



AI, The Future is Now

28 September 2017

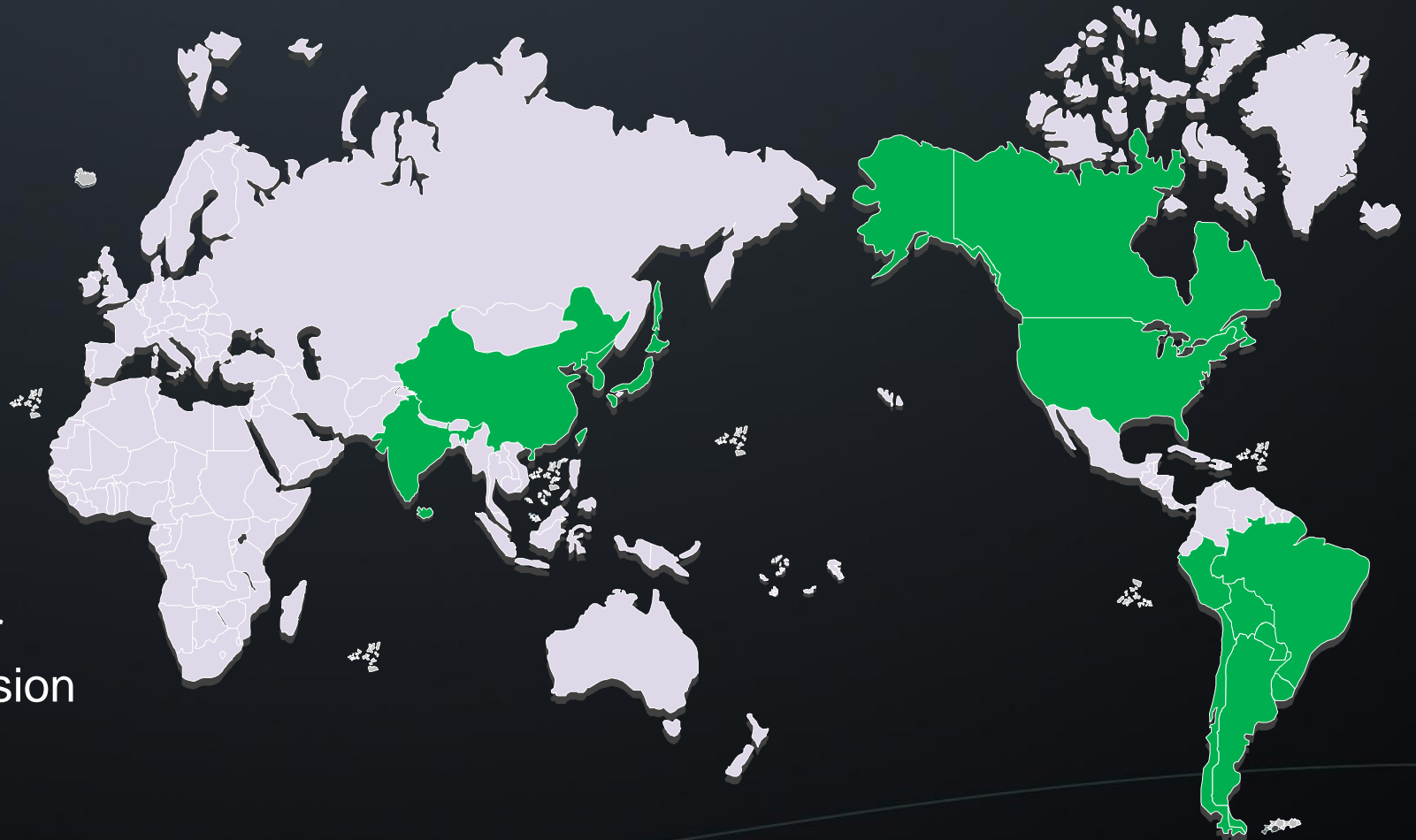
LEADING NEW ICT

Who am I?



Pearson Lee

Chief Strategy Marketing Officer
Eastern Asia Sub-Regional Division



Huawei was founded in Shenzhen, China's special economic zone



180,000
Employees



80,000
R&D
employees



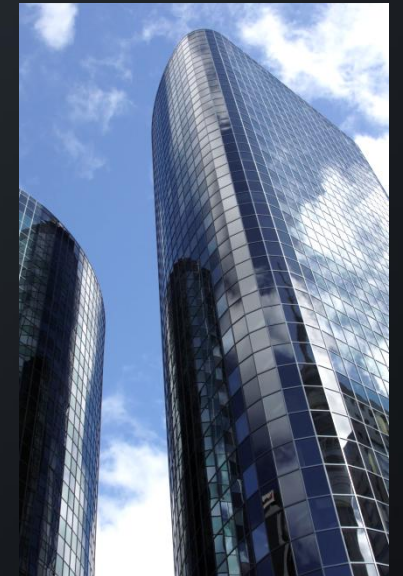
170+
Countries



15
R&D institute
and centers



No. 72
Interbrand's Top
100 Best Global
Brands



No. 129
Fortune Global
500

Huawei 15 years in Korea



Huawei started Korea business in 2002, Korea office establishment in 2007



Our solutions serve all three Korean carriers (KT, LG U+, SKT)



Started Enterprise and Consumer business in 2014



Number of employees over 180
75% are Korean employees



Currently an active corporate citizen in Korea

Milestones of the Information Civilization



PC: local



Internet: shared

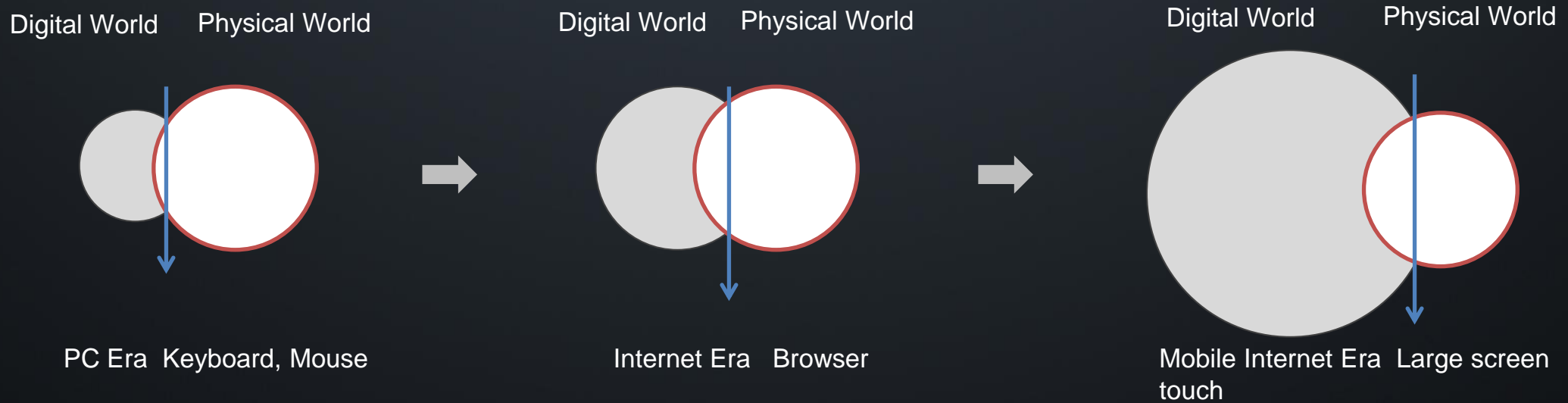


Mobile Internet:
anytime,
Anywhere



What's next?

The Hallmarks of Progress: Rich information, Convenient access



Rich Information: Knowledge and information from the physical world widely available, quickly and accurately; digital world self expands

Convenient Access: Users are able to naturally bridge the gap between physical interaction and digital information through faster connections and more natural interfaces.

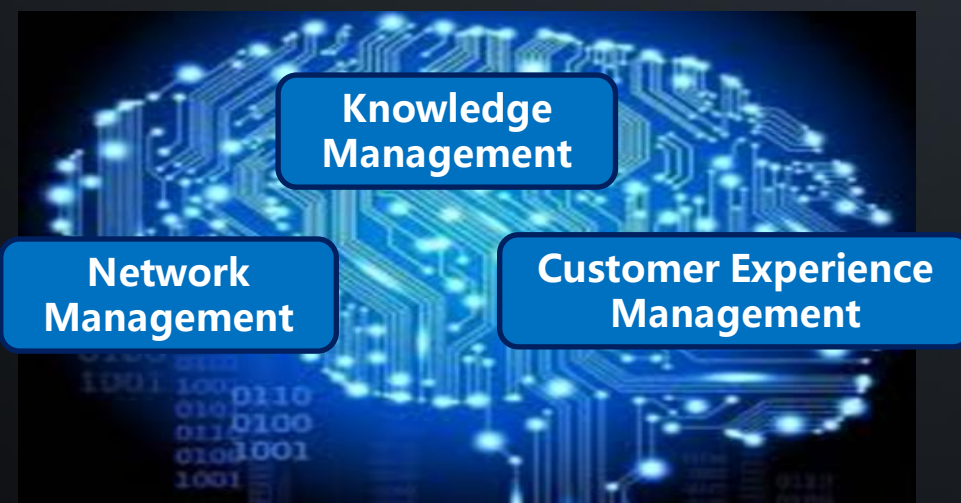
Huawei is Committed to Build a Better Connected World



- Intelligent society is composed of device, network and cloud.
- Device is the antennae for everything, network connects the world, whereas cloud is the Digitalized brain for everything

Enabling Intelligent Network Operation(1)

Huawei GTS Brain



1500+

Carrier Network

14M+

Carrier Network Equipment

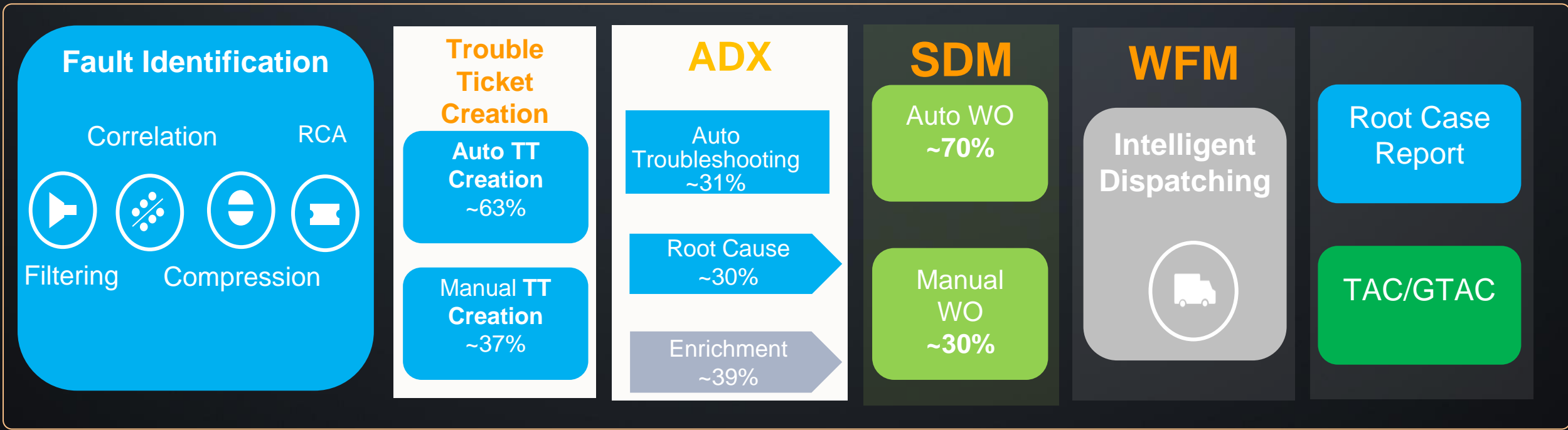
10M+

Network Alarm Per Day

1M+

Network Ticket Per Year

Enabling Intelligent Network Operation(2)



ADX (Auto Diagnose Expert)
SDM: Service Desk Management
WO: Work order
WFM: Work force management

Key Technologies:

- Active Learning
- Sequential Pattern Mining
- Knowledge Inference
- Supervised Learning
 - Deep Learning

30Min

Rule Generation for
40M Network Original Alarm

94+%

Network Alarm Compression

85+%

Accuracy for Root Alarm Detection

Digitalized Site

3D site survey

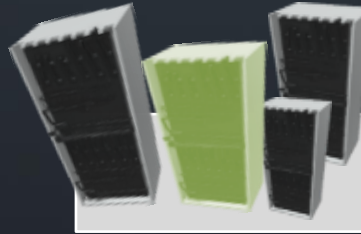
3D Scan



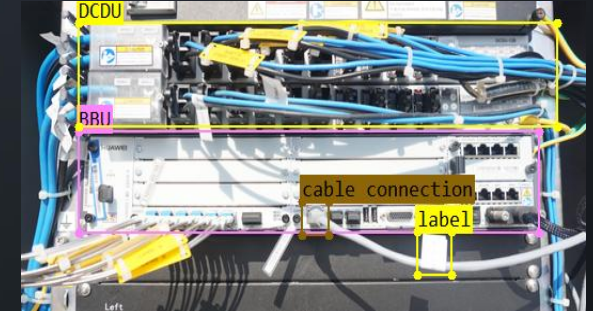
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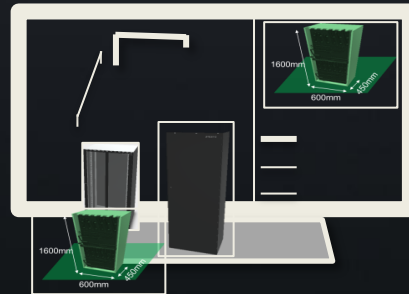
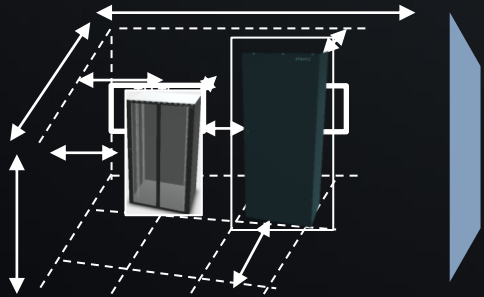
BIM Model



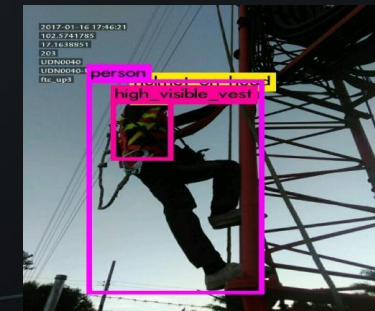
Smart Acceptance



Assistant design based on Digital Site information



EHS



Optimization Algorithm Practice in Supply Chain

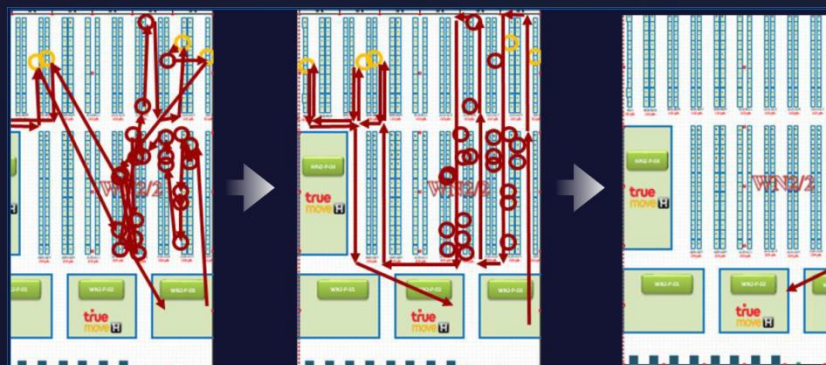


Weighted PageRank Algorithm
加权页面排序算法

20%

Increased Picking Efficiency
拣料效率提升

Intelligent Warehouse Planning | 智能仓储规划

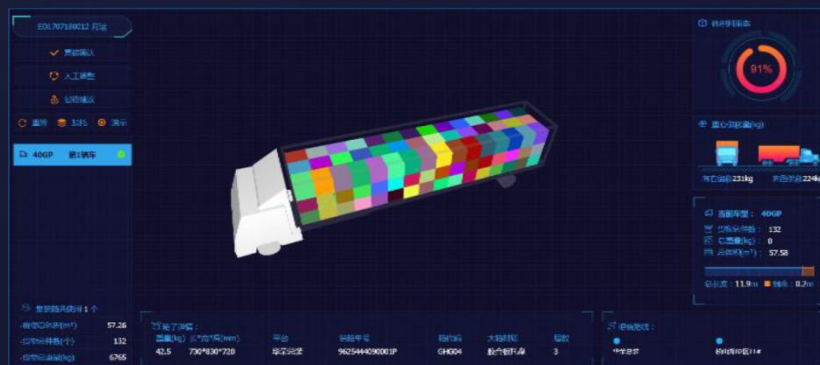


Tabu Optimization Model
禁忌优化模型

6%

Increase Container Utilization
集装箱利用率提升

Intelligent Packing Forecast | 智能装箱预估



Kmeans + Dijkstra
K均值聚类 + 最短路径算法

35%

Reduced Car Renting Cost
车辆租赁成本降低

Intelligent Path Optimization | 智能路径优化



8,000+ Package Boxes | 包装箱

200+ Delivery Points | 提货点

30+ Truck Types | 车型

30+ Restrictions | 约束条件

Enabling Intelligent City Traffic Management



- 3M Car;
- 510 car/KM;
- 15K community;
- 5.5K big company;



100G Ultra-high Bandwidth Network



Captured Urban Traffic Data



EI-assisted Law Enforcement

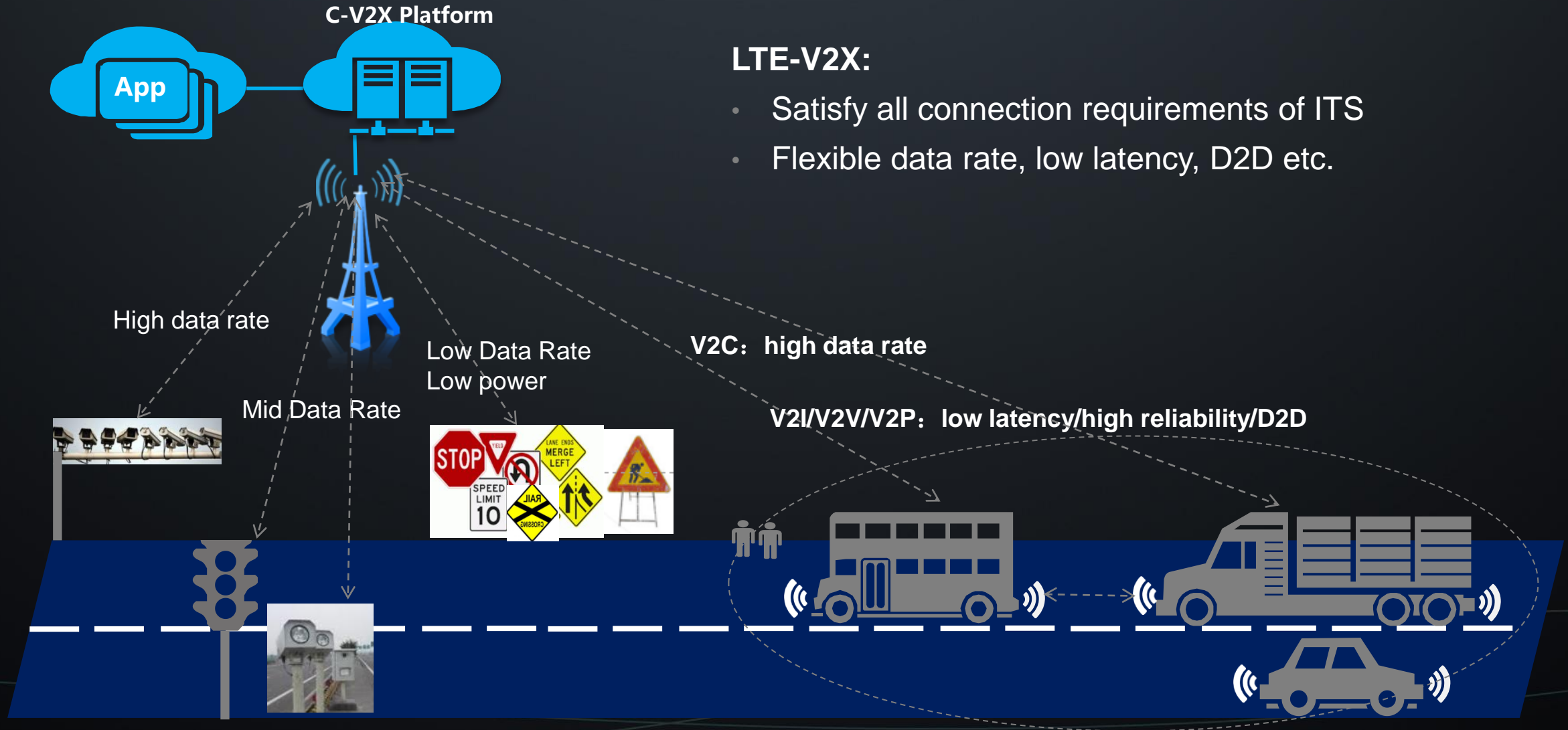


Increased Efficiency



Improved Experience

C-V2X: One Single Network Supports All ITS Connections



LTE-V2X:

- Satisfy all connection requirements of ITS
- Flexible data rate, low latency, D2D etc.

Similar Requirement for Digital World and Physical World

Latency

1 ms
E2E
Latency



Throughput

10G bps
Per
Connection



Connections

1,000K
Connections
Per km²



Mobility

500 km/h
High-speed
Railway



Network Architecture

Slicing
Ability
Required



Huawei Sustained AI Investment for Intelligent Society

Europe (Paris)

Domains: Network Control Intelligence

Core Tech: Reinforcement Learning, Online learning

Noah's Ark AI Lab of Huawei

US (New Jersey) Canada (Montreal)

Domains: New Technology

Core Tech: Brain-like Computing, Multi-Agent System

Shenzhen

Domains: Terminal Intelligence

Core Tech: Deep Learning, Online Learning, Search & Recommendation, NLP

Hong Kong

Domains: Enterprise Intelligence

Core Tech: Time Series Analytics, Markov Decision Process

Xi'An

Domains: Network Operation Intelligence

Core Tech: Knowledge Representation, & Reasoning, Online Learning



In this era of great opportunities,
we refuse to be opportunistic.

大机会时代，拒绝机会主义

— 任正非
Ren Zhengfei