
Challenges for a New Era

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The 1971 Concept Plan that is reflected in the modern city-state of Singapore today was very much a product of its time, when the focus was on creating jobs and housing for a young nation. Nevertheless, the guiding vision of a highly liveable and economically vibrant Singapore remains relevant even now. The need for strong leadership, supported by the necessary plans, policies and legislation that take the long-term view, remains key to the realisation of our vision into the future. But the process of achieving it will be more challenging given Singapore's very different context today as a First World city state.

Firstly, our population is much bigger compared to 1965. As the population continues to grow, the demand for housing, facilities for the people like hospitals and schools, and for transport, will grow in tandem.

Our population is also rapidly ageing. We need to plan and develop infrastructure that creates opportunities for our elderly to remain economically active, socially engaged and mentally alert. This is so that they can age in place within their communities while leading independent and productive lives.

Adding to these challenges are the changing aspirations and expectations of Singaporeans. Compared to the past, many today value the less tangible aspects of life, such as pursuing one's interests, achieving work-life balance, and participating in civic life. All these translate into greater demand for public spaces like parks and greenery, for sports and recreation, as well as for the arts and heritage. Given that there is a limit as to how much more land can be created through reclamation, catering to all these different aspirations and expectations requires us to explore and experiment with new solutions—such as underground space.

Our economy is also changing in fundamental ways with rapid advances in technology. Disruptive technologies like additive manufacturing, robotics and automation are beginning to transform the nature of manufacturing, as well as displace traditional jobs. The distinction between manufacturing and services is blurring as the economy moves towards higher value-added activities like R&D and knowledge creation. The emergence of the sharing economy, facilitated by advances in infocomm

technologies (ICT), is changing the way businesses are conducted in a variety of areas, such as car-sharing, taxi booking apps, and short-term/tourist accommodation. Work aspirations are changing too, with more people willing to take the plunge to start their own businesses, instead of working in traditional office jobs. Advances in ICT also facilitate more flexible working arrangements such as telecommuting.

We cannot fully anticipate all future possibilities. But what we can do, and should do, is to ensure that our plans are flexible enough to support changing needs. For example, instead of planning for single-use spaces, we should plan for multiple uses, to facilitate synergies, and to enable uses to be changed more easily.

As our population and economy continue to grow and evolve, travel demands will increase. Today roads already take up 12% of our land area, close to the 14% for housing. This is not sustainable. Instead, we must explore ways to reduce travel, by bringing jobs closer to homes, through a more polycentric network of employment nodes distributed across the island. At the same time, we need to push for greater use of public transport. This means looking at disruptive technology that can offer new car-lite transport options that will require less road space, such as autonomous vehicles, as well as creating an environment that is conducive for walking and cycling. Resilience in our public transport system could be strengthened by supplementing the existing Mass Rapid Transit (MRT) network with new options, such as a bus rapid transit system (BRT).

As a small island city-state, Singapore is vulnerable to the impact of climate change. We are already experiencing more extreme weather conditions in the form of greater rainfall intensity, prolonged dry periods without rain, and more hot days. We need to find ways to maintain a highly liveable environment in spite of such extreme climate conditions. Mitigation measures will have to be introduced to reduce carbon emissions. Our buildings will have to be green and energy efficient. New ways of greening our built environment—such as through more vertical greenery—will have to be deployed. We will have to make space so that more sustainable energy sources such as solar and wind can be adopted.

Conclusions

As our land needs increase with a growing population and an evolving economy, there will be a limit to how much more we can expand our land capacity through incremental and conventional efforts. The philosophy of planning has to shift towards greater flexibility, more sharing of space for multiple uses, and an increased willingness to experiment with new ideas, as we work to realise our vision for Singapore in the next 50 years.