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NEWS RELEASE

CapitaLand partners NavInfo DataTech and TPG Telecom to set up Singapore's largest 5G smart estate trial site at Singapore Science Park

***First in Southeast Asia to use 5G enabled Cellular Vehicle-to-Everything
technology to testbed smart mobility solutions in a commercial space***

Singapore, 17 October 2019 – CapitaLand is partnering NavInfo DataTech and TPG Telecom to set up Singapore's largest 5G smart estate trial site at CapitaLand's Singapore Science Park. As the first of the use-cases, the partners are the first in Southeast Asia to develop and testbed 5G enabled Cellular Vehicle-to-Everything (C-V2X) technologies¹ for intelligent mobility solutions in a commercial space. This was announced today by Mr S Iswaran, Minister of Communications and Information, Ministry for Communications and Information Singapore, at SG:D Industry Day.

The 5G smart estate trial and C-V2X technology are key pillars of the Smart Urban Co-Innovation Lab that CapitaLand is setting up at Singapore Science Park with the support of Infocomm Media Development Authority (IMDA) and Enterprise Singapore. The Lab aims to provide the industry and the public with a unique opportunity to discover, develop, test and deploy new, sustainable smart city products, services and solutions. These projects are supported under a S\$40 million fund by IMDA and National Research Foundation to build an open and inclusive 5G Innovation ecosystem.

Mr Manohar Khatani, Senior Executive Director, CapitaLand Group said: "As one of Asia's largest diversified real estate groups, CapitaLand is able to leverage our scale to pilot impactful large-scale projects and testbed new technologies. With IMDA's support and our partnership with NavInfo and TPG, we are delighted to be able to set up Singapore's largest 5G smart estate trial site at Singapore Science Park. This reinforces Singapore Science Park's position as a living lab for co-innovation and a catalyst for industry transformation, supporting Singapore's drive towards the Digital Economy. We will continue to leverage technologies and test new ideas to bring innovative real estate products and services to our customers in Singapore and beyond."

Industry players and Singapore Science Park customers who are interested to leverage the 5G infrastructure to develop and trial new and innovative solutions can submit their use-cases through the Smart Urban Co-Innovation Lab. These use-cases can include solutions that would benefit from low latency and increased data rates of 5G such as drones and augmented

¹ For more information on 5G and C-V2X technology, please refer to Annex.

reality/virtual reality applications. Moreover, subscribers of TPG Telecom, with compatible 5G devices, will also be able to enjoy 5G services for the first time in Singapore.

Mr Tan Kiat How, Chief Executive, IMDA, said: "I am encouraged to see our industry partners working together to develop impactful services that bring benefit to our businesses and consumers. I hope to see more partners join us to co-create an innovative, vibrant 5G ecosystem in support of Singapore's Digital Economy."

TPG Telecom will deploy an advanced 5G trial network with better than 99% 3.5GHz outdoor coverage across Singapore Science Parks 1 and 2 by 2020. This will be based on a commercially ready 5G core that follows 3rd Generation Partnership Project (3GPP) Release 15, the newest 5G standard. When Release 16 is finalised in 2020, it will feature even higher speeds and data capacity transmissions while reducing network latency by up to 10 times. 3GPP Release 16 is expected to support enhancements such as Industrial Internet-of-Things and advanced automotive connectivity.

Mr Richard Tan, Managing Director & Acting CEO, TPG Telecom said: "TPG is pleased to partner with CapitaLand and NavInfo to deliver a full coverage 5G network in support of Singapore's first 5G smart estate use-case. TPG has deep engineering knowledge and expertise, and we are committed to track the rapidly evolving 5G 3GPP developments to bring the true benefits of 5G for the greater good of all industry collaborators on this platform."

NavInfo DataTech, a Singapore company focused on advanced Geographic Information System solutions across transport, planning, and logistics industries, will provide technology know-how, domain expertise, and necessary infrastructure to set up their proprietary High Definition Global Navigation Satellite System, Cloud Control Platform and Highly Autonomous Driving maps for Singapore Science Park. The 5G enabled C-V2X smart estate testbed will include smart mobility assets like autonomous vehicles, smart mobility infrastructure technologies, and in-car experience solutions.

Mr Jonathan Ng, CEO, NavInfo DataTech said: "We are keen to demonstrate our advanced mobility solutions in a complex commercial setting that will deliver enhanced connectivity and safety within the park, whilst improving quality of life for tenants and visitors alike, all enabled by a pervasive 5G network. As much as the industry learnings here are crucial, the local capability development opportunity in this rapidly expanding field of smart mobility will be extremely impactful."

About CapitaLand Limited (www.capitaland.com)

CapitaLand Limited (CapitaLand) is one of Asia's largest diversified real estate groups. Headquartered and listed in Singapore, it owns and manages a global portfolio worth S\$129.1 billion as at 30 June 2019. CapitaLand's portfolio spans across diversified real estate classes which includes commercial, retail; business park, industrial and logistics; integrated development, urban development; as well as lodging and residential. With a presence across more than 200 cities in over 30 countries, the Group focuses on Singapore and China as its core markets, while it continues to expand in markets such as India, Vietnam, Australia, Europe and the USA.

CapitaLand has one of the largest real estate investment management businesses globally. It manages eight listed real estate investment trusts (REITs) and business trusts as well as over 20 private funds. Since it pioneered REITs in Singapore with the listing of CapitaLand Mall Trust in 2002, CapitaLand's REITs and business trusts have expanded to include Ascendas Reit, CapitaLand Commercial Trust, Ascott Residence Trust, CapitaLand Retail China Trust, Ascendas India Trust, CapitaLand Malaysia Mall Trust and Ascendas Hospitality Trust.

About Infocomm Media Development Authority (www.imda.gov.sg)

The Infocomm Media Development Authority (IMDA) leads Singapore's digital transformation with infocomm media. To do this, IMDA will develop a dynamic digital economy and a cohesive digital society, driven by an exceptional infocomm media (ICM) ecosystem – by developing talent, strengthening business capabilities, and enhancing Singapore's ICM infrastructure. IMDA also regulates the telecommunications and media sectors to safeguard consumer interests while fostering a pro-business environment, and enhances Singapore's data protection regime through the Personal Data Protection Commission. For more news and information, visit www.imda.gov.sg or follow IMDA on Facebook [IMDAsg](#) and Twitter [@IMDAsg](#).

About NavInfo DataTech (www.navinfo.com)

NavInfo DataTech is a Singaporean smart mobility company formed in early 2018 with the mandate to build enablers for intelligent mobility through class-leading, proprietary geospatial technologies of advanced telematics, mapping, and Geographic Information System solutions. Core technologies include High Definition Global Navigation Satellite System that enables millimetre to centimetre real-time accuracy, Highly Autonomous Driving Maps that empower connected and autonomous vehicles to assimilate better to their immediate environment, and a dynamic Cloud Control Platform that effortlessly blends these technologies to deliver a compelling smart mobility solution to business owners and fleets.

About TPG Telecom (www.tpgmobile.sg)

TPG is Singapore's 4th Mobile Network Operator with an island-wide 4G network providing 99% outdoor coverage. After launching with market innovations such as free mobile service trial with unlimited data and free data roaming to Malaysia and Indonesia, TPG has to date signed up more than 300,000 customers in Singapore. TPG is a subsidiary of the TPG Telecom group (ASX: TPM), Australia's second largest fixed line provider and leading market challenger with more than 2 million customers.

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Annex

5G is globally acknowledged to be the next big leap in mobile and wireless communications. As Singapore accelerates its transformation into an advanced Digital Economy, 5G is expected to be a key disruptive technology that will change the way people work, connect and transact with each other.

C-V2X technology allows vehicles to communicate with each other and virtually everything around them, including connecting vehicles to infrastructure, pedestrians and cloud. Vehicles with this technology will be able to sense people nearby even when drivers cannot see them, providing a higher level of predictability for improved road safety and a path towards autonomous driving. The vehicles can also be designed to send alerts to pedestrians and drivers through smartphone applications or connected wearable devices like smart watches.