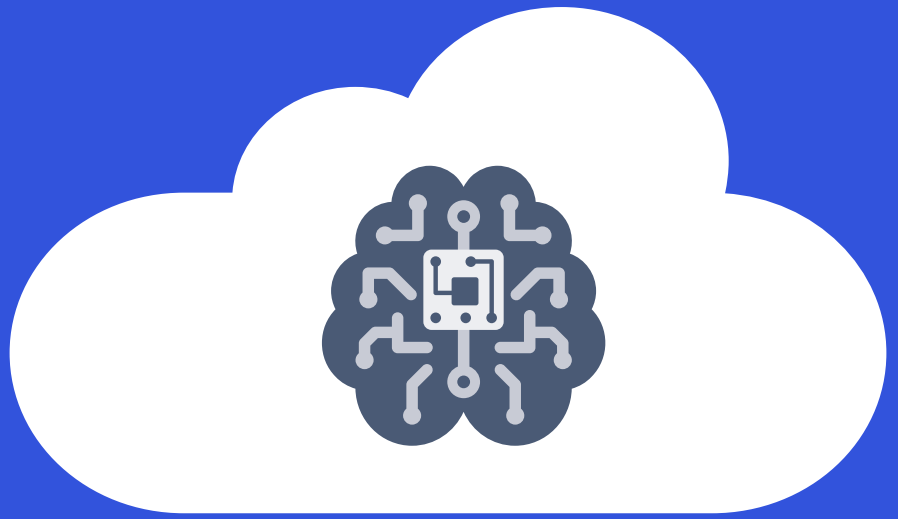
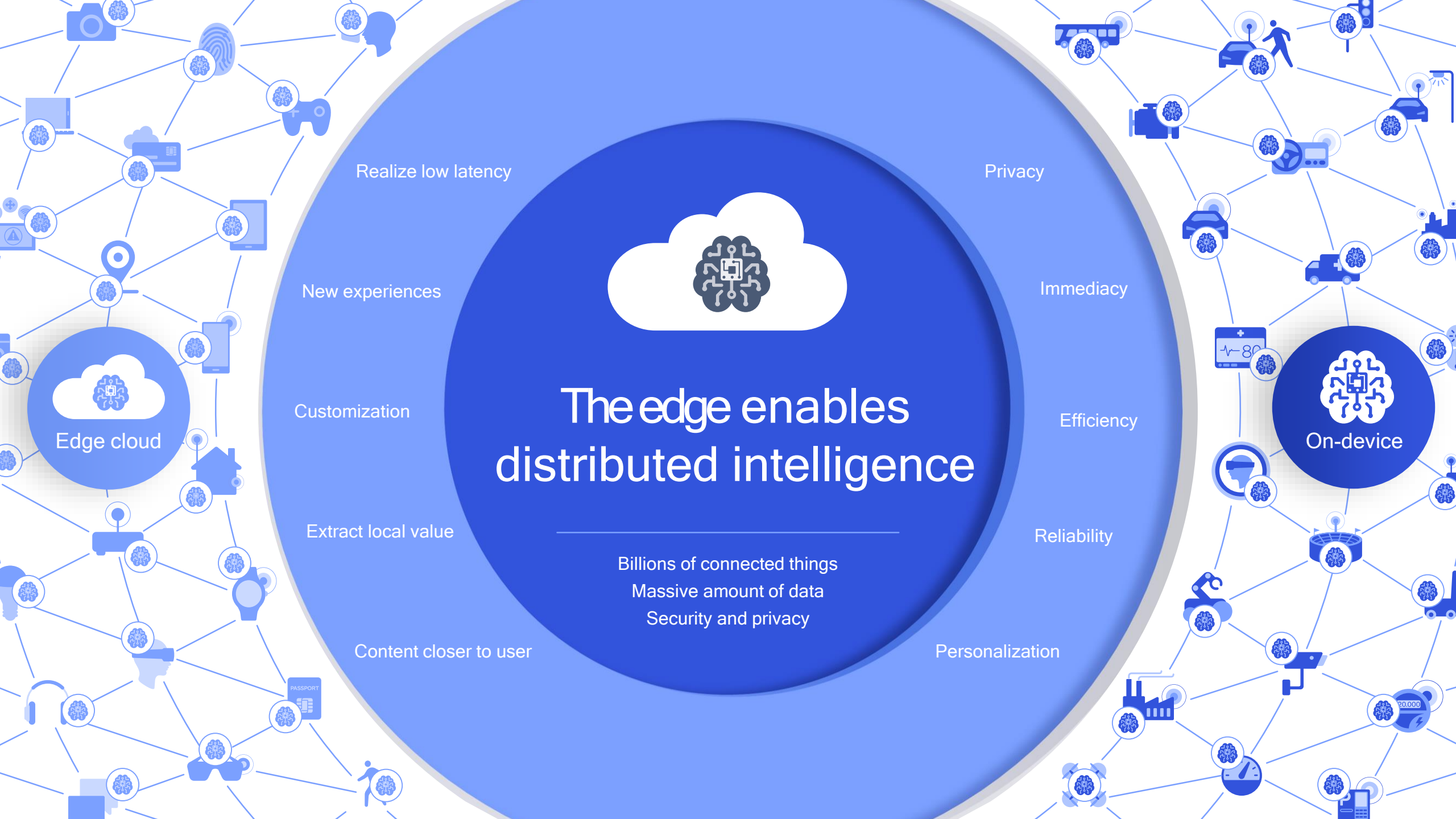

Qualcomm
August 6, 2019
@qualcomm
5G at the Edge in IoT
Dr. Yongbin Wei
Senior Director, Engineering
Qualcomm Technologies, Inc.
5G



# Today,

intelligence is primarily associated with the cloud


Realize low latency
New experiences
Customization
Extract local value
Content closer to user
Privacy
Immediacy
Efficiency
Reliability
Personalization
Edge cloud
On-device
The edge enables distributed intelligence
Billions of connected things
Massive amount of data
Security and privacy

## The challenge of AI workloads

- Compute intensive
- Large, complicated models
- Complex concurrencies
- Real-time
- Always-on

## Constrained edge environment

- Thermally efficient for small form factors
- Requires long battery life
- Storage/memory bandwidth limitations

# Unique requirements for IoT devices

# Technology improvements are enabling the IoT edge to grow rapidly

Sensing

CPU DSP GPU

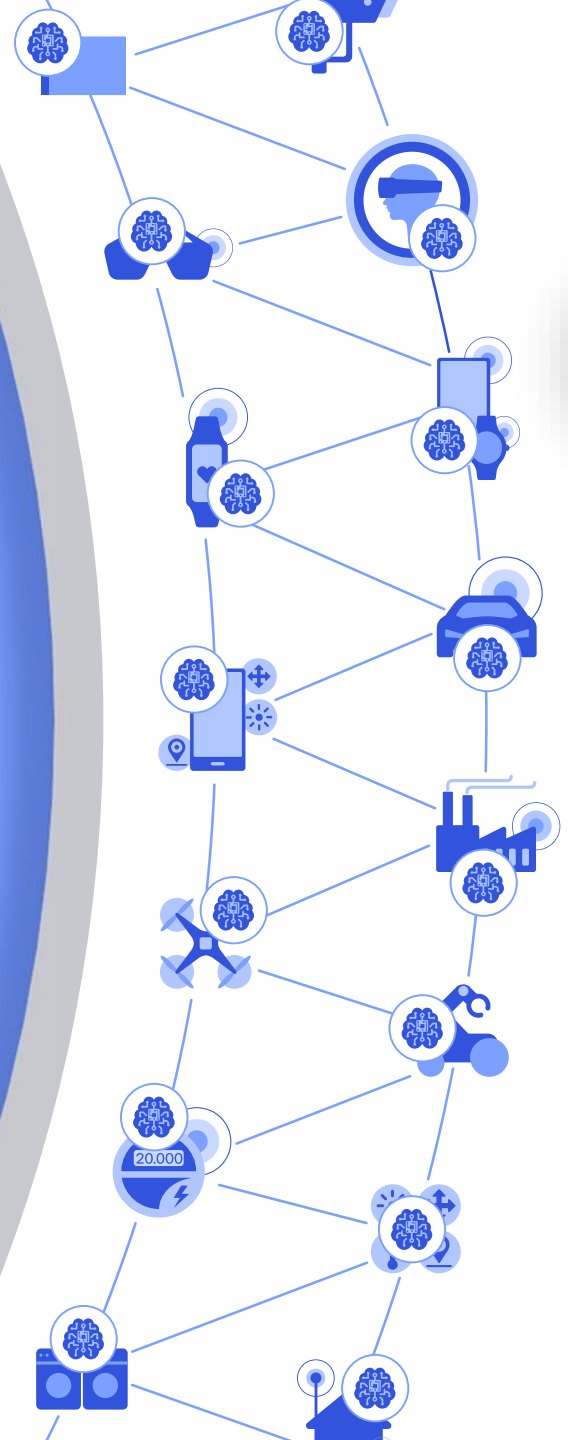
Processing

On-device AI

Connectivity

Security

Edge services




## Perceive

Hear, see, monitor, and observe

## Reason

Learn, infer context, and anticipate

## Act

Act intuitively, interact naturally, and protect privacy


A unifying connectivity fabric for society
Like electricity, you will just expect it everywhere
5G
Scalable to extreme simplicity
Multi-gigabit speed
Ultra-low latency
Virtually unlimited capacity
Extreme reliability
On-device intelligence

# Enabling the IoT at the edge with 5G

- Essential on-device capabilities augmented with processing/compute, content, control at edge cloud
- Supporting massive diversity of devices, applications, and end services
- New experiences with new levels of immersion, immediacy, personalization and privacy

Qualcomm

# Thank you!

Follow us on:

For more information, visit us at:

www.qualcomm.com & www.qualcomm.com/blog