## SINGTEL ON CONNECTED ACCESS WITH DIGITAL LOCKS - FRICTIONLESS, SMART PERIMETER SECURITY AT SCALE

The remote access management and monitoring of high-value, distributed infrastructure assets is an historically difficult, labor-intensive, disconnected, and non-scaling burden. Singtel's vision of a frictionless, smart, highly scalable perimeter access control solution begins today with a planned commercial launch of igloohome's connected digital lock system.

Singtel and igloohome (a Singtel-funded start-up) are excited to announce the upcoming commercial launch of their Connected Perimeter Access solution, based on igloohome's connected lock technology. The solution provides real-time, scalable remote control, management, and monitoring of distributed infrastructure perimeter access. Igloohome works with leading property developers throughout Asia, including but not limited to Sansiri (Thailand), Capitaland (Vietnam), and Mitsubishi (Japan).

Matthew Ng, VP of Product igloohome says: "We have adopted carrier-grade IoT network technologies like LTE-M and NB-IoT as they are increasingly prevalent among global operator IoT solutions deployments. In Singapore, we rely on Singtel's NB-IoT cellular network because of its wide coverage and high availability. These high-quality public IoT networks gives us faster time-to-market, and obviate the need to deploy our own private network, or implement discrete connectivity hubs/ gateways. LTE-M and NB-IoT are very power efficient, making our battery-powered smart locks more appealing to end users."

Igloohome is a worldwide partner of Airbnb, Booking.com, and Agoda, works with over 50 distributors, and ships to more than 90 countries. A global operator-deployed standard like NB-IoT is an essential element in support of igloohome's global business. Rahul Mehta, IoT Product Lead, igloohome comments: "We have extensively tested our NB-IoT locks across many countries in Asia, and they have performed well among all deployment scenarios - from deep indoor, to outdoor, and even remote locations. We are excited to meet the global market demand for our connected smart locks solution, a task that's simplified by a global IoT network standard like NB-IoT."

Igloohome first proved its technology in the vacation rental space, partnering with Airbnb to simplify host-controlled guest access without the need for a physical key exchange. The solution further enhanced host peace of mind with on-demand, detailed visibility of guest-specific room, site or location access.

Igloohome then broadened its offering to address the needs of different categories of home and property owners, addressing the operational and security limitations of physical keys, and enabling use cases like time-sensitive, remote monitored and controlled access for delivery and trade services, and access expiration for former tenants.

## NB-IoT Smart Lock on Gate



4G

Anthony Chow, CEO of igloohome, reflects, "Our vision is to create access ecosystems for smart cities, increasing efficiency and reducing costs. Globally deployed high-availability, powerefficient network standards like CAT-M1 (LTE-M) and NB-IoT help accelerate making our vision a worldwide

## SINGTEL'S MOBILE IOT STRATEGY

IoT depends heavily on low power wide area network, a technology that interconnects lowbandwidth, battery-powered devices over long ranges. In view of this, Singtel's main focus is on enhancing its low power wide area network to align with two 3rd Generation Partnership Project standards, Long Term Evolution for Machines (LTE-M or Category M1 (CAT-M1)) and NarrowBand IoT (NB-IoT). LTE-M is all about extending the battery life of devices while offering enough bandwidth for communication, while NB-IoT is a cost- and powerefficient technology that supports a wide range of commercial uses.

In Singapore and Australia, demand for IoT revolves around smart cities, utilities, and urban infrastructure such as smart meters, smart streetlights, energy management and industrial processes. To address the growing demand for IoT in both the enterprise and consumer space, Singtel partners with solution providers and government agencies to develop specific use cases for mobile IoT. This includes utilities metering, smart locks, fleet management and environmental sensing.

"In this new paradigm where data-driven strategies are the bedrock of successful businesses, IoT is instrumental in enabling enterprises to mine valuable data from proprietary sources and devices. We are also actively researching new technologies such as artificial intelligence, machine learning and blockchain to develop mobile IoT solutions that can turn data into actionable business insights," says Diomedes Kastanis, Head of IoT, Singtel. "Asia Pacific's IoT adoption speed is phenomenal. From government to app developers, there is strong determination all around to accelerate IoT deployment."

## NB-IoT Smart Lock on Metal Door



To move forward, the region will need to overcome fragmentation barriers. Countries in the region have varying levels of maturity in terms of infrastructure and IoT development. This, coupled with the diversity of languages and a lack of a uniform standard makes interoperability across countries difficult to achieve without regional collaboration.

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