for the future: The future economy requires workers to have deep technical skills, as well as essential generic skills like social skills. Markets like the digital sector, healthcare, logistics and advanced manufacturing have grown.



Tuas mega port: Port activities at Tanjong Pagar have moved to Tuas, while those at Pasir Panjang are moving over. The entire Tuas mega-terminal can handle up to 65 million standard-sized containers of cargo a year. Port waters are managed using next-generation systems, while automated port equipment and automated yard cranes are also key features.

Jurong Lake District: A regional centre in the west that has become Singapore's second central business district, thanks to the high-speed rail line.



Marine floating platforms: Solar photovoltaic panels are placed on floating platforms, to obtain another source of energy while utilising the space on water bodies.

Tengah new town: The housing estate, which is about the size of Bishan, has numerous green features including a 5km-long forest corridor. It has a car-free town centre with an underground road network, and dedicated walking and cycling paths have been built on both sides of the road.

Singapore-KL high-speed rail: The 350km line has cut land travel time between Jurong East and Kuala Lumpur to 90 minutes, compared to four hours by car. The eight-station line goes across the Strait of Johor via a 25m-high bridge near the Second Link.

Changi Airport: The completion of Terminal 5, one of the largest terminals in the world, has increased Changi's total capacity to 135 million passengers a year. It is connected to Terminals 1 to 3, allowing for easy transfers between terminals. T5 is also connected to the MRT network.

Imagining the future

What would the Singapore of tomorrow be like for an HDB household, if the recommendations by the Committee on the Future Economy (CFE) bear fruit? Insight takes a leap forward to 2030.

Royston Sim
Assistant Political Editor

Looking out of the window of his 15-storey HDB flat, businessman and father-of-two Alex Chin marvels at the scene before him.

Thirteen years ago, when he was 20, this flat located at Tengah, a former military training area in Singapore's west and ringed by a 100m-wide, 5km-long forest corridor, did not exist.

But if it did, he would have been looking out over a typical multi-storey HDB carpark full of a mix of sedans, SUVs, motorbikes, vans and pick-up trucks. Gantry bars would

be rising and falling as the electronic parking system deducted payment from in-vehicle units.

Elderly residents would be making their way painstakingly across the road to get to the coffee shop for a bite.

Children would be getting off the bus from school.

Foreign workers might be yelling as they gesticulated to a rubbish truck backing up to a communal rubbish chute.

Now, there are far fewer parking spaces available, with land being set aside for other uses. In fact, the town centre at Tengah – Singapore's 24th HDB town – is entirely car-free, with an under-

ground network of roads serving public buses and other vehicles. Besides, technology has made cars with drivers redundant. Self-driving vehicles have proliferated in the form of taxi services and commercial vehicles transporting goods and freight to logistics centres from Changi East and the Tuas mega port – to which Singapore has been moving its port activities from Tanjong Pagar and Pasir Panjang.

There are also far fewer foreign workers collecting rubbish, thanks to an underground pneumatic waste collection system that collects all the rubbish that residents throw down the chutes and transports it by underground pipes to a centralised bin. The trash is later transported to incineration plants.

As he looks onto Tengah Reservoir in the distance, Alex sees a large, dark patch on the still waters. These solar photovoltaic systems, placed on floating platforms, are now a feature in every reservoir islandwide, providing clean energy

to power Singapore's electric grid. Hunger pangs remind Alex that it is time for dinner. He orders nasi briyani and rojak, which will be delivered to his block by drones.

He goes to the bedroom and urges his seven-year-old daughter to finish her online maths assignment from school.

Shortly later, his wife Priyanka returns to their flat. The 32-year-old data analyst has just commuted back via high-speed rail after a work trip to Kuala Lumpur.

They chat over dinner about what to do when they next have time off. She suggests Orchard Road, because while they can buy anything online from anywhere, there's that old-school buzz of seeing physical merchandise and being part of a happy crowd doing the perennial Singapore pastime of shopping.

The popular shopping belt has undergone a major revamp – a section has been entirely pedestrianised, there is a plethora of boutique shops selling local wares and there is a theme park that attracts tour-

ists and shoppers alike.

Like Orchard Road, much else in Singapore has changed over the span of 13 years.

The Jurong Lake District has morphed into Singapore's second central business district, a transformation sparked by the 350km high-speed rail line linking Jurong East to Kuala Lumpur.

Pavements in the area are wide, and friendly to both pedestrians and cyclists. A bicycle-sharing system makes it easy for tourists to explore the area, while electric feeder buses ply the estate.

Unforeseen new technologies and companies have also emerged to disrupt industries and lifestyles, just how Uber and Airbnb did in the previous decade.

HOW IT CAME ABOUT

For Alex, 2017 was a milestone year as that was when a high-powered committee released a report that helped change the course of his career.

Back then, he was 20, had done

his national service, and was taking the tried and true route that had the approval of his parents – studying accountancy. But then the Committee on the Future Economy report came out and his plan that would have seen him in a safe white-collar job seemed ill-equipped for a challenging future.

But look at his father – this safe way was no longer so safe. He had been made redundant twice from his job as a bank manager, but was looking at getting new skills to remain employable.

Anyway, at that age of 20, Alex had read the signs. Entrepreneurship was the way to go. If he could think of a product, develop it, make use of the grants available, the shared knowledge from peers and the hook-ups from government agencies, he could develop a home-grown business.

More than that, he could grow it beyond Singapore. The CFE report had signalled to him that the world was his oyster – make that, rice bowl.

So five years on found him having founded a company to manufacture components for robotic surgery systems.

His then-fledgling business received a boost in 2023, when it was awarded a contract to supply Singapore's Health Ministry with mechanical parts for robot-assisted surgery. That helped him develop a track record and paved the way for him to expand into Cambodia, Indonesia, Malaysia and Laos – mem-

bers of the Asean Economic Community and the Free Trade Area of the Asia-Pacific.

He also received customised support and funding from IE Singapore to expand his business, which is headquartered in the Jurong Innovation District. The 600ha industrial park houses learning, research, innovation and production activities.

Entrepreneurs like Alex who have ventured into Singapore's regional hinterland have been critical to maintaining the country's growth.

Through a combination of remaining open to trade and investment, nurturing growth industries and equipping its workforce with deep skills, Singapore has managed to maintain growth of around 2 to 3 per cent each year, while its population increased to 6.9 million. It has remained open to foreign talent, even as it raised the criteria for employment pass applications. Manufacturing still accounts for close to 20 per cent of GDP.

shifting tack, helping children to find their own path among all the opportunities now laid out. The priority was shifting from academic excellence to picking up practical and soft skills, as well as taking on board the need for lifelong learning.

True, his parents were stuck in the old ways of thinking, being fixated on academic grades and opting for safe career choices like accounting and finance.

But look at his father – this safe way was no longer so safe. He had been made redundant twice from his job as a bank manager, but was looking at getting new skills to remain employable.

Anyway, at that age of 20, Alex had read the signs. Entrepreneurship was the way to go. If he could think of a product, develop it, make use of the grants available, the shared knowledge from peers and the hook-ups from government agencies, he could develop a home-grown business.

More than that, he could grow it beyond Singapore. The CFE report had signalled to him that the world was his oyster – make that, rice bowl.

So five years on found him having founded a company to manufacture components for robotic surgery systems.

His then-fledgling business received a boost in 2023, when it was awarded a contract to supply Singapore's Health Ministry with mechanical parts for robot-assisted surgery. That helped him develop a track record and paved the way for him to expand into Cambodia, Indonesia, Malaysia and Laos – mem-

bers of the Asean Economic Community and the Free Trade Area of the Asia-Pacific.

He also received customised support and funding from IE Singapore to expand his business, which is headquartered in the Jurong Innovation District. The 600ha industrial park houses learning, research, innovation and production activities.

Entrepreneurs like Alex who have ventured into Singapore's regional hinterland have been critical to maintaining the country's growth.

Through a combination of remaining open to trade and investment, nurturing growth industries and equipping its workforce with deep skills, Singapore has managed to maintain growth of around 2 to 3 per cent each year, while its population increased to 6.9 million. It has remained open to foreign talent, even as it raised the criteria for employment pass applications. Manufacturing still accounts for close to 20 per cent of GDP.

These results have defied the expectations of observers, who panned the CFE report for being too general, uninspiring and a rehash of old strategies when it was released 13 years ago.

Some attribute the good results to the Government and Singaporeans taking heed of the recommendations laid out, from focusing on skills above grades to remaining open to trade.

Another factor behind growth is the emergence of the digital economy, with more Singaporeans opting for careers in the data and cybersecurity industries.

When she isn't commuting to KL for work, Priyanka is based in Punggol, which has become a cluster for businesses in the digital, infocomm technology and cybersecurity fields.

The 32-year-old too, had taken the cue from the CFE report about how the digital economy was set to flourish. She thus opted to read data science in polytechnic and at university.

Alex wonders if their four-year-old son Elon will eventually work in the digital sector. That could happen, he thinks, if his son is posted to a vocation where he gets to learn cybersecurity skills during national service.

The number of career cybersecurity specialists has gone up, after the Ministry of Defence created new technology vocations within the Singapore Armed Forces to equip national servicemen with cyber warfare skills.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

When she isn't commuting to KL for work, Priyanka is based in Punggol, which has become a cluster for businesses in the digital, infocomm technology and cybersecurity fields.

The 32-year-old too, had taken the cue from the CFE report about how the digital economy was set to flourish. She thus opted to read data science in polytechnic and at university.

Alex wonders if their four-year-old son Elon will eventually work in the digital sector. That could happen, he thinks, if his son is posted to a vocation where he gets to learn cybersecurity skills during national service.

The number of career cybersecurity specialists has gone up, after the Ministry of Defence created new technology vocations within the Singapore Armed Forces to equip national servicemen with cyber warfare skills.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

When she isn't commuting to KL for work, Priyanka is based in Punggol, which has become a cluster for businesses in the digital, infocomm technology and cybersecurity fields.

The 32-year-old too, had taken the cue from the CFE report about how the digital economy was set to flourish. She thus opted to read data science in polytechnic and at university.

Alex wonders if their four-year-old son Elon will eventually work in the digital sector. That could happen, he thinks, if his son is posted to a vocation where he gets to learn cybersecurity skills during national service.

The number of career cybersecurity specialists has gone up, after the Ministry of Defence created new technology vocations within the Singapore Armed Forces to equip national servicemen with cyber warfare skills.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

Alex pictures his son sitting in front of a computer terminal, learning how to write programs to counter malicious computer software – that would be a far cry from his own national service when he was a tank driver, he thinks.

TEXT: ROYSTON SIM | SUNDAY TIMES GRAPHICS: CEL GULAPA & MIKE M DIZON



roysim@sph.com.sg