A smart nation limited only by imagination

Imagination is vital for a small country like Singapore in aiming big to stay ahead of the competition, said former head of civil service Peter Ho. And while Singapore's aim to be a Smart Nation is a product of its imagination, it is also limited by the nation's imagination, added Mr Ho in an IPS-Nathan Lecture on Wednesday. Below is a excerpt from the lecture by Mr Ho, who is currently the senior adviser to the Centre for Strategic Futures.

Peter Ho
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SINGAPORE has a big ambition to become a Smart Nation. But what is a Smart Nation?

On one level, it is about the exploitation of technologies in order to make the lives of people better, by giving them convenient and fast access to information and to customised services, including those that we cannot even imagine today. The current state of technology already offers all the ingredients of a Smart Nation.

But on another - I would argue more fundamental - level, being a Smart Nation calls for innovation at the systems level - aggregating technologies and combining them with new operating concepts, policies and plans - to solve national problems, such as the effects of climate change, traffic congestion, an ageing population, or simply to improve service delivery.

But its realisation is the sum of many innovations, big and small. Its ambition should be big, but its implementation is in hundreds and thousands of projects, both large and little.

But on both levels, it is a product of our imagination, and it is limited only by our imagination. Imagine a Smart Nation where there is increased efficiency, convenience and connectivity in and between workplaces and homes. Wearable technology such as hologram devices are used on the go to check and respond to work e-mails. Wi-Fi is available islandwide, eliminating restrictions from fixed data and limited call minutes. In the workplace, robots take over routine administrative tasks like coordinating meetings, conducting research and running daily errands.

At home, robotic helpers do the household chores and prepare meals. They order groceries when food items are low in stock, which are then delivered by drone to the doorstep.

Throughout Singapore, there are healthcare pods deployed islandwide at every housing block. These provide medical diagnosis, dispense medicine and provide simple medical services as well. These make it more convenient for elderly residents, who have mobility problems, and those who do not have the time to visit a clinic.

However, the Government may not be structured to reach this level of imagination and boldness of vision. Some might argue that it is not even its business. Innovation at this level is perhaps better achieved by the private sector, and by individual start-ups with the boldness and the ideas.

Empowerment is key. Too much top-down control will kill the spirit of innovation that is central to a Smart Nation. Instead, the role of the Government should be to facilitate such innovation by funding incentives and arrangements through flexible - rather than restrictive - regulations.

A good example of this approach is the Monetary Authority of Singapore's establishment of a regulatory sandbox last year to allow fintech companies to experiment with products and services in an environment where, if an experiment fails, "it fails safely and cheaply within controlled boundaries, without widespread adverse consequences".

The Government also has a key role in connecting these innovations to their societal environments, by encouraging and organising test-bedding and pilots of Smart Nation technologies in real-life settings, and perhaps even by insuring the risk of some of these experiments.

In Singapore, a precinct - one-north - is now the site of a major pilot for the use of autonomous vehicles - or driverless cars - testing not just the technologies for the cars, but also for the road furniture. Such experiments and trials are essential because the development of these technologies and their applications need to be test-bedded in real environments.

If the pilot is successful, then the programme may be expanded beyond this precinct into the larger national transport system, relieving road congestion and getting people to their destinations faster - and more safely - and, like Car-Free Sunday SG, helping to realise the vision of a car-lite Singapore.

Politics and trust

But there is a political challenge to such ambition. There are many misconceptions about the technologies associated with a Smart Nation. One big misconception is that in a 24/7 online world constantly surrounded by innumerable sensors and smart objects all connected to the Internet - the Internet of Things - absolute privacy and absolute security can be achieved.

As smart objects seek to gather more contextual information on behaviour and actions, the ability of smart devices to analyse people's lives and discover their identities will challenge traditional notions of privacy. Such information can clearly be misused and abused, compromising privacy and security.

There is another related issue - a fear, perhaps irrational in some countries and rational in others - that the government will exploit these technologies to intrude into the private lives of citizens, or to create an Orwellian system of mass state surveillance.

To overcome these misconceptions, a mature discussion is needed, not a polemical one. The Government has a central role to play in shaping this discussion. It will have to persuade citizens that the benefits outweigh the risks of exploiting these technologies, and then explain how the risks can be managed.

This is clearly in the realm of politics, and the onus must be on the political leadership to convince the people that such fears are misplaced in Singapore. But this can be achieved only if there is trust between the people and the Government. As I observed earlier, trust in a fast- changing and complex world is a vital asset to good governance.

Change cannot be avoided. Innovation must be continuous because the world does not stand still. Change and its handmaiden - innovation - must be embraced as an imperative of governance. Furthermore, there is no end point. It is a journey without a fixed destination, because the future is an ever-shifting horizon.

But people dislike change - it is human nature. Change requires leadership, because it means leading people out of their comfort zone. Getting them to change is an act of will. The future-fit leader has to persuade his people to believe in the need for change, instil confidence in change and empower his people to change.

Successful leaders of change also make their people brave enough to express their opinions, change their behaviour, take risks and learn from failure. They tolerate mavericks - even if they do not embrace them - because all future-fit organisations need mavericks. They are the ones who are prepared to challenge conventional wisdom and come up with the ideas that can change the rules of the game. Some will argue that leaders should be more tolerant of mavericks.

My response to this is: "Yes, but only up to a point." A maverick is a maverick only if he is fighting the establishment. If he believes enough in his ideas, he ought to have the courage and conviction of his beliefs to push them, even against resistance. If he gives up the moment he runs into some opposition or official rebuff, then in my book, he is not a maverick. I think this is a sound approach. It is essentially a Darwinian process, in which only those who have thought through their ideas and are prepared to stand up and defend them, deserve the chance of a second hearing. Some mavericks will survive.

In today's world of accelerating change - the Anthropocene - we will need to dare to dream and to experiment with things no one else has done before. We must steel ourselves to embark on journeys of discovery, in which the destinations are unknown, and we must be prepared to cope with unexpected outcomes, to experiment, to manage the risk, to fail and then to pick ourselves up and keep going.