

China's Bank-as-Service Cases Sharing

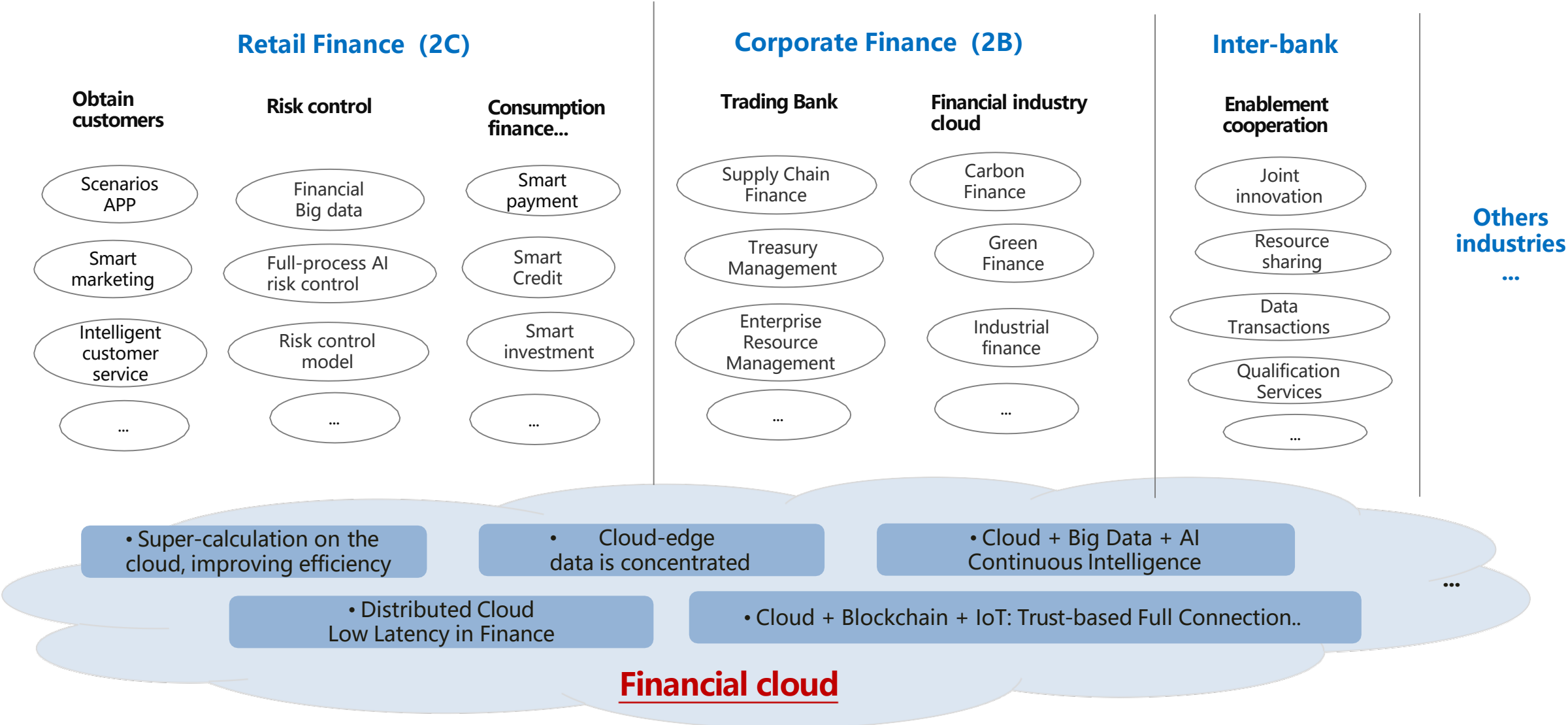
Neo Gong
Digital Finance of Huawei



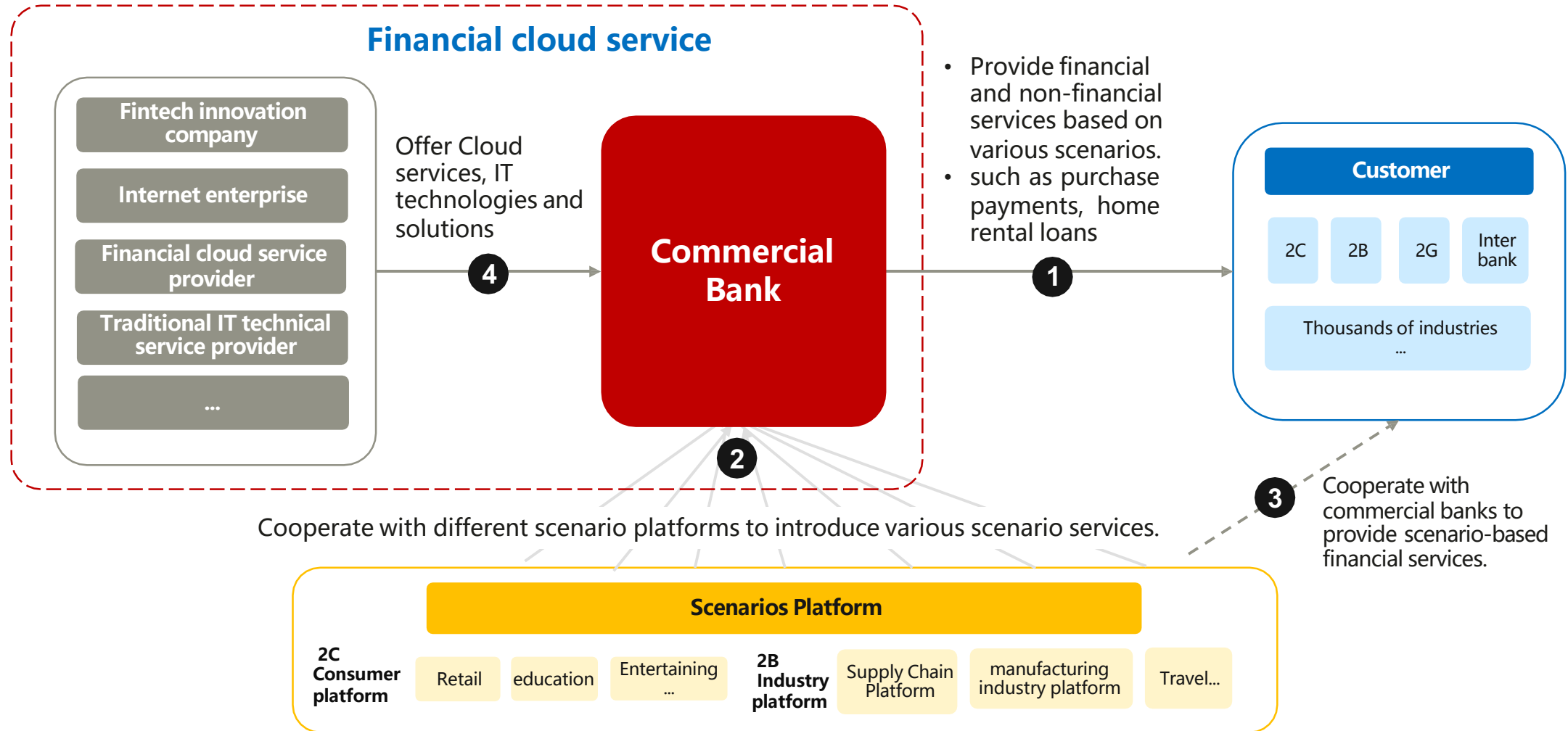
Security Level:



Bank as Service, Brightening Various Financial Services and Continuously Innovate Scenarios and Experiences



With Bank as Service, China's banks will gradually build a self-centered business ecosystem



Case: Shanghai Pudong Development Bank

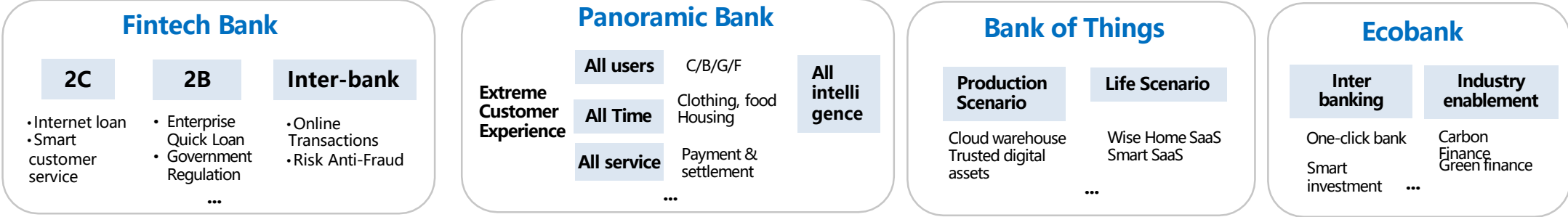


Shanghai Pudong Development Bank Financial Cloud Strategy



Financial Cloud Strategy

Drive financial service innovation with “customer experience + digital technology”, and become an open & ecosystem-oriented fintech institution



Customer + Fintech



- Ranked 8th in China's Top 100 Banking Industry List in 2020;



SPD Bank's Strategy & Roadmap of Bank as Service

SPD Bank Fintech Department has become a separate subsidiary with the goal of transforming into a real Fintech company

1. Panoramic Bank

Transition from Financial Instruments to Life Service Platforms



Open API

Scenario Finance

New Users	2C	➔	2B2C、2F 2G2C、2C...
New partners	Financial institutions	➔	Internet company, Fintech institution...
New scenarios	Financial Tools	➔	User's lifecycle service platform
New benefits	Financial income	➔	New Biz models & revenue

Maturity Phase

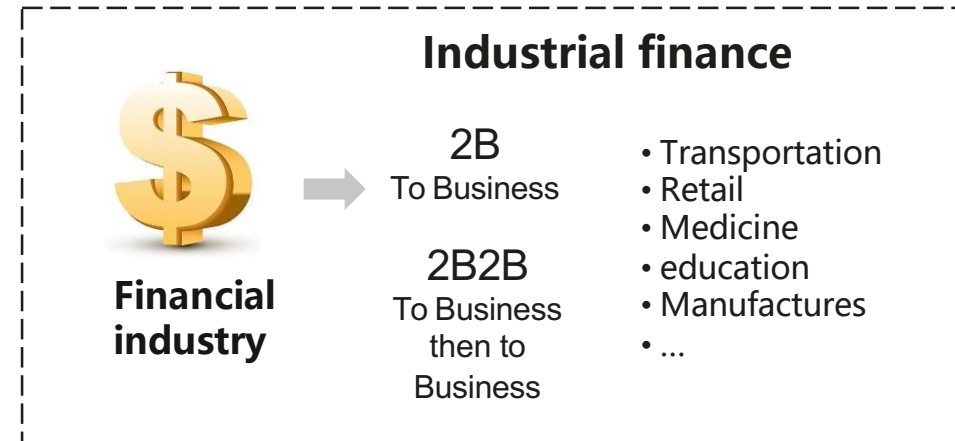
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2. Financial Eco-cloud

Enable peers and serve industries with financial SaaS

Financial SaaS/aPaaS

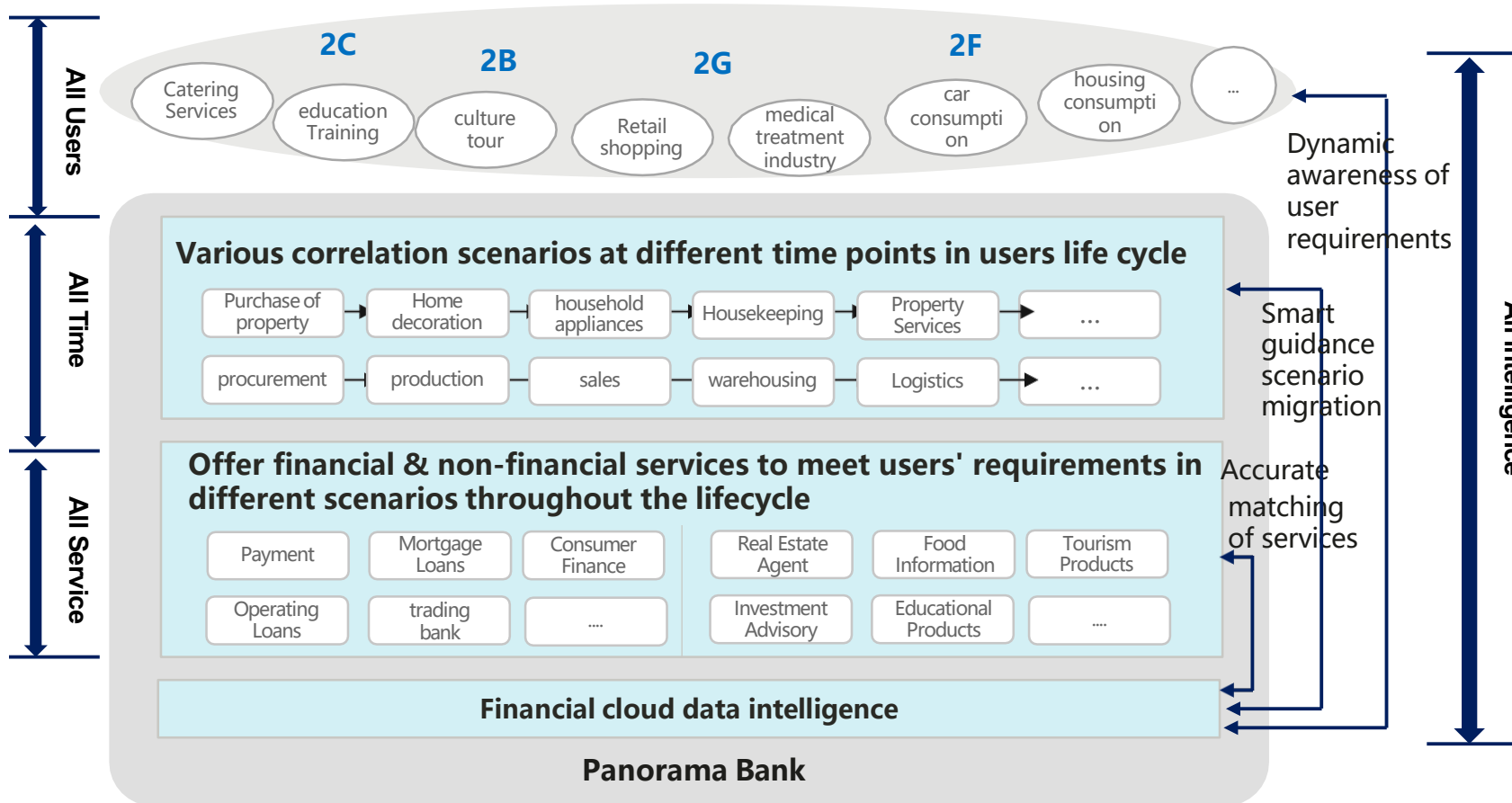
New Finance on the Cloud



Planning Phase

Introduction to Panoramic Bank of SPD Bank

Concepts & Business Scenarios of Panoramic Bank of SPD Bank



- **All Users:** SPD Bank service objects will further extend to ecological related parties. Provide services for different groups such as retail, Enterprise, Enterprise and family.
- **All Time:** Covers requirement in different time & scenarios in the entire lifecycle of users.
- **All Service:** Based on the requirements of various users to constructs a pan-financial solution that includes financial and non-financial services.
- **All intelligence:** sense users requirements & implement real-time behavior linkage by data & AI

SPD Bank Mobile App is the bearer of Panoramic

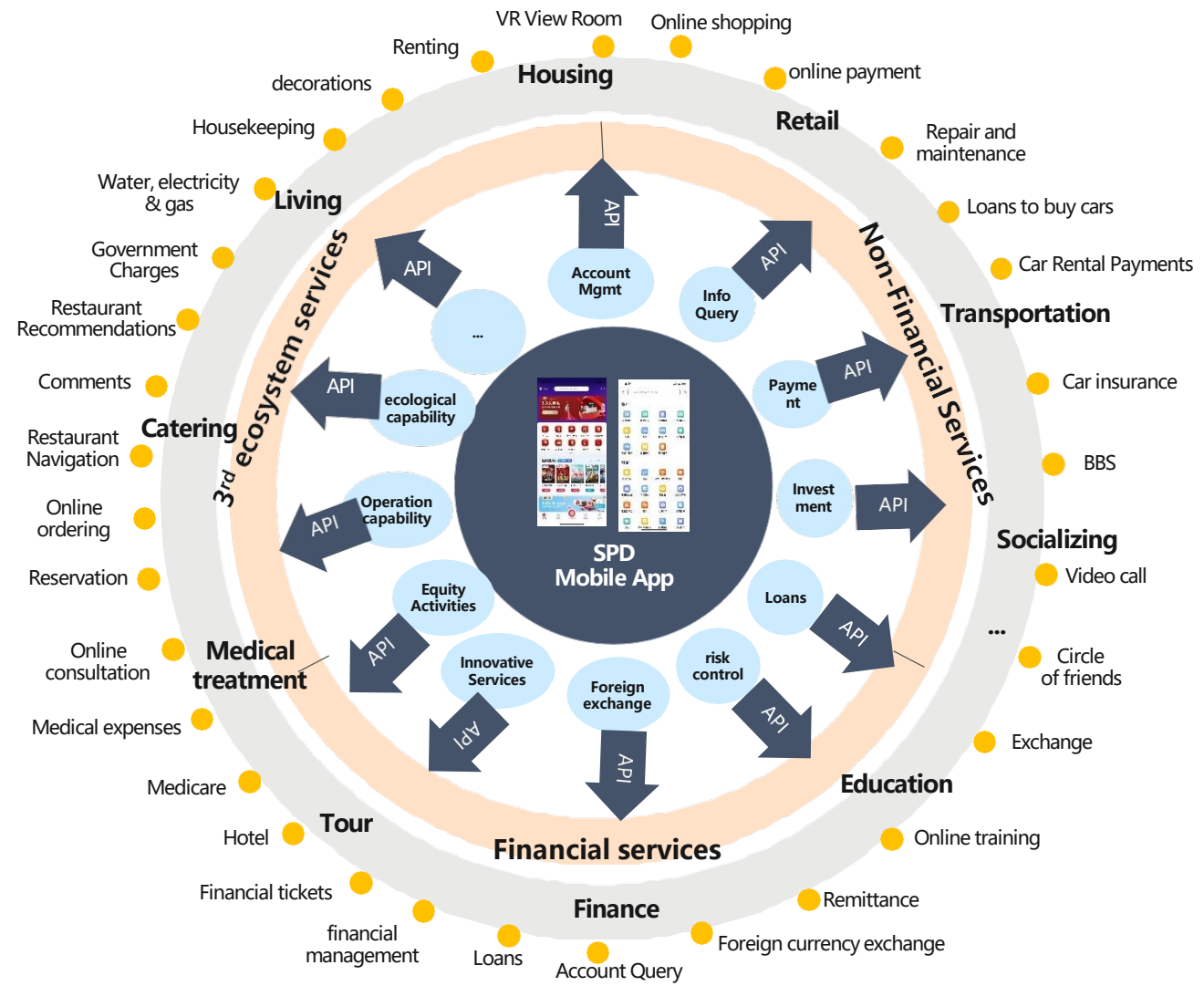


Scenario Platform for retailer

Scenario Platform for Enterprise

Fintech Cooperation alliance

Fintech Innovation Lab In university



Transition from Financial tools to Life Service Platforms

Business Performance

As of early 2020
It was been in operation for over 2years

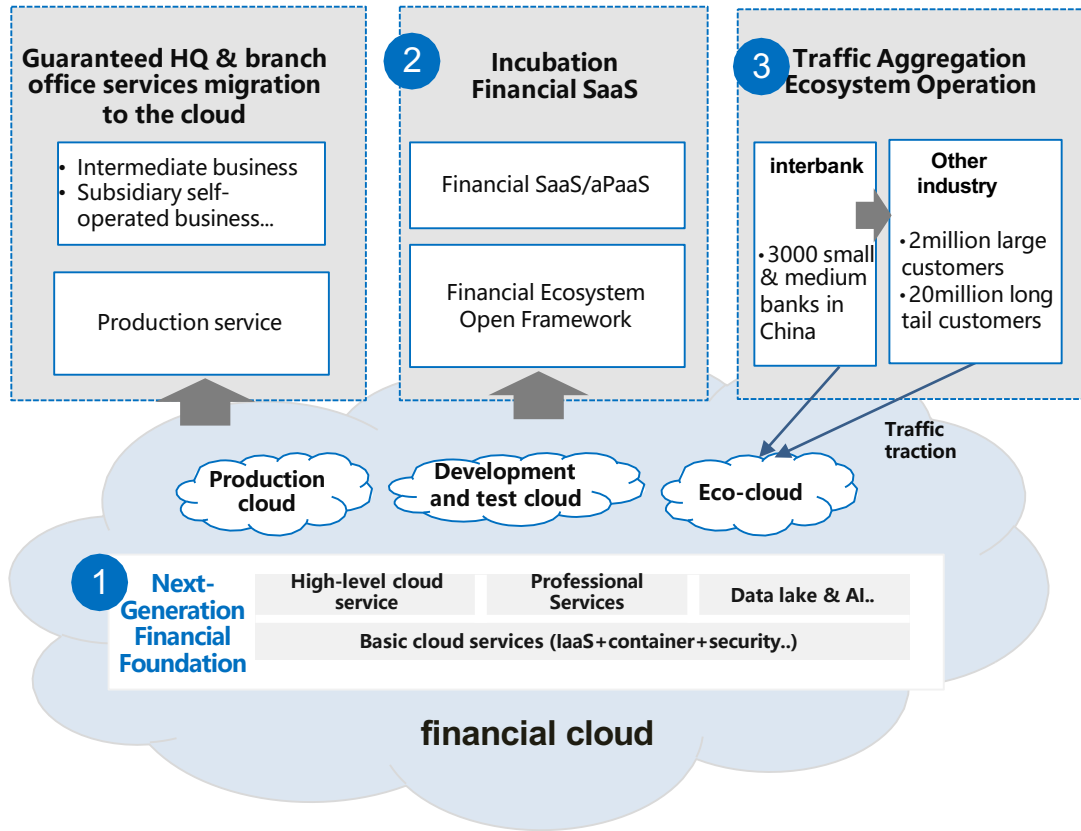
- **+1200** API Services
- **+20000** Partner Applications
- **16 million** API transactions
- **11 major areas**, involve account management, loan financing, investment consultant;
- **43million** mobile banking customers, an increase of 22.89% over the end of last year.
- **1.516 billion**, the number of transactions during the reporting period
- **¥9.02 trillion** with a transaction amount

In addition to mobile payment, it becomes a life service platform, connecting people and businesses, **creating more value of the platform economic.**

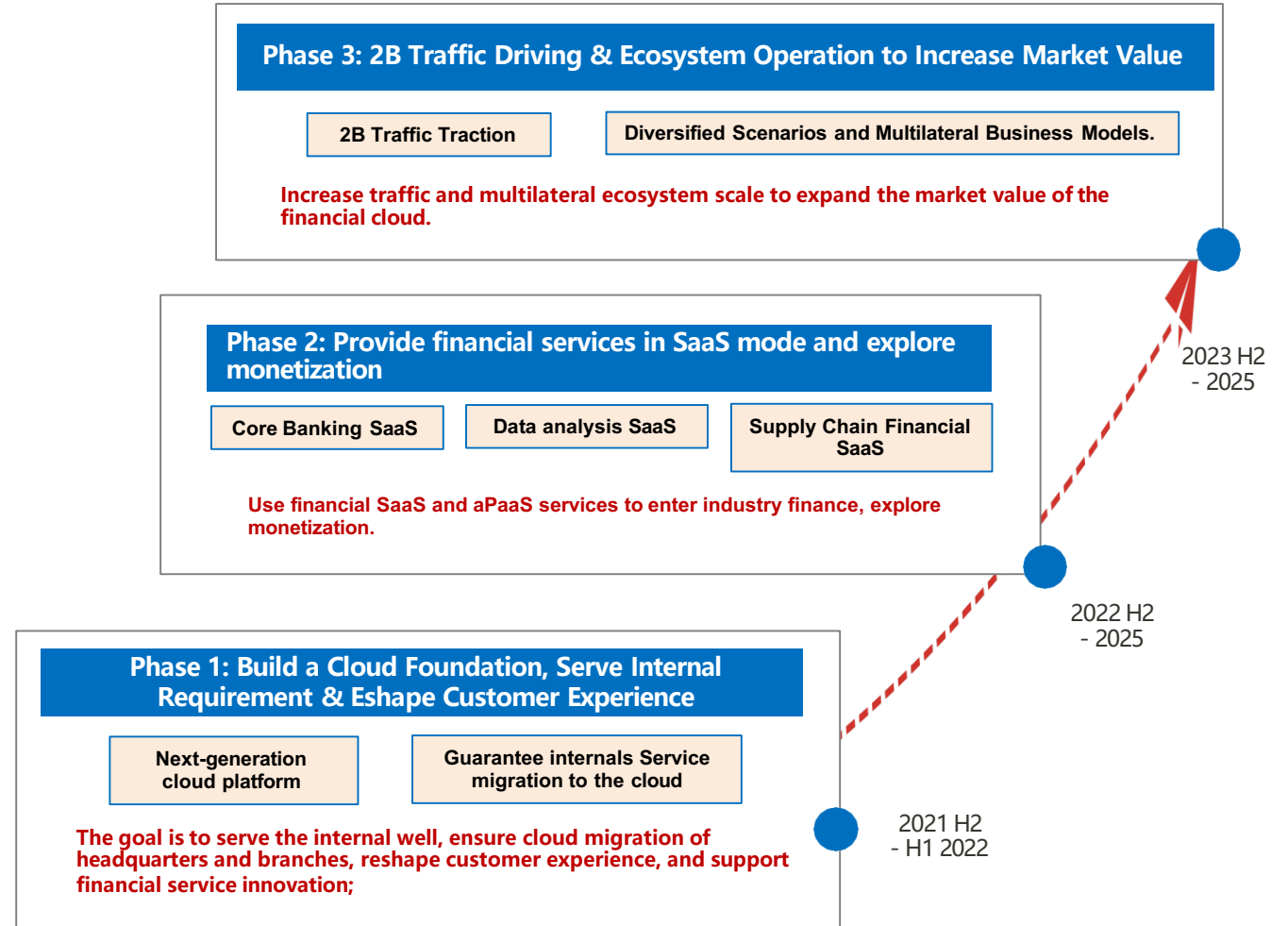


Eco-Cloud: Serving Peer Banks & Industry in SaaS Mode to achieve "New Finance on the Cloud"

SPD Bank Financial Cloud Architecture



"Three-Steps Profit Model " of SPD Bank Financial Cloud




Design more innovative SaaS to enter industry finance

Empowering Bank Peers & Related Partnerships

- 1**

Core banking system as service




One-click to open a bank

 - Help newly established small & medium-sized banks quickly build core banking systems and carry out banking services.

- 2**

eKYC + Risk Management system as service




Intelligent risk control model

 - Provide risk control models to help other financial institutions identify risks and gradually improve existing models.

- 3**

Credit Card core system as service



“Credit Card Cloud + Ecosystem”


 - Provide credit card platform and ecosystem capabilities to help other financial institutions issue credit cards

...

Empowering Thousands of Industries

- 1**

Supply Chain Finance as service



Smart cloud warehouse


 - Use smart warehouses as carriers to help different industry customers develop supply chain financial services such as chattel pledge and seek new industry cooperation opportunities.

Logistics data analysis

Trading market trends

- 2**

Treasury Mgmt. system & experience as service



Treasury Management Cloud

 - Provide treasury management capabilities and launch the Treasury Management SaaS which based on own advanced treasury management experience to fiscal enterprises.

Unified view of global accounts

Bank-wide payment & settlement

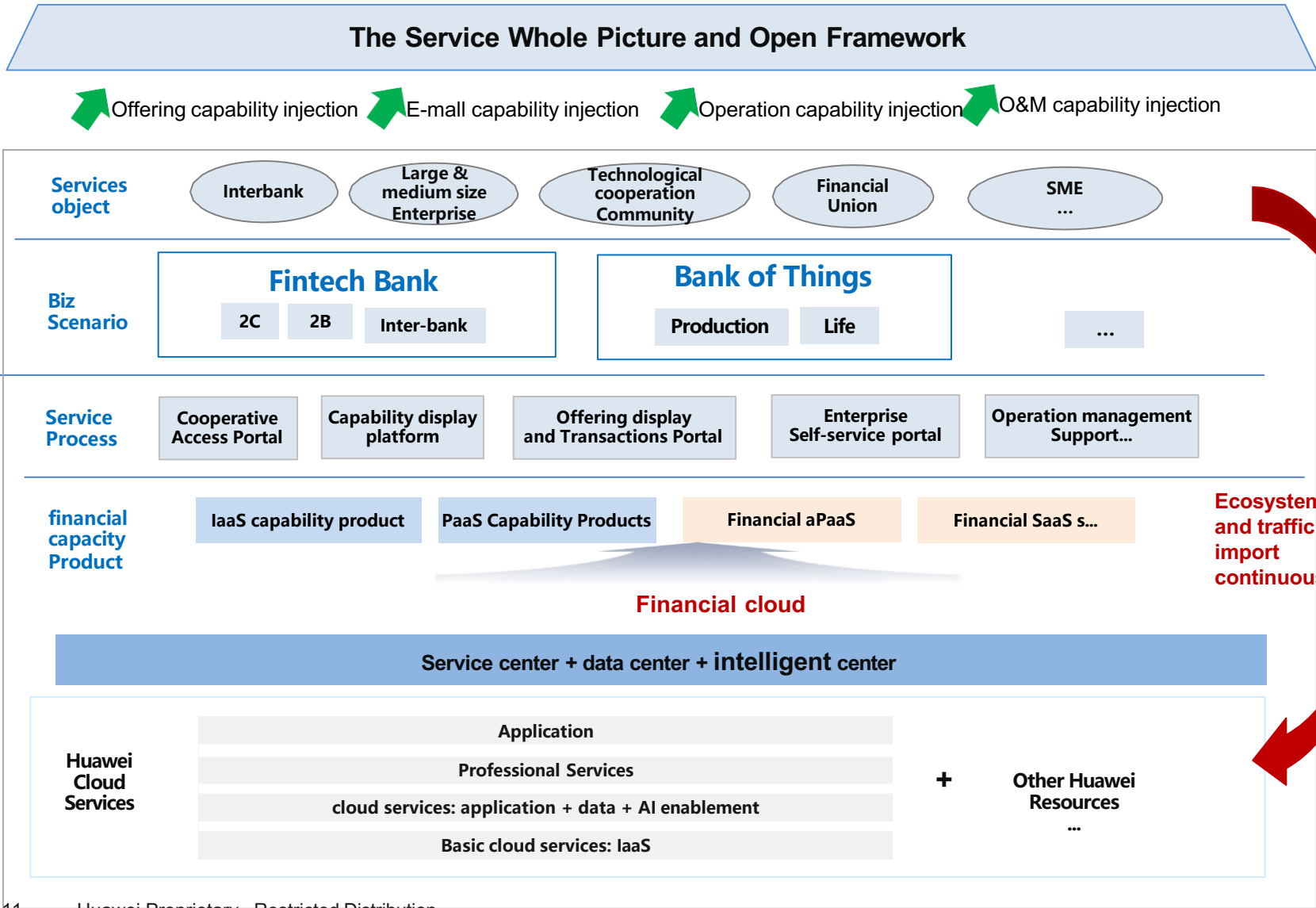
Refined fund management

E2E treasury risk control

All-scenario investment and financing management

Intelligent analytics and decision support

The Service Whole Picture & Monetization Mode of Financial Cloud



Monetization Model of Financial SaaS and aPaaS

- Loan interest
- guarantee deposit
- Data service fee
- SaaS/aPaaS Subscription Fee
- Business cooperation revenue sharing and settlement
- Marketing promotion and channel cooperation expenses
- ...



Case: INDUSTRIAL AND COMMERCIAL BANK OF CHINA



ICBC

中国工商银行

The Road to Go Cloud of ICBC



ICBC serves **5 million** enterprise customers and **550 million** individual customers

In 2021, ICBC ranked No. 1 in the china's financial industry in terms of market value, ranked No. 1 in Forbes Global 2000 and United Kingdom Bankers Global 1000 for nine consecutive years, and ranked No. 1 in the world's most valuable bank brand for six consecutive years.

The Road to Go Cloud

Cloud Transformation1.0

- Container-based & compatible universal servers
- Quickly deployed and maintained.

2012-2014

Reduce Cost
& Increase Efficiency

Cloud Transformation2.0

- Fast, elastic, on-demand self-service
- Microservice container XaaS

2015-2019

Application Agile

Cloud Transformation3.0

- **DWS** replaces MRS, cloud native data lake
- AI risk control marketing

2015-2019.

Data Intelligence

Cloud Transformation4.0

Serverless, service grid, secure, and multi-cloud hybrid cloud

2020- now

Full-scenario Finance

IT Architecture Transformation Achievements

- Service deployment time from hour to minute
- **9000+ database containers, improving overall utilization by four times**

Application Transformation Achievements

- Transaction peak of 200,000+ TPS in the year of the Ox Trading Coin
- **20% daily annual growth rate**
- Container+cloud host self-healing 1000+ times per week

Data Transformation Achievements

- Served 5000+ analysts & support real-time marketing recommendation
- 660 million full customer profiles (day-level tag update)
- Risk warning from day to second

Biz Model Transformation Achievements

- Open financial ecosystem, offer education, healthcare, travel, property, tourism, and multiple SaaS products
- Promote over 70,000 enterprise/institutional customers and over 12 million individual customers.

Three Steps for ICBC Cloud Ecosystem Business Model Innovation

Digital Bank Online Services

Open Bank Open Capabilities and Go Out

Ecosystem Bank Provide a platform to bring ecosystem in

Business mode:

- ① Customers can use banking services online.
- ① Multi-channel digital customer acquisition via mobile banking, online banking & telephone banking.

Business mode:

- ① Open financial APIs to third-party and embed them in partner's scenarios.
- ① Expanding banking service traffic via third-party portals

Business mode:

- ① Platform economy mode, providing industry SaaS & marketplace, providing not only financial services, but also 2B services.
- ① Infiltrate corporate customer service to acquire new depositors

Financial Tools

RMB Deposit Rate RMB Loan Rate FX Deposit Rate FX Rate Wealth Trade Fund Trade Bond Trade NAV of Funds

Products & Services

E-banking Bank Card Personal Loan Personal Deposit Global Market Bill Business

Internet Banking Telephone Banking Mobile Banking WeChat Banking

An online platform with diversified functions... Easy to use, simple to apply, cost low and use reliable technology... Wide service coverage, rich functions, safe and reliable... Available for all with help desk service, self-service...

Popular services

U-Shield real-name signing, account opening, credit card application, Internet of Things, etc., all available

<p>QR code scan code payment</p> <p>ICBC QR code scanning payment is newly launched by our bank. Payment products, both customers and merchants can generate QR code with payment elements, by scanning the QR code. Achieve fast and</p>	<p>ICBC e-wallet service</p> <p>ICBC Electronic Account (Including electronic type II and type III accounts). It is to open the account capacity of our bank to the partner company platform. The two platforms realize data exchange. A win-win business with customer sharing.</p>	<p>Online identity verification</p> <p>Meet the partner's. The client conducts identity verification and The need for digital signatures.</p>	<p>Rongan e letter</p> <p>Using advanced big data and information technology. According to financial peers and corporate customers Risk prevention and control needs, self-developed. The first risk information service product.</p>
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Popular products

Safe, smart and convenient financial cloud products

<p>Education Cloud</p> <p>Support personalization according to customer needs and scenarios. Configurator, according to the characteristics of school charging institutions. Provide customization of different products.</p>	<p>Property Cloud</p> <p>Enrich the property platform ecosystem, Gain revenue by providing extended services. Property industry service products need support. Multi-tenant isolation; call our bank via API.</p>	<p>Party building labor union cloud</p> <p>Help party organizations in enterprises and institutions to achieve party affairs Management, according to specific needs. One set supports personalized customization, mature and perfect. Covers the collection, payment, and management of party dues.</p>	<p>Religious cloud</p> <p>Provide online donation, membership registration and other services, Is payment and reconciliation, merit management, legal management, Personnel management and other functions in one Intelligent management platform.</p>
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Digital on Boarding

API Store

SaaS APP Store

ICBC Technology: An independent subsidiary that undertakes the overall operation of financial cloud and provides enablement for government & enterprise

ICBC 工银科技

3) Financial ecosystem cloud (SaaS)

2) Application platform cloud (PaaS)

1) Infrastructure cloud (IaaS)

ICBC enterprise-class financial cloud

open.icbc.com.cn

Financial SaaS for 4500+ China's Bank

ICBC Hosted & Investment Cloud

Centering on institutional investors, focusing on pre-investment, during-investment, and after-investment, providing value-added services

Financial supervision cloud

Provide financial services such as customer risk classification, suspicious transaction monitoring & large-amount reports

Financial Risk Cloud

Provides financial risk monitoring and control services, including blacklist query, personal credit score check & anti-frauds.

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Industry+ Financial SaaS for 9 Industries

Education Cloud

- **Industry:** student mgmt., course mgmt., examination registration
- **Financial:** tuition fee payment ...
- **Target:** kindergartens, primary schools & social education.

Tour cloud

- **Industry:** ticketing, finance, parking & data analysis...
- **Financial:** online accounts, payment receipts & fund escrow...

Supply Chain Cloud

A package of financial services: purchase order placement, payment settlement, and document query

e-Government cloud

- For government agencies & the general public
- Provide comprehensive financial services based on agency revenue and expenditure, routine finance & public service mgmt..

Transportation cloud

- **Industry:** parking mgmt., toll station info mgmt....
- **Financial:** recharge, payment & reconciliation...
- for parking lots, highway toll station & metro companies

Healthcare cloud

- healthcare supply chain services for medical institutions...

Property cloud

Religious cloud

...

General SaaS for all enterprise

Treasury Cloud

- Integrates ICBC's account mgmt., payment & settlement, cash mgmt. & investment mgmt. service and offer the accounting, credit & fund mgmt. etc..

HR Cloud

- Personnel mgmt., compensation mgmt., & payroll payment in the HR domain.

Party building & trade union cloud

The collection, management, distribution & reconciliation of party fees, union due & union funds

...



Thank you.

Bring digital to every person, home and organization for a fully connected, intelligent world.

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