



Removing the barriers to pervasive connectivity

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#BluetoothAsia2018



arm

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2021

1.17B

2018
631M



arm

A trillion securely connected devices

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50 billion
chips shipped

50 billion
chips shipped

100 billion
chips expected to ship

Arm vision:
A trillion
securely
connected
devices, **From
device to
cloud**

1991

2013

2017

2021

2035

arm

Barriers

Power



Cost



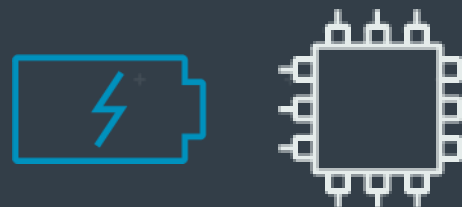
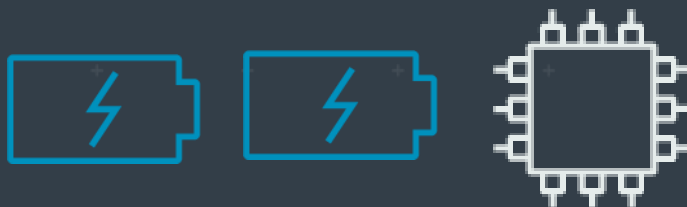
**Cloud
connectivity**



Security



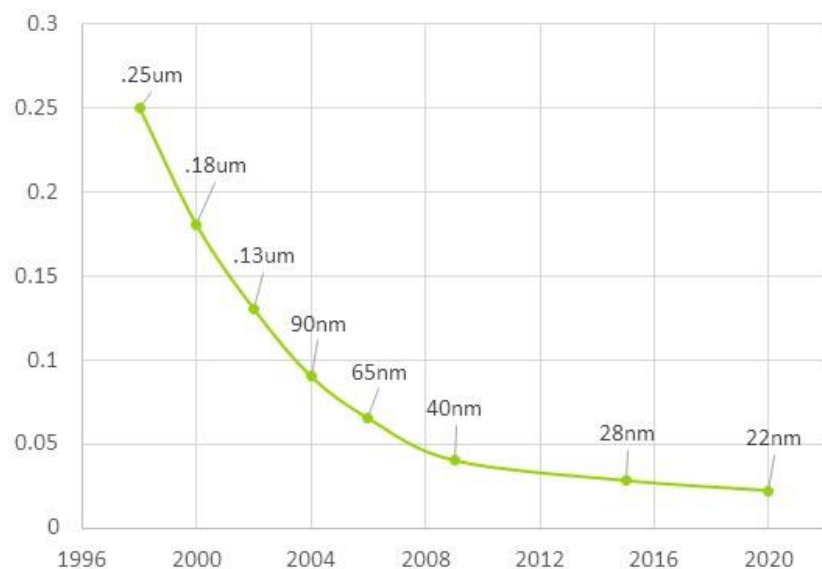
Cost and power



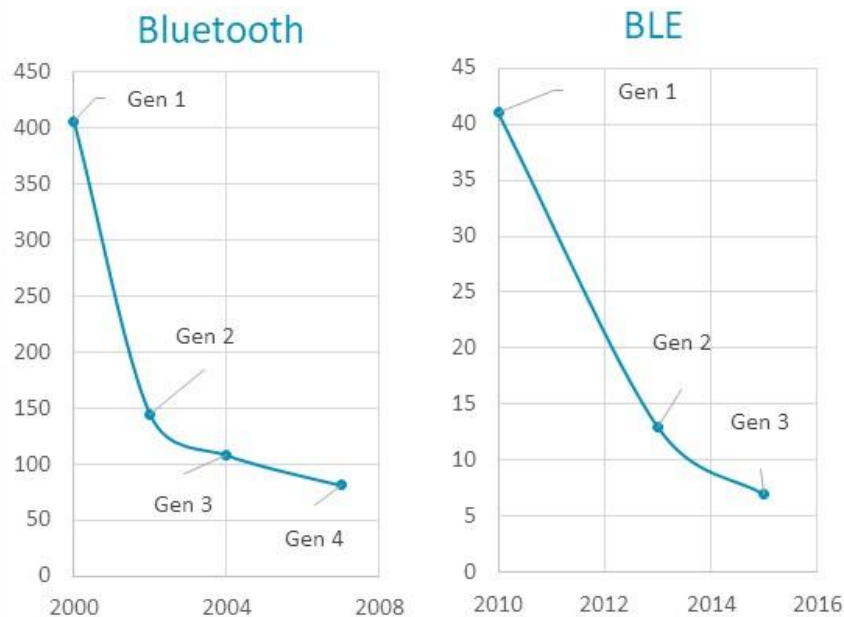
arm TechCon 2017

Connectivity chip evolution

Low power CMOS process nodes



Bluetooth/BLE radio power



arm TechCon 2017

Can we build this?

Concept connectivity SoC in 4-7 years

Subthreshold digital

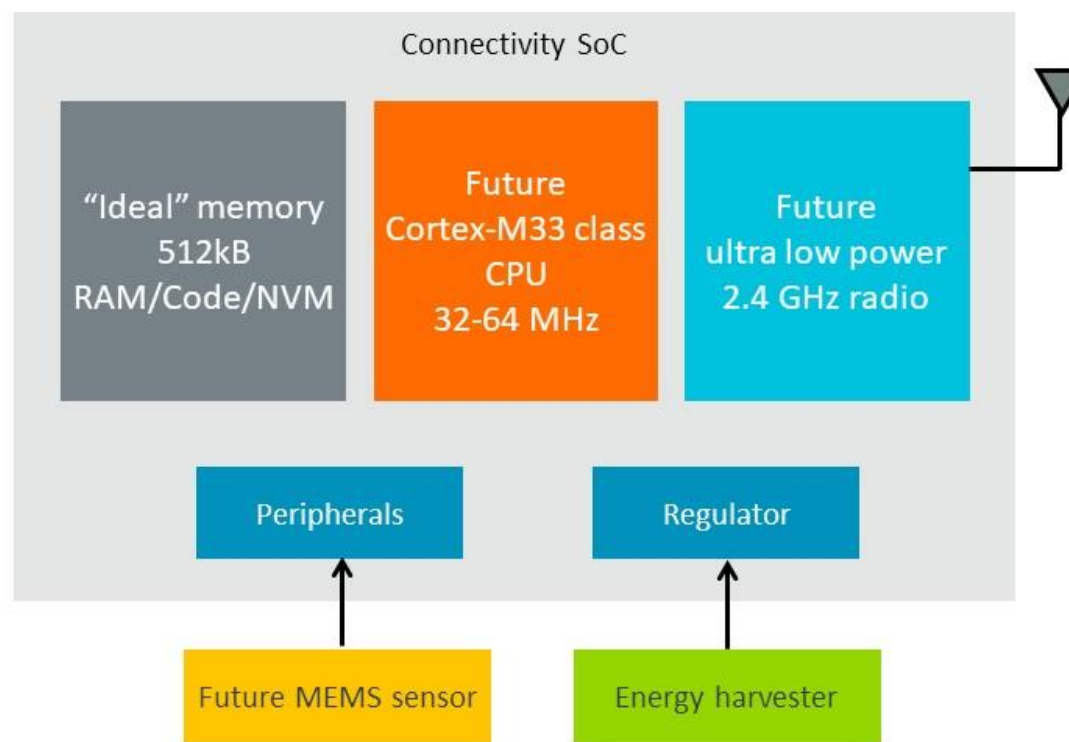
Ideal memory

10 μ W/MHz CPU

1mW/2mW RX/TX radio

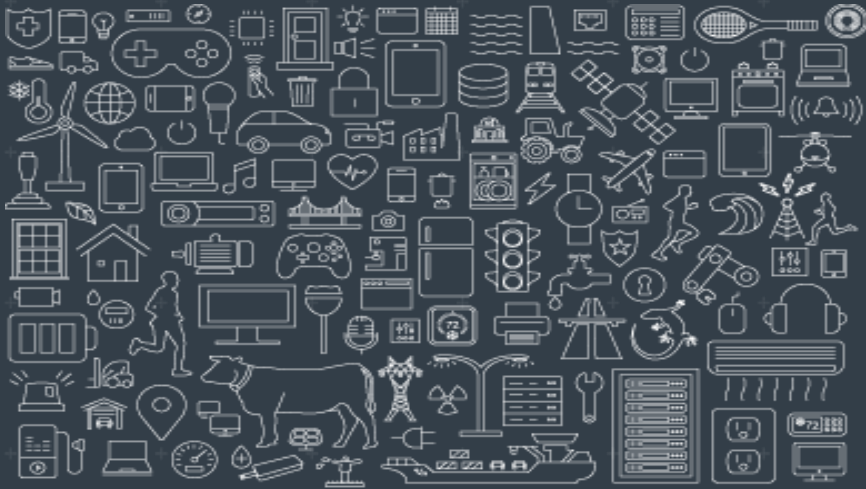
< 1 μ W sleep

Volume price < \$0.50



The cloud connectivity challenge

Develop new innovative extraordinary devices at high pace while keeping development costs under control



Design and implement new groundbreaking cloud services at cloud speed



Solving cloud connectivity

- Simplifying development
- Increasing productivity

- Secure device management
- Secure firmware upgrade
- Trusted data to the cloud

- Factory provisioning at scale
- Onboarding and device ownership
- Secure access for field technicians



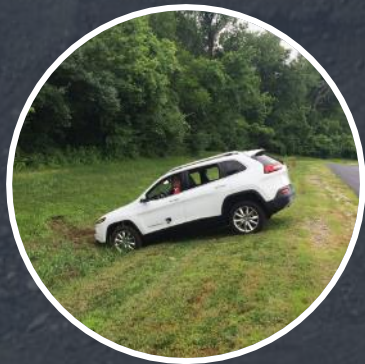
Product-ready software

The security wild west

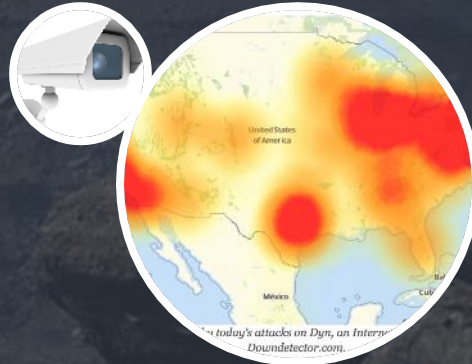
It's dangerous out there

Attacks are changing user expectations

Security becoming a must-have



Jeep Hack



**Mirai Botnet
DDoS attack**



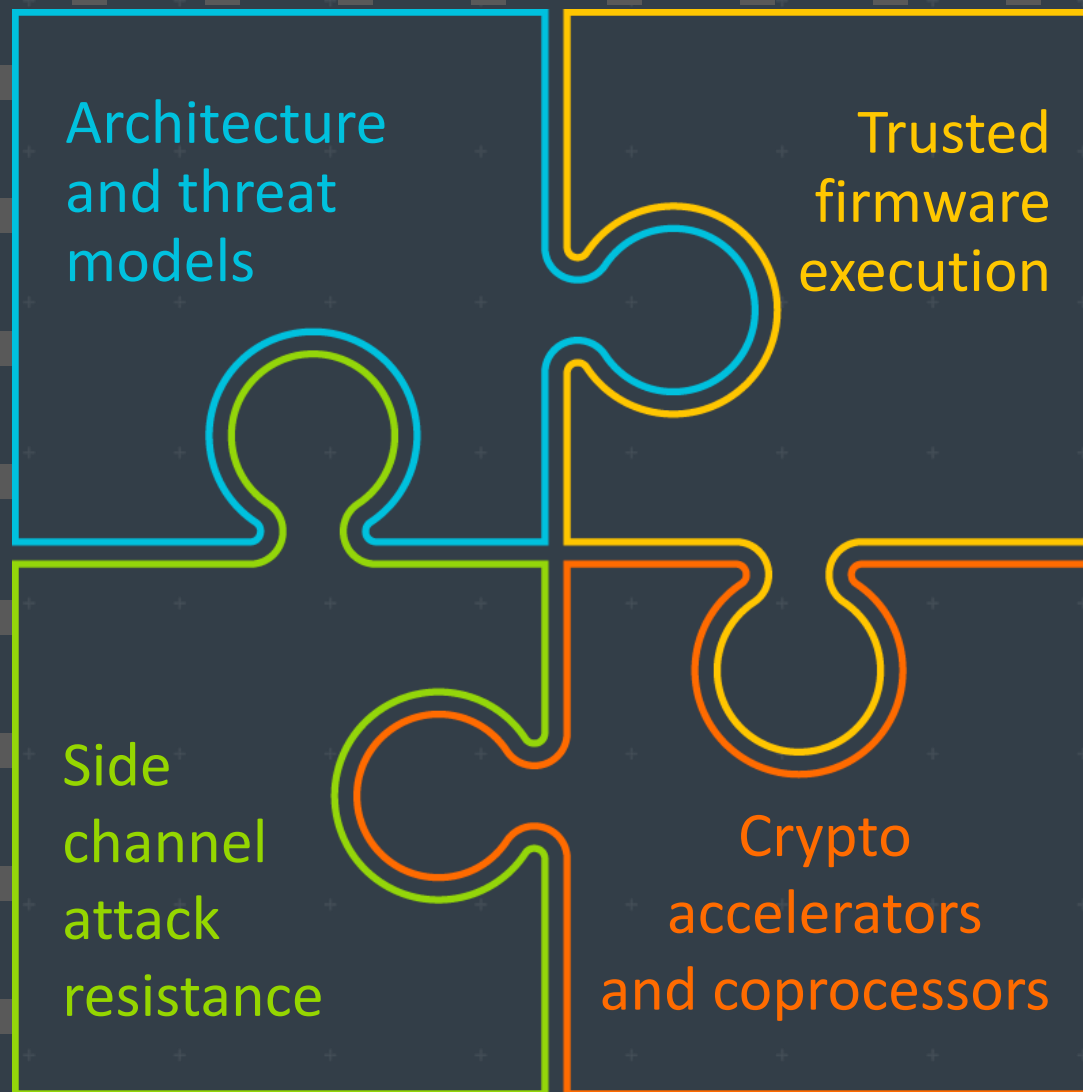
**Owlet Baby
Monitor**



**St Jude's
pacemaker**



Solving security





Lower Power



Lower Cost



**Easier Cloud
Connectivity**



High Security





谢谢

Thank you!

arm

