YVOLV
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IoT Ready Data Centre

Clinton O' Leary
Chief Commercial Officer
clinton.oleary@yvolv.ae

@grassblade
@YVOLV

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DATA CENTRE BUILD

About the Founding Partners

Alibaba Cloud was **established in 2009**, with R & D centers and operations in **Hangzhou, Beijing** and **Silicon Valley**. Alibaba Cloud is a strategic business unit of Alibaba Group.

Alibaba Cloud's goal is to create the world's leading cloud computing services platform. Alibaba Cloud is committed to creating a public, open cloud computing services platform.

Alibaba Cloud provides a cloud platform for 20+ Alibaba business units in addition to serving over **2,300,000** customers.

Meraas was established to make a **positive contribution** to the National economy of the UAE

By creating a portfolio of investments in various industry sectors, Meraas seeks to generate long term wealth enhancement to the economic and social development of Dubai.

In order to capitalize on opportunities in Dubai and beyond, Meraas is **pioneering several initiatives** in various macroeconomic sectors including:

- Retail
- Leisure & Entertainment
- Hospitality
- Food & Beverage
- Healthcare
- Residential
- Enterprise
- Technology (YVOLV / Alibaba)

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Overview

YVOLV is **based in the UAE**, with **in-country cloud infrastructure** provided from two resilient UAE Data Centers

We offer state-of-the-art, solutions in:

- **Cloud Computing -** Alibaba Cloud aliyun.com
- **Digital Transformation Solutions**
- **Services** – Consulting, Assessments and Implementation

We follow a **3-step approach** when assisting our customers in adopting and utilizing new technologies:

Step 1: Develop Hybrid Cloud / Digital Transformation Strategy
Step 2: Design Business Solutions ready for Cloud, Digital UI/UX and Things
Step 3: Implement Solution for on-time Business Delivery

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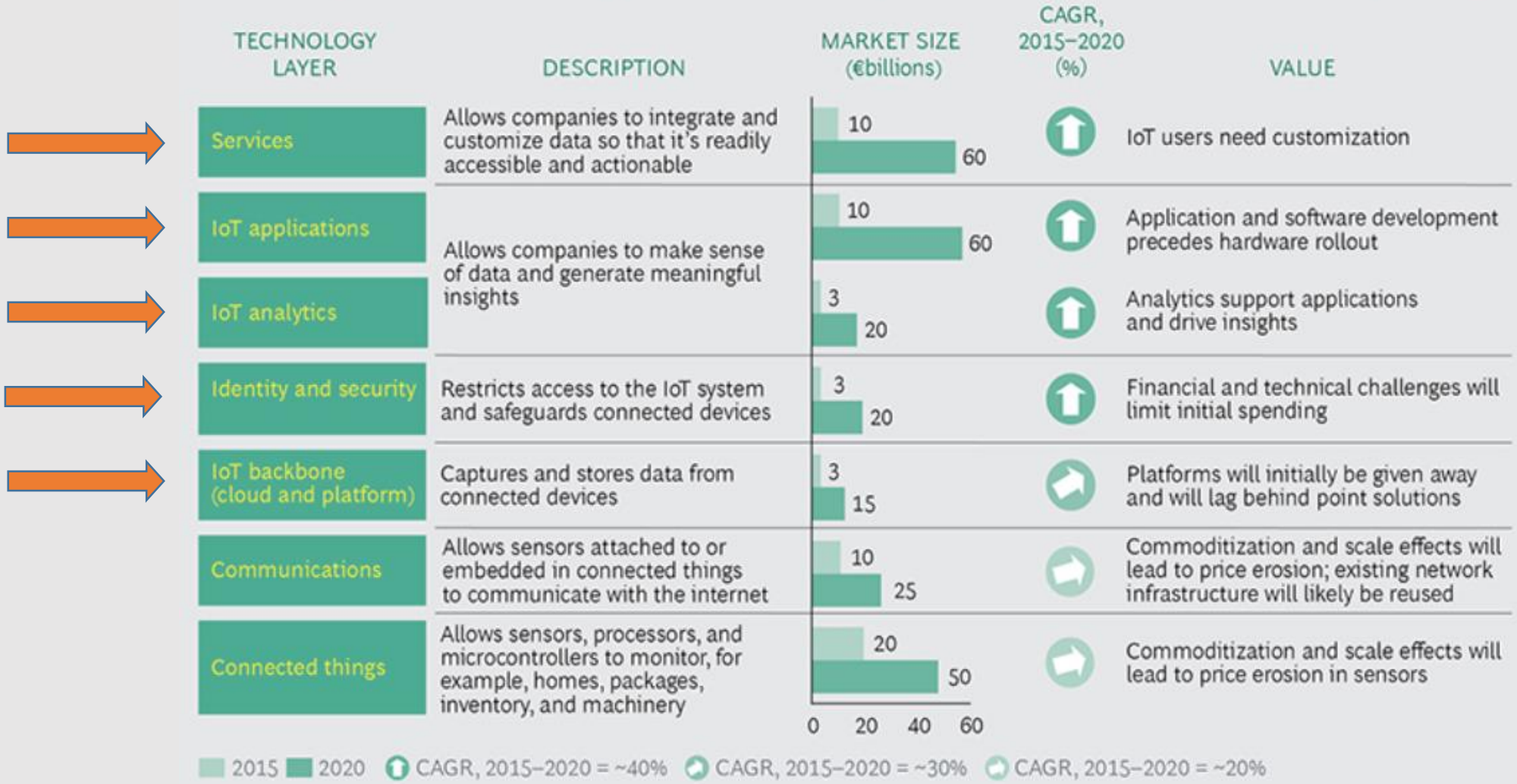
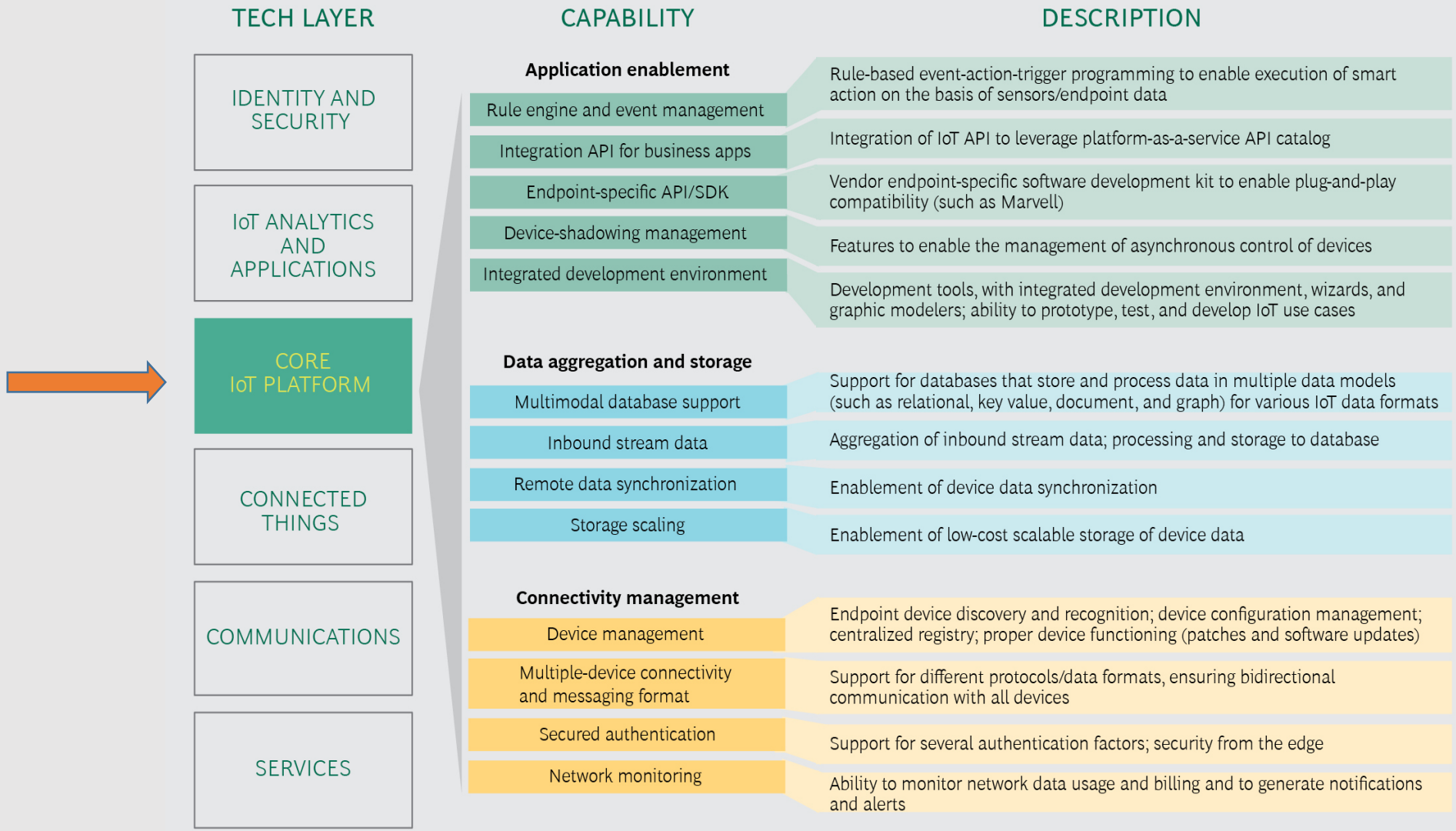
EXHIBIT 1 | Services and IoT Applications and Analytics Will Capture Some 60% of IoT Spending



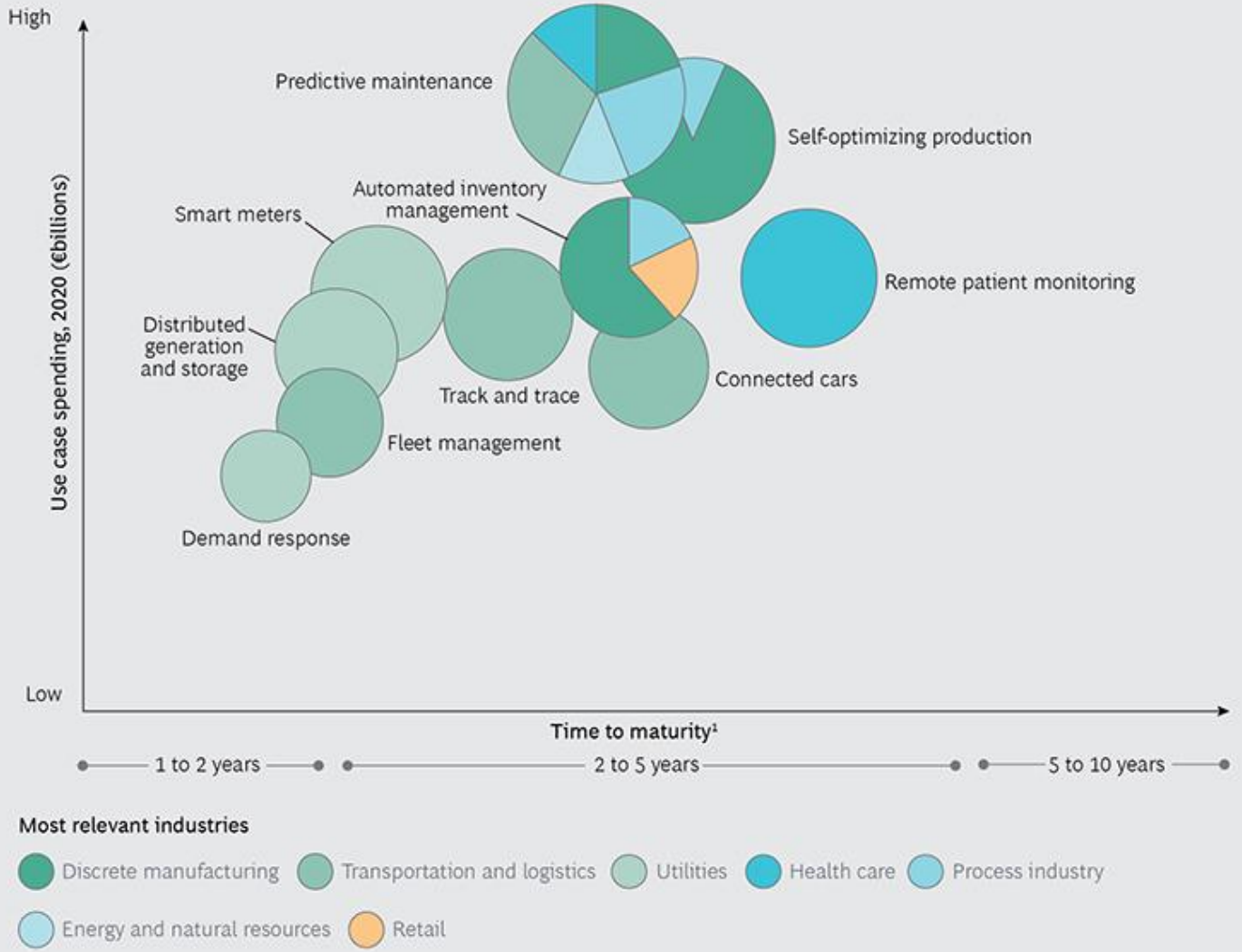
Sources: IDC; Gartner; ABI Research; BCG Internet of Things buyer survey; expert interviews; BCG analysis.

EXHIBIT 1 | A Complete Core IoT Platform Addresses Three Main Capabilities



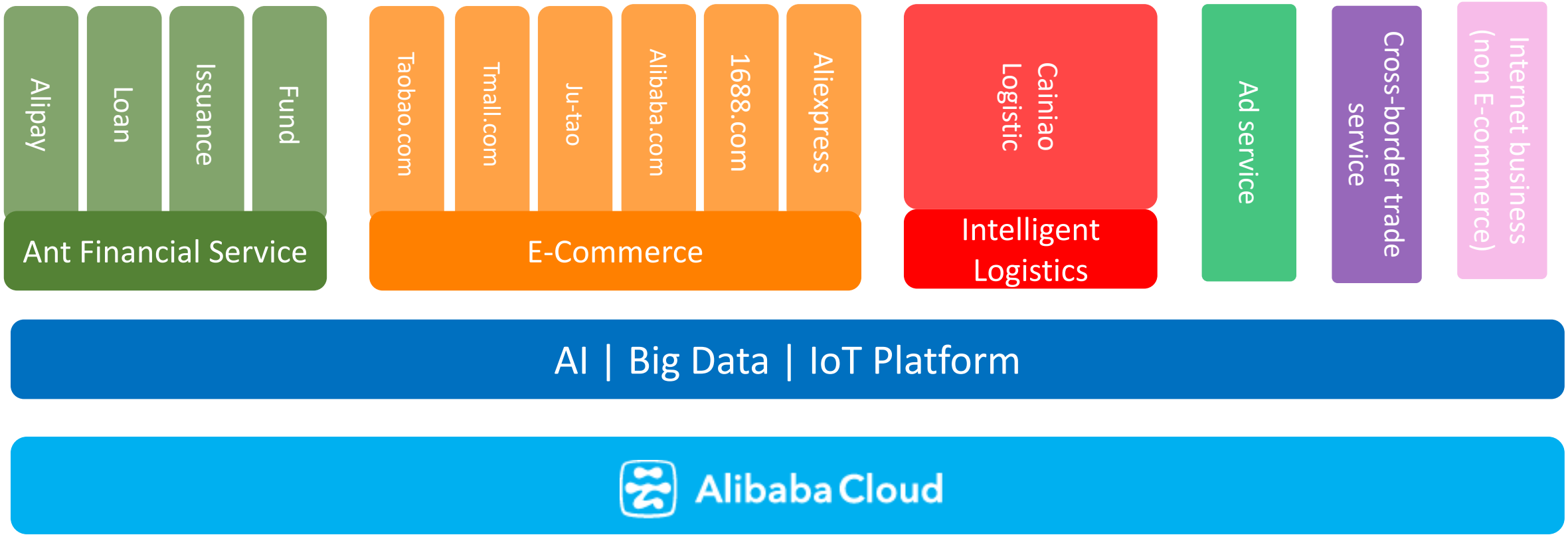
Source: BCG analysis.
Notes: API = application programming interface; SDK = software development kit.

EXHIBIT 2 | Ten Use Cases Will Drive IoT Growth Through 2020



Sources: BCG Internet of Things buyer survey; IDC; expert interviews; BCG analysis.
Note: The bubble sizes indicate relative amounts of spending.
[1]Productive and scaled use within real-life settings (that is, no pilots). To capture opportunities, vendors must quickly ramp up activities. The timing of commercial viability for these use cases was derived from responses to a survey question: "When do you expect to productively use [name of use case]?"

Alibaba Cloud: the Powerful Engine Supporting the Growth of Alibaba Business



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Alibaba Marketplaces, Ecosystem & Economy

Exhibit 8. The Alibaba Economy Alone Is Expected to Generate Over 100 Million Jobs by 2035[1]

Job opportunities directly created by Alibaba domestic business

- ...E-commerce and online business services (online shop owner, Tao Lady, customer service, web design ...)
- ...Logistics (packaging materials factory, courier staff...)
- ...Tao Factory
- ...Ali Cloud
- ...Domestic B2B
- ...O2O (Daowei, delivery staff...)

112 million

Job opportunities directly created by Alibaba international business

- ...Alibaba Cloud Computing International Business
- ...AliExpress
- ...Ali OneTouch
- ...Ali investment in international companies such as Lazada

~10 million

>100 million

Given the strong correlation between Ali's emerging businesses (cloud computing, digital entertainment, etc.) and the digital economy, these are expected to increase its share of China's overall digital economy even further.

Sources: BCG analysis; data of Alibaba Group.

[1] In 2015, employment created by Alibaba's retail business alone accounted for 27% of the total employment of China's digital economy. We assume that the share of employment created by Ali is the same as 27% in 2035.

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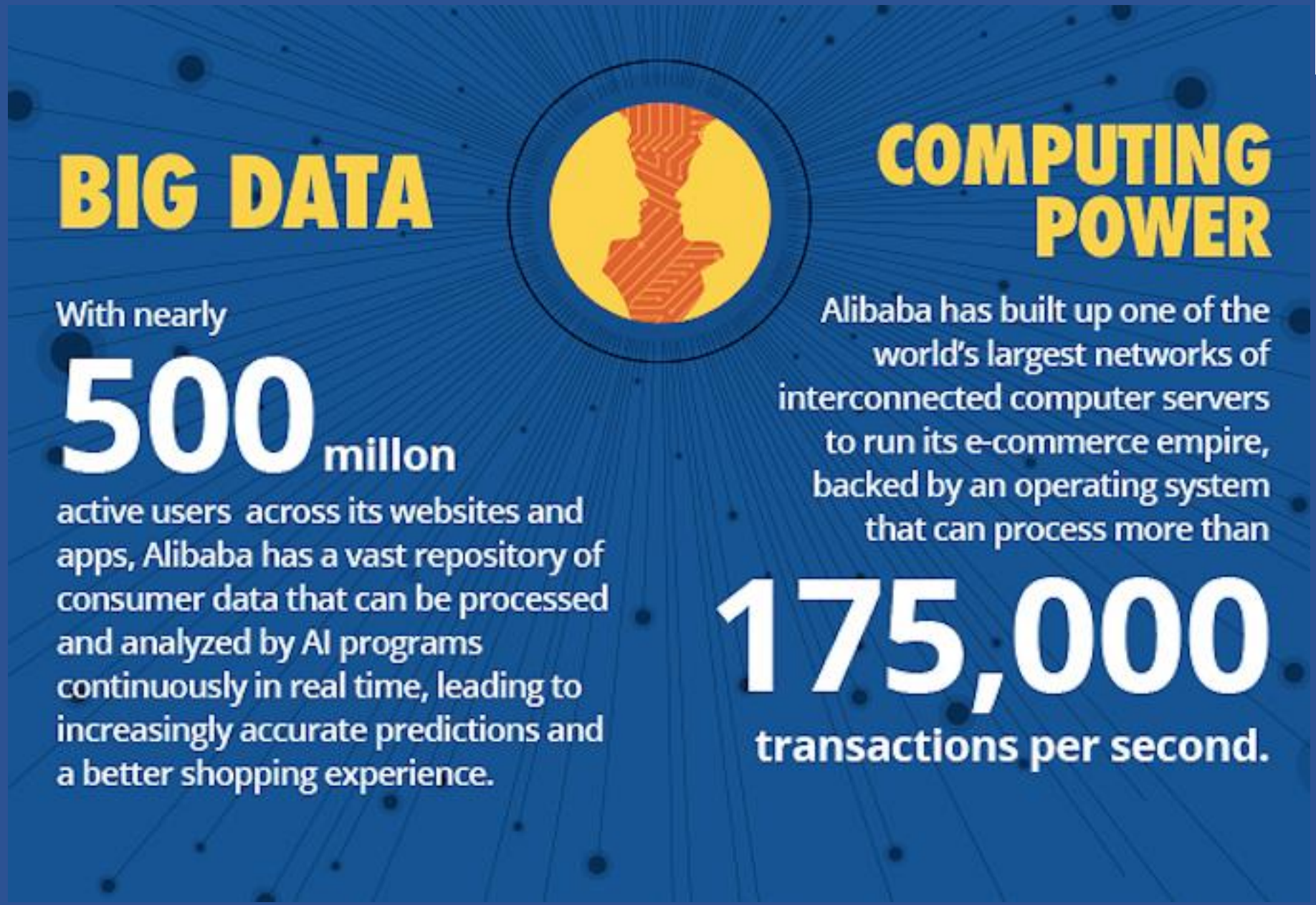
BIG DATA
With nearly
500 millon
active users across its websites and apps, Alibaba has a vast repository of consumer data that can be processed and analyzed by AI programs continuously in real time, leading to increasingly accurate predictions and a better shopping experience.
COMPUTING POWER
Alibaba has built up one of the world's largest networks of interconnected computer servers to run its e-commerce empire, backed by an operating system that can process more than
175,000
transactions per second.

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Alibaba is applying advanced AI algorithms to improve efficiency across five key sectors...

SMART PRODUCT SEARCH AND RECOMMENDATION

Alibaba's software uses real-time data from within the Alibaba online ecosystem to create predictions for what consumers want, based on not just previous purchases but also online browsing, comments, content consumption and more.

....

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SMART CUSTOMER SERVICE

Ali Assistant is a chatbot that handles both spoken and written queries, acting as customer-service rep and personal shopping assistant. It is capable of handling up to

95% of customer service enquiries

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PERVASIVE PERSONALIZATION

Merchants selling on Tmall and Taobao are able to personalize their virtual storefronts for individual visitors, offering real-time, tailored product recommendations based on purchase histories, age, gender, geographic locations and a host of other data points.

6.7

billion

personalized shopping pages were generated by merchants on Taobao and Tmall last year during Alibaba's huge 24-hour online sale, the 11.11 Shopping Festival.

There was a

20%

higher conversion rate

on personalized landing pages during 11.11 compared with non-personalized pages.

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SMART LOGISTICS

Cainiao, Alibaba's logistics affiliate, uses cutting-edge technology to determine the fastest and most cost-effective delivery routes in a variety of complex road networks, including both rural villages and crowded urban areas.

70%
of parcel deliveries in China are processed by Cainiao technology, resulting in

42 million
deliveries a day

10%
less vehicle use and

a **30%**
reduction in travel distances thanks to AI technology

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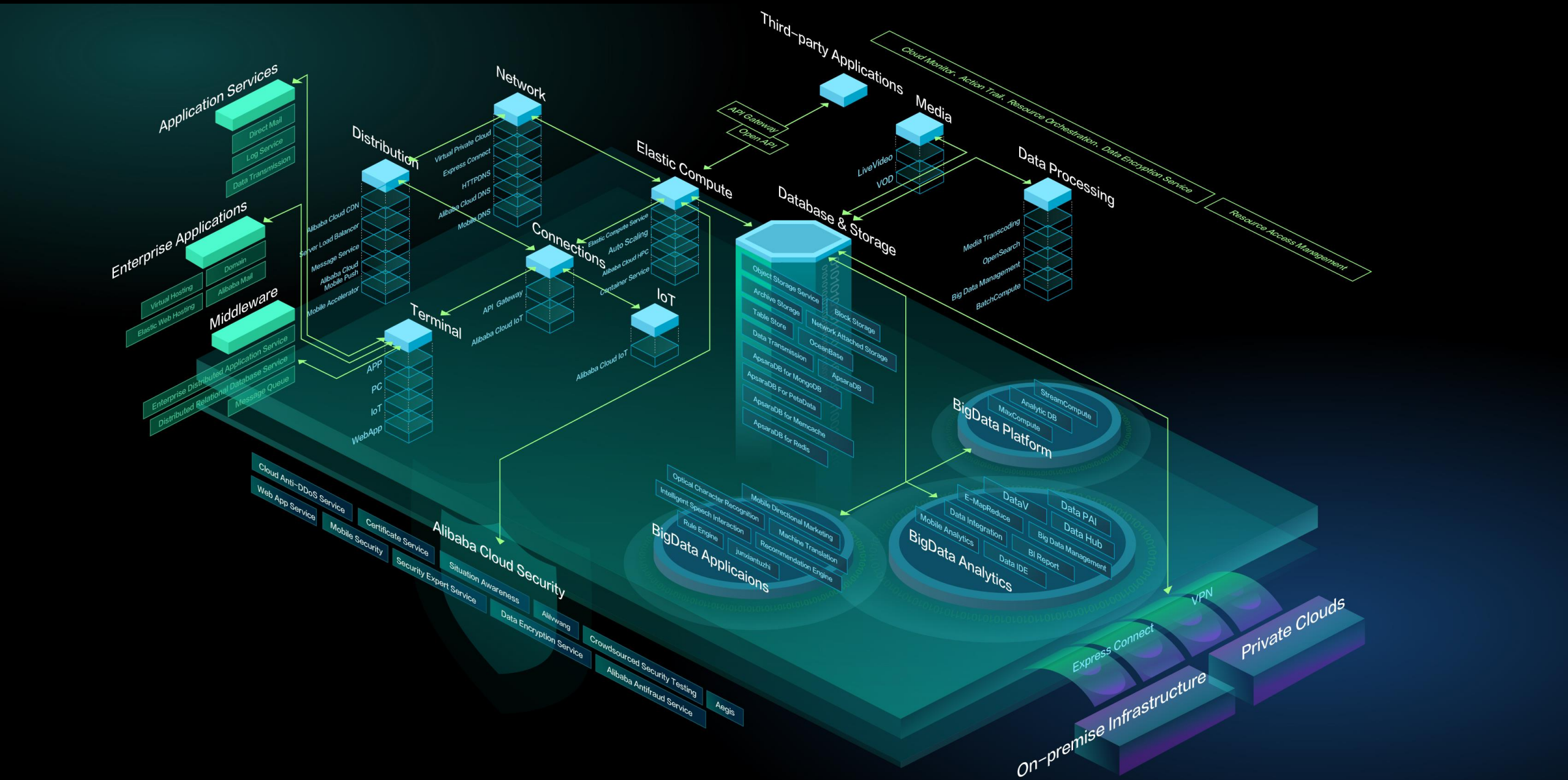

MORE THAN JUST CLOUD | Alibaba Cloud

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Support

- Technical Support
- Professional Services
- Training & Certification
- Cloud Architects
- Pricing Report

Solutions

Gaming, Web, IoT, Media, AdTech, Healthcare, Security, FinTech, O2O, Storage, Government, Mobile

Applications

Big Data

- MaxCompute — Data Warehouse
- EDAS — Enterprise Dist. App Service
- EMR — Elastic MapReduce
- PAI — Platform of Artificial Intelligence

Applications

- Live Streaming
- Domain Name
- MTS — Media Transcoding
- DNS — Domain Name Service

DevOps

- RAM — Resource Access Management
- DRDS — Distributed RDS
- API
- ROS — Resource Orchestration
- IoT — Internet of Things
- CLI

Monitoring & Security

- Cloud Monitor — Monitoring/Alarm Service
- Anti-DDoS — Basic
- Anti-DDoS — Pro
- SSA — Security Situation Awareness
- KMS — Key Management Service
- WAF — Web Application Firewall
- Server Guard — Server Security
- HSM — Data Encryption Service

Compute

- ECS — Elastic Compute
- Auto Scaling
- SLB — Server Load Balancer
- Container — Docker

Storage

- Block Storage
- OSS — Object Storage Service
- Archive Storage
- NAS — Network Attached Storage
- Message Queue — Managed RocketMQ

Database

- RDS — Relational Database
- Analytic DB — Realtime OLAP
- Redis — Key-value
- MongoDB — NoSQL
- Memcache — Key-value
- Table Store — NoSQL
- DTS — DB Migration/Sync

Networking

- CDN — Content Delivery Network
- VPC — Virtual Private Network
- ExpressConnect — Dedicated Line
- Elastic IP
- HA-IP — High Availability IP

Infrastructure

Global IDC, Regions, Availability Zones

Note: New Product availability dependent on Data Center region

MORE THAN JUST CLOUD | Alibaba Cloud

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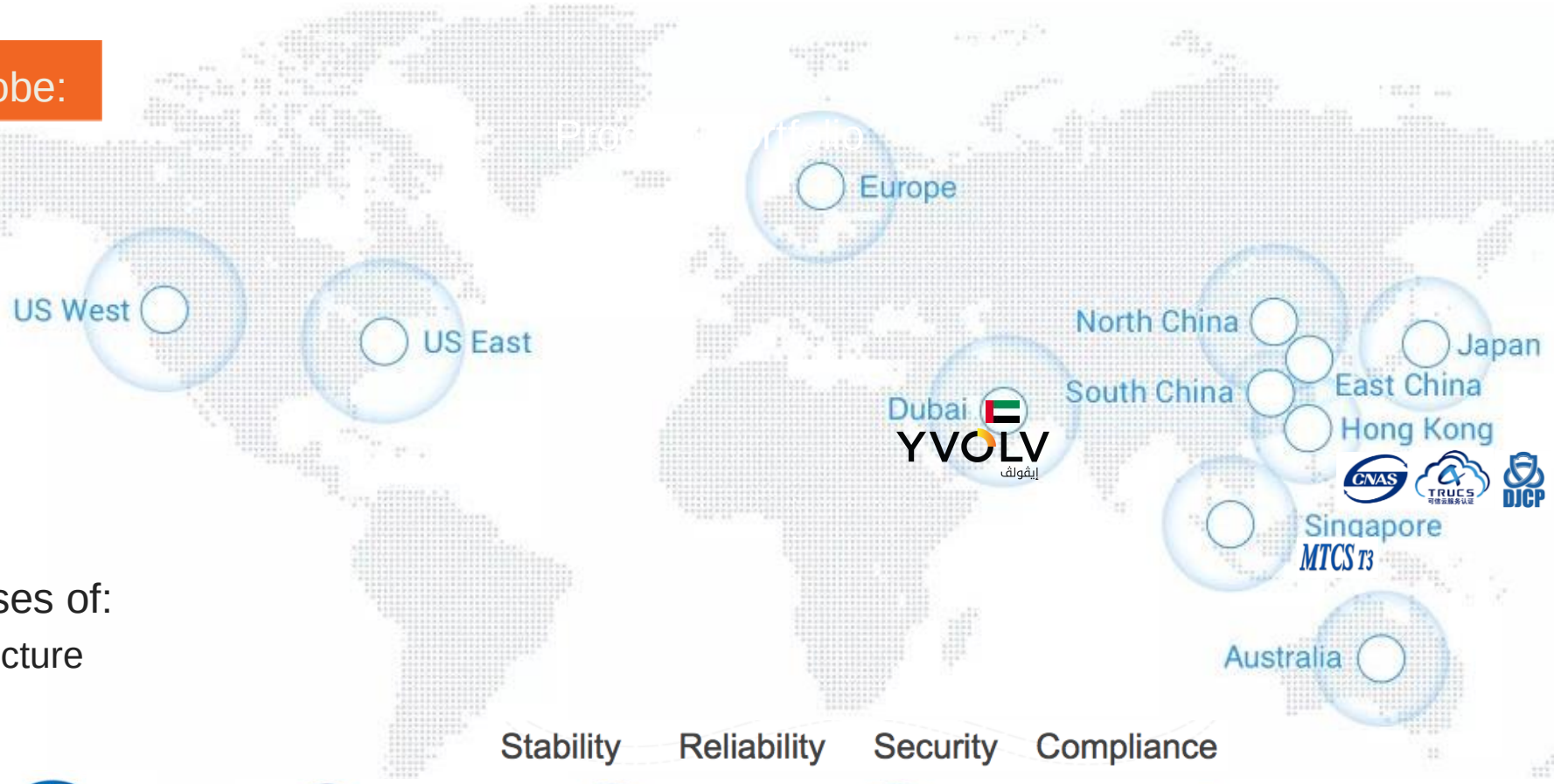
Global Service Regions and Compliance

14 locations across the globe:

- **United Arab Emirates**
  - Australia
  - China (5 Locations)
  - Germany
  - Hong Kong
  - Japan
  - Singapore
  - USA (2 Locations)

- Each Datacenter comprises of:
  - High availability infrastructure
  - Carrier Neutrality



Stability Reliability Security Compliance

AICPA

ISO 27001 Certified

ISO 20000 Certified

ISO 22301 Certified

PCI-DSS Compliant

CSA-Cloud Security Alliance

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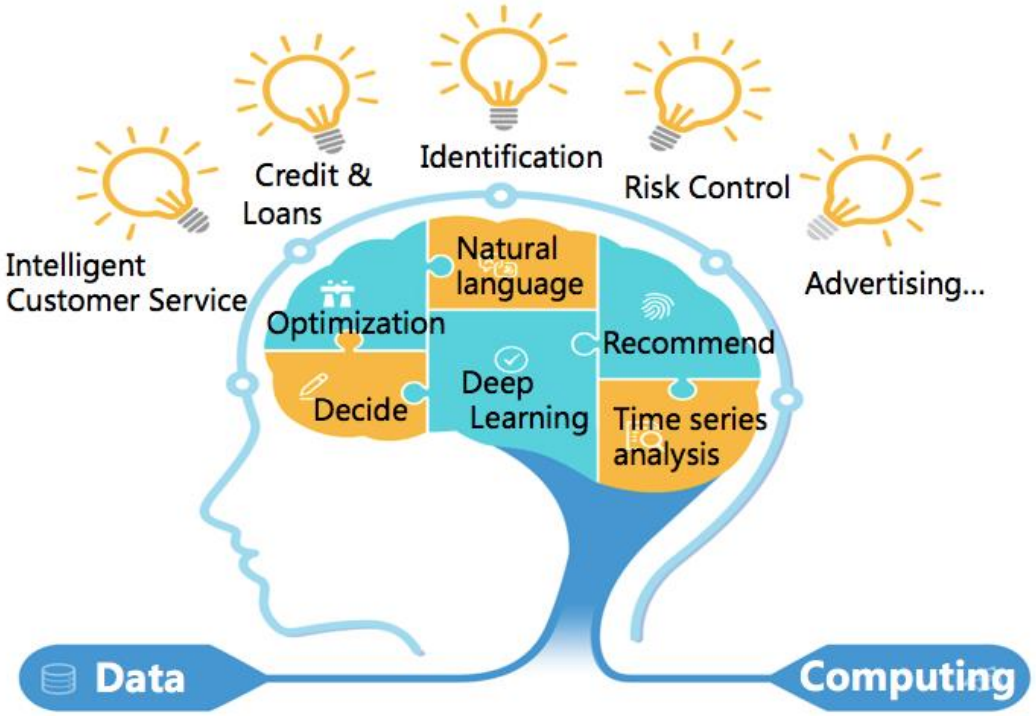
Core Competitive Advantage – AI



Hangzhou to build 'City Brain' with Alibaba and Foxconn

(People's Daily Online) 17:43, October 13, 2016

The Hangzhou government launched a new project, titled "City Brain," with Alibaba Group and Foxconn Technology Group at the 2016 Computing Conference in Hangzhou, Zhejiang province on Oct. 13.

City Brain, an artificial intelligence hub, will use big data to help the city "think" and make decisions. It aims to build Hangzhou into a smart city with the ability to self-regulate and even interact with human beings.

"The core of City Brain will use the ET artificial intelligence technology of Ali cloud, which can conduct overall real-time analysis of the city, automatically deploy public resources and amend defects in urban operations," said Wang Jian, chairman of Alibaba's Technology Steering Committee.

The first step of the City Brain project is to collect data relating to infrastructure facilities including transportation, resources and water supply. From there, the partners will integrate data resources scattered around the city to navigate its "neural network."

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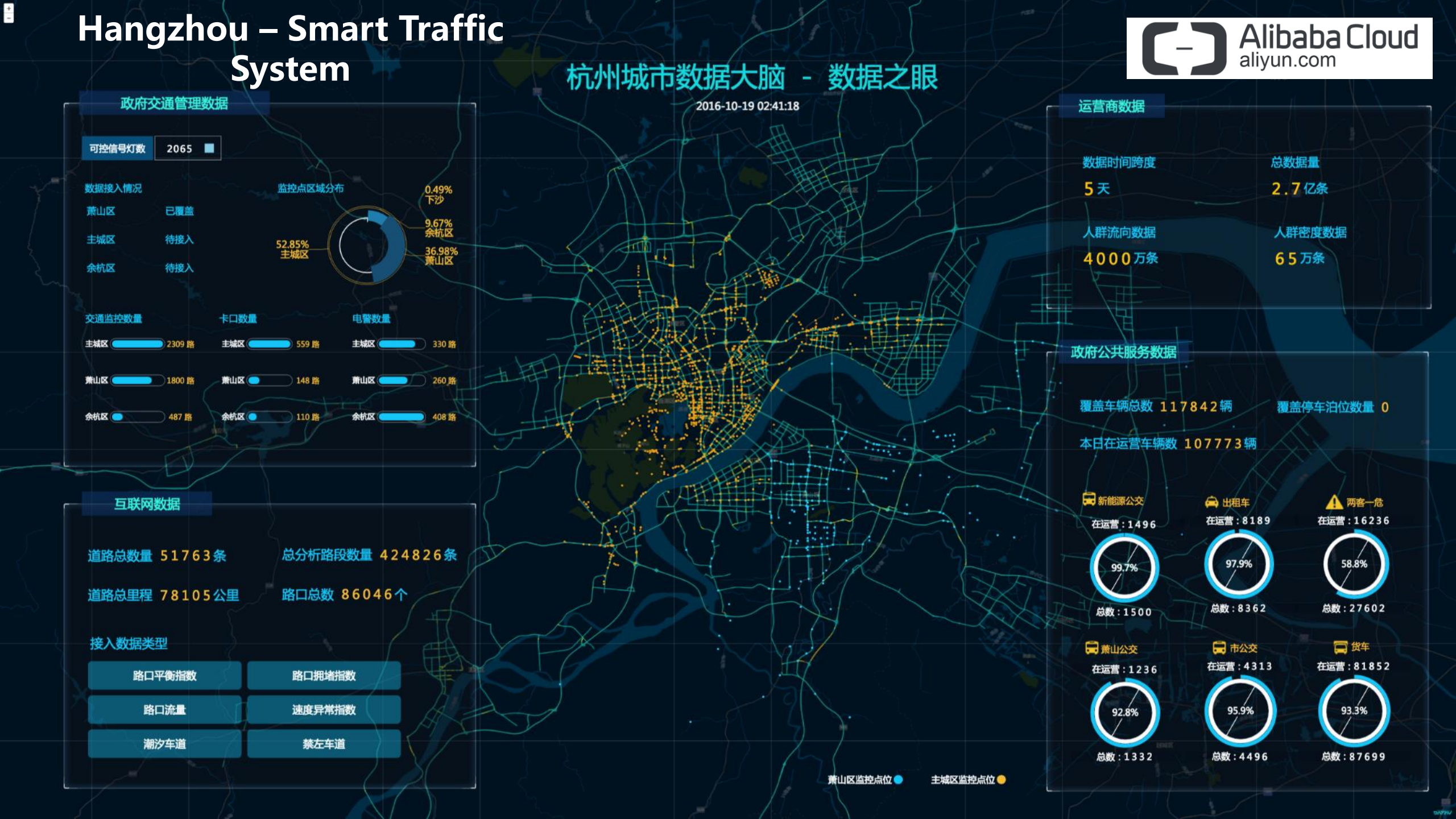
Hangzhou – Smart Traffic System



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aliyun.com

Hangzhou – Smart Traffic System

Alibaba Cloud
aliyun.com

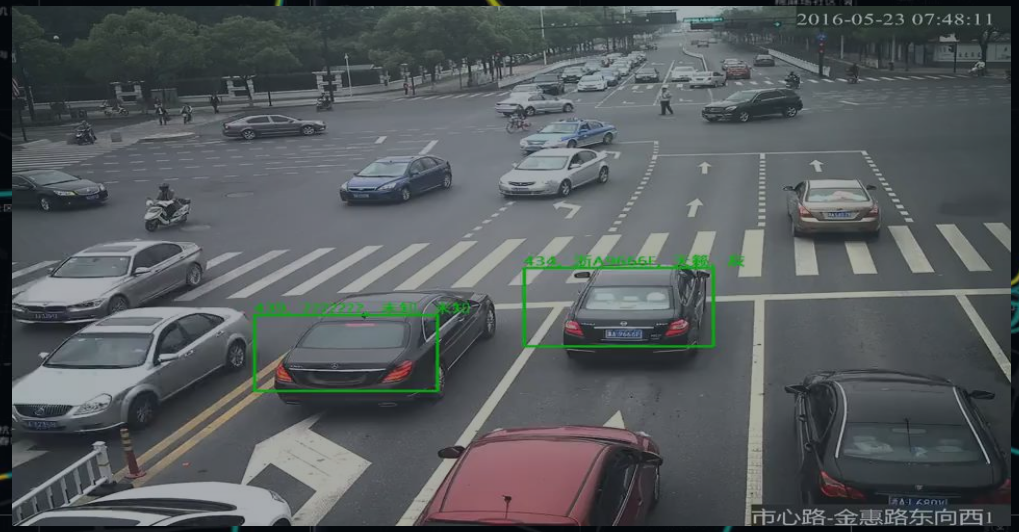
Xiaoshan District

2016 Sep，City brain began to serve in Xiaoshan district CBD

By optimizing traffic lights, the passing speed improved by **3%**

Traffic speed improve by **5%**

11%



Guangzhou City Brain

Alibaba Cloud
aliyun.com

Operation Platform

Data | Computing | API | Congestion | Distribution | Real-time Traffic | … …

Open Algorithm Platform

Bus Capacity Prediction	Bus Stop Optimization	Bus Route Analysis	Bus Route Optimization	Forbidden left index evaluation	Benefit Prediction
Surveillance Video Recognition	Road network state modeling	Vehicle behavior modelling	Intersection simulation and prediction	Traffic Management Strategy Optimization	… …

Data Exchange Platform

Data Standard	Physical Modeling	Index Computing	Data Index	Compute and Modeling
Data Integration	Data Cleaning	Data Exchange	Data Security	Compute and Modeling

Mobile Base station data | Bus GPS data | Road network data | Cars GPS data | Traffic lights Data | Bus route data

Traffic flow data | Hazardous goods vehicle GPS data | Taxi GPS data | Pic/Video Data

… …

Historical data

Carriers

Base Station

Bus historical GPS data

Bus company

Bus Scheduling system

Bus Real-time GPS Data

Static Map Data

Internet Company

Road network | Vehicle Flow | … …

Bus

Map

Vehicle historical data

Vehicle real-time GPS data

Traffic Bureau

… …

Taxi Management system

Connection system

Heavy Vehicles

Taxi

School Bus

Leased Line

Control Center

Signal pairing optimization solution

DMZ

Police network

Video Procession cluster

Video | Picture | … …

Traffic Lights Control

Police Station

E-Police System

CCTV

Traffic Light

Signal system

Internet of Vehicles Use Case

Alibaba Group's YunOS is collaborating with Gemalto, a world leader in digital security, to provide YunOs with connectivity and security for its Internet of Things (IoT) venture in China, according to an announcement on Monday, Oct. 17, by Gemalto.

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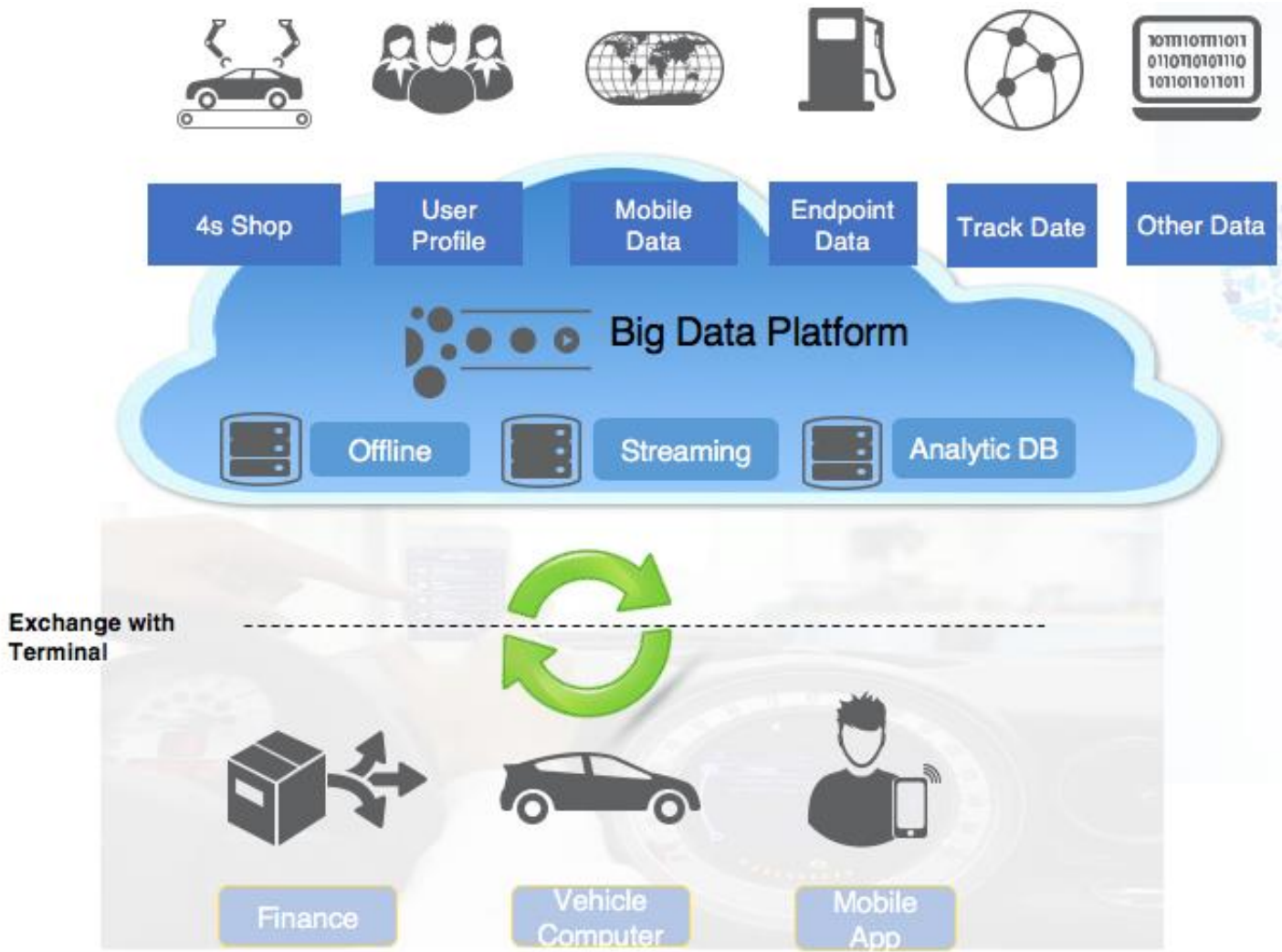
Internet of Vehicles – Where to Monetize the Data



Alibaba Cloud
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- ✓ The key for big data is to build up a data producer and consumer close cycle. With more data, comes to more value.

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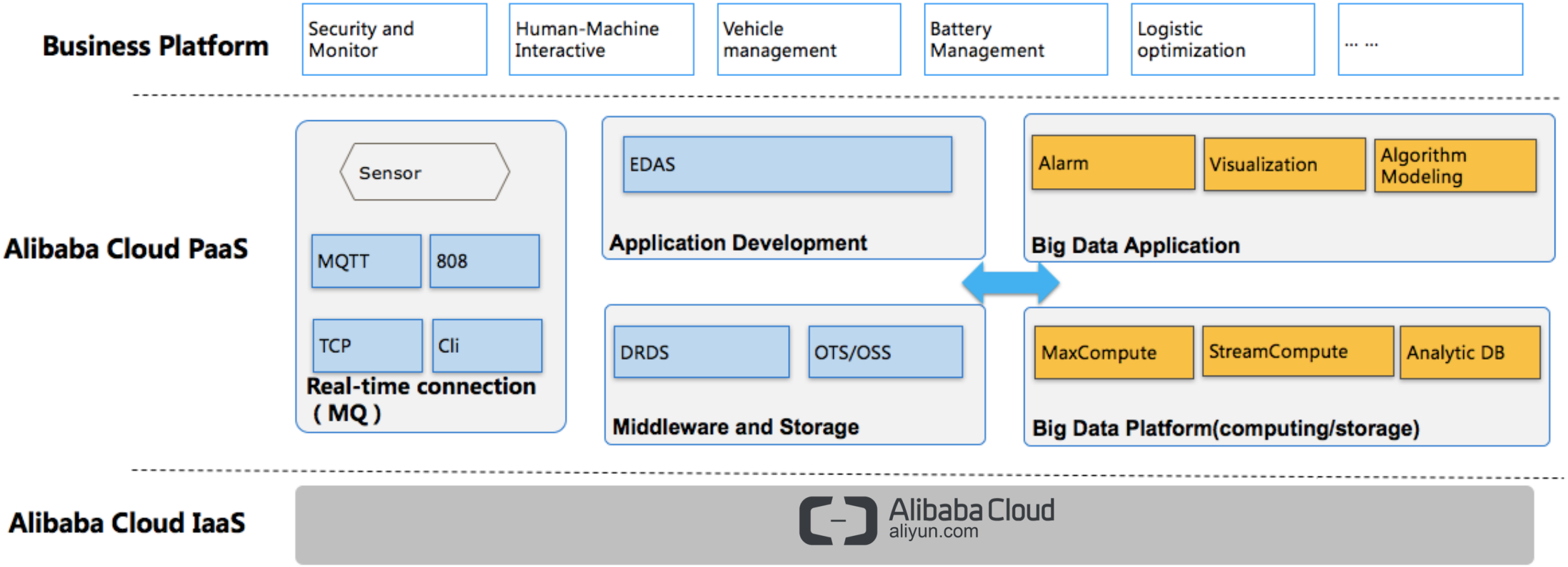
Internet of Vehicles - Architecture



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- In 2015, Chinese investors spent over USD $27 billion to buy U.S-based properties.
- There has been a surge in the number of Chinese nationals investing in properties in such places as the U.S, Japan, Taiwan and Russia - CBRE Asia Pacific Research,

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“Performance is always our No. 1 priority to choose a cloud provider. It really is life-and-death decision for your business. Loading content instantly is that moment of truth when users can fall in love with your application”.
- Powermew

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Core Competitive Advantage – Cyber Security

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G20 2016 CHINA

We provided state of art cyber security services for over 200 Zhejiang government agency websites during the G20 Summit.

- **Blocked over 306mn malicious IPs.**
- **Automatically defended over 247mn attacks.**

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Alibaba Cloud Security Family

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App & Web Development Capabilities

- Our **technology stack** includes:
  - Backend Engineering (Grails, Java, Hadoop, etc..)
  - Frontend Engineering (HTML 5, CSS3, Polymer, React)
  - Mobility (iOS, Android, Samsung Smart TV)
  - DevOps (Alibaba Cloud, Docker, etc…)
  - UI
  - Testing
  - Web Content Management

- **Enabling us to deliver:**
  - Mobility apps
  - Ecommerce websites
  - Chatbots
  - Machine learning and Artificial intelligence applications

- YVOLV provides **application and software development** through a **global network of capability centers:**
  - India 1
  - India 2
  - France

Choice of subcontractor depends on customer budget and type of competency/complexity required

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Digital Strategy & UX Capabilities

YVOLV provides a **diverse of services** to help customers **articulate their technology strategy** and **customer experience**:

- **Technology Innovation Strategy**
  - Vision/Mission
  - Cost Benefit Analysis
  - Technology Roadmap
- **Customer Experience Design**
  - Market/Segment Analysis
  - Design Testing
- **User Experience Design**
  - Customer Journey
  - User Experience Design

Our strategy resources include the following profiles:

- **Big 3 Strategy ex-consultant with 20+ years experience in:**
  - Aviation
  - Tourism
  - Real Estate
- **Big 3 Strategy ex-consultant with 5+ years experience in:**
  - Technology
  - Real Estate
  - Banking
- **Industry expert with 5+ years experience in:**
  - Digital transformation in retail

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YVOLV Digital Transformation Services

Technology Innovation Strategy

Trends Impact Analysis

Cost Analysis

Technology Strategy

Customer Experience Design

Market Research

User Experience (UX) Design

User Interface (UI) Design

Solution Design and Development

Mobile/Web Development

Digital Services

Cloud Migration

Data Analytics and Monetization

Data Warehousing

Data Analytics

Data Monetization

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Alibaba Group

The Olympic Partner (TOP)

Becomes official “Cloud Services” and

“E-Commerce Platform Services” Partner

Olympic cycle

- 2018 Winter Olympics, Pyeongchang, Korea
- 2020 Summer Olympics, Tokyo, Japan
- 2022 Winter Olympics, Beijing, China
- 2024 Summer Olympics
- 2026 Winter Olympics
- 2028 Summer Olympics

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