

IoT Summit

Wi-Fi 6, 5G and the IoT

Cees Links

General Manager Wireless Connectivity

Shenzhen – 4 December 2018



QORVO
all around you

Agenda

- 5G and Wi-Fi 6 (.11ax) are arriving
- Access to be sorted out
- The Shake-Up
- We are **Qorvo**



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IEEE 802.11ax



Range



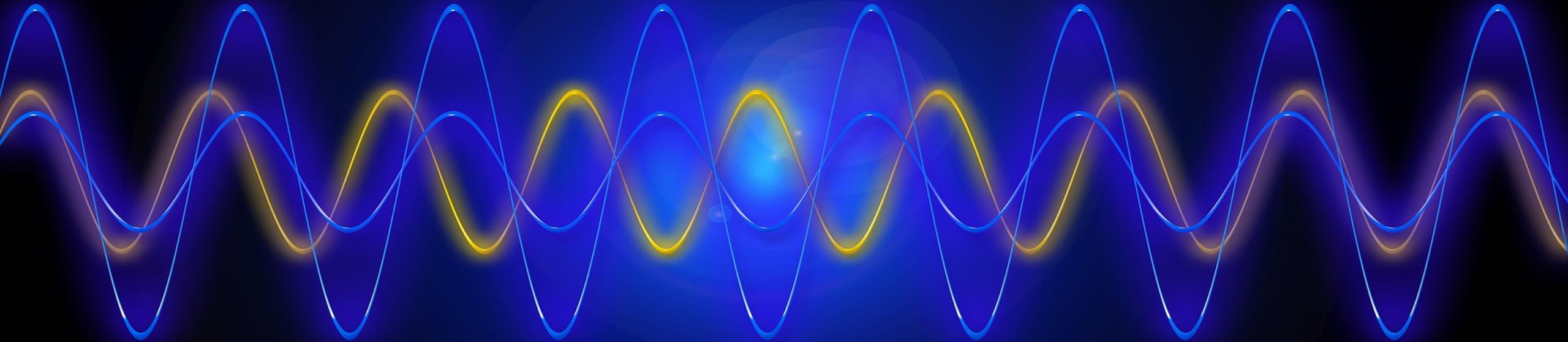
Data Rate



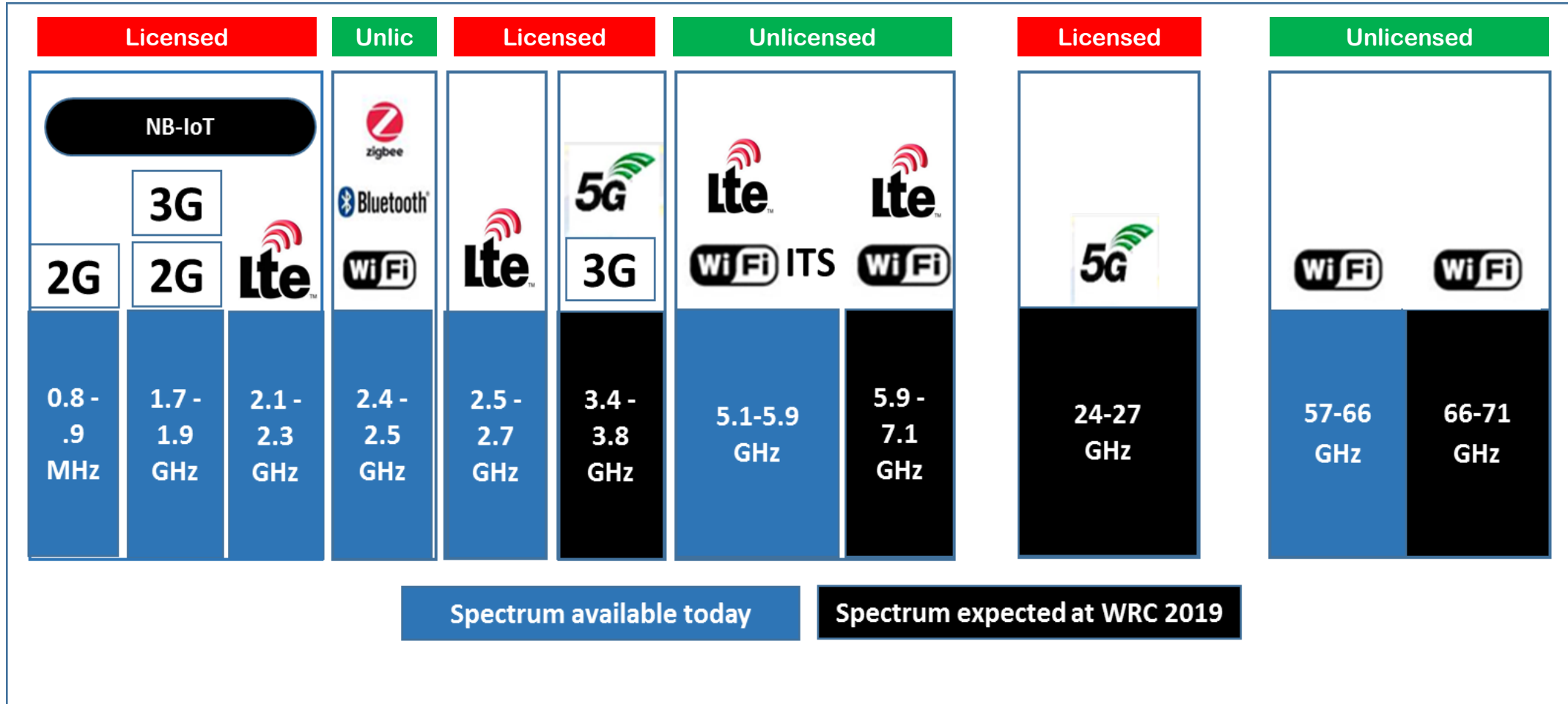
Capacity



Frequency



Spectrum



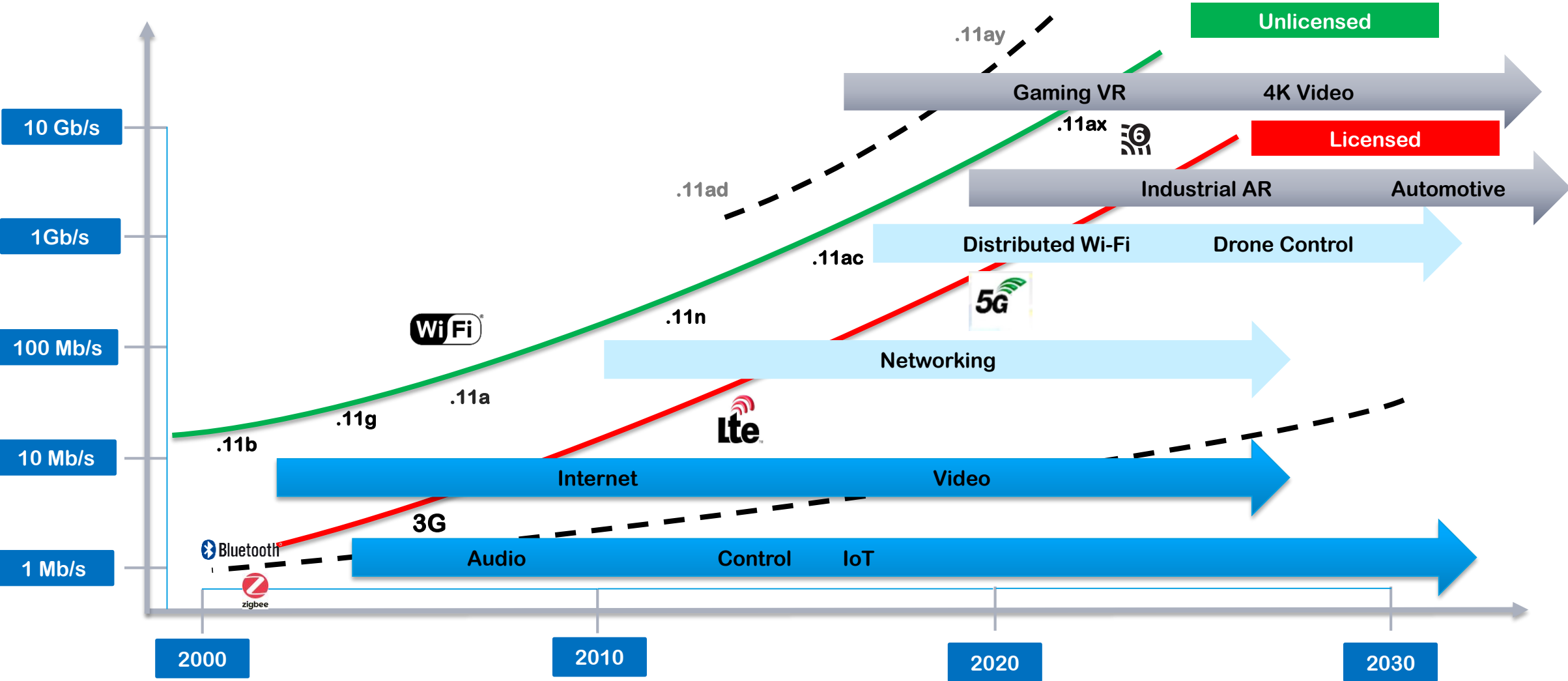
Power



Battery Life

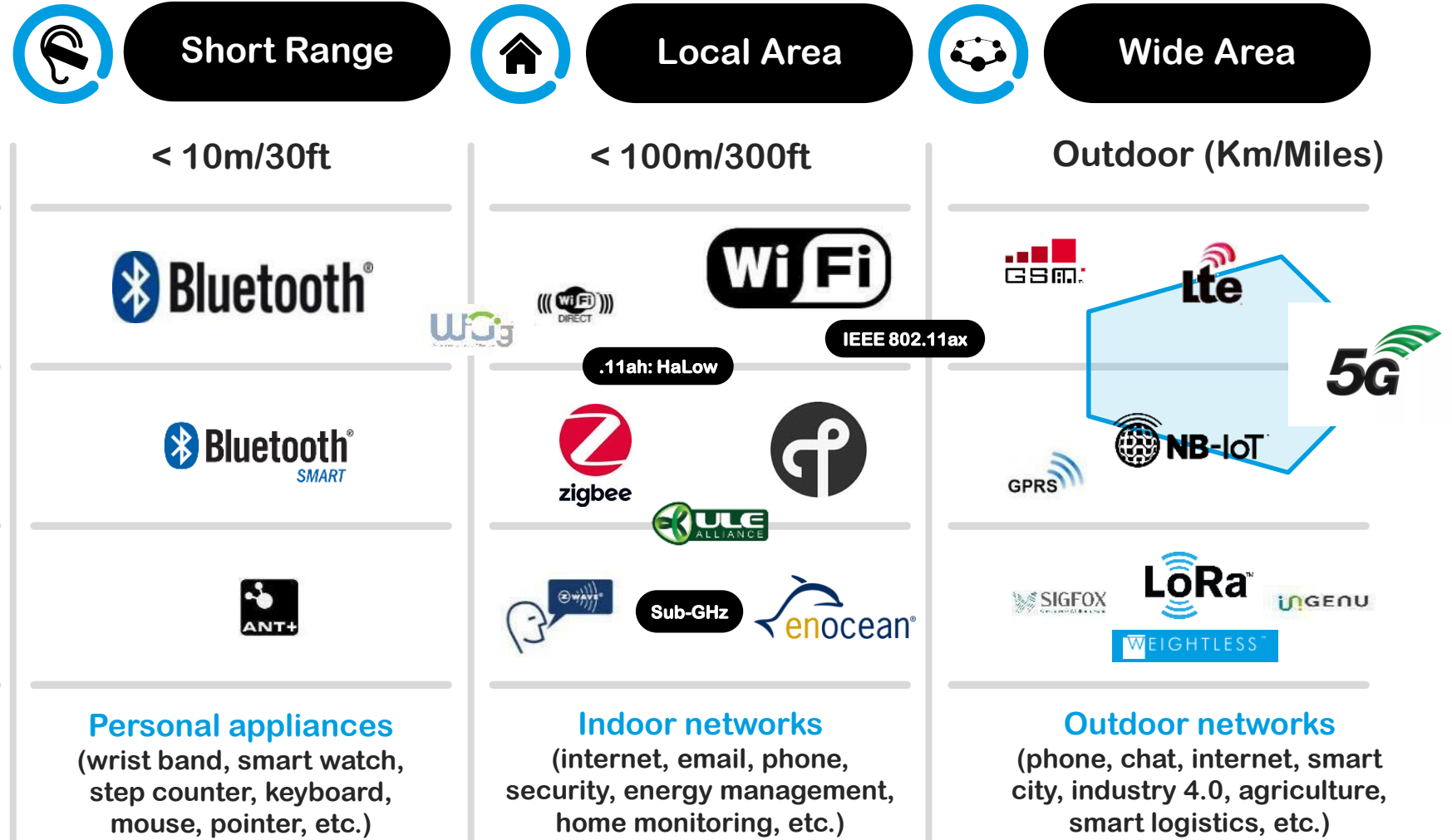


Appetite for Speed






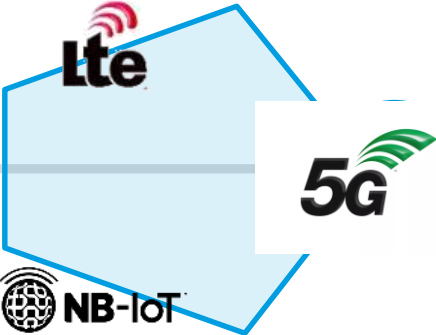





Protocol Landscape Fragmented

Qorvo technology is agnostic



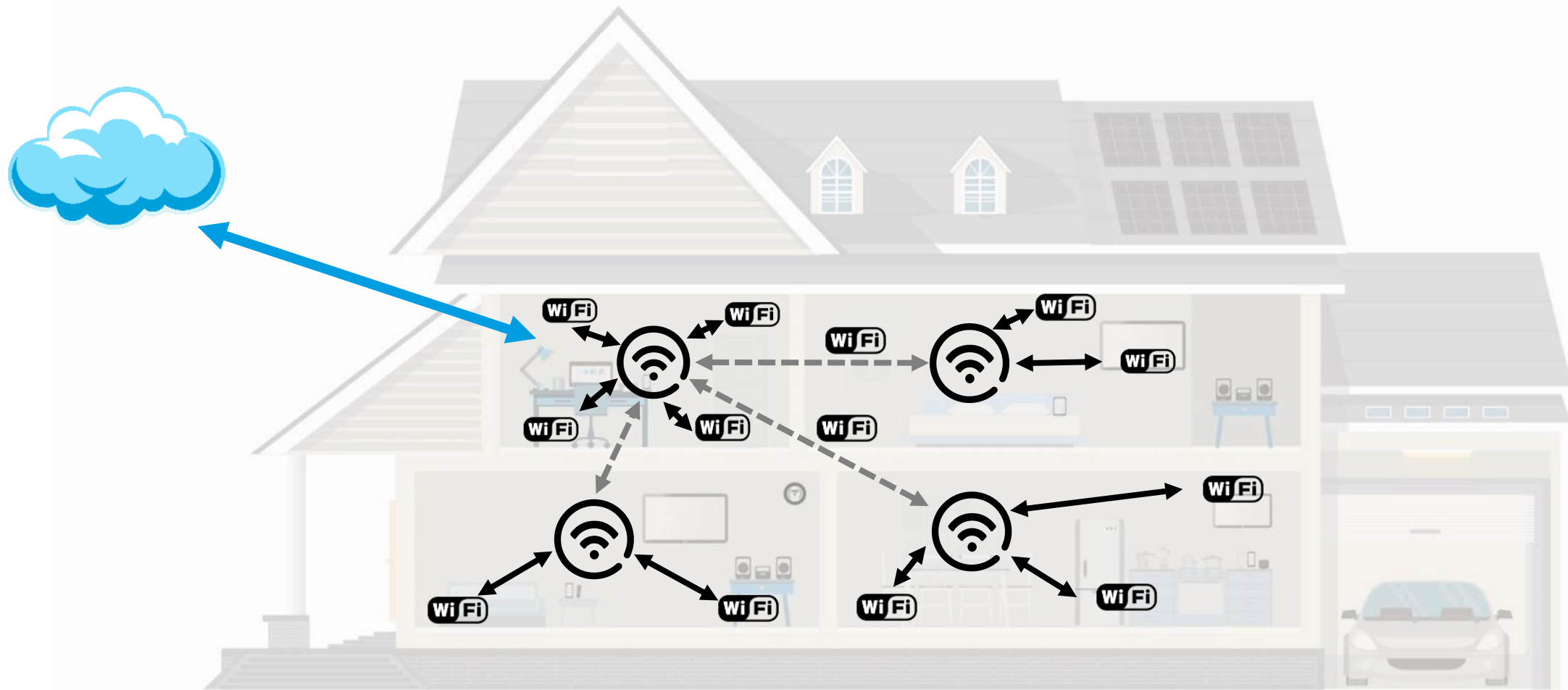
The End-Game?

	 Wearables	 Home	 Phone
Range (typical)	< 10m/30ft	< 100m/300ft	Outdoor (Km/Miles)
Phone (Content)	 Bluetooth [®]		
IoT (Sense & Control)	 Bluetooth [®] <small>SMART</small>	 zigbee	
Typical applications	Personal appliances (wrist band, smart watch, step counter, keyboard, mouse, pointer, etc.)	Indoor networks (internet, email, phone, security, energy management, home monitoring, etc.)	Outdoor networks (phone, chat, internet, smart city, industry 4.0, agriculture, smart logistics, etc.)



Wi-Fi 6: Distributed Wi-Fi

One Pod Per Room

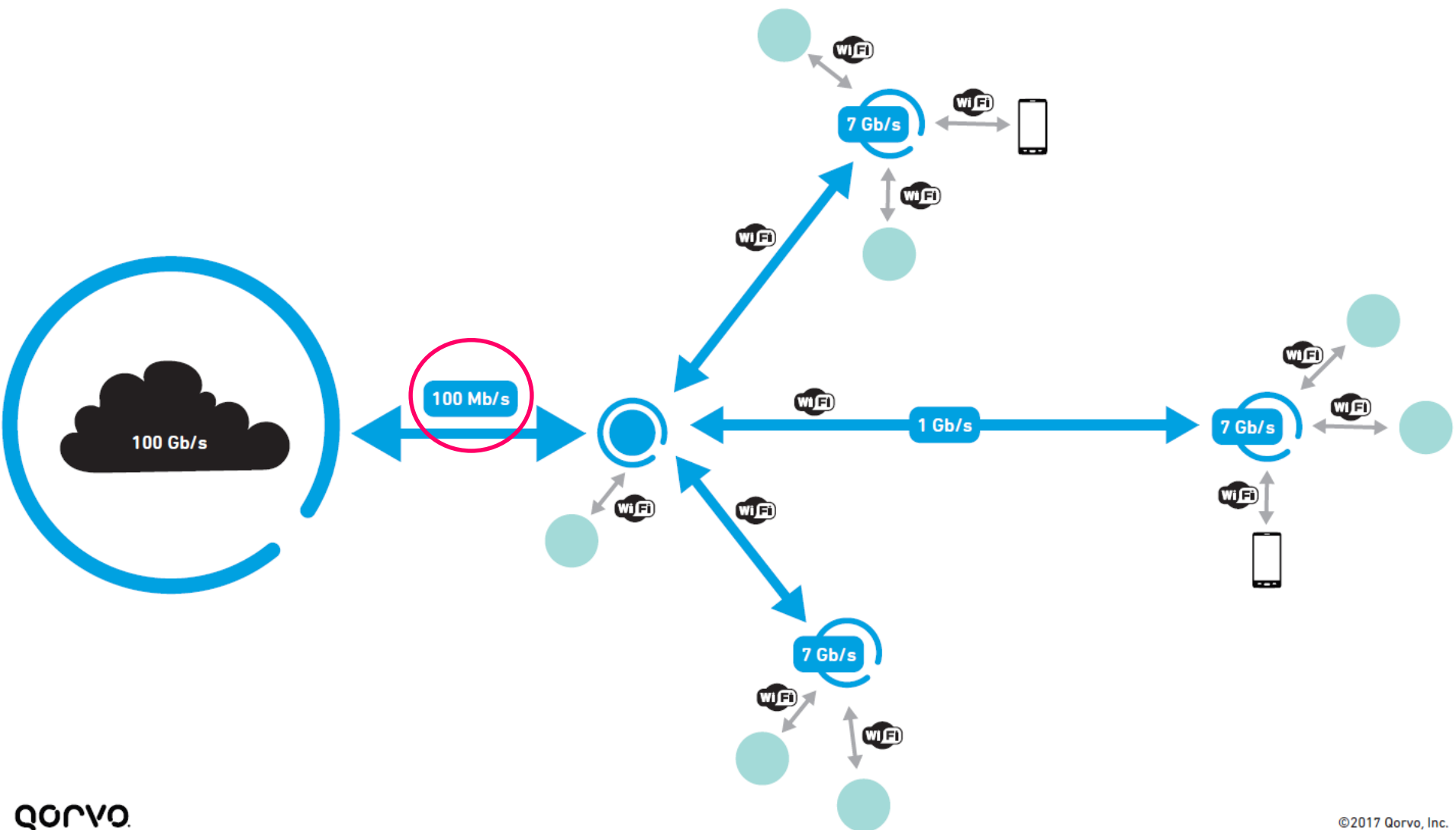


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Out-of-Balance (100 Mb/s – 1 Gb/s – 7 Gb/s)



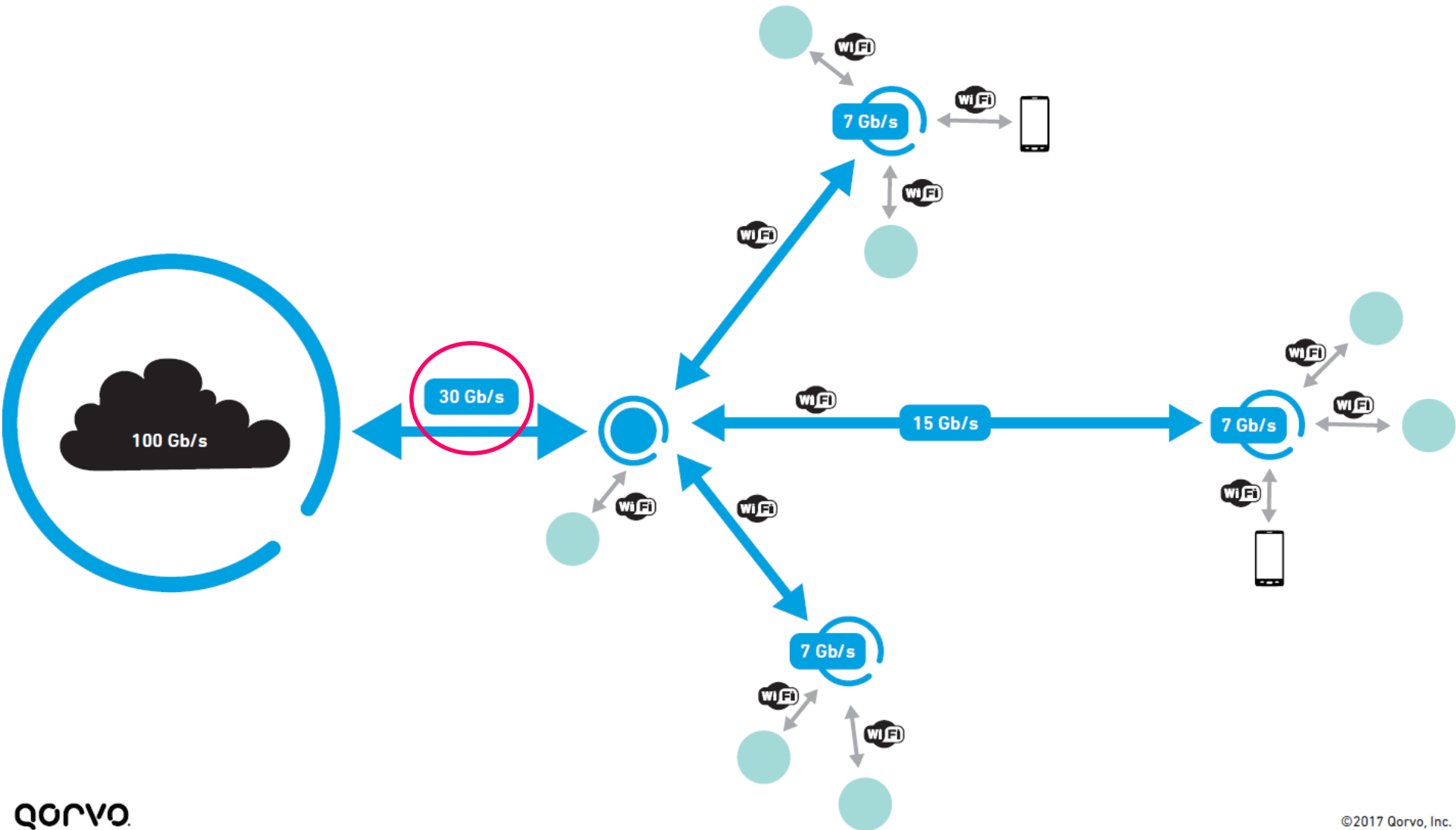
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Hierarchy



The Future (30 Gb/s – 15 Gb/s – 7 Gb/s)



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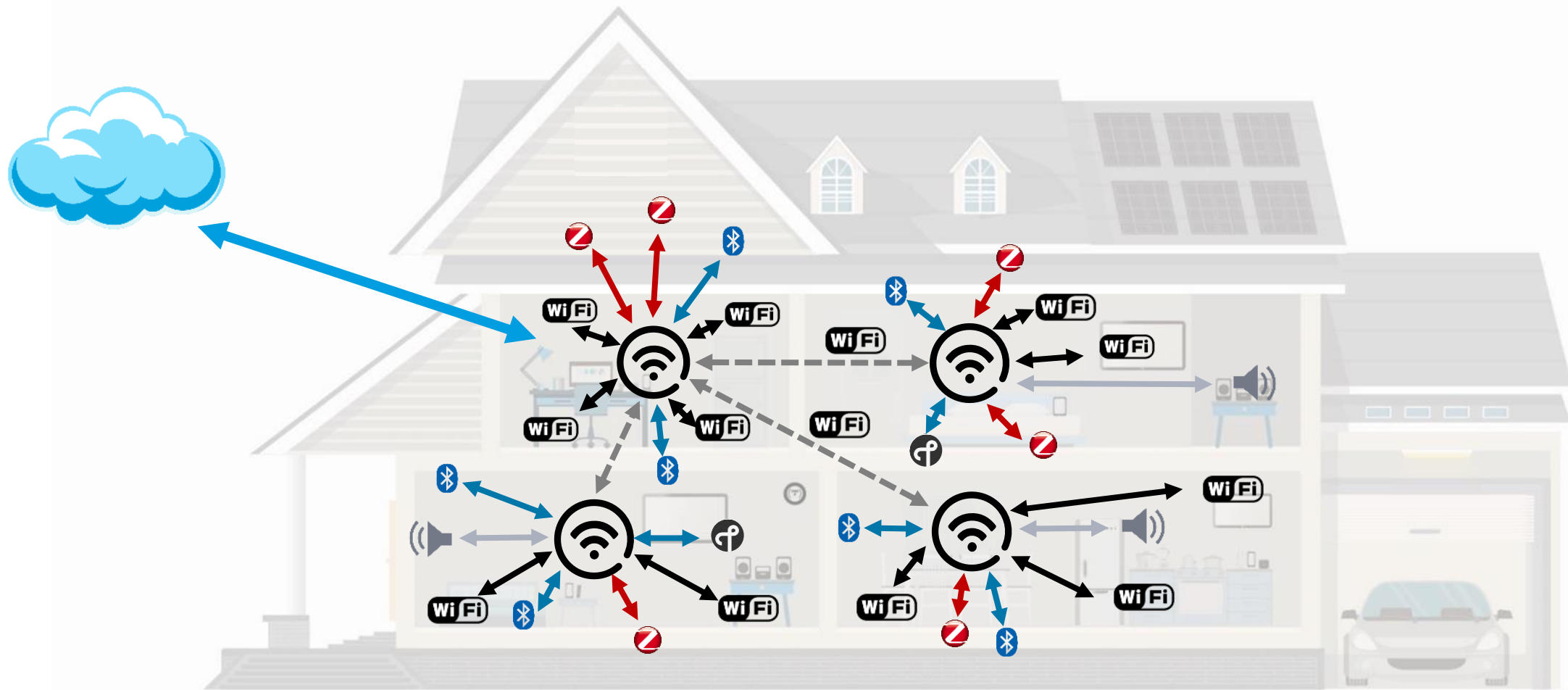
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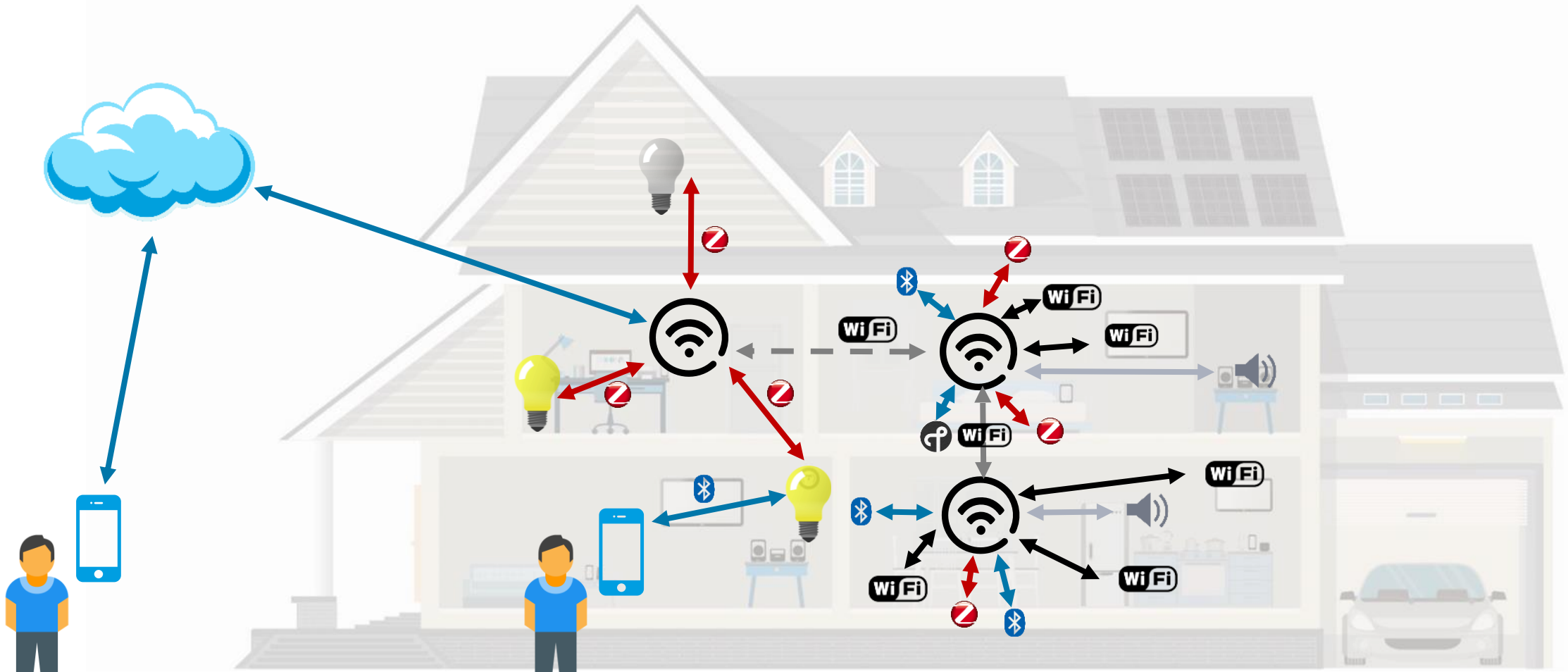
One Pod Per Room

The Vision is Complete, the Smart Home is a Reality!



Smart Lighting

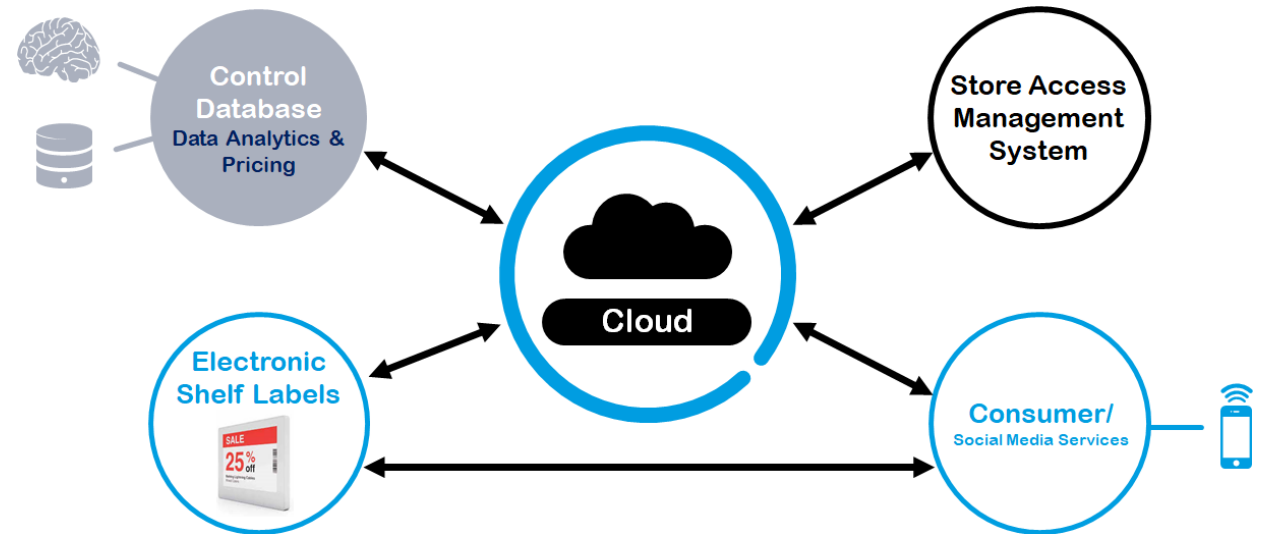
Multiple standards for multiple use-cases





Smart Retail

Bridging the gap between On-line and Off-line (O2O)



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- Ultra-Low Power drives the IoT
- The Shake-Up
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Car



Traffic



From Computer...





... to the Internet



Making Better Decisions Faster

PLAN B

PLAN A



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Qorvo, the RF Company

We design, develop and manufacture high-quality RF components



**We're in billions of devices all around you –
helping to enable the modern connected world**



Our Global Footprint



- | | | | |
|------------------------|-----------------------------|--------------------------|-------------------------|
| 1. Hillsboro, OR | 11. Richardson, TX | 21. Norresundby, Denmark | 31. Taipei, Taiwan |
| 2. Bend, OR | 12. High Point, NC | 22. Nuremberg, Germany | 32. Zhongshan, China |
| 3. Broomfield, CO | 13. Greensboro, NC | 23. Munich, Germany | 33. Shenzhen, China |
| 4. Hiawatha, IA | 14. Brooksville, FL | 24. Helsinki, Finland | 34. Hong Kong, China |
| 5. Chelmsford, MA | 15. Apopka, FL | 25. Bangalore, India | 35. Laguna, Philippines |
| 6. San Jose, CA | 16. Heredia, Costa Rica | 26. Dezhou, China | 36. Ipoh, Malaysia |
| 7. Torrance, CA | 17. Reading, United Kingdom | 27. Beijing, China | 37. Singapore |
| 8. Newbury Park, CA | 18. Colomiers, France | 28. Seoul, South Korea | |
| 9. Chandler, AZ | 19. Zele, Belgium | 29. Tokyo, Japan | |
| 10. Farmers Branch, TX | 20. Utrecht, Netherlands | 30. Shanghai, China | |



A Connected World is a Better World



IoT for Dummies

But you are Experts now!

- Published by Wiley and co-written by Cees Links, Father of Wi-Fi and GM of Qorvo's Wireless Connectivity business unit
- 2 volumes
 - Vol 1 - What is the IoT
 - Vol 2 - IoT Applications
- Download eBooks: www.qorvo.com/iot-for-dummies
- Chinese version: <http://cn.qorvo.com/design-hub/ebooks/internet-of-things-for-dummies>





Thank You!

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all around you