![China Comservice 中国通信服务 CHINA COMSERVICE]

CHINA COMMUNICATIONS SERVICES CORPORATION LIMITED

Stock Code : 552

2020 Annual Results

30 March 2021

New Generation
Integrated Smart Service Provider

www.chinaccs.com.hk

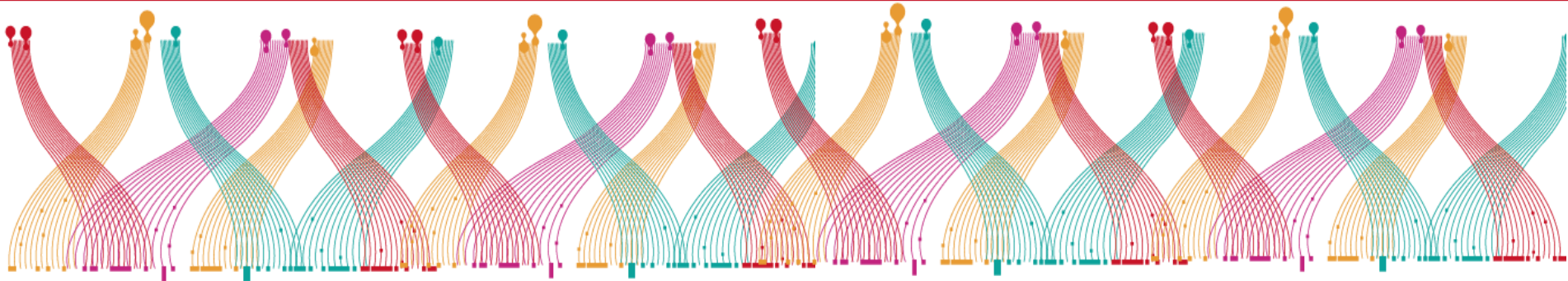**CHAIRMAN**   MR. ZHANG ZHIYONG

PRESIDENT   MR. HUANG XIAOQING

EXECUTIVE VICE PRESIDENT   MR. LIANG SHIPING

EXECUTIVE VICE PRESIDENT & CFO   MS. ZHANG XU

Overview

Business Review

Financial Results

Overview

Overcame the impact of the pandemic and resumed positive revenue and net profit growth for the full year

Seized New Infrastructure opportunities and achieved breakthrough in the general contracting projects for 5G and data centers

R&D investment drove business development, smart solutions for industrial applications underwent iteration and upgrade as well as swift replication

Revenue from domestic non-operator market accounted for more than 40% of revenue, and was the largest contributor to revenue growth
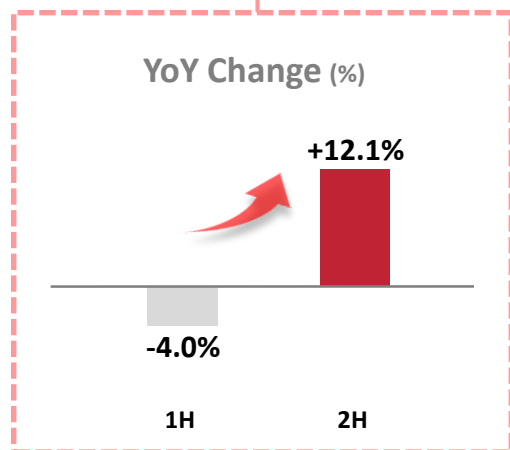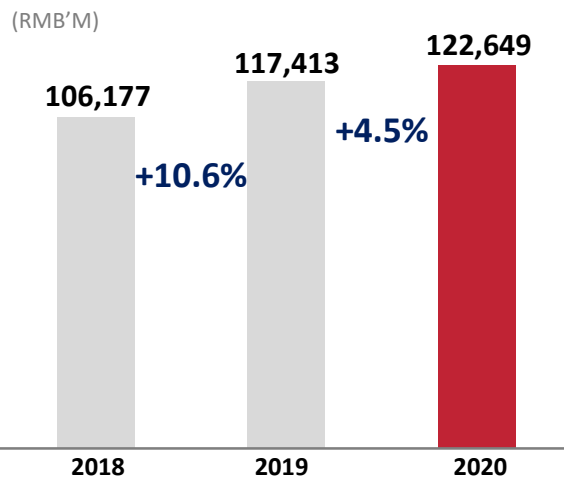
Revenue from ACO business increased to approximately 15% of revenue, and was the fastest-growing business for 4 consecutive years among the 3 businesses
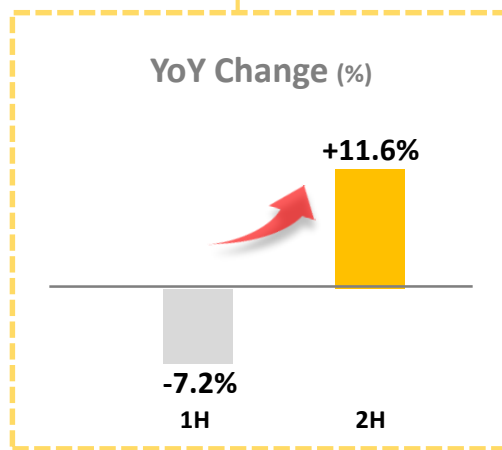
Adhering to the strategic positioning as "New Generation Integrated Smart Service Provider", promote reform continuously and seize opportunities from digital transformation

Resumed Positive Growth for the Full Year amid the Pandemic

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◄──── Revenue ────►

(RMB'M)

106,177
+10.6%
117,413
+4.5%
122,649

2018　2019　2020

YoY Change (%)

+12.1%

-4.0%

1H　2H

◄──── Net Profit ────►

(RMB'M)

2,901
+5.1%
3,049
+1.1%
3,081

2.7%　2.6%　2.5%

2018　2019　2020

── Net Profit Margin

YoY Change (%)

+11.6%

-7.2%

1H　2H

◄──── Free Cash Flow [1] ──►

(RMB'M)

3,613
4,243
5,157
2,527 [2]
2,630

2018　2019　2020

YoY Change (RMB'M)

4,226

-1,596

1H　2H
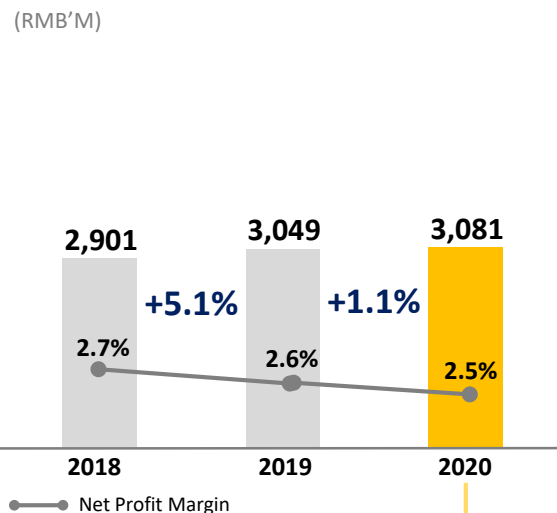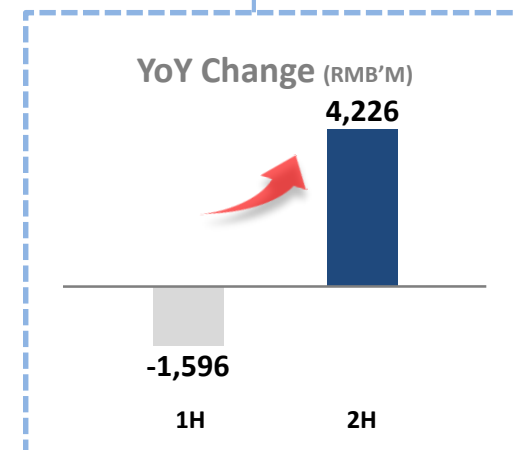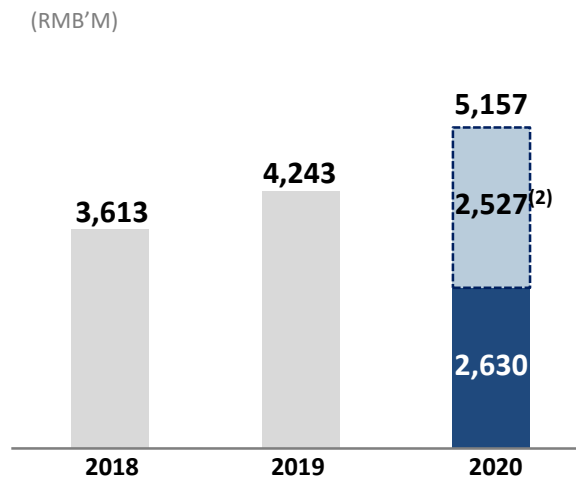
[1] Free cash flow = profit for the year + depreciation & amortization – changes in working capital – CAPEX
[2] Such amount refers to the CAPEX in 2020 on property acquisition to serve as the bases for the smart production, operation and R&D of the Group

Each Major Business Supported Overall Results

CHINA COMSERVICE 中国通信服务

Market:

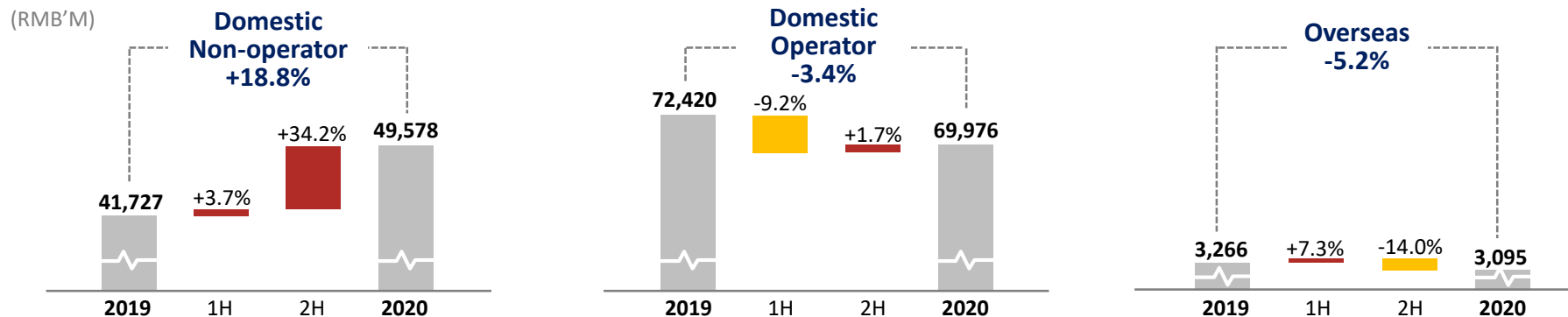➤ New infrastructure businesses such as data centers and informatization construction drove the rapid development of domestic non-operator market, 2H2020 revenue growth notably accelerated

➤ Contribution of network construction such as 5G by domestic operators gradually emerged, revenue from such market resumed positive growth in 2H2020

(RMB'M)

Domestic Non-operator +18.8%

41,727 | +3.7% | +34.2% | 49,578

| 2019 | 1H | 2H | 2020 |

Domestic Operator -3.4%

72,420 | -9.2% | +1.7% | 69,976

| 2019 | 1H | 2H | 2020 |

Overseas -5.2%

3,266 | +7.3% | -14.0% | 3,095

| 2019 | 1H | 2H | 2020 |

Business:

➤ Driven by domestic non-operator and domestic operator markets, TIS and BPO businesses resumed growth in 2H2020

➤ Driven by the increase in demand for smart products, revenue growth of ACO business accelerated in 2H2020

(RMB'M)

TIS +3.8%

64,689 | -5.7% | +12.5% | 67,165

| 2019 | 1H | 2H | 2020 |

BPO +1.7%

36,637 | -6.4% | +9.8% | 37,277

| 2019 | 1H | 2H | 2020 |

ACO +13.2%

16,087 | +10.1% | +15.6% | 18,207

| 2019 | 1H | 2H | 2020 |

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CHINA COMSERVICE
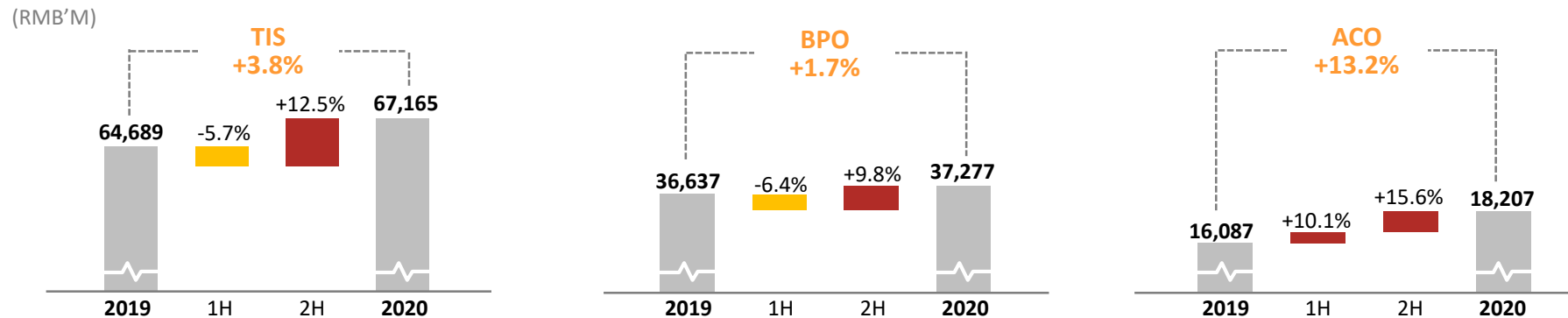
Network Construction including 5G

- TIS revenue from operators resumed growth in 2H2020
  in which - **China Telecom: +18.9%**
  China Tower: +25.5%

- **Leverage the experience on 5G construction project with general contracting model, and extend to IDC, ICT and overseas general contracting**

Data Centers

- 2020 new contracts amounted to **~RMB 11.5 billion** (+>50%)

- Mix of new contracts:
  Non-operator vs Operator: **~60:40**

- **3 projects were awarded Model Data Center Project**

Industrial Applications (Smart) Solutions

- **Group-level products 30+**
  Local project products 300+

- **Domestic non-operator market revenue: +18.8%**

- **ACO revenue: +13.2%**
  in which - Revenue from
  system integration: **>20%**
  in recent 2 years

Increased R&D to Drive Business Development

(RMB'M)

2018	2019	2020
2,798	3,276	**3,782**
2.6%	2.8%	**3.1%**

- R&D Expenses
- R&D as a % of Revenue
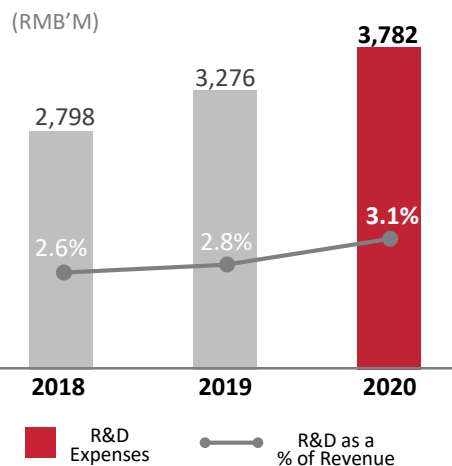
- **Established General Research Institute:** Through "Synergistic + Dispersed" R&D mechanism, coordinate the establishment of core platforms, group-level product management, implementation of major projects and ecological cooperation

- Cumulative R&D investment in recent 3 years reached RMB9,856 million

Industry Recognition

- **Rank 5th in "100 Most Competitive Software & IT Service Enterprises" for 2 consecutive years**

- **IoT platform:**
  - "CCS IoT" was awarded
    - ✓ "2020 Best Digitalization Product in PRC"
    - ✓ "OFweek 2020 Most Popular Development Platform in China IoT Industry"
  - Selected as "Innovation Project for the Integration of Digital Economy and Real Economy" in Sichuan

- **Network Security:**
  - CCS Network Information Security was elected into "CCSIP 2020 Panoramic Map of Network Security Industry in PRC"

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Revenue

(RMB'M)

CAGR +12.3%

CAGR +8.7%

- 45,417 (2010)
- +78.3%
- 80,960 (2015)
- +51.5%
- 122,649 (2020)

2010 2015 2020

Net Profit

(RMB'M)

CAGR +5.1%
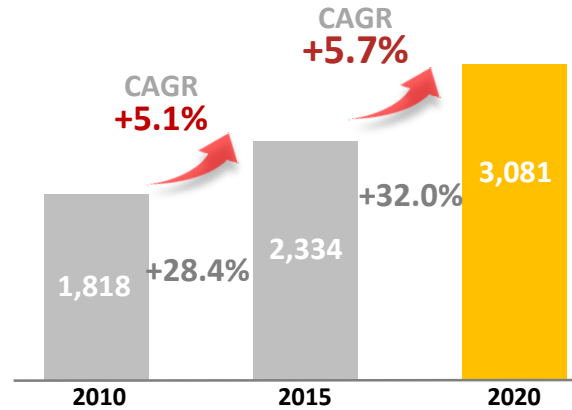
CAGR +5.7%

- 1,818 (2010)
- +28.4%
- 2,334 (2015)
- +32.0%
- 3,081 (2020)

2010 2015 2020

Revenue Mix - Market

	2010	2015	2020
Overseas Customer	4.9%	4.0%	2.5%
Domestic Non-operator	30.2%	28.3%	40.4%
Domestic Operator	64.9%	67.7%	57.1%

- Domestic Operator
- Domestic Non-operator
- Overseas Customer

Revenue Mix - Business

	2010	2015	2020
ACO	11.6%	10.8%	14.8%
BPO	40.8%	40.8%	30.4%
TIS	47.6%	48.4%	54.8%

- TIS
- BPO
- ACO

Laid a Foundation for Future New Opportunities

➢ **Enhancement of both revenue and quality**
- Revenue scale continued to expand and **exceeded 100 billion**
- Business quality enhanced with **expediting net profit growth**
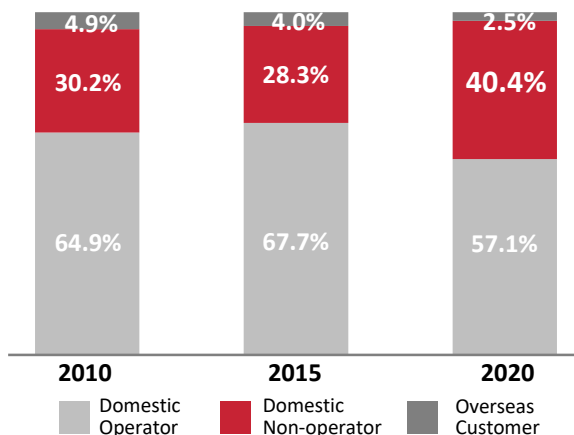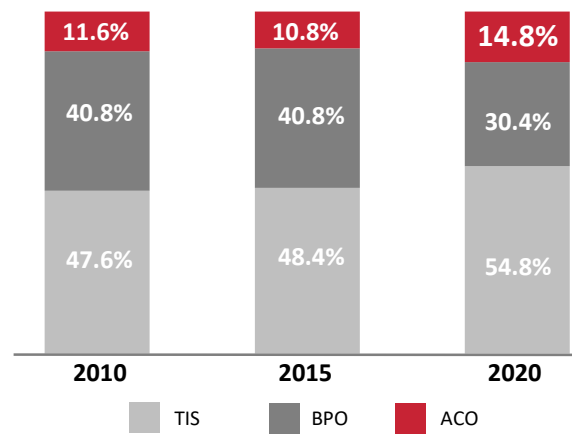
➢ **Revenue mix notably optimized**
- Revenue contribution from **domestic non-operator market** increased significantly to **>40%** and the market became the largest customer group
- Continued to increase R&D investment, revenue contribution from **ACO business** increased notably to **~15%**

9

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➢ With the acceleration of Digital Economy development and digital transformation of industries, customers demand for integrated smart services that are full-cycle, safe and expert

➢ Create value for customers by leveraging China Comservice's key technology application and innovation from its "1 Positioning, 4 Roles" and integrating deeply its 4T capabilities [1]
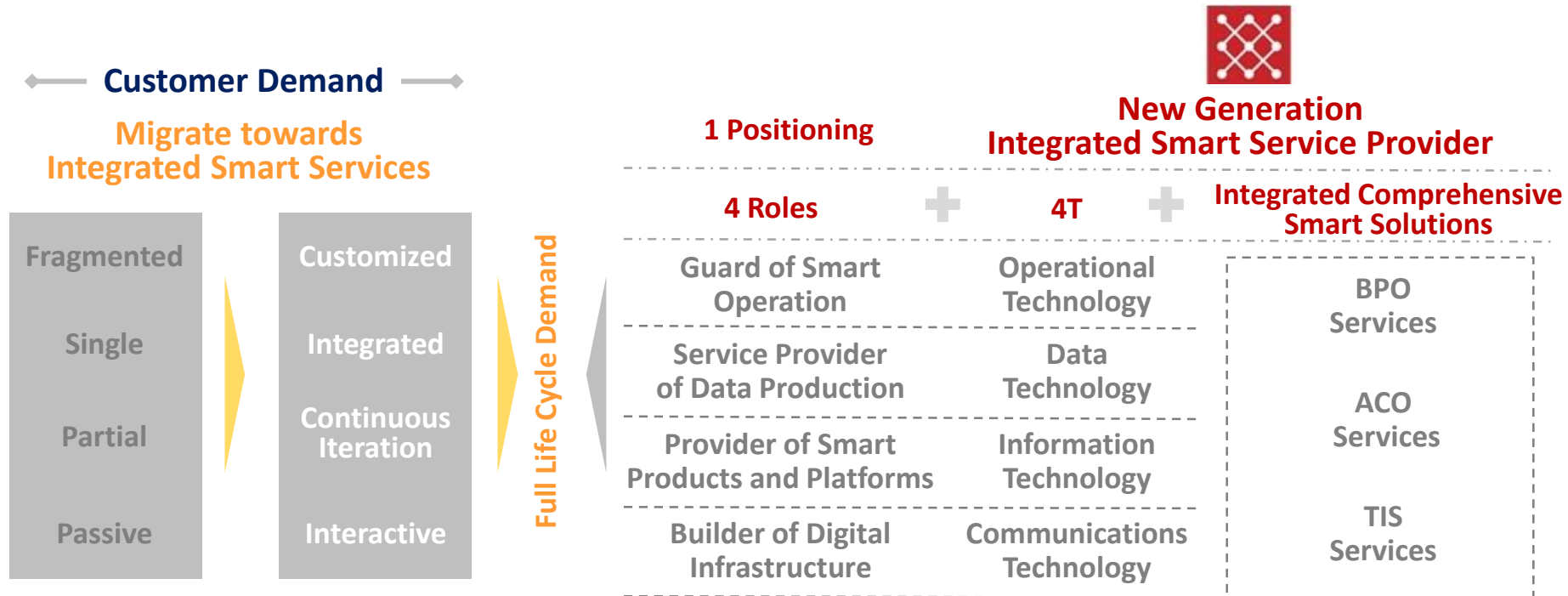
← **Customer Demand** →

Migrate towards Integrated Smart Services

1 Positioning

New Generation Integrated Smart Service Provider

4 Roles ➕ **4T** ➕ **Integrated Comprehensive Smart Solutions**

Customer Demand		Full Life Cycle Demand	4 Roles	4T	Integrated Comprehensive Smart Solutions
Fragmented	Customized		Guard of Smart Operation	Operational Technology	BPO Services
Single	Integrated		Service Provider of Data Production	Data Technology	
Partial	Continuous Iteration		Provider of Smart Products and Platforms	Information Technology	ACO Services
Passive	Interactive		Builder of Digital Infrastructure	Communications Technology	TIS Services

[1] 4T represents Operational Technology, Data Technology, Information Technology, and Communications Technology respectively

Start the New Development Stage, Practise the New Development Philosophy and Formulate the New Development Landscape
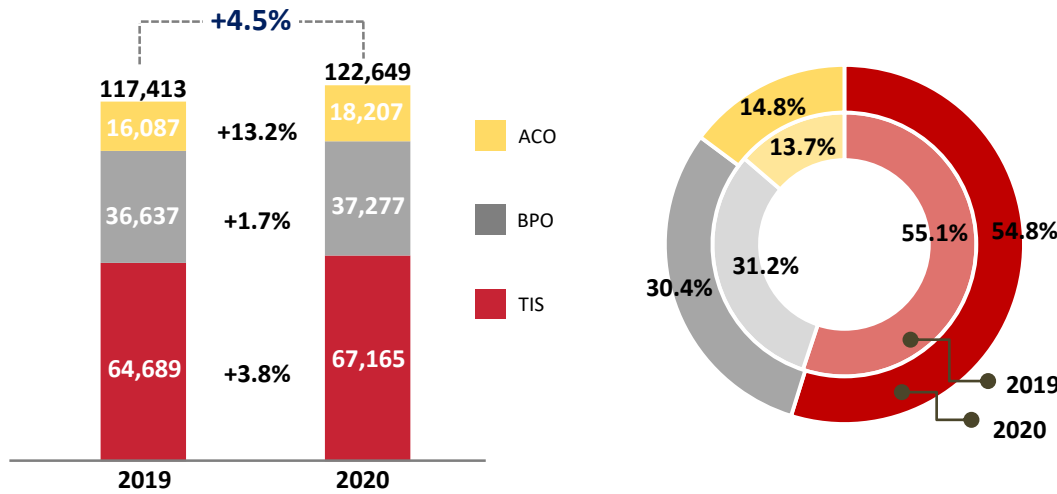
New Journey for Smart Services

Research and Development of Smart Product Portfolio

New Generation Integrated Smart Service Provider

Build World-class Network

Service Provider in the Informatization Sector

➤ Continuously promote corporate reform and expand ecological cooperation

➤ Enhance development quality and speed

➤ **"Organic + External" Growth - Dual Growth Drivers**

Service Provider to Telecommunications Operators

➤ Market Transformation: Domestic Operator + Domestic Non-operator + Overseas

➤ Business Transformation: CAPEX & OPEX, Smart Businesses

➤ Listing, Consolidation, Acquisition

➤ **"Organic + External" Growth**

3G   4G   5G

Revenue

Exceeded RMB100 billion

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |

Business Review

(RMB'M)	2019	2020	Change %	% of Revenue
TIS (Telecommunications Infrastructure Services)				
Design	10,239	10,372	1.3%	8.5%
Construction	50,735	52,953	4.4%	43.2%
Supervision	3,715	3,840	3.3%	3.1%
Subtotal	**64,689**	**67,165**	**3.8%**	**54.8%**
BPO (Business Process Outsourcing Services)				
Maintenance	15,827	15,794	-0.2%	12.9%
Facilities Management	6,168	6,357	3.1%	5.2%
Supply Chain	10,320	10,871	5.3%	8.8%
Core BPO Businesses Subtotal	**32,315**	**33,022**	**2.2%**	**26.9%**
Products Distribution	4,322	4,255	-1.6%	3.5%
Subtotal	**36,637**	**37,277**	**1.7%**	**30.4%**
ACO (Applications, Content and Other Services)				
System Integration	9,108	11,180	22.7%	9.1%
Software Development & System Support	2,856	3,108	8.8%	2.5%
Value-added Services	2,035	1,963	-3.5%	1.6%
Others	2,088	1,956	-6.3%	1.6%
Subtotal	**16,087**	**18,207**	**13.2%**	**14.8%**
Total	**117,413**	**122,649**	**4.5%**	**100%**

Business : Revenue Growth and Mix

(RMB'M)

+4.5%

	2019	2020	Growth
ACO	16,087	18,207	+13.2%
BPO	36,637	37,277	+1.7%
TIS	64,689	67,165	+3.8%
Total	**117,413**	**122,649**	

Legend: ACO, BPO, TIS
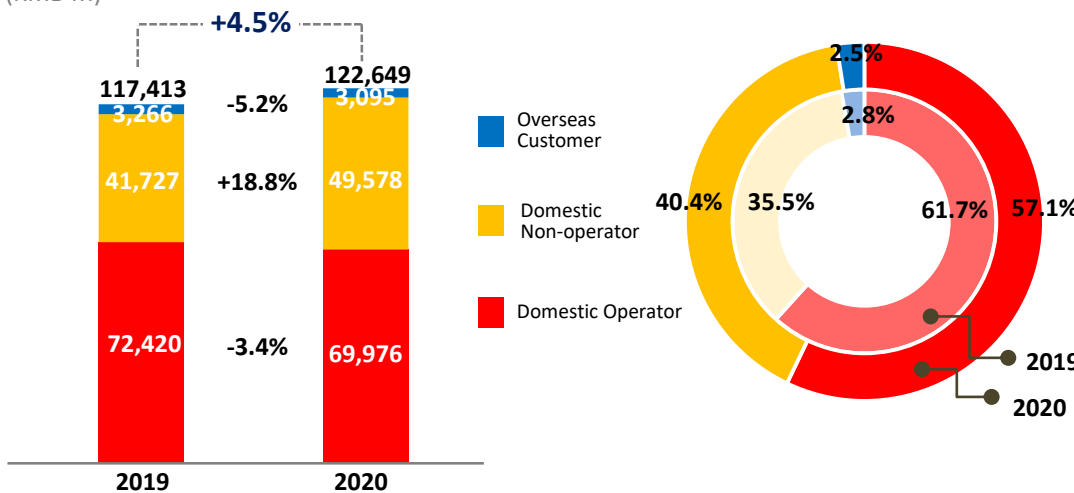
Donut chart: 14.8% / 13.7%, 55.1% / 54.8%, 30.4% / 31.2%
2019 / 2020

ACO Business

➢ The fastest-growing business for **4 consecutive years**, indicating initial results by R&D investment

➢ Revenue contribution increased to **~15%**

Market : Revenue Growth and Mix

(RMB'M)

+4.5%

	2019	2020	Growth
Overseas Customer	3,266	3,095	-5.2%
Domestic Non-operator	41,727	49,578	+18.8%
Domestic Operator	72,420	69,976	-3.4%
Total	**117,413**	**122,649**	

Legend: Overseas Customer, Domestic Non-operator, Domestic Operator

Donut chart: 2.5% / 2.8%, 61.7% / 57.1%, 40.4% / 35.5%
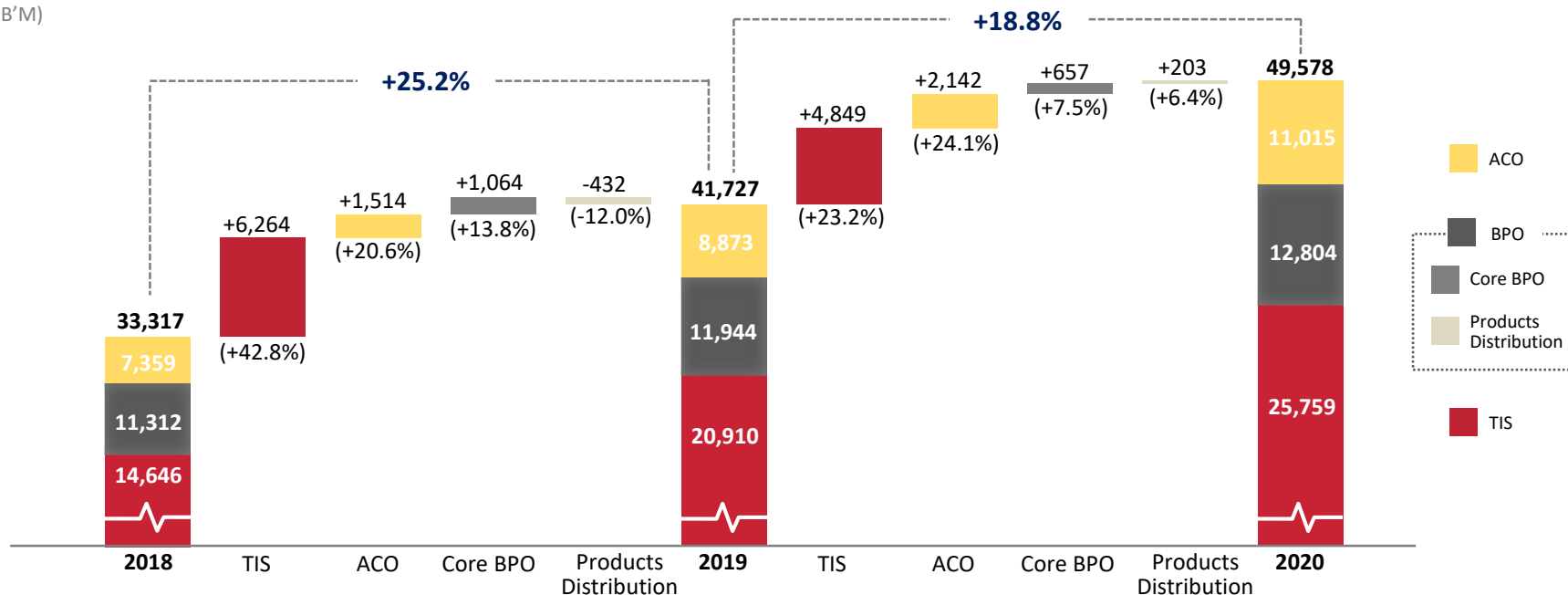2019 / 2020

Domestic Non-operator Market

➢ The fastest-growing market for **4 consecutive years** and the largest contributor to revenue growth in recent years, demonstrating successful change of growth momentum

➢ Revenue contribution increased to **>40%**

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Revenue Growth Drivers

(RMB'M)

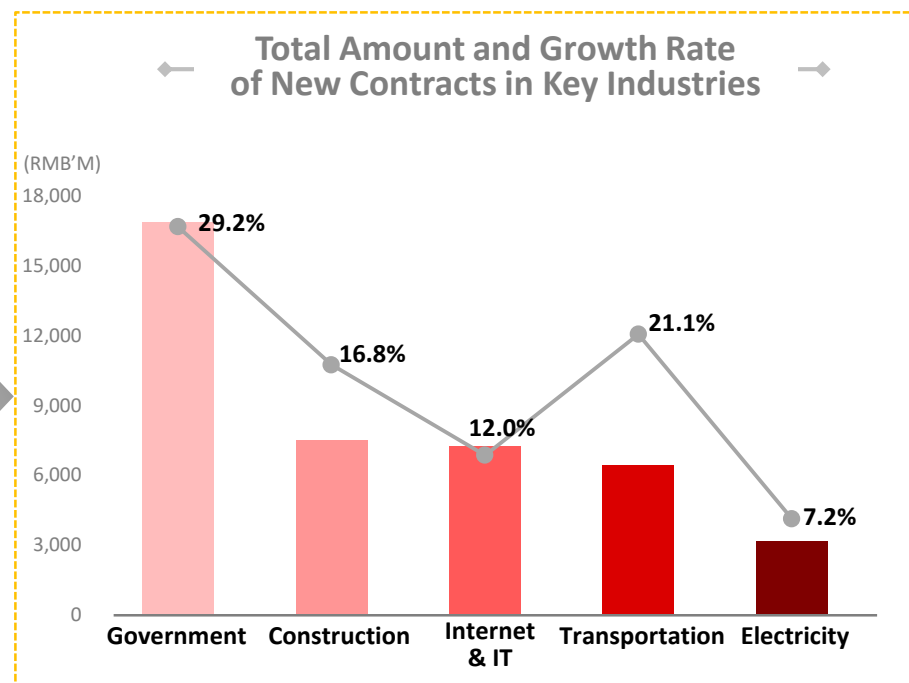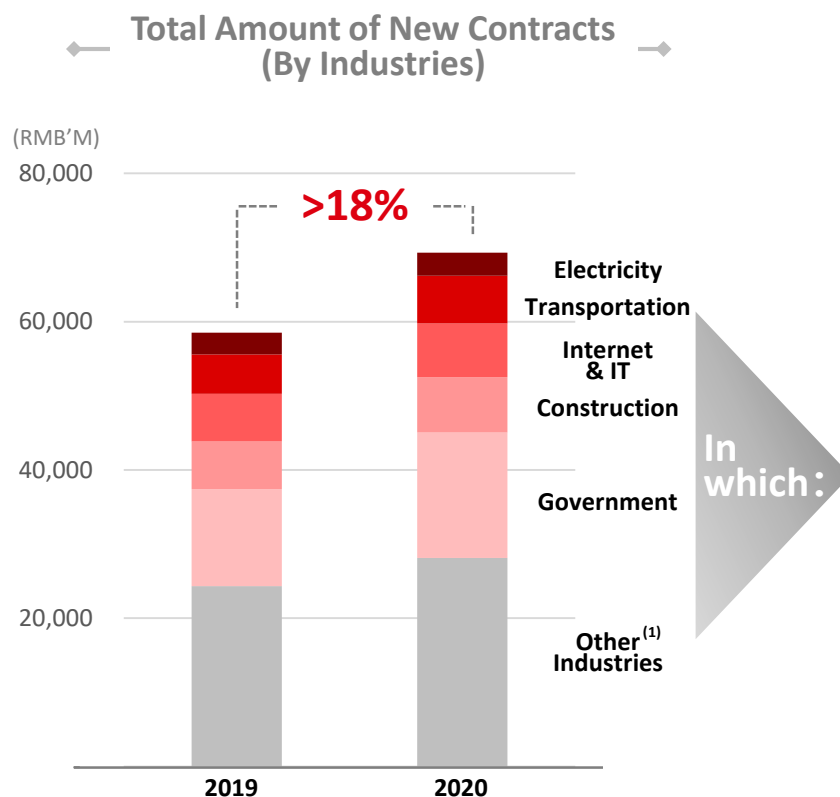**Seized Opportunities from Digital Economy, New Infrastructure, Smart Society and 5G Industrial Applications**

➢ Leveraging top-level design and planning (TIS – Design and Consultation) and ACO core products, dedicated to providing integrated comprehensive smart solutions for customers to drive development of various businesses

➢ Focused on the demand for construction, operation, maintenance, software development and applications of data centers of government and industry-leading enterprises, as well as the integration of traditional and new infrastructure, we captured market share and related projects rapidly increased

Penetrated into vertical industries and forged key industries such as digital government, transportation, electricity, etc., with new contracts realized a rapid growth

> **For new contracts with size over RMB10 million:** both the no. of new contracts and contract amount increased >30%; and its **proportion to total amount of new contracts increased to >44%** (up by 4.0 pp)

Total Amount of New Contracts (By Industries)

(RMB'M)

>18%

Electricity
Transportation
Internet & IT
Construction
Government
Other[1] Industries

2019   2020

In which:

Total Amount and Growth Rate of New Contracts in Key Industries

(RMB'M)

29.2%
16.8%
12.0%
21.1%
7.2%

Government   Construction   Internet & IT   Transportation   Electricity

16 [1] Other industries include SMEs, finance, manufacturing, trading, water conservancy, agriculture etc.

Domestic Non-operator Market (3) Increased R&D, Kept Iterating Products & Realized Swift Cross-province Replication

← Government — Construction — **Internet & IT** — Transportation — Electricity — **Other Industries** →

Smart City/Digital Government

- Smart Shenzhen
- Smart Nanjing
- Smart Wuhan
- Guiyang Big Data Expo Avenue
- Digital Guangzhou
- Digital Dongguan
- Digital Hefei
- Digital Zhanjiang

Cloud Computing Project

- Qiandao Lake (AliCloud) Data Center
- Tencent Qingyuan Data Center
- Yangtze River Upstream Data Center & Yibin City Big Data Industrial Park (Phase I)
- Western Sichuan Industry Park

Smart Park

- Beijing Horticultural Expo
- Shenzhen World Exhibition & Convention Center
- Beijing Wenyu River Park

Intelligent Building

- National Radio and Television Administration Intelligent Building
- Fuzhou Haixi Commercial Building
- Inner Mongolia Power Generation, Dispatch and Command Centre

Smart Town

- Improvement Project of Linghu Town, Huzhou, Zhejiang
- Smart Wang Jiangjing Town in Jiaxing, Zhejiang
- Street Sewage Management System in Keqiao District, Shaoxing, Zhejiang

Industrial Internet

- Industrial Big Data Platform in Chongqing
- Industrial Internet Big Data and Cloud Service Platform in Shanghai
- Industrial Internet Application Platform in Guangdong Province

Smart Highway

- Hunan Province Smart Highway Integrated Management Platform
- Changsha-Yiyang Expressway Smart Transportation Management and Control System
- Shanghai-Kunming Expressway (Tan Shao Section) Smart Management and Control System

Smart Airport

- Beijing Daxing International Airport
- Guangzhou Baiyun International Airport
- Wuhan Tianhe International Airport
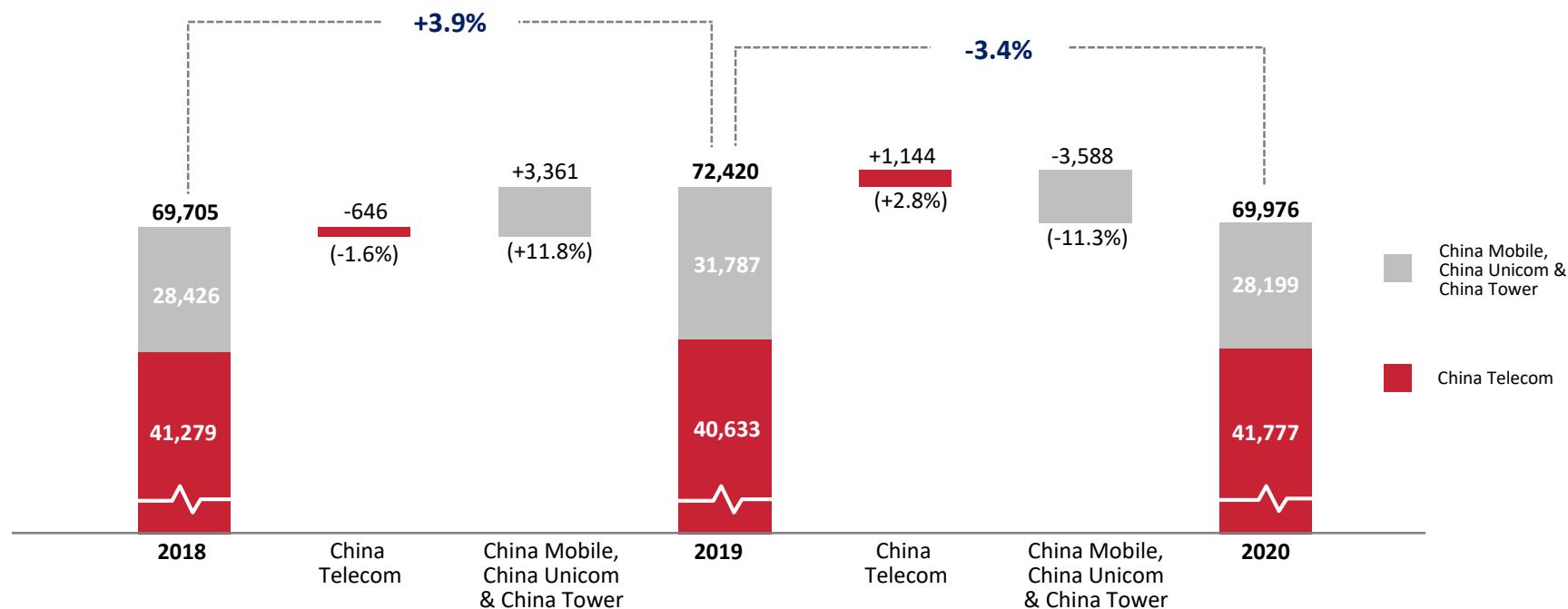
Smart Emergency Management

- Guangdong Smart Emergency Management Integrated Application Platform
- Hubei Emergency Management Integrated Information Platform
- Anhui Safe Production Informatization Platform

Through "Synergistic + Dispersed" R&D Mechanism and Establishment of Core Platforms (Cloud R&D Middle Platform, CCS IoT, CCS Network Information Security), Construct Synergistic Collaborative R&D Capabilities to Swiftly Penetrate into Industry Demand, Replicate and Promote
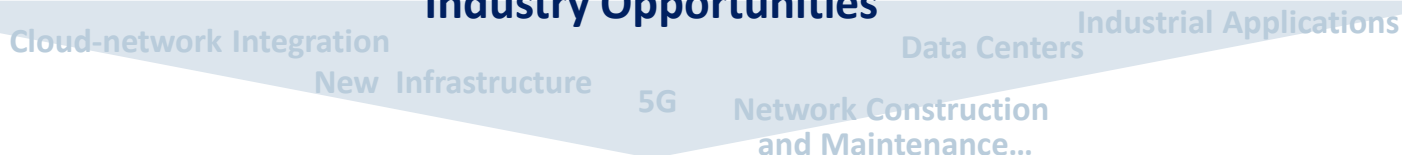
[1] Above are some of the key projects of the Company in recent years, please refer to appendix for detailed introduction of some selected cases

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Revenue Growth Drivers

(RMB'M)

> Overcame the impact of the pandemic in 1H2020 and supported network construction such as 5G of domestic operators, revenue from China Telecom resumed positive growth for the full year while revenue from China Unicom and China Tower continued a positive growth

> Persisted in the "CAPEX & OPEX + Smart Applications" strategy to ensure the stability of the overall domestic operator market
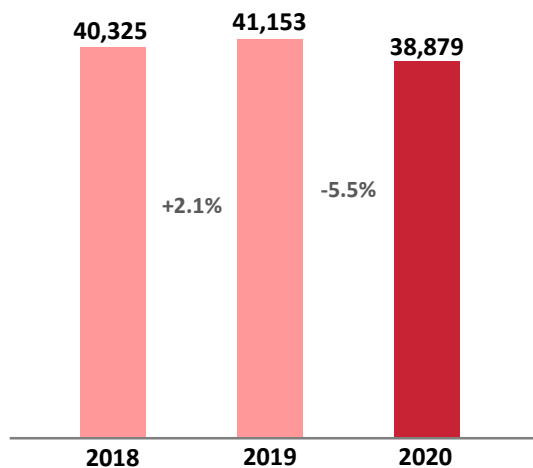
中国通信服务
CHINA COMSERVICE

Industry Opportunities

Cloud-network Integration   Industrial Applications

New Infrastructure   Data Centers

5G   Network Construction and Maintenance…

CAPEX   +   OPEX   +   Smart Applications

TIS Business [1]

(RMB'M)

2018	2019	2020
40,325	41,153	38,879

+2.1%   -5.5%

BPO Business [1]

(RMB'M)

2018	2019	2020
23,514	24,454	24,237

Core BPO +4.8%   Core BPO +0.2%

Legend:
- Products Distribution
- Supply Chain
- Facilities Management
- Maintenance

ACO Business [1]

(RMB'M)

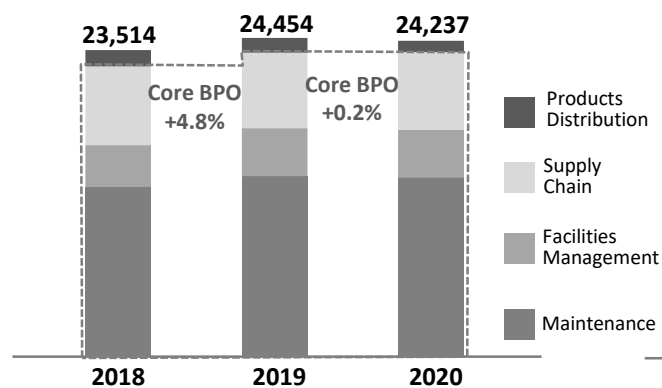| 2018	2019	2020
5,866	6,813	6,860

+16.2%   +0.7%

➤ Made successful breakthrough in undertaking 5G network construction projects by general contracting model

➤ Seized new opportunities from cloud-network integration, 5G and data center construction etc.
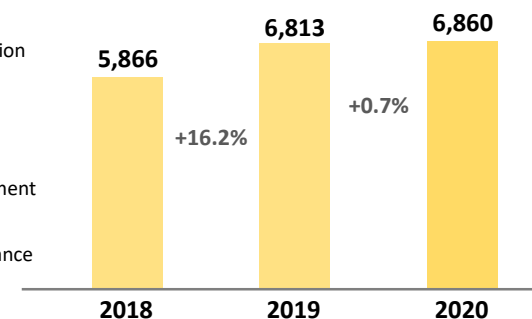
➤ Penetrated into maintenance, property management and supply chain businesses to increase market share

➤ Supply chain company undertook major 5G equipment delivery in the 5G general contracting projects
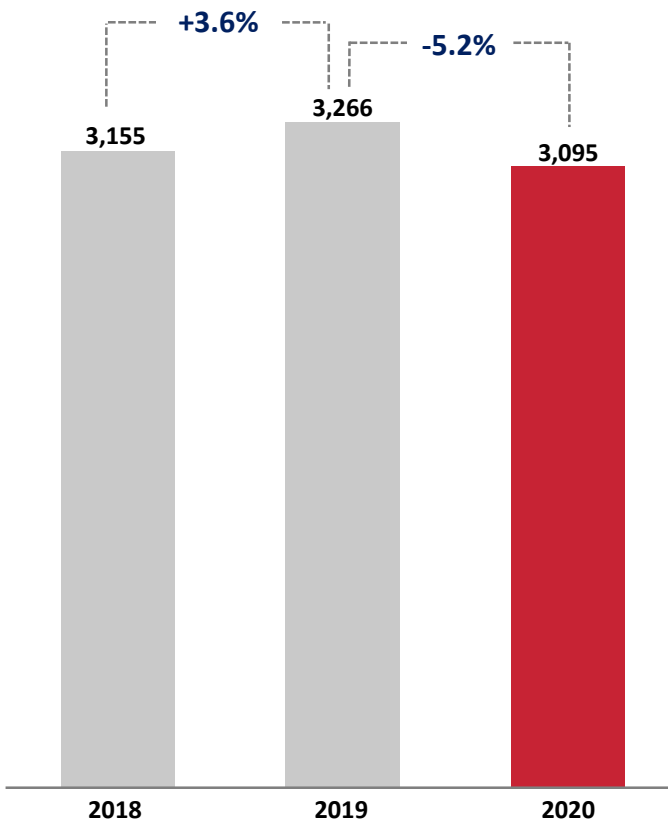
➤ Extended capabilities and experience from domestic non-operator market to domestic operator market for collaborative development

➤ Integrated into operators' transformation ecosystem and cultivated the "Cloud+5G+DICT" capability

19   [1] Such data only represents revenues from domestic operator market

Revenue from Overseas Market

(RMB'M)

- +3.6%
- -5.2%
- 3,155 (2018)
- 3,266 (2019)
- 3,095 (2020)

> The pandemic affected the development and delivery of overseas projects to a certain extent and caused volatility in revenue

> Overseas key projects in execution supported the fundamentals of overseas business; achieved breakthrough in electricity industry

> Strengthen the overseas synergistic development, serve the overseas data center construction demand along the "Belt and Road" and from enterprises and domestic operators in China

> Focus on overseas new and traditional infrastructure, and extend our smart product capabilities to overseas market

Key Regions	Southeast Asia/Asia-Pacific, Middle East and Africa			
Key Businesses	Overseas New Infrastructure (5G, Data Centers)	+ Maintenance Business	+ Electricity Business	
Key Customers	PRC Operators	Local Operators	International PRC Enterprises	Local Gov't and Enterprises

Building Smart Society, Boosting Digital Economy, Serving a Good Life

New Generation Integrated Smart Service Provider

Based on "1 Positioning, 4 Roles" to meet the demand of society, industries and customers, enhance R&D and innovation for migration towards professionalism and high-end in value chain

Service-oriented	Technology-oriented	Safety-oriented

Organic (Domestic Operator, Domestic Non-operator and Overseas Markets) + External Development

External Service Capabilities

4 Roles

- **Guard of Smart Operation**
- **Service Provider of Data Production**
- **Provider of Smart Products and Platforms**
- **Builder of Digital Infrastructure**

4T [1]

- OT
- DT
- IT
- CT

Smart Operation and Emergency Management	
Data Analysis and Value Exploration	
Software Development, Iteration and Upgrade	
General Contracting (EPC) + Informatization + Network Information Security	

Key Capabilities

- Consultation & Design
- General Contracting Construction
- Delivery and Operation
- Operation, Maintenance and Safety
- Software Development and Iteration
- Localized Supporting Service in the Country
- Ecological Cooperation

Internal Capabilities System

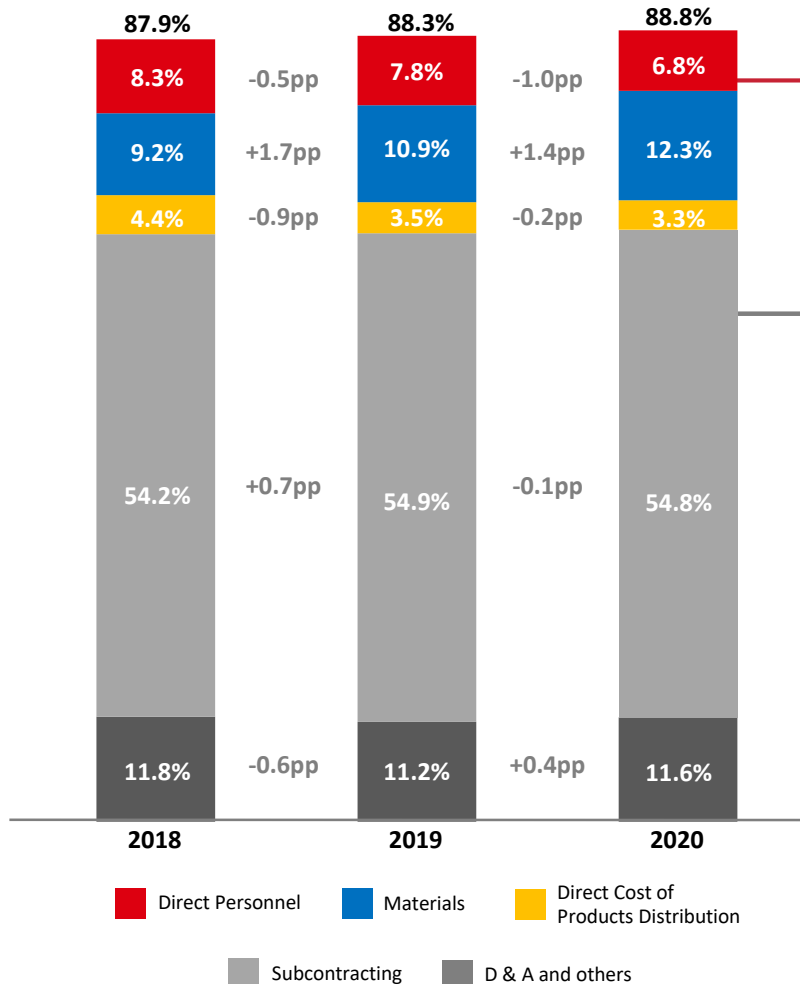**Vitality + Collaboration + Capabilities + Execution**

Delivery	Products	R&D	Ecosystem	IT	Talents	Risk Control	Others...

[1] 4T represents Operational Technology, Data Technology, Information Technology, and Communications Technology respectively

Financial Results

(RMB'M)	2019	2020	Change %	% of Revenue
Revenue	**117,413**	**122,649**	**4.5%**	**100%**
Cost of Revenue	**103,726**	**108,911**	**5.0%**	**88.8%**
Direct Personnel	9,111	8,300	-8.9%	6.8%
Materials	12,838	15,057	17.3%	12.3%
Direct Cost of Products Distribution	4,168	4,068	-2.4%	3.3%
Subcontracting	64,462	67,166	4.2%	54.8%
D & A	757	827	9.3%	0.6%
Others	12,390	13,493	8.9%	11.0%
Gross Profit	**13,687**	**13,738**	**0.4%**	**11.2%**
SG & A	**11,494**	**11,826**	**2.9%**	**9.6%**
Net Profit	**3,049**	**3,081**	**1.1%**	**2.5%**
EPS (RMB)	**0.440**	**0.445**	**1.1%**	-
ROE (%)	**9.1%**	**8.6%**	**-0.5pp**	-

Costs Structure

Cost of Revenue as a % of Revenue

87.9%

2018		2019		2020
8.3%	-0.5pp	7.8%	-1.0pp	6.8%
9.2%	+1.7pp	10.9%	+1.4pp	12.3%
4.4%	-0.9pp	3.5%	-0.2pp	3.3%
54.2%	+0.7pp	54.9%	-0.1pp	54.8%
11.8%	-0.6pp	11.2%	+0.4pp	11.6%

88.3% **88.8%**

Legend:
- ■ Direct Personnel
- ■ Materials
- ■ Direct Cost of Products Distribution
- ■ Subcontracting
- ■ D & A and others

Direct Personnel Cost: By utilizing subcontracting resources adaptively and controlling total staff number, labour productivity kept increasing

Labour Productivity [1]

(RMB'000/staff)

2018	2019	2020
1,119	1,279	1,351
	+14.3%	+5.6%
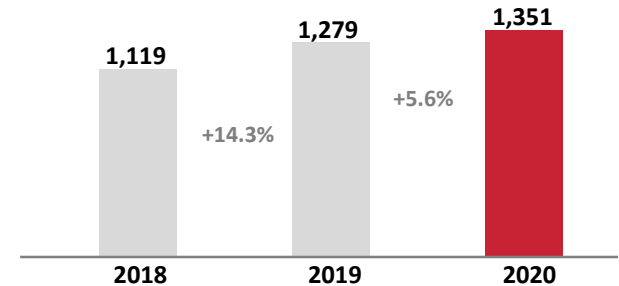
Subcontracting Cost: Through data analysis on subcontracting and strengthening the management and supervision over the whole subcontracting process, subcontracting cost was effectively controlled and its portion to revenue fell

Materials Cost: Increase of general contracting projects, and also the rapid growth of TIS business in domestic non-operator market and system integration business drove the relatively fast increase in materials cost
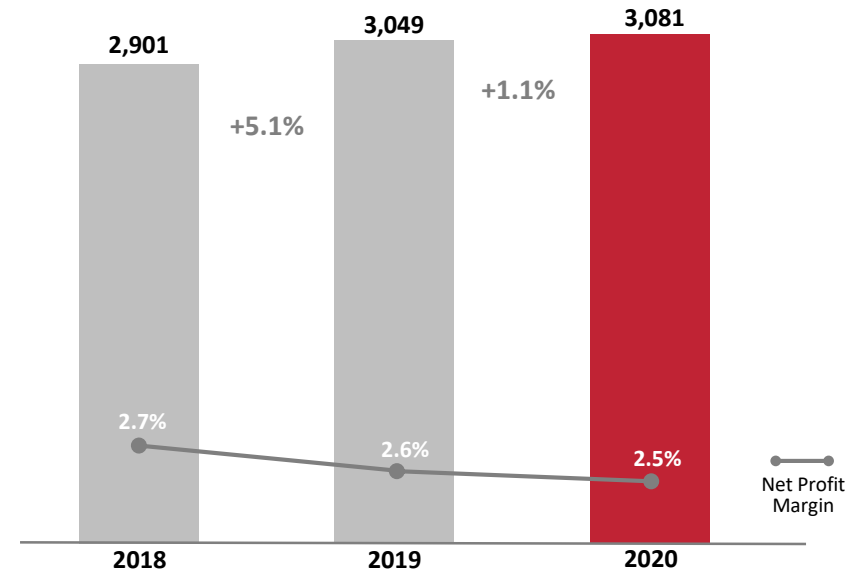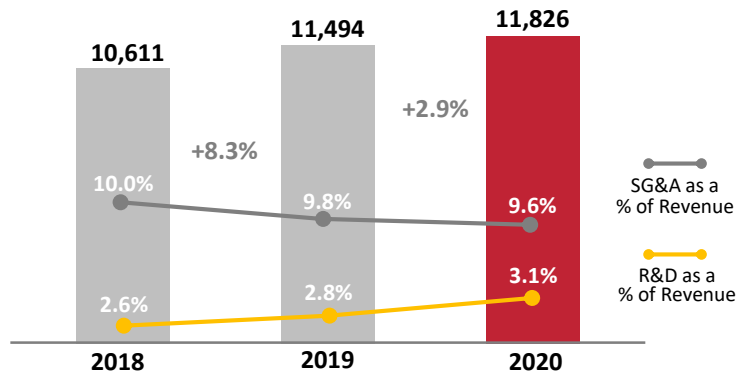
[1] Labour Productivity = revenue (annualized basis) / staff number

Revenue

(RMB'M)

2018	2019	2020
106,177	117,413	122,649
	+10.6%	+4.5%
12.1%	11.7%	11.2%

Gross Profit Margin

Net Profit

(RMB'M)

2018	2019	2020
2,901	3,049	3,081
	+5.1%	+1.1%
2.7%	2.6%	2.5%

Net Profit Margin

SG & A

(RMB'M)

2018	2019	2020
10,611	11,494	11,826
	+8.3%	+2.9%
10.0%	9.8%	9.6%
2.6%	2.8%	3.1%
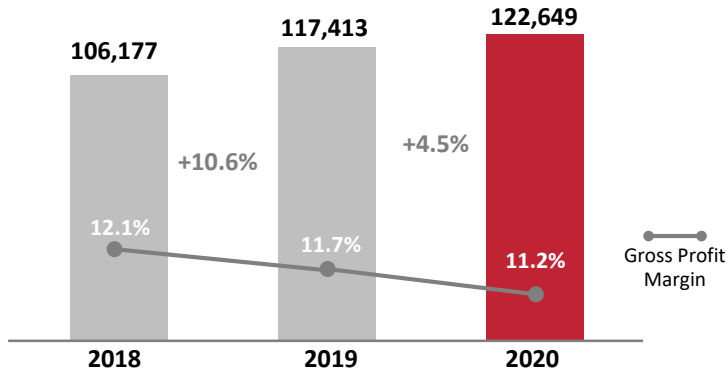
SG&A as a % of Revenue

R&D as a % of Revenue

➤ **Gross profit margin and net profit margin:** mainly affected by the pandemic, decreased service value in telecom industry and investment for transformation

➤ **R&D expense as a % of revenue:** continuously increased R&D expenditure to support transformation, enhance service capability and drive business development

➤ **SG&A as a % of revenue:** enhanced cost control, elevated digital management capability and strictly controlled administrative expenses etc.

Free Cash Flow Maintained Favourable, and Cash Conversion Ratio Continued to Stay at a Healthy Level
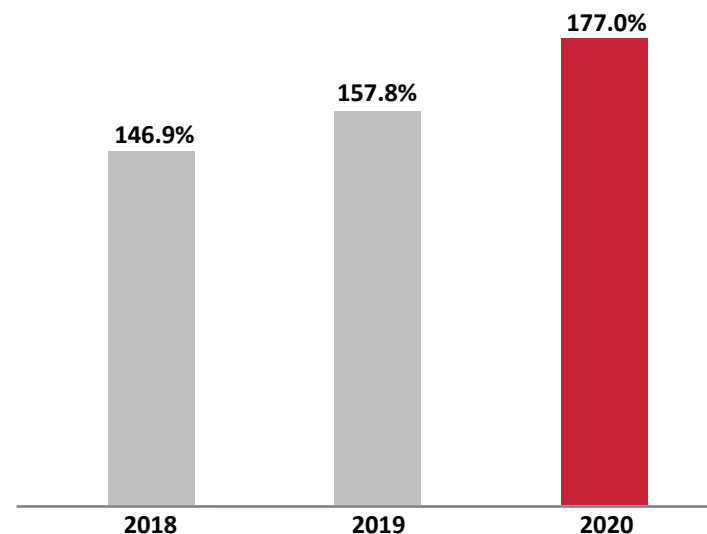
Free Cash Flow

(RMB'M)

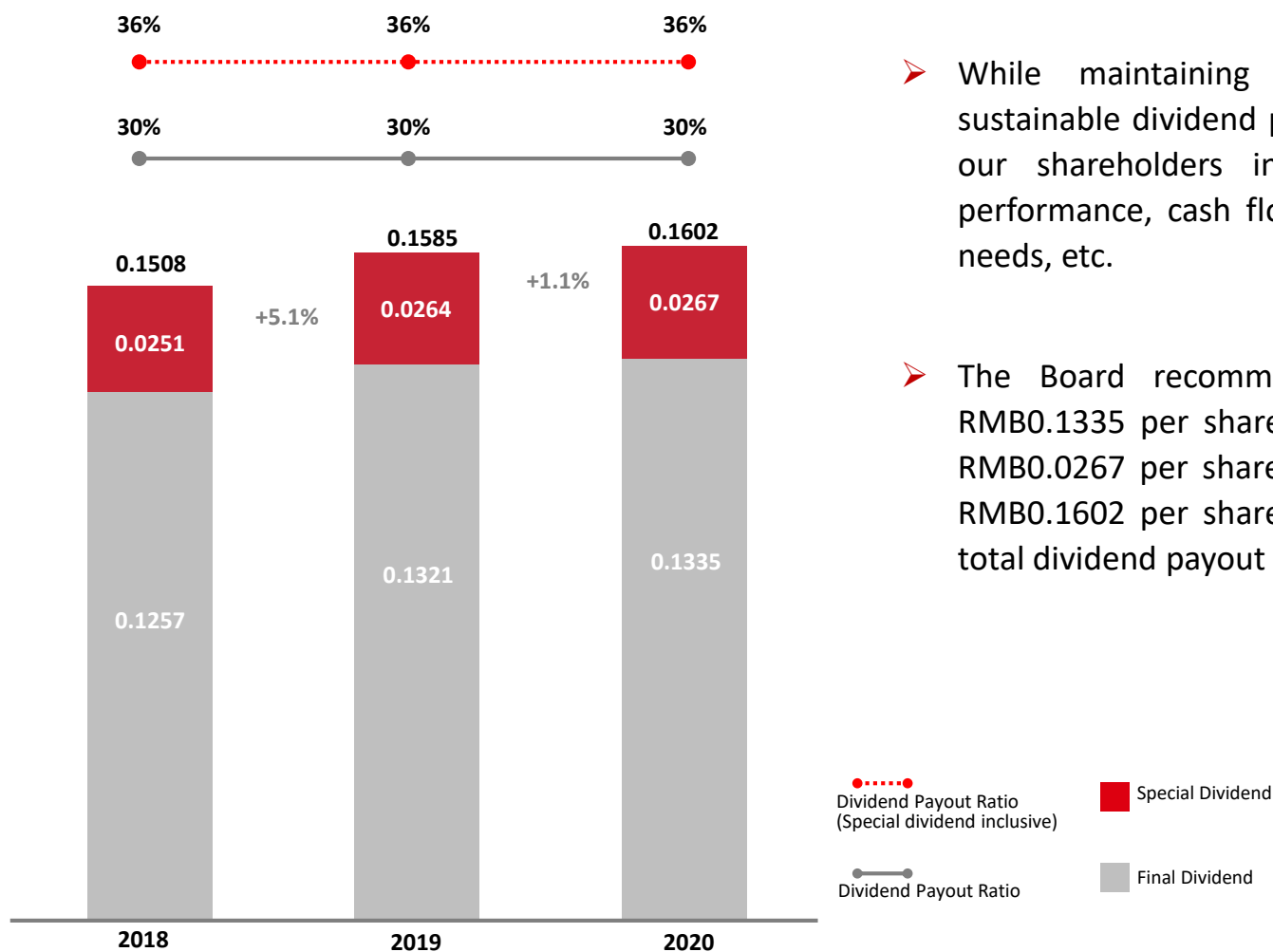|	2018	2019	2020
	3,613	4,243	5,157
	+17.4%	+21.5%	2,527 [1]
			2,630

Cash Conversion Ratio [2]

(%)

	2018	2019	2020
	146.9%	157.8%	177.0%
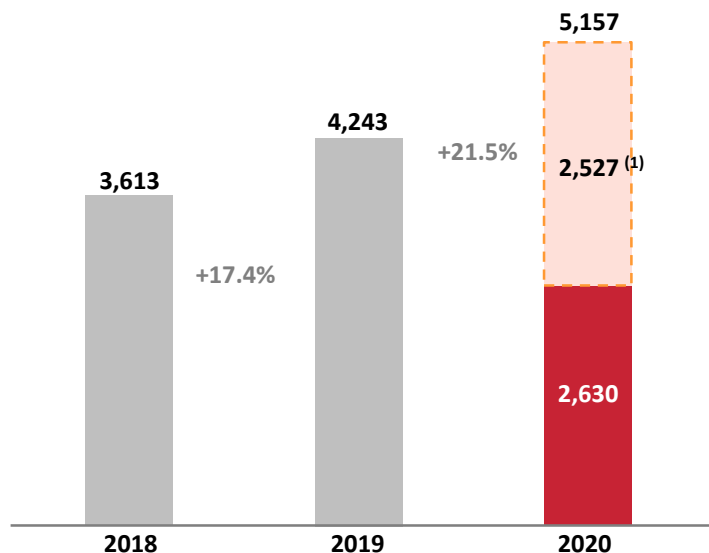
➢ Accounts Receivable – turnover days maintained at the same level to last year at 110 days in 2020

➢ Accounts Payable – turnover days increased by 3 days year-on-year to 135 days in 2020

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[1] Such amount refers to the CAPEX in 2020 on property acquisition to serve as the bases for the smart production, operation and R&D of the Group

[2] Cash conversion ratio = net cash generated from operating activities / net profit

Dividend per Share

(RMB)

> ➤ While maintaining a relatively stable and sustainable dividend policy, we increase return to our shareholders in consideration of results performance, cash flow and future development needs, etc.

> ➤ The Board recommends a final dividend of RMB0.1335 per share, and a special dividend of RMB0.0267 per share, total dividend for 2020 is RMB0.1602 per share, up by 1.1% yoy, with the total dividend payout ratio of 36%

Dividend Payout Ratio
(Special dividend inclusive)

Special Dividend

Dividend Payout Ratio

Final Dividend

- Solid financial position and cash flow would be beneficial to business development
- Expand ecosystem and enhance joint collaboration to accelerate the pace of external growth

Support the Company to Capture Opportunities from Digital Transformation as well as Facilitating Long-term Sustainable Development

(RMB'M)	31.12.2019	31.12.2020
Total Assets	87,541	94,489
In which：Cash and Deposits	21,692	23,874
Accounts Receivable and Contract Assets	36,246	37,995
Total Liabilities	52,503	57,302
In which：Accounts Payable and Contract Liabilities	40,762	44,341
Interest-bearing Liabilities	511	704
Equity Attributable to Equity Shareholders	34,564	36,718
Total Liabilities / Total Assets (%)	60.0%	60.6%
Debt-to-Capitalization Ratio (%)	1.5%	1.9%

Thank you!

Appendix

(RMB'M)	2019	2020	Change	Change %
TIS (Telecommunications Infrastructure Services)				
Domestic Operator	41,153	38,879	-2,274	-5.5%
Domestic Non-operator	20,910	25,759	4,849	23.2%
Overseas Customer	2,626	2,527	-99	-3.8%
TIS total	**64,689**	**67,165**	2,476	**3.8%**
Core BPO (Business Process Outsourcing Services)				
Domestic Operator	23,329	23,381	52	0.2%
Domestic Non-operator	8,761	9,418	657	7.5%
Overseas Customer	225	223	-2	-0.7%
Subtotal	**32,315**	**33,022**	707	**2.2%**
Products Distribution	4,322	4,255	-67	-1.6%
BPO Total	**36,637**	**37,277**	640	**1.7%**
ACO (Applications, Content and Other Services)				
Domestic Operator	6,813	6,860	47	0.7%
Domestic Non-operator	8,873	11,015	2,142	24.1%
Overseas Customer	401	332	-69	-17.1%
ACO total	**16,087**	**18,207**	2,120	**13.2%**
Total	**117,413**	**122,649**	5,236	**4.5%**

Smart City

- China Comservice is one of the domestic pioneers in the research of Smart City development which provides one-stop Smart City integrated solution that cover overall planning and top-level design, collaborative business consultation, system design, project implementation and project management for smart cities with "Consultation + EPC" integrated solution service capabilities from Digital China.

- Provide **>20 Smart City product and service systems**, including smart industry sub-products such as urban comprehensive perception platform, urban public information platform, smart park, smart transportation etc. Premium Smart City top-level consultation solutions that leveraged Smart City planning and consultation expertise have been offered to **>100 cities (regions) of different scale locally and overseas** to tap into the implementation and construction of Smart City.

Digital Guangzhou

- Supported the reform and construction of "Digital Government" in Guangzhou by Guangzhou Municipal Government Affairs Data Administration in formulation of overall system planning for the construction of digital governments covering various districts and departments, including implementation plan, data management planning, project management system, ultimately accomplishing all-round digital transformation.

- Guangzhou City had >3 million real-name registered users. "Suizhiguan (穗智管)", a city operation and management hub for unified management, connected 151 departments over information sharing platform and collected >16 billion pieces of data. The reform and construction of "Digital Government" in Guangzhou was rewarded as an outstanding case for the development of E-government Service and new Smart City in Guangdong Province.

Digital Hefei

- Under the "Consultant + Staff" service model, we acted as the full-process consultation think tank for digitalization construction of Hefei Municipal Government and provided consultation services including top-level planning, project proposal, feasibility study, preliminary design, project evaluation in the form of project research, technical support and capabilities enabling training. We also undertook the Hefei "14th Five-Year Plan" Informatization Development Plan, Digital Hefei Development Plan, Digital Infrastructure Development Plan, while providing our customers with services such as project consultation and design, consultation and evaluation, etc.

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☁ Cloud Computing Project

Qiandao Lake (AliCloud) Data Center

- Having a gross area of 28,000 m² with mains electricity capacity of 10,000 kVA via 6 routes, the project is one of the largest domestic data centers with gross area in a single unit and power usage capacity in China. The project used lake water as the cooling source, whereby the lake water from the depth flew through the data center in sealed pipelines to cool down the servers, then the naturally-cooled pure water at last returned to Qiandao Lake.

Yangtze River Upstream Data Center & Yibin City Big Data Industrial Park (Phase I)

- With a gross area of ~100,000 m², the data center could accommodate data center rooms with > 1,000 cabinets and a supporting power center of ~11,000 m², an 18-story big data industrial park office building and a 5-story telecommunication hub center of ~ 52,000 m².

- The project covered construction of office buildings and data center in the industrial park, including construction of mechanical and electrical facilities for the data center, intelligentization and mechanical and electrical facilities; it also established an integrated platform for big data industry development and smart city construction and operation.

Western Sichuan Industry Park

- The project was completed in 3 months and set the new speed record in Big Data Center construction in China.

- The overall planning area of 5 km² was capable of holding 2.1 million servers, of which Phase I covered an area of 13,548 m². The two-story server room had electrical system, gas suppression system, heating, ventilation, and air conditioning (HVAC) system, weak current system, as well as decoration and furnishings.

Smart Park

Beijing Horticultural Expo

- Leveraged advanced information technologies such as IoT, big data, cloud computing, AI, AR/VR, GIS and BIM to sense, monitor, analyze, control and consolidate the resources of each key link in the park, thus forming a cross-platform multi-service integrated Smart Park service platform.

- The three pillar systems of the Smart Park, i.e. the management support system, service support system and big data support system, made China Comservice **the only domestic project contractor of Horticultural Expo for four consecutive times**.

Shenzhen World Exhibition & Convention Center

- Phase I has a gross area of 1.605 million m^2 (equivalent to six "Bird's Nest") and is the world's largest exhibition and convention center. Through the smart systems (smart venue operation and management system, smart exhibition innovative service system, safe exhibition operation and command system, 3D map platform, indoor navigation platform, etc.), intelligentization systems (4 systems and 17 sub-systems such as information facility system, public security system, building & equipment management system and server room engineering system), audio and video systems, China Comservice turned it into a world-class fourth-generation intelligent exhibition center.

Beijing Wenyu River Park

- Beijing Wenyu River Park is the first in Beijing and one of the first 5G + technology-powered ecological parks in China. The Smart Park construction transformed natural landscape tours into immersive tourist experience and manual-mode services into AI interactive tours, upgraded manual management into smart management. With 5G capabilities enabling management, service and ecological environmental protection, the park became the new model for 5G+ technology-powered ecological park in China pursuing innovative and sustainable development.

Intelligent Building

Fuzhou Haixi Commercial Building

- Adopting a Smart "Management + Operation + Service" model and with the CCS-iBMS platform at the core, the project integrated 21 systems including property management and equipment automatic control to enable resource sharing, centralized monitoring and smart interconnection.

- Project construction and quality were highly recognized by the NDRC and key development department of Fujian Province and awarded as the Outstanding Project for Key Project Target Assessment of Fujian Province in 2018

Inner Mongolia Power Generation, Dispatch and Command Centre

- One of the key electricity projects of Inner Mongolia, with a gross area of 45,197 m^2. Adhering to the construction guideline of "Planning Goes First, with Models Leading the Way", the project integrated 15 sub-systems, such as building auto-control system, building energy efficiency supervision system and smart lighting system, to achieve the results of smart interconnection and comprehensive control with improved management efficiency. The project was granted the China Construction Engineering Luban Prize (National Prime-quality Project).

Smart Product Cases (5/8)

Smart Town

Comprehensive Improvement Project of Linghu Town, Huzhou, Zhejiang

- Leveraging IoT, the platform connected the sensors for water quality and level monitoring, video surveillance, meteorological monitoring, dust and noise, etc. with the town's middle platform. Through the data processing by the middle platform, the platform showed the current construction status of beautiful town, analysis of the strengths and weakness of construction, analysis of 55 construction weakness items, so as to accomplish the goal of building beautiful towns and greatly elevated the informatization level of the Town, which made it successfully pass the acceptance of the first batch of demonstration sites of beautiful towns in the province.

Smart Wang Jiangjing Town in Jiaxing, Zhejiang

- By connecting the smart NB-IoT manhole covers to the town platform, such platform completed the informatized, visualized, refined and transparent management of the underground pipe and grid network through advanced technical tools such as Beidou satellite positioning technology, global mobile communications technology, GIS geographic information processing technology, big data collection and processing technology.

- It displayed the manhole cover status and real-time statistical data of the smart pipe and grid network, and realized full-process, refined and traceable management for the pipe and grid network after co-build and co-share. The status changes of pipelines and grids and manhole covers can be monitored in real-time through the platforms, saving the cost of patrol.

Smart Product Cases (6/8)

💡 **Industrial Internet**

Industrial Big Data Platform in Chongqing

- A complete full life cycle management for economic data assets and data. The platform integrated city-wide industrial data, which covered a full range of economic data including industries, industrial parks, SMEs and private sector, financial innovation and high-quality development, analyzed current economic situation from various levels, predicted future economic development and provided scientific guidance and assistance to make new economic development decisions.

- The platform established the "4+1" five business views to realize economic monitoring and early alert, visualize analysis of economic trend from various levels, understand current economic status, serve operation deployment and support scientific decision-making. Such project has been visited by leaders from various local relevant department and received critical acclaim.

Industrial Internet Big Data and Cloud Service Platform in Shanghai

- Cloud Platform + application services: focusing on the collection and analysis of industrial big data, it provided enterprises with in-depth monitoring and analysis functions in each part of marketing, product production, corporate operations, and after-sales services, which supported enterprises to seize market demand, optimize product production, improve product quality etc., ultimately meeting the core needs of industrial enterprises.

- The product covered the full life cycle of product, such as product demand, manufacturing and after-sales services for industrial enterprises. Products and services possessed certain generality for various types of industrial enterprises.

Smart Emergency Management

Guangdong Smart Emergency Management Integrated Application Platform

- The integrated application platform based on the achievements of the Digital Government of Guangdong Province gradually integrated various decentralized applications, services, and data resources related to various emergency management of the province into one set of platforms, enabling a unified access to all applications, services, and data, and fulfilled the goal of "whole province / city coordination" and built the structure from top to bottom by unified portal, service lines, application support and data management. After the project construction was completed, the provincial emergency management department would be able to access all emergency services systems through one portal, while providing unified application and data support for the provincial informatization system, avoiding duplicated construction and improving the efficiency of informatization construction.

Anhui Safe Production Informatization Platform

- The first provincial smart emergency management platform promoted at national level, the first provincial platform with the most comprehensive services and applications, and also possessed the largest data volume and no. of users in China. Such platform integrated the whole "pre, amid and post process" applications, with 18 business systems, including potential safety threats elimination, administrative enforcement and emergency management; the platform comprised three levels of regulatory authorities and enterprise users, of which involved 3,000+ government users, 1,000+ mobile users and 40,000+ enterprise users across the province. The platform generated a massive amount of business data, handling a total of 200,000+ enterprise safety threats, 100,000+ law enforcement inspection records, 2TB+ business data, and approximately 10,000 new entries per day.
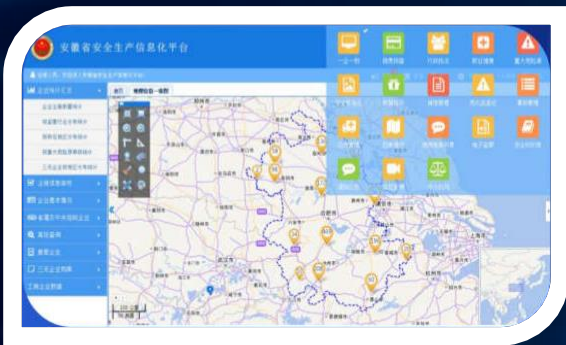
Smart Highway

Changsha-Yiyang Expressway Smart Transportation Management and Control System

- Aggregated multi-source data to conduct integrated analysis, enabled road network information to be measurable, visible and controllable, reflects the video image, traffic flow, section vehicle speed, traffic flow variation of various time and the traffic jams index and road capacity of neighboring national and provincial highway. The system showed real-time surveillance videos of congested roads on a large monitoring screen, enabling smart traffic diversion to mitigate traffic jams and improve the road capacity.

Smart Airport
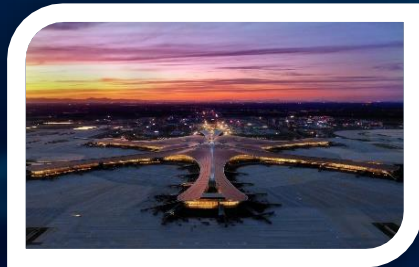
Beijing Daxing International Airport

- Through communication system planning, we created communication infrastructure facilities and network with a full range of services, reasonable structure, comprehensive functions, advanced technology, being safe and reliable. It involved 15 subdivided specialties, such as communication network, radio and television, specialized communication systems. Three 800M base stations in the airport area that covered trunking communication for such region were built in the 800M digital trunking project.

Guangzhou Baiyun International Airport

- The system utilized advanced technology and equipment to guide passengers to complete the security check by self-service, saving the step of manual verification, and after the differentiated inspection channel put into service, the total time consumed by security check was less than 10 seconds and the efficiency increased by 23.1%, with the full process of self-service security check realized and the passengers' experience improved, thus enhancing the quality and efficiency of airport security check and passengers' satisfaction with the airport service.

- The aviation logistics platform and logistics park management platform were built with four functional systems of production operation, public service, park management and data exchange, containing special features such as smart vehicle dispatching, smart label identification, smart warehouse management, smart early alert system, smart security management, and integrated information service.

The Company would like to caution readers about the forward-looking nature of certain statements herein. These forward-looking statements are subject to risks, uncertainties and assumptions, which are beyond its control. Potential risks and uncertainties include those concerning, among others, the change of macroeconomic environment, the growth of the telecommunications industry in China, the development of the regulatory environment, and our ability to successfully execute our business strategies. In addition, these forward-looking statements reflect the Company's current views with respect to future events and are not a guarantee of future performance. The Company does not intend to update these forward-looking statements. Actual result may differ materially from the information contained in the forward-looking statements as a result of a number of factors.