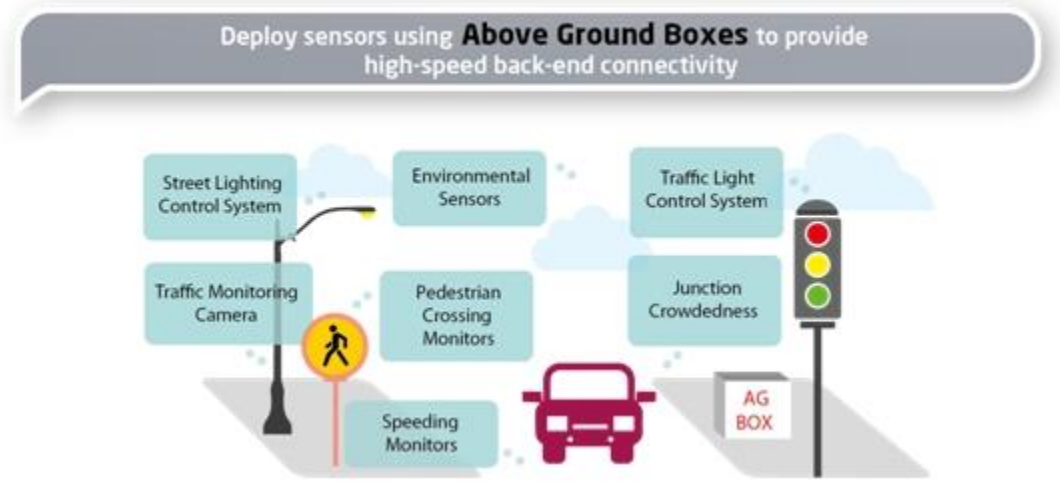
Above Ground Box

Cities worldwide are facing challenges that urbanisation and rapid population growth bring, such as pollution, resource constraints and public safety. One way to deal with these challenges is to deploy a vast array of sensors to gather data for analysis. The information derived from data analysis can aid the government in making well-informed and timely decisions, and thus improve its city management services.

To deploy sensors nationwide, we need a whole new approach to infrastructure investment and deployment. Now, because we lack a common sensor infrastructure, outdoor sensors are deployed in ad-hoc manner, with limited co-ordination and planning across service providers. This results in long and costly deployment processes, which arise from issues such as site surveys, trenching and the laying of fibre and power cables. The current situation is not sustainable or scalable in view of the growing need for sensors.

We are thus considering ways to aggregate the demand for sensor deployment on a common secure platform. This can be done by the inclusion of Above Ground ("**AG**") Boxes in the core nationwide infrastructure. AG Boxes will build on the earlier infrastructure investments, such as Next Gen NBN. They provide a ready-built common infrastructure for sensor deployment by supplying points for fibre access and power. This reduces the need for unnecessary groundwork, thereby reducing deployment time and cost.

We target to install these AG Boxes in common outdoor areas where there is demand for sensor-based technologies. These places include bus stops, parks and traffic junctions. The end goal is to have a speedy, secure, cost-effective and scalable nationwide sensor communication infrastructure.



Opportunities for the ICM Sectors

Deploying a sensor communication backbone nationwide can benefit different sectors. In manufacturing and design, the IP rights surrounding the architecture of the AG Box can be exported and monetised in other markets that require a reference model for large-scale use of sensor technologies. Being one of the first to roll out such infrastructure gives us relevant expertise that allows us to collaborate with other cities to develop their own precincts. These cities could become lead markets for the design and manufacturing of sensor-related communications infrastructure.

The rollout of AG Boxes can also provide an incentive for new research efforts in sensor design and management. Because there is a common communication platform, there is a reason to have a standardised sensor interface that can reduce the cost of manufacturing sensors and related equipment. Singapore can also be a test bed for new sensor technologies to global electronic companies. These firms may find our strong legal framework for IP rights an important consideration when choosing a place to set up their R&D facilities and to file their patents.

With the nationwide deployment of sensors, the volume of information and data gleaned from the network of sensors will grow. The increase can help catalyse the local data analytics scene. In turn, the demand for data processing and analysis services can drive the demand for related ICM solutions and talent.

Lastly, as densely-populated areas get more connected, other commercial ICM services such as wireless payment can be deployed with ease. Information from these services also allows advertising firms to tailor their marketing campaigns to their target audience.