Annex B

PDD's district-level infrastructure system and services

The following district-level infrastructure system and technologies will be developed in PDD:

1. **Integrated Facilities Management -** To manage our building developments sustainably and enhance user experiences, PDD will adopt an integrated facilities management approach that centralises the operations of all building services. This allows us to centrally and remotely monitor, analyse, optimise and control the building systems.

2. **Pneumatic Waste Conveyance System -** An automated waste collection system that transports waste at high speed through an underground pipe network to a collection station where it is compacted and sealed in containers. When the container is full, it is transported away and emptied. This means that the entire waste disposal process will be sealed, and our air will be kept odour-free and fresh.

3. **District Cooling System -** A system that produces chilled water at a central plant and then pipe that energy out to buildings for air conditioning, space heating and water hearing. This enables about 30-40 % space and cost savings, with reduction in our carbon footprint.

4. **Solar-powered generation technology -** Deployed on roofs to add more clean energy to the power grid.

5. **Centralised Logistics Hub –** Goods could potentially be dropped off and picked up at a Centralised Logistics Hub, improving productivity and reducing congestion on roads. Robots or AVs could pick up goods from the Hub and deliver them to customers within the District.

6. **IoT systems –** The District will be built with IoT systems from the ground up that allows continuous digital experimentation and innovation. The community is welcome to provide ideas and participate in creating new products and services. In line with its work on the Smart Nation Sensor Platform, GovTech will also trial IoT and sensors technologies to enhance community living, for possible future deployment in PDD. This could potentially include environmental sensors to monitor air quality and noise, and cameras to detect, classify and count personal mobility devices in public spaces such as cycling paths, pedestrian walkways and roads.