GSMA

Summit

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Future Technologies - Connectivity choices for international IoT

未来技术 - 国际物联网的连接选择

Speaker

Kelvin Pan,

General Manager,
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Hosted @ MWC GSMA

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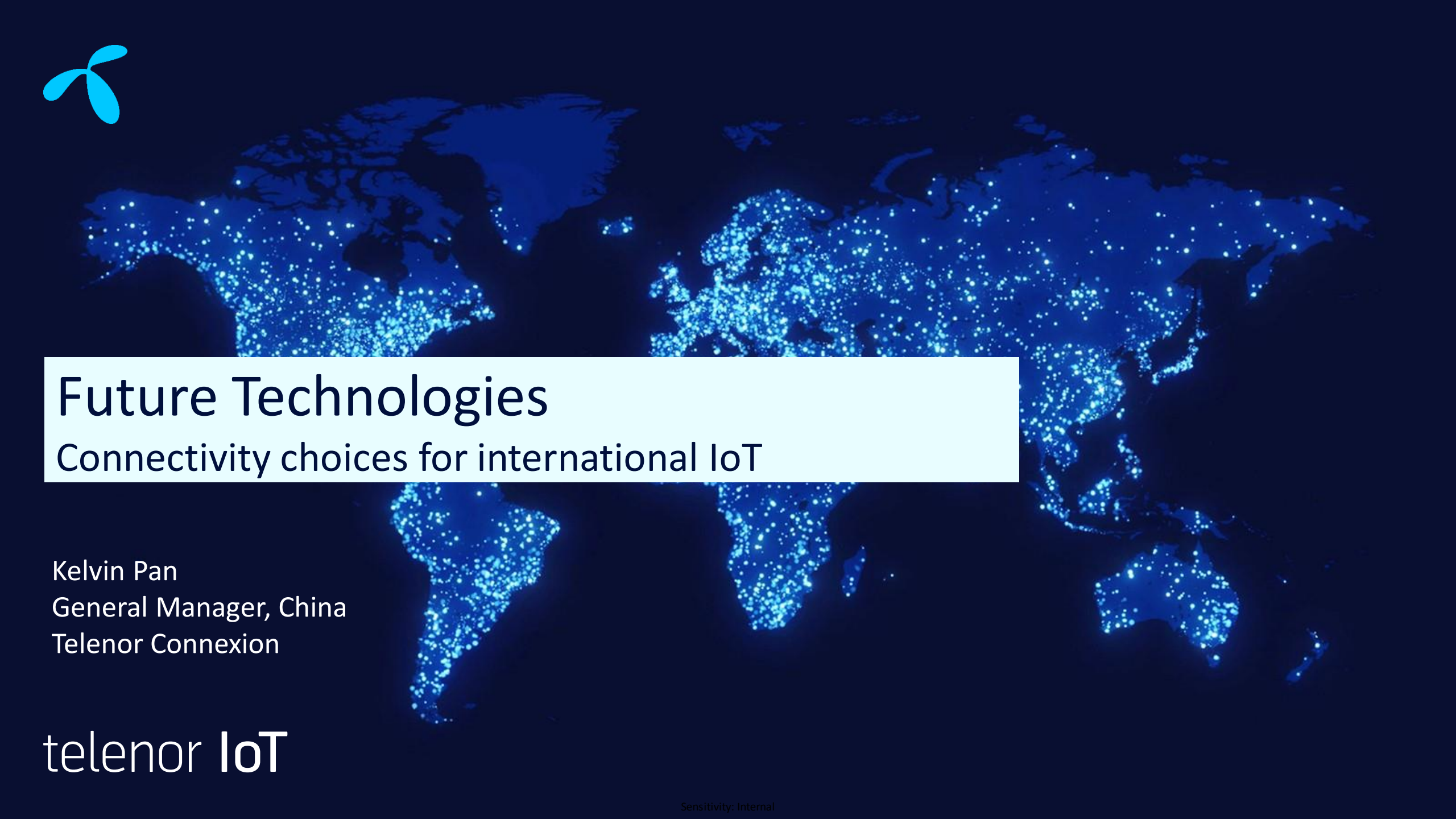
HUAWEI

Kelvin Pan, Telenor IoT 总经理



Future Technologies

Connectivity choices for international IoT

Kelvin Pan
General Manager, China
Telenor Connexion

telenor IoT

The first choice for IoT

Telenor IoT
Top IoT operator
in Asia & worldwide

Telenor
Established 1855
163 years History

Global IoT Coverage

500+ networks globally

200+ countries

Global IoT Organisation

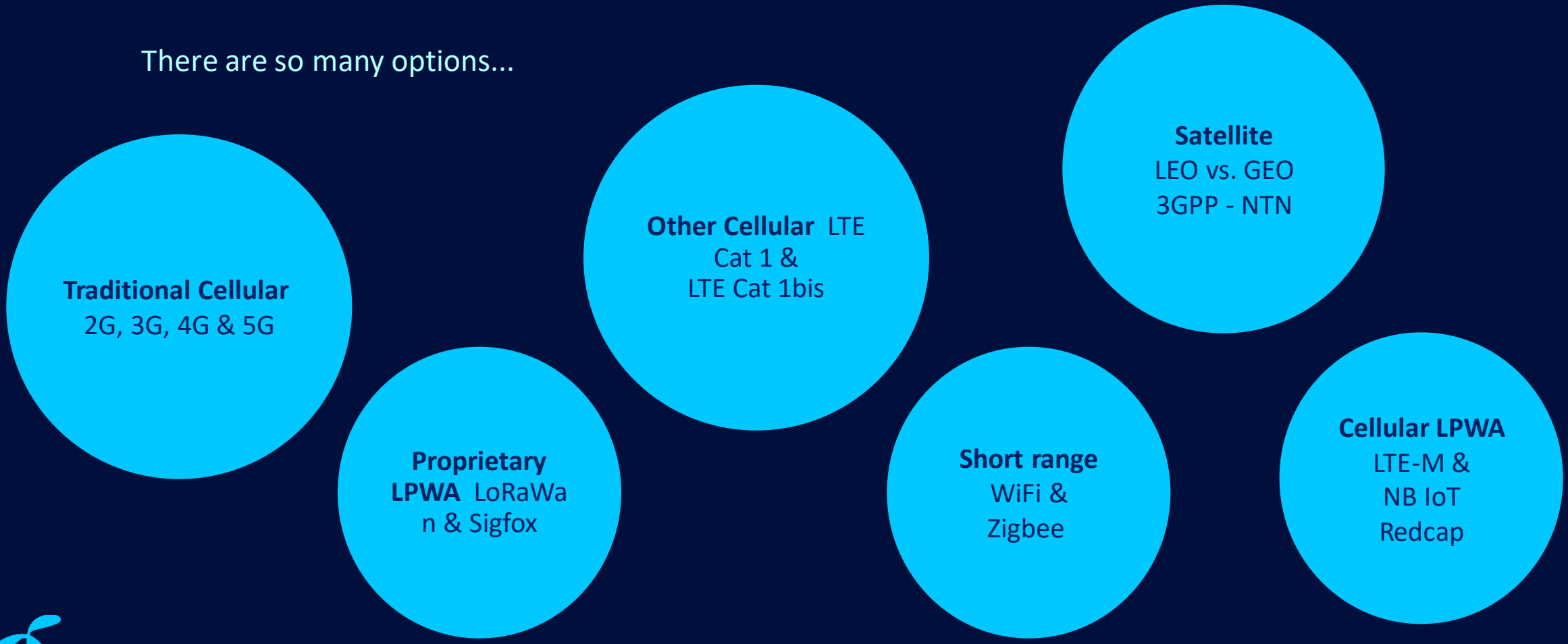
- Sweden
- UK
- US
- South Africa
- China
- Korea
- Australia
- Japan
- Malaysia
- Germany
- Belgium
- Netherlands

Trusted by World Leaders

VOLVO, SCANIA, GWM, Husqvarna, verisure SMART ALARMS, SAIC MOTOR, xylem, HITACHI, SANXING

How to choose the right technology for international IoT deployment?

There are so many options...



Most important is your use case

- Where should your product be deployed?
- When should you start delivering services?
- How important is the connectivity for the user experience?
- How should your supply chain work?
- How much data is needed?
- Will your service require real time interaction with the end user?
- What business model are you looking for?

How to choose the right technology?

And many aspects to consider

Technical

Global managed IoT connectivity services and expert support to companies of all sizes.

Commercial

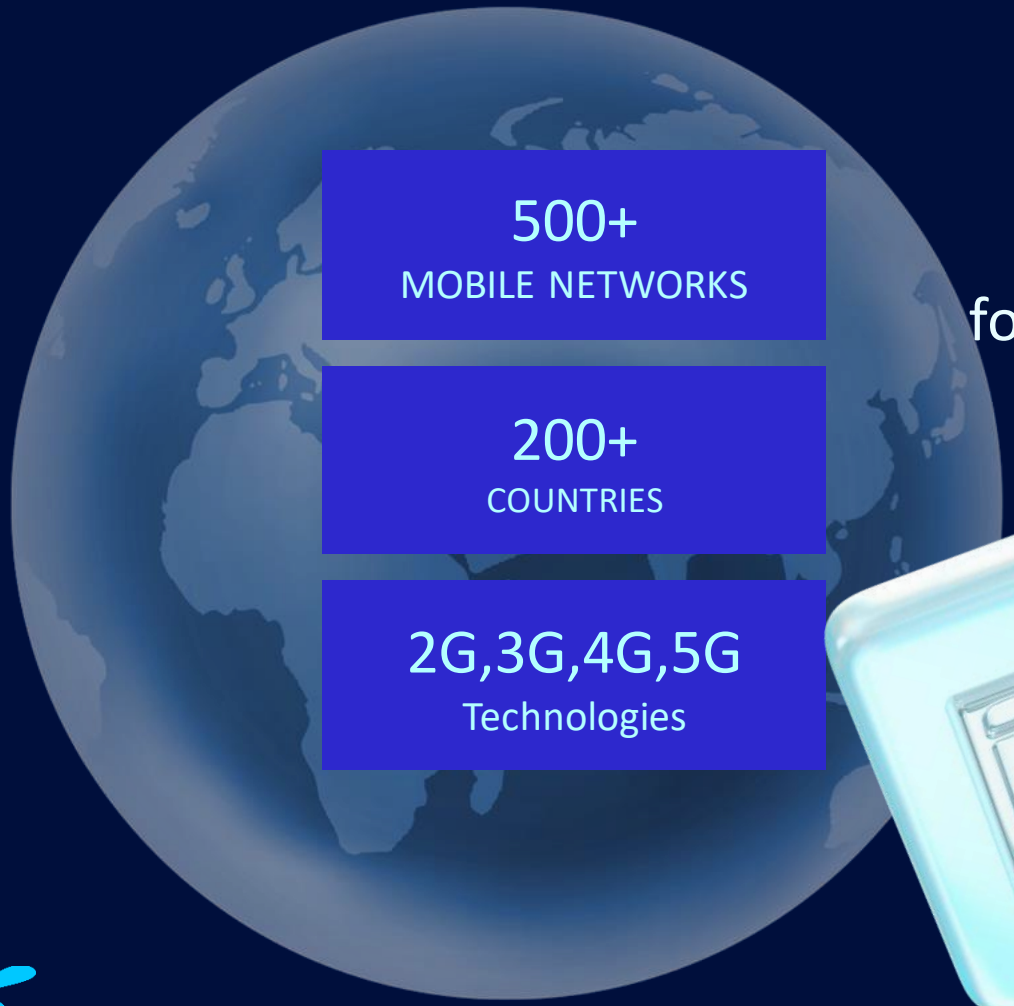
End-to-end connectivity service for companies looking to connect their products faster, easier, and with higher quality.

Ecosystem

Future proofness, Global reach and interoperability

For international IoT mobile is often ideal

Managed IoT Service Providers enable efficient international IoT deployments



500+
MOBILE NETWORKS

200+
COUNTRIES

2G,3G,4G,5G
Technologies

ONE

ONE SIM card
for the whole world

ONE contract & relationship

ONE consolidated invoice

ONE support operations centre

ONE API

ONE roadmap

International access can be secured through roaming or local access with the Single Point of Contact

	Roaming (Global SIM)	Local access (eSIM)
Coverage / redundancy	**Global / multi-network**	**Selected countries / single network** (typically)
Cost	**Low**	**High**
Maturity	**High**	**Medium**
Data rates / latency	**High / low** (today w. local break-out)	**Ultra-high / low,** (if 5G SA enabled in network)
Regulatory restrictions	**A few countries**	**None** (if related constraints met, e.g., know-your-customer, fingerprints, data sovereignty, …)
	Recommended for majority of IoT use cases and countries in 2025	**Recommended for use cases or locations where roaming is not ideal**

What’s your use case?

Low Medium High

Technical considerations	Traditional cellular				Other cellular	LPWA Cellular		Proprietary LPWA	Short range		
	2G	3G	4G	5G	LTE Cat-1	LTE-M	NB-IoT	LoRaWan	Wi-Fi	Zigbee	Bluetooth LE
Outdoor range											
Indoor coverage											
Energy efficiency											
Typical uplink data rate											
Typical downlink data rate											
Mobility											
Positioning											
Latency											
Device density											
Commercial considerations	**Traditional cellular**				**Other cellular**	**Cellular LPWA**		**Proprietary LPWA**	**Short range**		
	2G	3G	4G	5G	LTE Cat-1	LTE-M	NB-IoT	LoRaWan	Wi-Fi	Zigbee	Bluetooth LE
Module cost											
Subscription cost	yes	yes	yes	yes	yes	yes	yes	yes/no	no	no	no
Deployment & maintenance cost											
Reliability											
Security											
Scalability											
Ecosystem considerations	**Traditional cellular**				**Other cellular**	**LPWA Cellular**		**Proprietary LPWA**	**Short range**		
	2G	3G	4G	5G	LTE Cat-1	LTE-M	NB-IoT	LoRaWan	Wi-Fi	Zigbee	Bluetooth LE
Future proofness											
Global reach & operability											

Table 1: Main technologies for IoT with strengths and weaknesses

Connectivity technologies for IoT

2023 Edition

This report was produced in collaboration with Accenture.

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