**INSPUC** 浪潮

GLOBEOSS

# Computing Force Network One-stop Solution

Empower Your Network and Service

















Cloud · Data · Al

inspur worldwide@inspur.com

# inspur 浪潮

Global leading cloud computing and big data service provider

New type internet enterprise of Cloud + Data + Al

### Mission

Lead the tide of information technology and promote the progress of social civilization

### Vision

Become the service provider of advanced information technology products and leading solutions



### About GlobeOSS

GlobeOSS is a services company that has vast domain knowledge in OSS and BSS. Over the last 17 years, the GlobeOSS team has more than 220+ telco analytic engagements with various telecommunication operators and enterprise companies in Asia Pacific.

GlobeOSS empowers the Autonomous Network Solution to accelerate the lifecycle process of operational automation. We deliver services ranging from business intent, service design, service orchestration, network orchestration, service monitoring and assurance, analytics and actions, heal network/service, to customer experience.

We assure the smart digital world by unleashing the data analytics in every part of the operation. We improve end-to-end customer digital experience. We transform the world of digital data into a world of insights and intelligence and we secure the digital world through our digital security expertise.



# **Inspur Group Introduction**

Inspur group is world leading cloud computing, big data service provider with listed companies of Inspur Information, Inspur Software and Inspur Digital Enterprise, covering major four business groups of cloud data center, cloud service & big data, smart city and smart enterprise. Inspur offers diverse IT products and services that satisfy the information needs of governments and enterprises in more than 120 countries and regions.





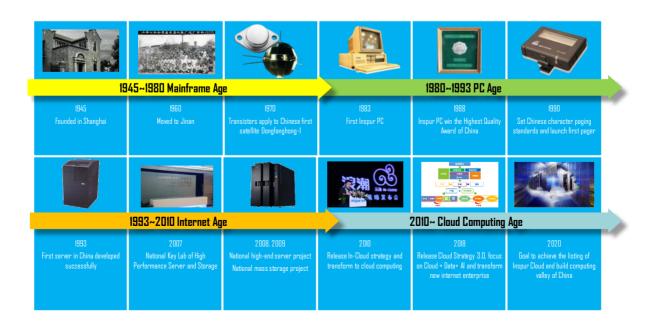




### **Long History of Innovation**

As one of the earliest IT brands in China, founded in 1945, Inspur is committed to promoting the informatization of various industries by innovative and pragmatic spirit.

In the past 78 years, Inspur has continued to innovate and practice, experienced several transformations and successfully achieved forward-looking breakthroughs in the important historical stages and led China's IT industry development.



# **Business & Market Profile**

Inspur helps build a leading cloud computing infrastructure platform with high-end servers, mass storage and cloud OS, and fully supports customers of government, enterprise and industrial by various software and terminal products and solutions. Inspur offers IT products, services and solutions in more than 120 countries and regions around the world.





- Inspur server: No.1 in China, Top 2 worldwide
- No. 1 e-government cloud market share in China
- No. 1 self-owned software brand in China
- No. 1 comprehensive strength of big data in China
- Leading position in Top 100 Chinese IT enterprises
- No. 1 enterprise management software market share



- Grade A building intelligent system design qualification
- IS09000, IS014000, IS018000, IS020000, IS027000, IS027701 and other certifications
- Software CMMI-5 certification
- C-STAR (Security, Trust & Assurance Registry) certification
- · Certifications of trusted cloud service TRUCS certification, gold operation and maintenance, service security, user data protection capability





Qualifications



Standards





























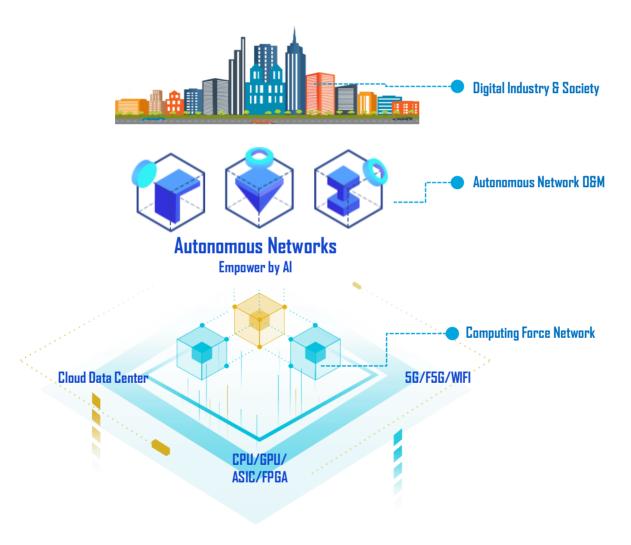
- Inspur KI won the first prize of National Science and Technology Progress Award
- National key lab of high performance server and storage technology
- National engineering lab of host system
- National engineering lab of big data circulation and transaction technology
- Nation-certified software testing lab
- National R&D center of information storage engineering technology
- National enterprise technology center
- National enterprise R&D center
- National 863 server result industrialization base
- National post-doctoral station
- National key high-tech enterprise, key software enterprise

# Computing Force Network One-stop Solution

Since 1997, Inspur has entered communications network management field. With technology innovation and industry development, Inspur extends the business to full-service operation support, cloud network, IDC, ICT and so on, to help operators develop and transform. Now Inspur is the largest OSS solution provider in China, establishes strategic relationships with the big 5 operators of China and cooperates in multiple areas.

In April 2022, Inspur released Computer Force Network solution to empower industry digital transformation . CFN solution consists of 3 layers:

- Infrastructure Construction, including data center, chips and 56 products, establish foundation of digital ecosystem.
- Autonomous Network led by Al technique, build core capability of digital operation.
- · Intelligence solution specific to multiple industries, support digital transformation of society and industries



In the new era, Inspur will continue to connect government, enterprises and individuals based on data, build Cloud + Data + Al ecosystem, focus on industry digitization and application innovation, grasp 5G opportunities, deepen international cooperation, and accelerate the transformation to a new type internet enterprise.

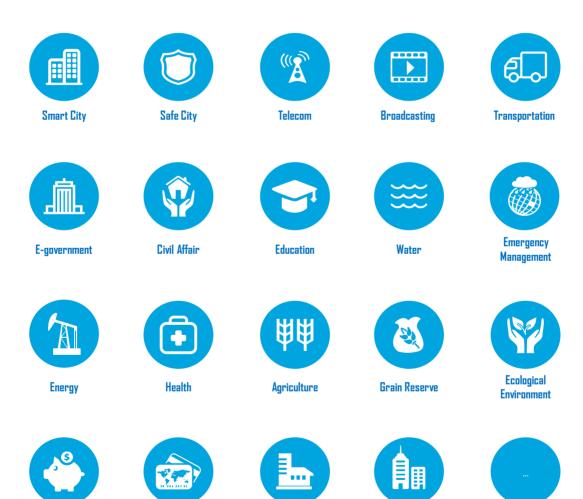
# Serve Digital Industry & Society

Enterprise

Management

Inspur is committed to driving enterprise growth and promote social civilization progress with technologies.

Based on the leading cloud, data and Al technologies and years of practices on industrial information and digital transformation, and joint with partners, Inspur builds platform and ecosystem, integrates various data, solutions and capabilities from different dimensions and offers professional solutions, personalized products and local services for global customers from various industries and fields.



**Manufacturing** 

**Taxation** 

**Financial** 



# Inspur Solution Introduction

Cloud Data Center	/0
Cloud Data Center Construction	/1
Data Center Products	/
Integrated Operation & Maintenance	/۱
Autonomous Network D&M	/
Practice and Achievement	/1
Resource Center	/1
Fault Center	/1
Quality Center	/1
D&M Center	/1
Orchestration Center	/1
Business Operation Center	/1
Home Business Operation Support	/2
Corporate Business Operation Support	/
Domain Controller	/2
Foundation Platform Introduction	/2
Data Sharing Platform	/2
Al Platform	/2
DevOps Platform	/2
Environmental, Social and Governance	/2

In this era of informatization and digitalization, Inspur gives full play to comprehensive strength of cloud computing and supplies competitive new infrastructure, computing power and productivity for industries to empower industry information construction and digital transformation. The total solution of cloud data center covers new data center construction, existing data center renovation, related IT infrastructure and platform software and service of data center operation, maintenance and management.

Inspur one-stop service covering entire lifecycle				
Site Survey	Requirement Analysis	Solution Design	Construction & Deployment	Operation & Maintenance Service
DC Operation & Maintenance	DCIM	DC Operation Management	Energy Consumption Management	 3D Visualization
System Service	DC Relocation	Data Migration	Backup & Restore	Disaster Recovery
Cloud Computing & Big Data	Cloud Resource Pool	Network Resource Pool	Storage Resource Pool	Franciscosos Big Data Integration
IT Infrastructure	Server	Storage Net	twark Security	Load Balance
Data Center Infrastructure				



#### **Data Center Family**

Provide different data center types and products incl. general data center and related service and software, container data center of all-in-one design supporting quick deployment, and micro-module data center



#### **Full Line DC Products**

Inspur full line DC products include server, storage, network equipment, various types of data center, cloud OS, big data, PaaS platform, etc.



### **Cloud Resource Pool**

Build cloud service platform to integrate the physical architecture platform, computing resource pool and cloudified network, help realize unified management center and agile business adaption



### Integrated DC OSM

Provide integrated IDC operation and maintenance capabilities, covering infrastructure management, 3D visualization, intelligent data center OSM, and business operation support



### **Energy-saving Reform**

Focus on specific scenarios and provide customized solution to reform IDC and reduce PUE, covering reformation from IDC level, computing room level to cabinet level, and promote the conversion to high energy efficient center



### **Energy Consumption Management**

Relying on platform and professional service, help realize energy consumption monitoring, control and management, reduce PUE and cut down the cost remarkably

### **Cloud Data Center Construction**

Inspur has built 7 core data centers and 50 secondary data centers in China, and planed oversea core hub sites to serve global customers. Currently Inspur has served customers in various industries such as government, public security, telecom, energy, transportation, education, medical care, finance, taxation, construction, meteorology, agriculture, forestry, tourism and other industries.

### **Inspur Cloud Data Center**

The cloud data center located in Jinan, is one of Inspur domestic core data centers, completely designed, built, operated and maintained by Inspur. The data center mainly provides services for government customers in provincial, municipal, county levels and various kinds of industry enterprises.

# Park Scale • 160,000 square meters • Capacity, 30,400 cabinets and I million servers • 21,600 square meters of building area in Phase I • 3,800 cabinets, 120,000 servers • 25% partly natural cooling • 25% partly natural cooling

### Data Center Project in Overseas Country

Inspur has planned, designed and built a data center building for local customer in the country, to help customer provide cloud computing, physical space leasing and other data center services for local government and industry enterprises.







### **Data Center Products**

Inspur product family includes server, storage, network, security and HPC, data center and covers full line products from infrastructure, IT equipment, virtualization, cloud management, cloud services to big data platform. Inspur can provide flexible, efficient and stable fusion-architecture infrastructure and data center solutions for different customers' application scenarios, to facilitate data center construction and business development.



### Integrated Operation & Maintenance

For data center operation and maintenance, Inspur provides integrated platform and comprehensive support throughout whole data center lifecycle. DCIM provides unified infrastructure management and data center monitoring and management. CMP provides virtualization cloud management platform, and manages virtualization resource uniformly.



### **Unified Experience**

Unified product catalog, unified account for users based on the unified portal, unify the experience, and optimize the multi-cloud experience

### Multi-cloud Management

CBP supports Huawei HCS, VMware, OpenStack.

### **OSM Flow Automation**

Complete the process automation of big business value and workflow, combining Al and big data technology.

### Al Intelligent Management

By Al big data analysis engine, realizes fault predictions, trouble preprocessing, capacity forecast, energy consumption analysis, reducing costs and increase efficiency.



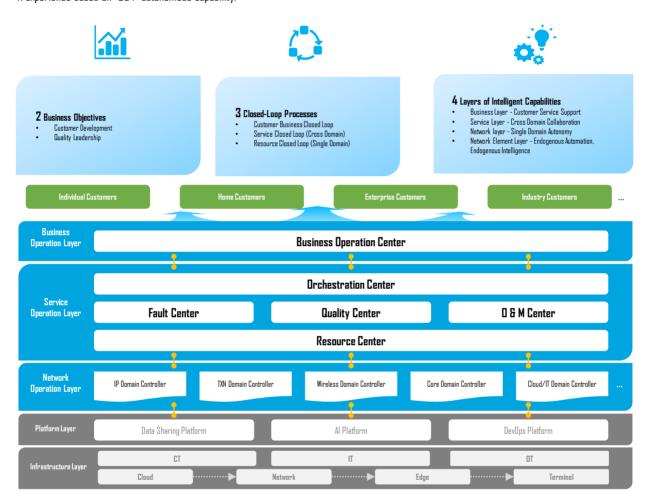






### **Practice and Achievement**

Inspur AN solution provides consulting services and best practice experience to help operators build self-X D&M capability and finally realize zero-X experience based on "234" autonomous capability.



### Contributions to TMF & Awards

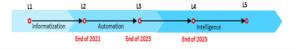
- Deeply Developed & Participated in TMF Released Whitepaper on Autonomous Networks (IGI305)
- Autonomous Network Levels Evaluation Methodology (IGI252)
- Autonomous Networks Business Requirements and Framework (IGI218)
- $\bullet \quad \text{Model-driven service orchestration: Proving policy is the best honesty} \\$
- Building Model-Driven Service Orchestration via an FMO Architecture
- Model-Driven Hybrid Service Orchestration via an FMO Architecture





### **Best Practices Jointly with China Mobile**

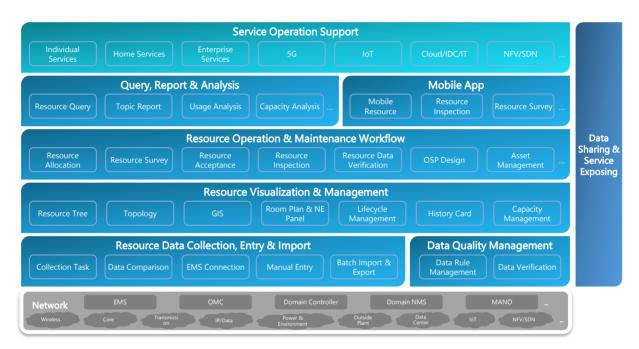
- Strategic partner of China Mobile for 25 years
- More than 10 provinces AN practices
- Reaching Level 2 in 2021 and Level 2.5 in some areas, Level 3 by end of 2023, and will reach Level 4 by the end of 2025.



System	Number	Customers covered
Service Orchestration	14	Beijing, Sichuan, Guizhou, Anhui, Chongqing, Tianjin, Jilin, Ningxia, Hebel, Shandong, Yunnan, Shanxi, Liaoning, Henan
Resource Center	19	Shandong, Beijing, Jiangsu, Hebel, Liaoning, Sichuan, Hunan, Yunnan, Guizhou, Anhui, Shanxi, Chongqing, Tianjin, Jilin, Henan, Ningxia, Heilongjiang, Oinghai headquarters
Fault Center	3	Shandong, Llaoning, Hunan
Quality Center	10	Jiangsu, Hunan, Liaoning, Guangxi, Shanxi, Chongqing, Xinjiang, Gansu, Jilin, Heilongjiang
O&M Center	9	Shandong, Jiangsu, Sichuan, Hunan, Anhui, Xinjiang, Ningxia, Yunnan, Hainan

### Resource Center

The new-generation resource platform not only provides the central management of different domains of networks, types of resources, supports of both traditional and new telco services, but also brings a whole new way of resource operations and maintenance which powered by Al technology.







**Visualization Views** Parious visual views, new UI style, quick search









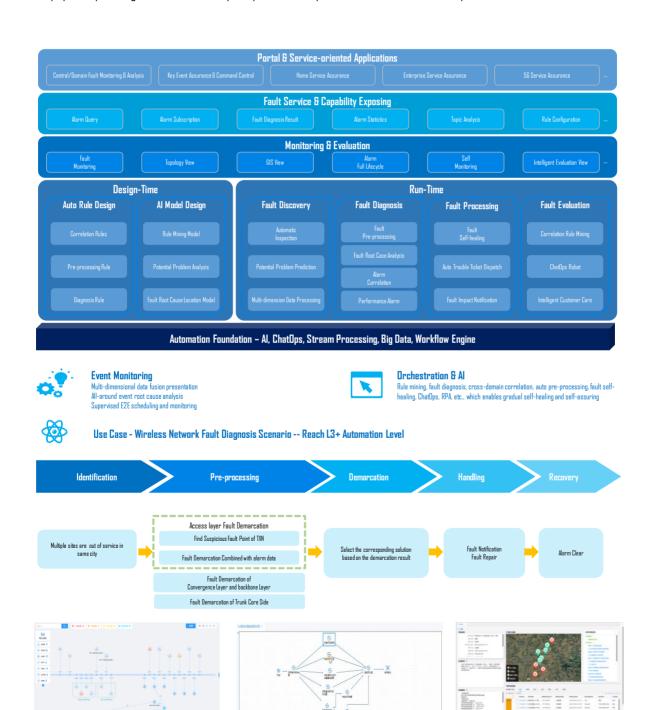






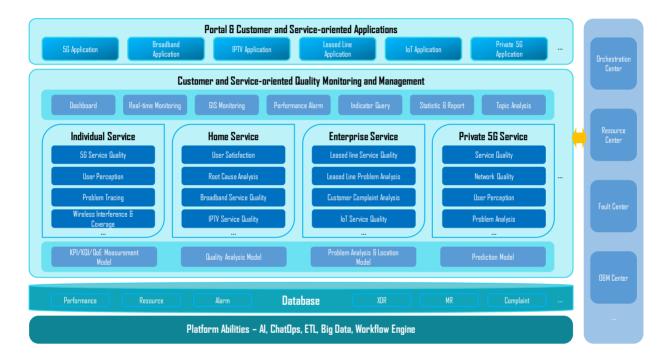
### **Fault Center**

The whole closed loop (intent-based awareness, identification, analysis, decision, execution and evaluation) powered by big data and Al technology effectively speeds up the long-term autonomous capability construction process on base of abundant best practices and case libraries in China.



### **Quality Center**

By indicator systems and analysis models, the platform provides closed-loop process and helps build E2E support capability of service quality management and assurance oriented to excellent network performance, service quality, customer perception and experience.





Closed-loop process of proactive monitoring, quality analysis, earlywarning, problem discovery and analysis, effect evaluation

All training-based indicator systems, analysis model and prediction model, specialized quality measurement







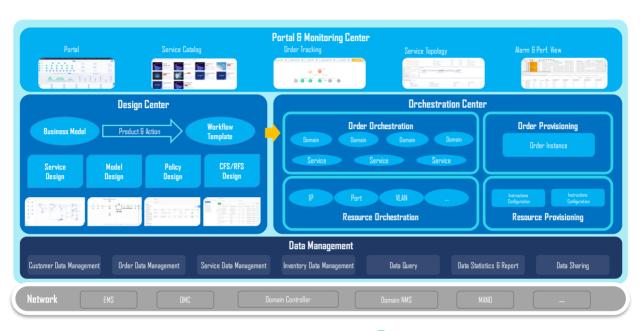
### **D&M** Center

Based workflow platform, the system realizes agile business process design, orchestration, execution and EZE management for all of telco operation and maintenance processes and scenarios.



### **Orchestration Center**

Flexible service and resource orchestration will realize the revolution of the way of customer service and resource delivery, and effectively upgrade telco service provider's core competitiveness.





Intent-based, model-driven, workflow-driven



Automatic closed control loop & EZE visual view



Easy drag-drop workflow design & orchestration



Full service support capability & OOTB Pack





### **Business Operation Center**

Integrated solution provides comprehensive business operation support functions and flexible deployment, and realizes rapid capability delivery and launch to market.

# Business Hall | Customer Relationship Management & Lite Billing | Business Hall | Customer | Postpaid/prepaid/pytrid | Sales catalog tree | Postpaid/pytrid | Postpaid/pytrid | Sales catalog tree | Postpaid/pytrid | Postpaid/

# Al-based potential churn user prediction Al-based potential churn user prediction





Intelligent Campaign

Big data-based customer tag and profile

### E-KYC to Know Your Customer Exactly



Customer Information Capture



Biometric information Captur



OCR Information Captur



Identity Verification



Identity Service

### **Typical Application Scenarios**

### Home Business Operation

Receive customer service request and provide home broadband, voice, IPTV and other converged services

### loT Business Operation

For various IoT application scenarios, provide SIM card and related services and charge as different flexible billing policy

### Data Center Business Operation

Provide data center resource services or cloud services for different customers as needed and enable flexible billing

### Enterprise Business Operation

Manage enterprise customer's order and provide services such as leased line of internet, VPN, IP-PBX, message, etc.

### Power Telecom Business Operation

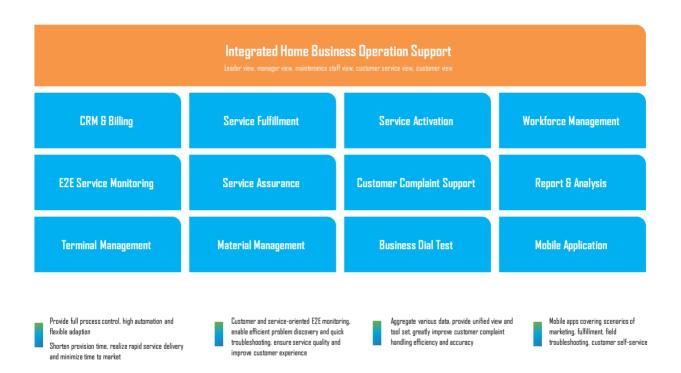
Power companies transform to provide value added services for telecom operators based on infrastructure resources of optical fibers, sites, towers, poles, trench and others

### MVND

Provide mobile service to end user by renting one or several major operators' networks, normally with a cheaper price.

### **Home Business Operation Support**

Regarding home business (e.g. fixed broadband, voice, IPTV), Inspur provides an integrated business operation support solution for whole business operation processes covering marketing, service fulfillment, billing, service assurance, operation and maintenance and customer complaint handling. The solution is agile to adapt different customer scenarios and capable to comprehensively improve service quality, customer experience and operation efficiency.





### **Corporate Business Operation Support**

As for corporate business such as leased line, Inspur solution provides integrated supports covering entire sales process from mining leads and prospects, evaluating project to provisioning the service and maintaining after sales. The solution will help establish overall operation support capability, develop corporate customers, explore business opportunities and guarantee service quality.

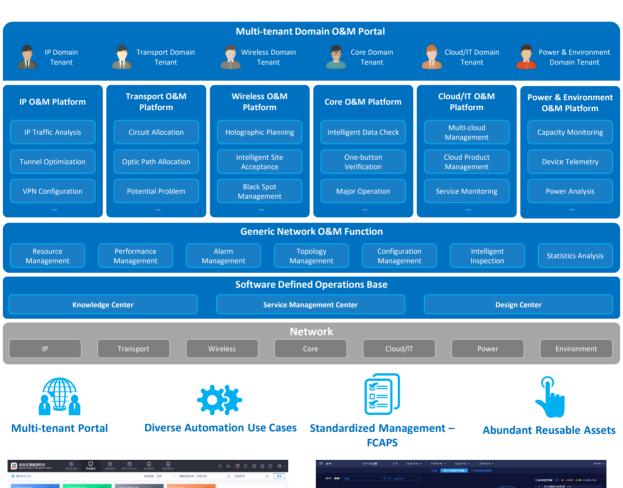


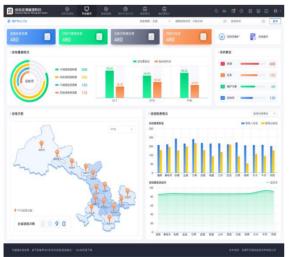
For corporate customers, Inspur provides customer service platform to offer differentiated operation capability and services including unified information presentation, business operations, service quality, customer self-service, reports. Corporate customers can login the platform to view related details and do operations conveniently.



### **Domain Controller**

Based on SDO Base, build a new-generation integrated, automatic and intelligent domain controller / network operation and maintenance platform independent of network vendors.

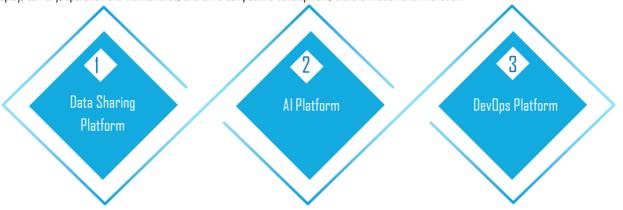




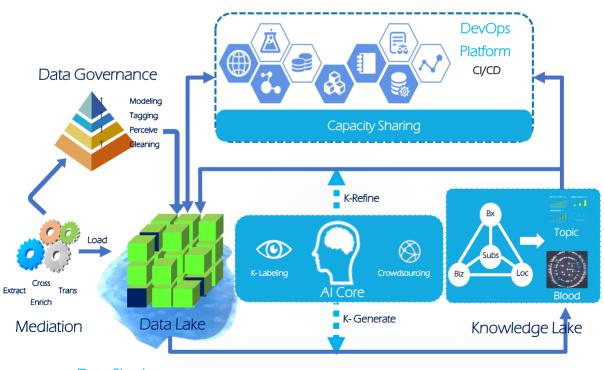


### Foundation Platform Introduction

Three foundation platforms help build enterprise-level platform capabilities, enable agile supports cross whole process of telco planning, design, deploy, delivery, operation and maintenance, and drive competitive development, transformation and innovation.



Build enterprise-level data sharing platform and supporting both internal and external applications Orive China Mobile's AN progress and also supporting DICT applications in multiple industries Agile and quick development, testing and deployment directly improving efficiency

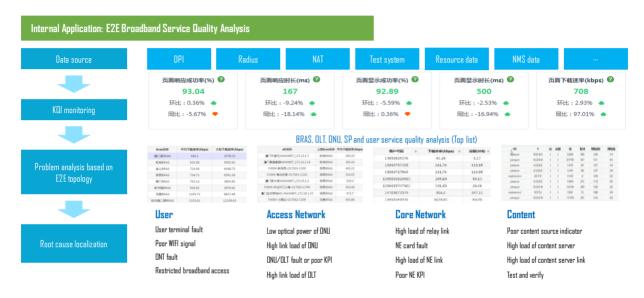


Data Sharing Platform

Al Platform

### **Data Sharing Platform**

The data sharing platform is mainly for unified data asset management and open operation of data capabilities, with comprehensive data capability support for business applications and analysts, builds a centralized data processing factory internally, and provides a unified data consumption portal externally.



### External Application: Tourism Big Data Application

Based on operator's user location, user behavior and other data, provide tourism monitoring and analysis system to help monitor tourist activities (traffic, stay, tourist origin, etc.), do overall industrial analysis and perform precise marketing.



### Scenic Spot Analysis

Passenger flow analysis and prediction Tourist stay period analysis Weather impact analysis Tourist review analysis Facility statistic & analysis Video monitoring & analysis



### **Passenger Flow Monitoring**

Video wall display

Real-time passenger flow monitoring

Tourist distribution and density

monitoring

Passenger flow warning



### Tourist Analysis

Stayed tourist analysis

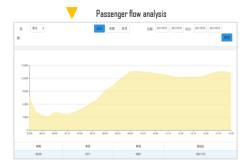
Tourism frequency analysis

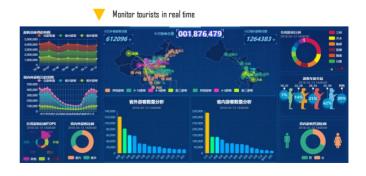
Traffic/travel route analysis



### **Precise Marketing**

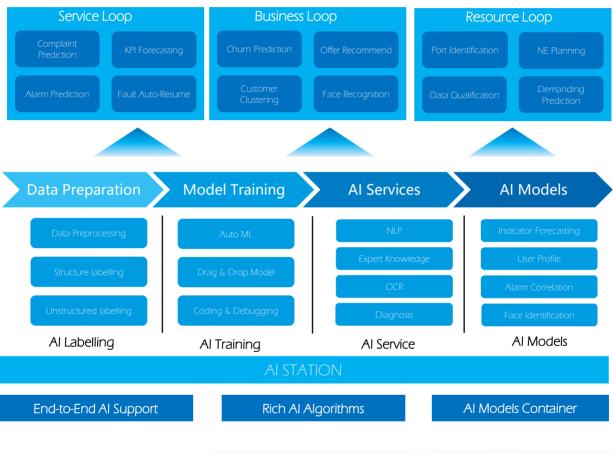
Busy season marketing
Off season marketing
Key event marketing
Holiday marketing





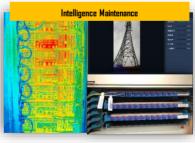
### **Al Platform**

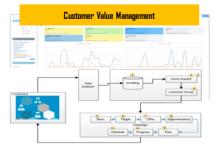
Inspur Al platform builds an end-to-end Al system from data preparation to model openness. Based on the Al platform, Inspur has successfully help multiple industries achieve their business outcomes.









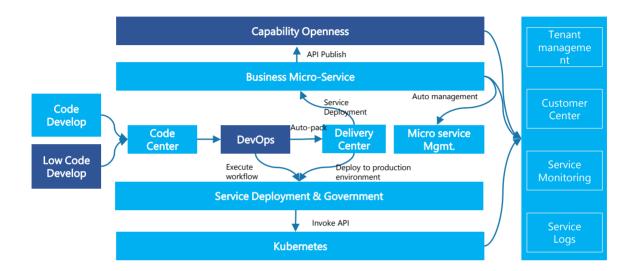






### DevOps Platform

Generic Technology Platform based on cloud native technologies such as micro-services, Kubernetes, and DevOps, form development, OSM, deployment, and delivery standards, build micro-service framework and unified R&D management system.

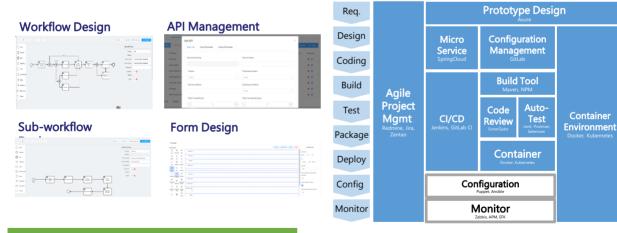


### **Low Code Platform**

Low-code platform provides a graphical interface for quick workflow design, form design, sub-workflow design, and API management functions to perform flexible process configuration to adapt to business process and market changes.

### **DevOps Platform**

DevOps platform provides agile DevOps tools to manage the end-to-end project process. Accelerate business development efficiency, improve product quality and management level.



### **Capacity Openness Platform**

Realizes the unified registration, management, provisioning, review, and visual analysis of capabilities, also the standardized operation of capabilities through a series of specifications









# Serve a Green and Sustainable Life

### Strengthen R&D of Low-Carbon Technology and Promote Carbon Neutralization

- Inspur (Jinan) cloud computing center achieves a reduction of 0.18 PUE value and an annual reduction of 321 tons of carbon emissions.
- Inspur government cloud helps government save 1 billion kWh of power consumption and reduce 960k tons of carbon dioxide emissions every year.



### Focus on biodiversity conservation and build a common future for all life

Inspur and Xishuangbanna National Nature Reserve Management and Protection Bureau jointly created the "Asian Elephant Monitoring and Warning Platform", which effectively alleviated the "human-elephant conflict". At the same time, it provides a lot of valuable video and image data for the scientific research of Asian elephants.



# **Grow Together With Employees**

### Pay Attention to Employee Development and Make Efforts to Promote Public Good

- Inspur Library has more than 40000 books. There are over 1000 courses on online learning platform to for employees to learn online anytime and anywhere.
- From community service, blood donation, caring for disadvantaged groups, to anti-epidemic service, Inspur people use action to promote public good.



### Advocate Joyful Work and Happy Life

Provide employees with safe and comfortable working environment and wonderful after-hours life. Set up the employee welfare system of the whole life cycle, at every key life stage of employees, such as entry, marriage, giving birth and retirement, there are Inspur accompanying.









### Inspur Group

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