

San Diego, CA

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@qualcomm\_tech

Qualcomm

# Intelligently connecting our world in the 5G era

Use Cases





# Delivering on the 5G vision

Where virtually everyone and everything is intelligently connected



5G

# 5G will expand the mobile ecosystem to new industries

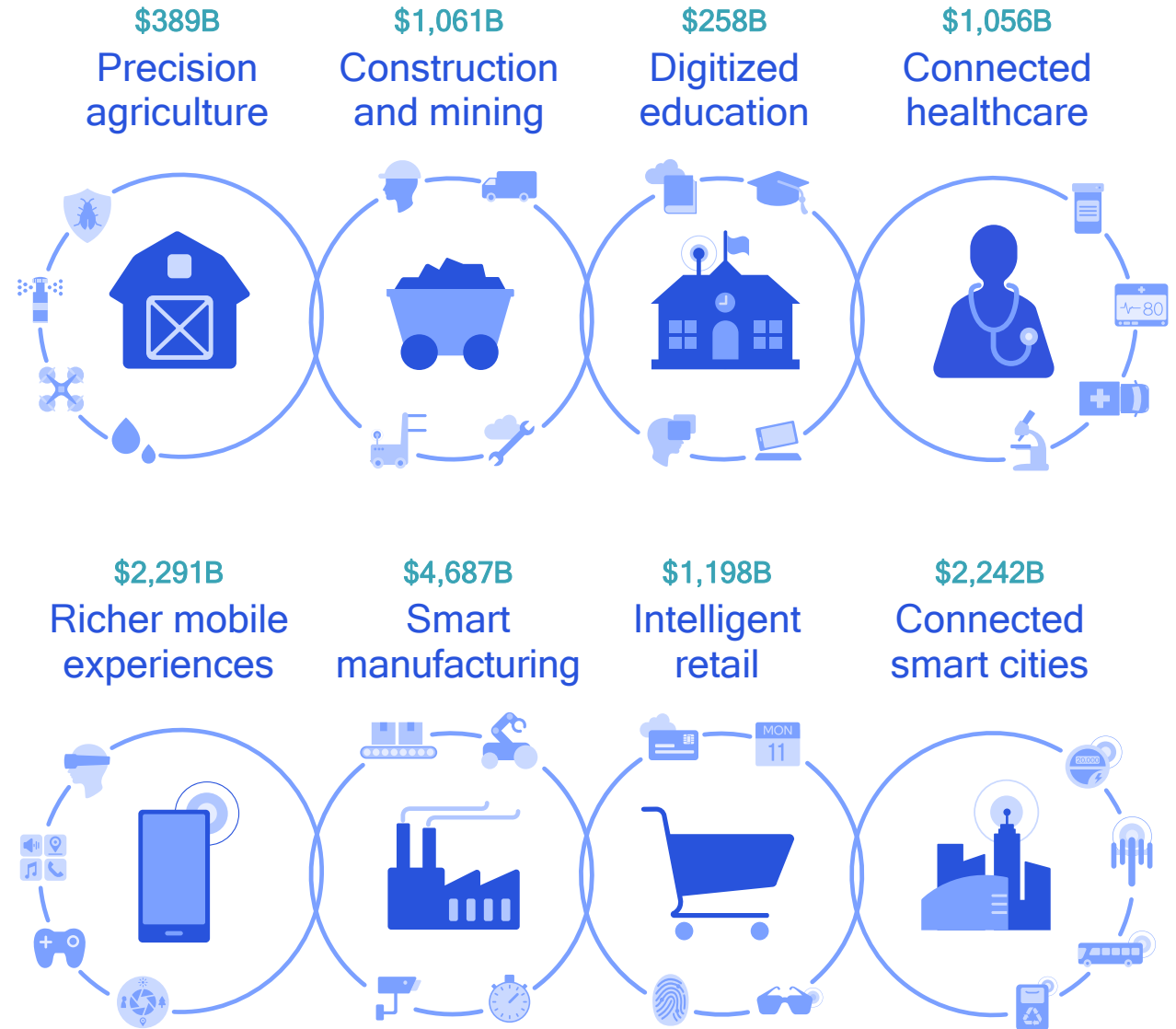
Powering the digital economy

\$13.2

Trillion

In global economic value by 2035\*

\* The 5G Economy, an independent study from IHS Markit, Penn Schoen Berland and Berkeley Research Group, commissioned by Qualcomm







Fueling precision agriculture to  
improve production efficiency





Pest detection



Autonomous trucks



Supply chain analytics

Moisture sensors



Smart sprinklers

On-device intelligence



## Autonomous harvesters



Crop health



Forecast



Real-time inventory



Location



Fueling precision agriculture to improve production efficiency



Connecting energy grids for more efficient  
production, distribution, and consumption



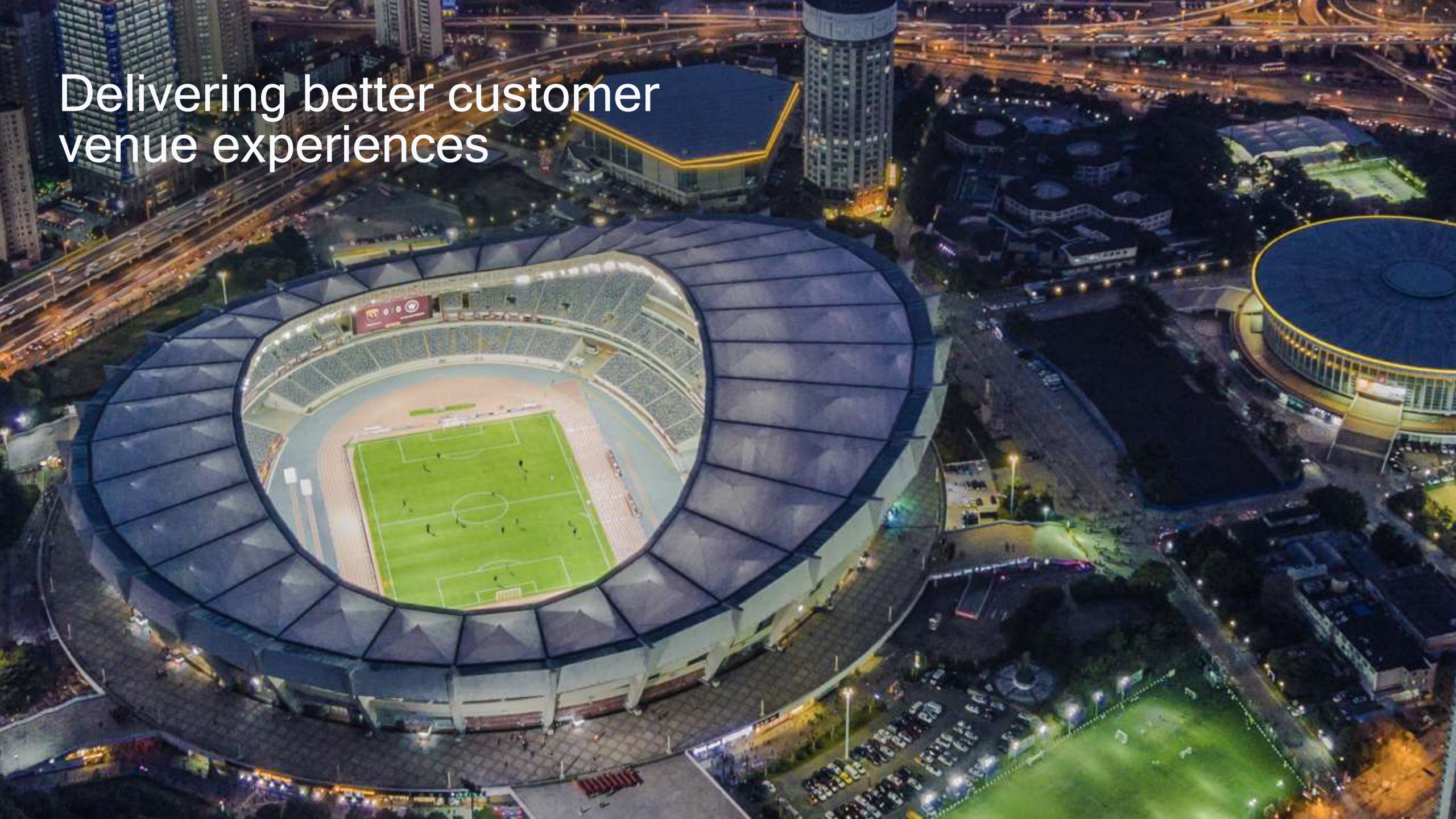


# Connecting energy grids for more efficient production, distribution, and consumption





Delivering better customer  
venue experiences





# Delivering better customer venue experiences



Enhanced  
immersive audio

Reliable and consistent  
mobile broadband

Personal concierge,  
e.g., smart ticketing

Indoor seat  
navigation

Personalized  
in-seat concession

UHD  
surveillance  
camera

5G  
private network

Real-time traffic

Autonomous  
ride share

Real-time  
smart parking status

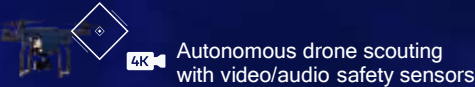


Connecting emergency  
services for improved public safety





# Connecting emergency services for improved public safety



3D live map updates to emergency site



Updating traffic patterns to avoid the emergency





# Enabling smarter logistics at container ports





# Enabling smarter logistics at container ports






Driving the next industrial  
revolution with flexible manufacturing






# Driving the next industrial revolution with flexible manufacturing

 On-premise edge analytics and data storage


  
5G  
private network

 Smart UHD surveillance

 Process monitoring sensors


  
5G  
private network

 Process monitoring sensors

 Wireless modular equipment

  
Factory automation

  
AGV tracking control system

  
Autonomous guided vehicle

AR guided belt repair

 HMI interface

Robot #018  
Digital twin

5G cloud connection

Production metrics

Transfer speed

2.3 Gbps

Performance

Metric	Value
Speed	100
Accuracy	99.9
Efficiency	98.5
Reliability	99.5
Flexibility	95.0
Scalability	90.0
Interoperability	85.0
Security	99.0
Compliance	98.0
Availability	99.9
Performance	95.0

 Predictive maintenance



# Increasing productivity with connected remote mining operations





# Increasing productivity with connected remote mining operations





Elevating operation  
efficiencies at airports





# Elevating operation efficiencies at airports

Pilot training



Navigation and collision avoidance with precise positioning



Upload aircraft logs

Operator broadband access

First responders

Ground/flight crew access

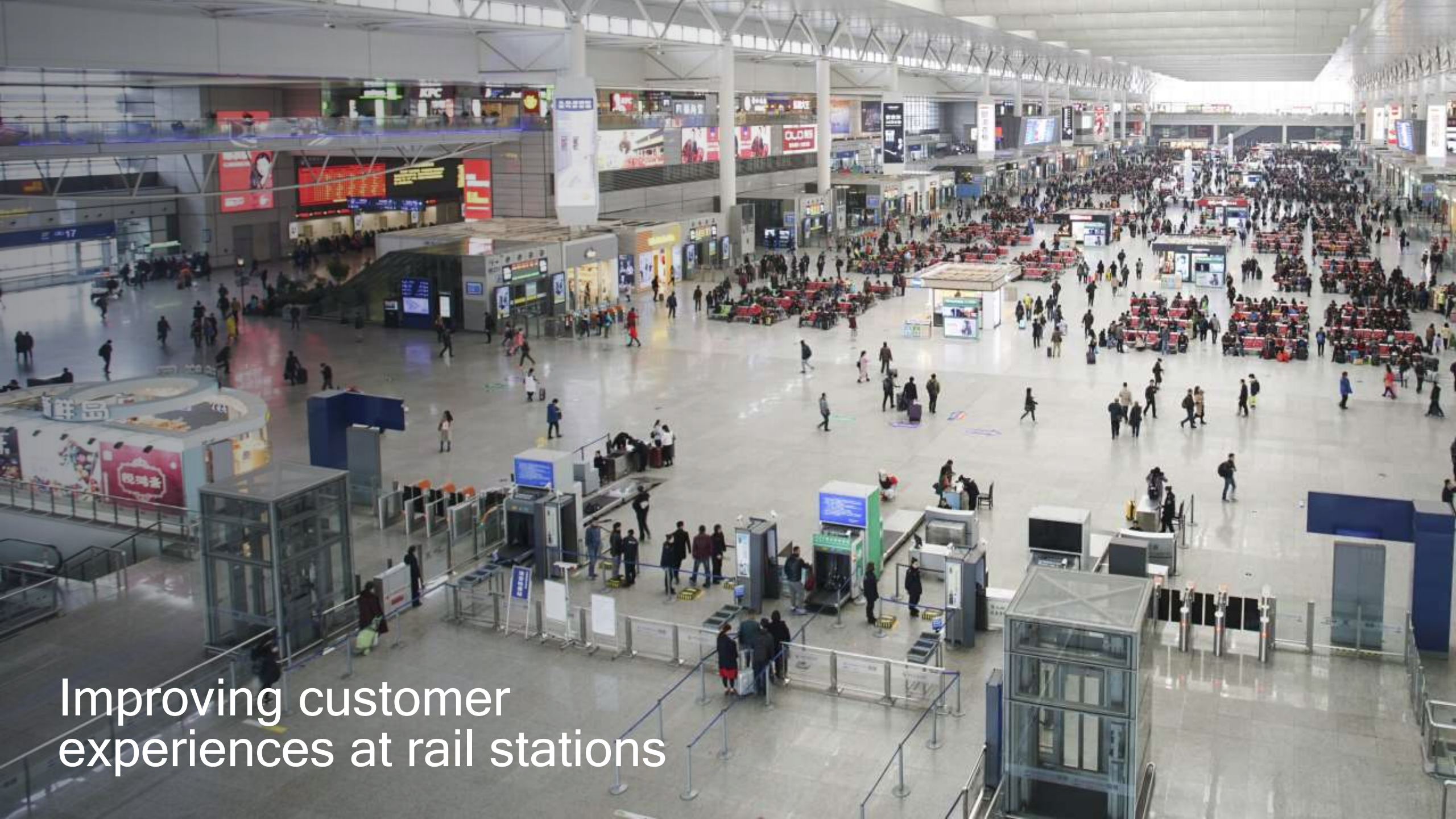
Asset tracking

Autonomous luggage vehicles

5G private network

Edge analytics for traffic flow and security





Improving customer  
experiences at rail stations





Smart UHD surveillance

Monitoring sensors

Tenant 5G broadband services

Tenant 5G broadband services

Tenant 5G broadband services

Passenger assistance

5G private network

Gate boarding pass reader

Security gates

Baggage transfer information		Baggage tracking	
Flight	Arrival	Destination	Code no
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101

Carry on's data

Flight	Arrival	Destination	Code no
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101
SH 201	10:00	CDU	101

Gate check in information

Checked in baggage rights

Arrivals

5G private network

Always connected PCs

Self check-in kiosks

Improving customer experiences at rail stations



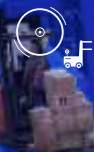


Enabling smarter  
warehouses





UHD  
surveillance  
cameras



Autonomous  
guided vehicle



Shelf  
sensors



Monitoring  
sensors



Automated  
asset routing



5G  
private network

# Enabling smarter warehouses



Perishable  
item tracking



Identify precise  
cargo location



Driving better road efficiencies with smart transportation





# Driving better road efficiencies with smart transportation







Digitizing healthcare with IoT  
to bring better patient experiences





5G  
private network



Smart medicine  
dispenser



Equipment  
tracking

Diagnostic equipment  
(BP/HR/Oxygen)

+ Remote surgery

Health wearable

Patient location  
tracker



Drugs track  
and trace

Upcoming  
appointment  
notification

Automated records  
and retrieval

# Digitizing healthcare with IoT to bring better patient experiences






Connecting classrooms  
and remote learning






 Always connected devices (laptop, tablets)


 Personalized learning



 Student wireless backpack



 Immersive XR learning experience

 Digitized classrooms and libraries

# Connecting classrooms and remote learning



Bringing next-level retail experiences





# Bringing next-level retail experiences



Scheduled drone delivery in 2 hours



Smart parking

Pick-up and return kiosk

Electronic price tags

5G private network

Smart waste management

Personalized ads and coupons

5G private network













# Thank you

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