

**A**S A professor at the National University of Singapore, it is natural for me to imagine Singapore in 2065. By then all my mentees would be basking in the glory of their mentees, and I would be 100 if I am still alive. It is a gamble for anyone to predict the future. Yet we cannot resist! How Singapore will be in 2065 depends very much on how the world turns out to be, and which innovations Singapore absorbs along the way.

Like Singapore, Moore's Law – which predicted the future of integrated circuits, the heart of computing and smart devices – turned 50 this year. The co-founder of Intel Gordon Moore famously made an empirical observation in 1965 about how the number of transistors that could fit on a single silicon chip would double every two years thereby increasing computing power and speed. Intel's latest chip offers 3,500 times more computing performance, is 90,000 times more energy efficient and costs about 60,000 times less compared to its first generation chip. We now have personal computers, smartphones and the Internet. By 2065 I wish to see more technologies using this law which will lower the cost of living and make rapid improvements in living standards.

Fifty years from now, economic growth facilitated by innovations in finance, commerce and political governance will enable people around the world to be global (i.e. global as well as local) in their mindsets and work-

# Singapore in 2065

## Expect smart technologies, healthcare innovations and upgraded infrastructure

places. They would be more concerned about the sustainability of the world for future generations, influenced by clean water shortages and undesirable consequences caused by climate change. How will these end points impact Singapore in its transformation to 2065?

According to Emporis, which lists the world's top skylines, Singapore with 4,562 tall buildings is ranked third behind New York (6,091) and Hong Kong (7,794). I imagine that by 2065, Singapore's skyscrapers will increase and be three times taller than the current ones with automated car-park systems and smart home appliances. They will be smarter and enable us to find the nearest and cheaper car-parks, efficiently water green spaces, ensure security, save energy and handle waste with robots.

Lush green spaces in Singapore will grow and be recognised the world over for their uniqueness. Singapore will turn waste into a resource, and even export it to the world. Carbon footprinting of products and services will become the vogue, and building materi-

als and construction methods reimagined to lower the carbon footprint.

Singapore will be monitoring polluting particles and gases to facilitate higher standards of healthy, urban living. Finance and international trading aspects of the economy will grow further. All electric transportation will go mainstream and information sent to our smartphones so we can share rides and find cost-effective parking spots and dining places. Drones will deliver food, groceries and purchases where and when we need them. Urban farming and nutritious diets will be favoured by Singaporeans. E-shopping will be the new normal. We will have our energy needs met at least up to a quarter by renewable sources.

Owing to our robust electricity system we may become the biggest data centre of the region and perhaps the world. We may be supplying clean water, clean energy and nutritious food to the region. We will be mitigating the rise of the sea level while leveraging on opportunities with the emergence of new shipping and trading routes via the Arctic.

The World Health Organisation expects that one in four people in the

world will be above 65. As people pay more attention to health and well-being, they are likely to use more medicines and medical devices in addition to pursuing healthy lifestyles. As much as a quarter of our body weight is likely to be various medical devices! Aside from healthcare innovations, Singapore will have upgraded amenities, infrastructure (smart technologies-enabled walkways, building access, public transportation and roads), healthcare facilities, and opportunities for learning and skills upgrading.

Singapore in 2065 could be a key global node for finance, healthcare, sustainable technologies, dining, entertainment and space tourism. It will be a leading example of a livable city with high quality, smart infrastructure.

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