



One-stop Data Center Solution

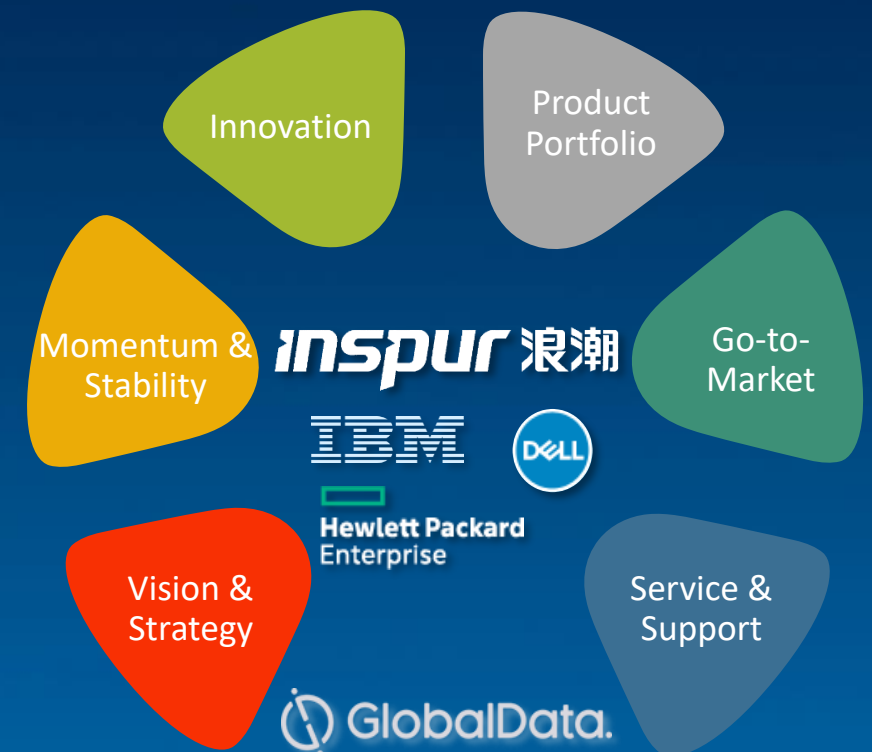
Empowering Digital Transformation & Innovation
with New Infrastructure Construction



“VERY STRONG” in Data Center Technologies

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On March 27 2020, GlobalData, the world leading data and analytics company, rated Inspur as “Very Strong” in Data Center technologies market in its Company Assessment Datacenter report, an overall rating that was on par with enterprises such as IBM, Dell and HPE.



VERY STRONG in 6 core competencies

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Qualification & Certification

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- ✓ **Level 1** - Mechanical & Electrical Engineering Construction General Contracting
- ✓ **Level 1** - Electronic & Intelligent Engineering Specialized Contracting
- ✓ **Level 1** - Fire Prevention Facility Engineering Specialized Contracting
- ✓ **Level 1** - Building Decoration Engineering Specialized Contracting
- ✓ **AAAAA** - Construction and Maintenance for Infrastructure of Green Data Center Service Certification in China
- ✓ **AAAAA** - Data Center Green Level Certification (Energy-saving technology service) TGG(the green grid)& ODCC
- ✓ **Level 1** - Electronic & Intelligent Engineering Specialized Contracting
- ✓ **Level 1** - Fire Prevention Facility Engineering Specialized Contracting
- ✓ **Level 1** - Building Decoration Engineering Specialized Contracting
- ✓ ISO9001/ ISO45001/ ISO14001/ ISO20000/ ISO27001





DC EPC

DC construction, reform & upgrade
System integration



DC O&M Service

Onsite O&M service
Integrated O&M platform



Infrastructure Products

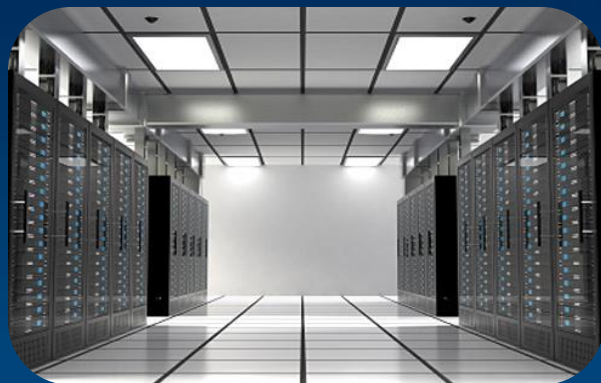
Micro-Module
LV Distribution Product
Intelligent Busbar
Liquid Cooling Product



DC/IT Cloud Service

Cloud service
Cloud platform
Self-owned brand IT products

General Data Center



Capability of data center construction, integration, maintenance and operation

Container Data Center



All-in-one design, quick deployment and flexible to adapt to outdoor environment

Micro-module Data Center



Modular design with high standardization, efficiencies and facility scalability

Single-rack Data Center

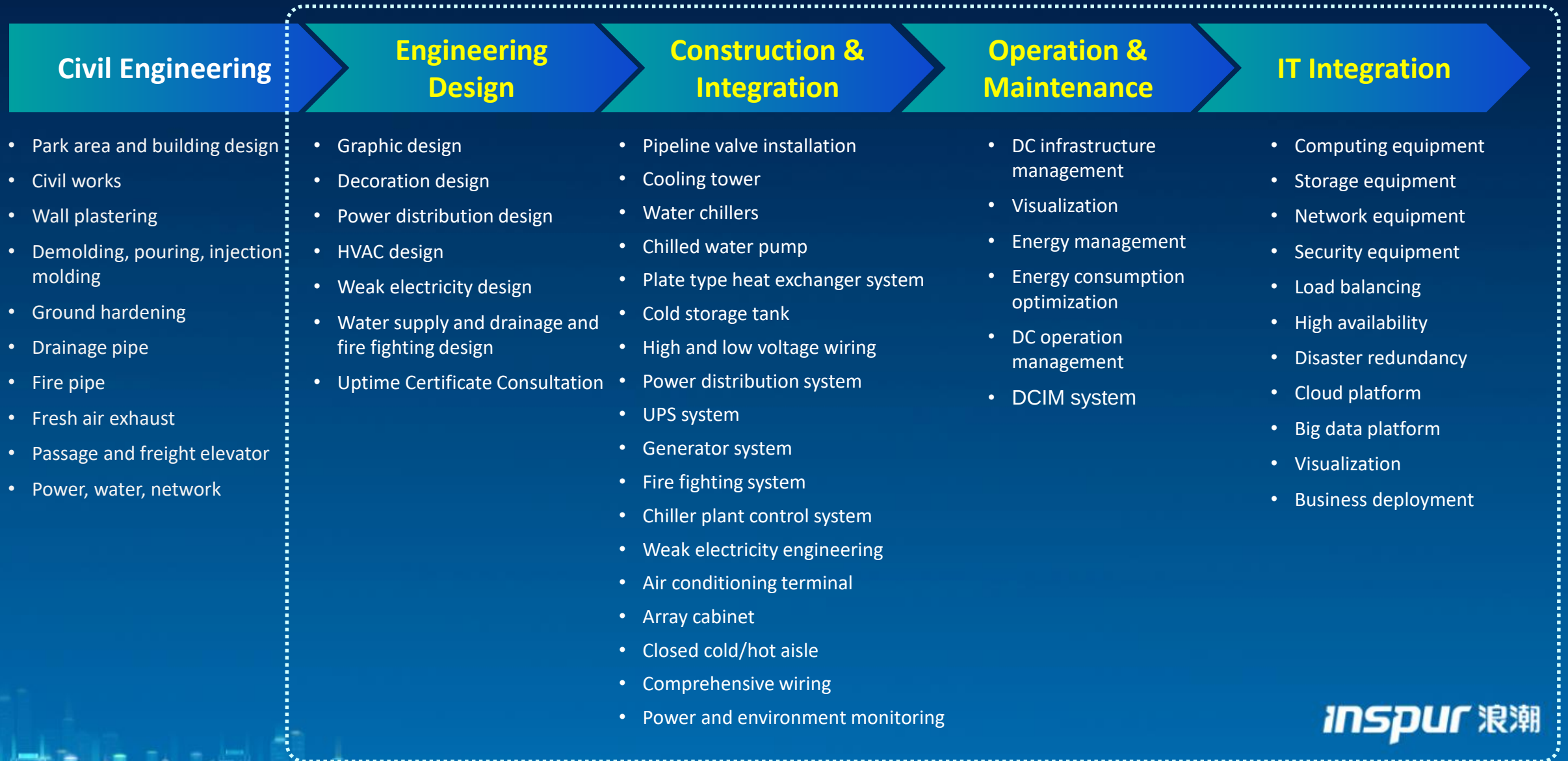
Rack-level, modular-design and high-integrated data center



Single-row Data Center

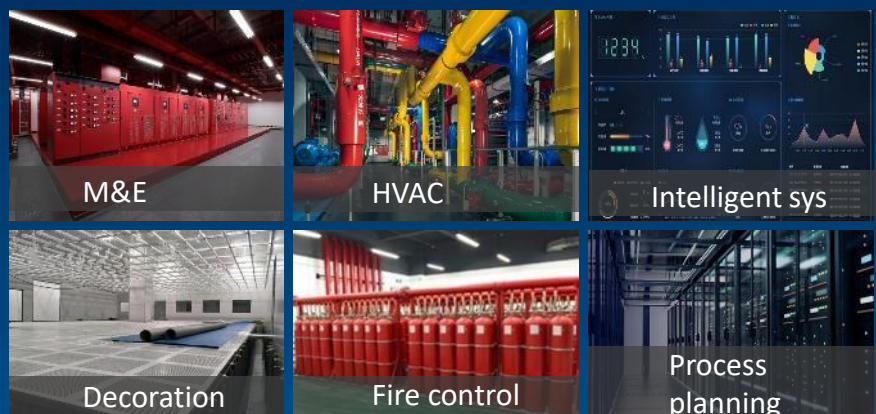
Designed for small and micro demand scenario, quick delivery





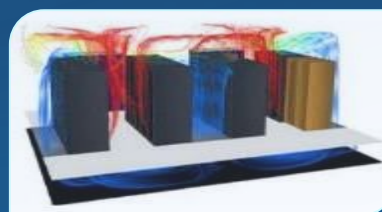
Inspur have a full-professional design team to provide conceptual design, preliminary design, construction drawing design, output plan, list, CAD drawings, etc.

Basic Design Capability

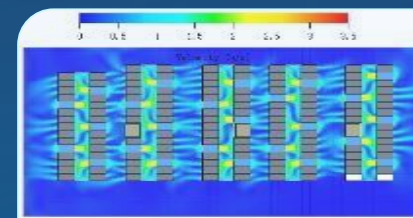


Value-added Design Services

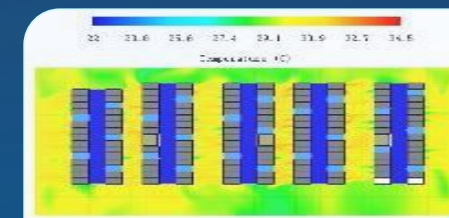
- The temperature and velocity of the air distribution in the computer room are simulated, the air distribution is analyzed, **Air distribution design** is optimized to avoid local hot spots



3D airflow simulation

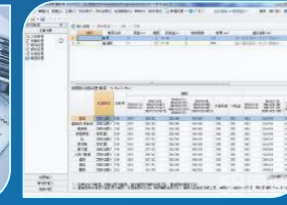
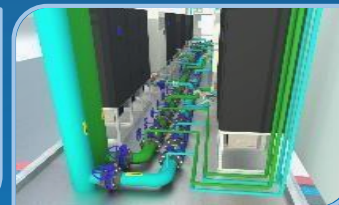
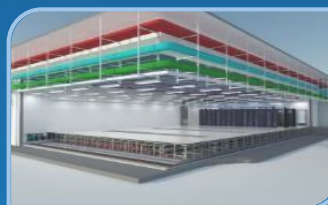


Air velocity field simulation



Simulation of air temperature field

- **BIM modeling** to solve the collision problem of construction pipelines, reduce rework, improve delivery efficiency, and achieve the best layout and look and feel



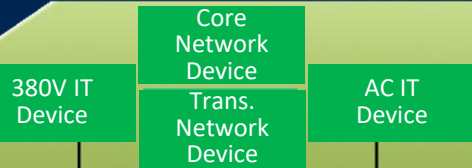
- Provide customers with professional **cost consulting** services, catering to the intricate and diverse requirements of data center

Data Center Solution

Construction & Integration

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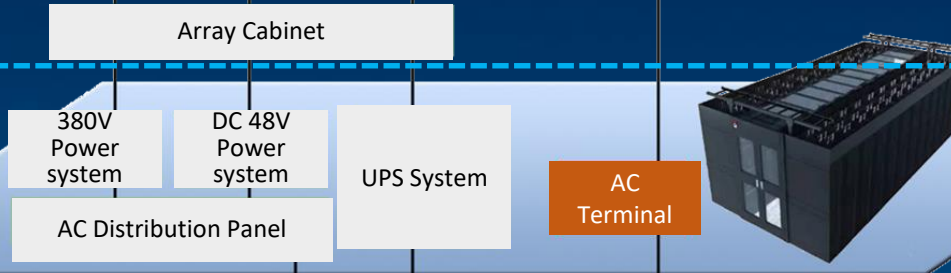
IT Construction



IT Construction

Server, storage, network, security equipment, Cloud platform software.

Data Hall Construction



Data Hall Construction

Including AC terminals, closed cold aisles, UPS, AC power distribution panels, structured cabling, lighting and decoration.

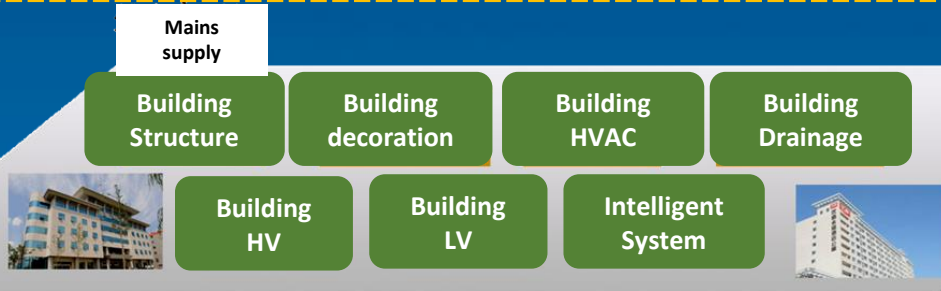
Infrastructure Construction



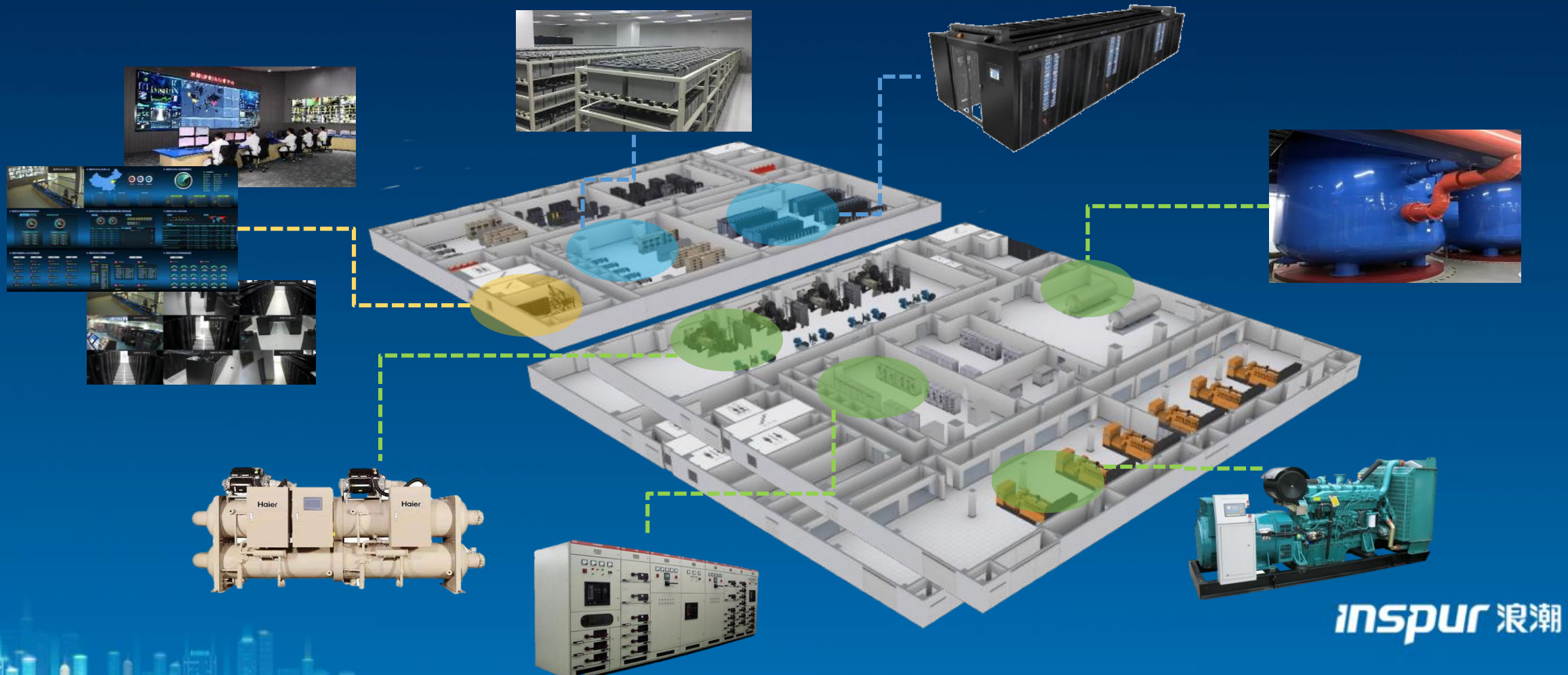
Infrastructure Construction

HVAC and Electrical system projects, such as cooling towers, cooling storage tanks, diesel generator sets, power switching equipment, etc.

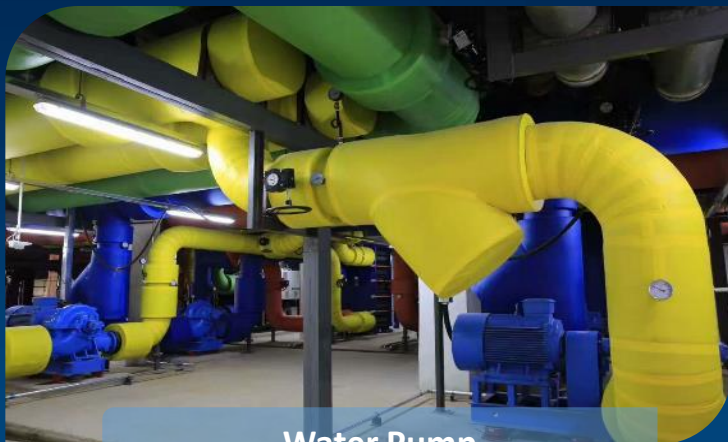
Civil Construction



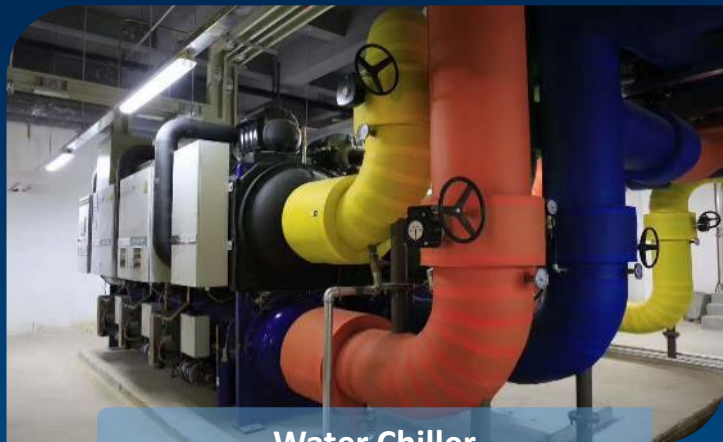
Relying on professional project management team, mature project management process, advanced construction technology, mainly around mechanical and electrical engineering, Inspur provides customers with professional engineering construction services according to the actual situation and needs.



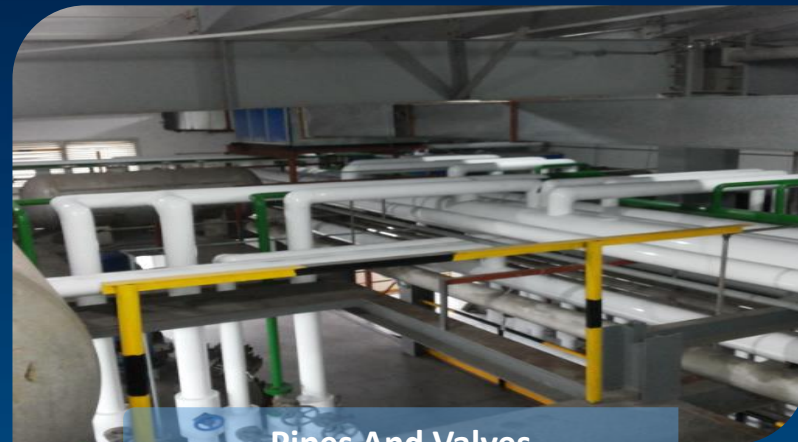
Data center construction and integration – HVAC



Water Pump



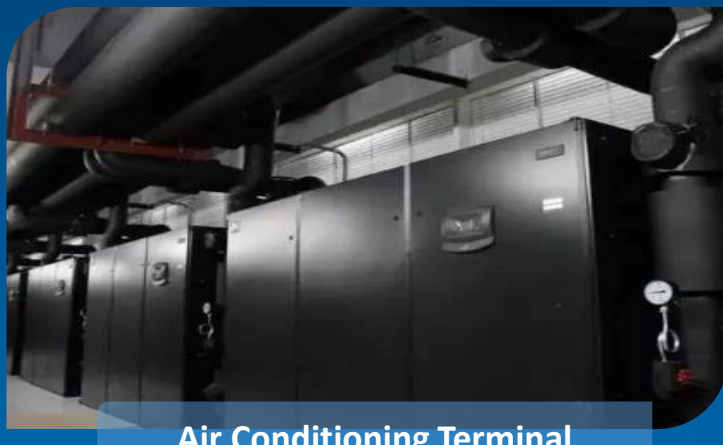
Water Chiller



Pipes And Valves



Cold Storage Tank

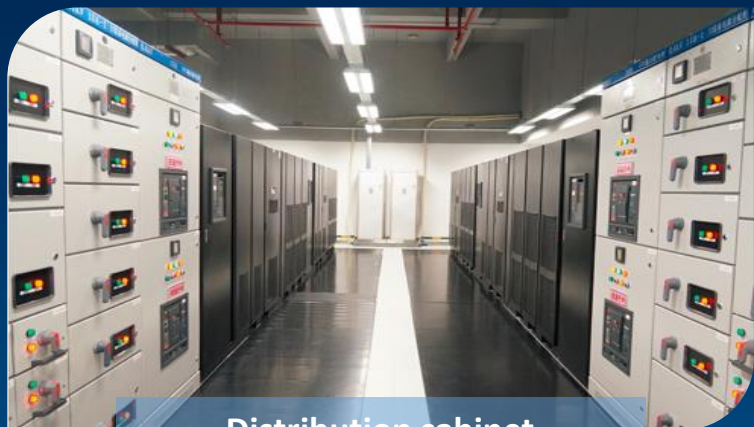


Air Conditioning Terminal



Cooling Tower

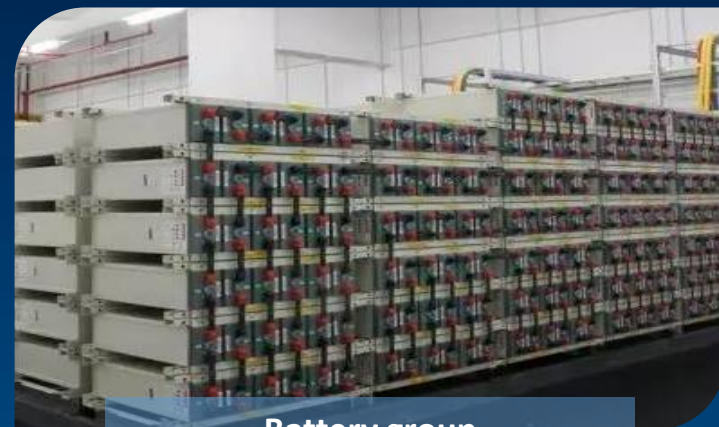
Data center construction and integration – Power Distribution



Distribution cabinet



UPS



Battery group



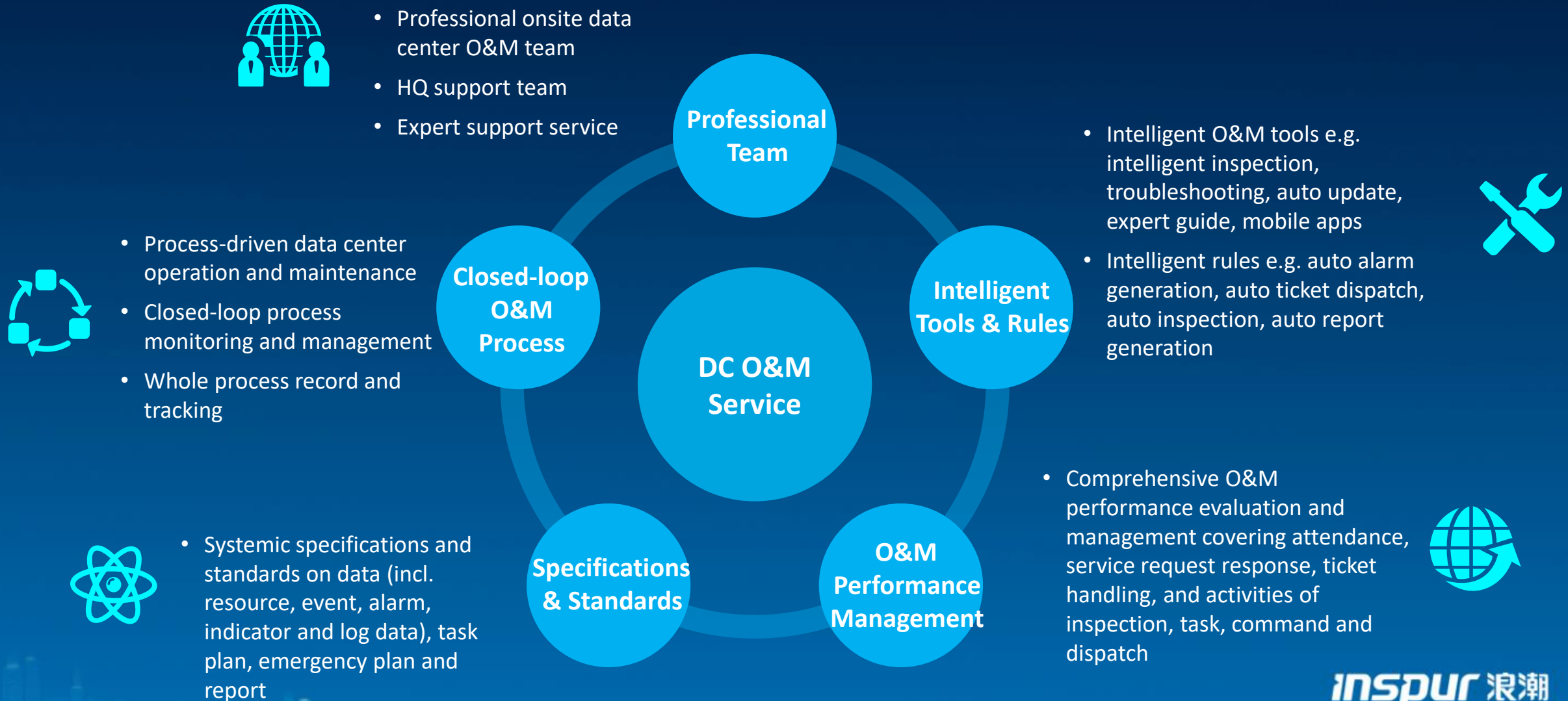
Indoor diesel generator



Outdoor cabin generator



Transformer



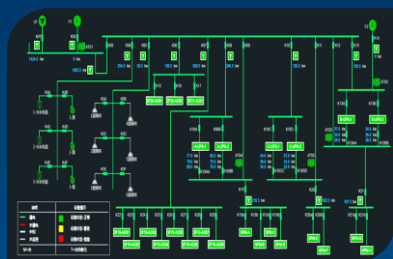
Based on DCIM platform, Inspur provides unified monitoring, visual presentation, automatic and intelligent operation and maintenance, automatic business provisioning, customer-oriented operation and customer self-service.

DC Overview



Provide DC overview, and facility equipment configuration, check and management.

Power Topology



Display power distribution topology and equipment status, support vector scaling.

2D/3D Display



With 2D/3D display function, display the real scene of the computer room.

Asset Display



Provide equipment assets inquiry, display and other functions.

Reports Management



Provide various reports of fault, energy consumption and resource analysis according to customer templates.



Micro Module

Highly integrated and flexibly deployable data center infrastructure solution, featuring rapid deployment, efficient O&M and low-carbon characteristics, providing customers with an energy-saving, and efficient product experience

LV Distribution Products

Used for power distribution, control, protection, and monitoring in low-voltage electrical systems, ensuring the safe and reliable operation of the data center power system



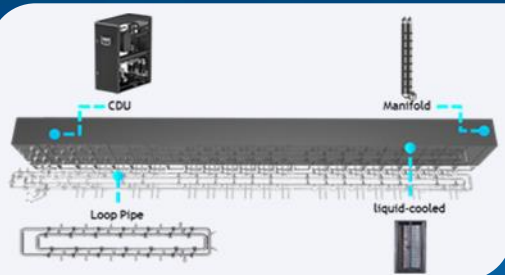
LV Switchgear



Power Module



Array Cabinet



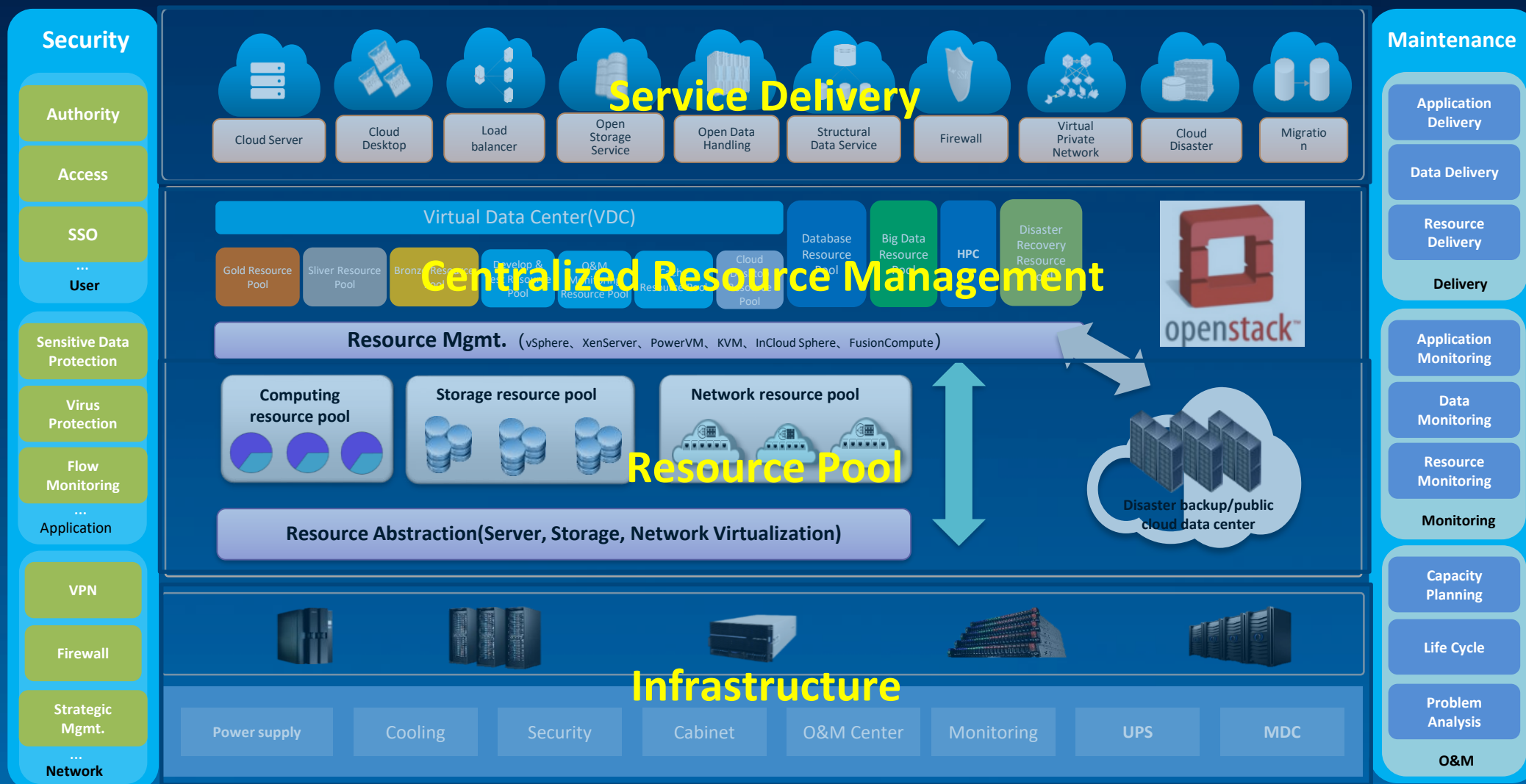
Cold Plate Liquid Cooling Products

For the high-density cabinet scenario in data centers, we employ a liquid cooling technology-based cooling solution that utilizes efficient heat exchange to achieve equipment cooling, providing green computing power with low PUE

Intelligent Busbar

Integrating intelligent monitoring, management, and protection functions, accurately monitor power usage, increase cabinet utilization, and ensure the stability and safety of the power system





Solution for different business scenarios



Cloud Computing
Cloud Platform &
Virtualization



Big Data



AI



Edge
Computing



HPC



SAP HANA
AIO

Server

Cloud Computing Node Server

4U4P



NF8480

4U2P



NF5466



NF5476



NF5486

2U4P



NF8260

2U2P



NF5260



NF5280



NF5266



NF5180

1U2P



NF3120

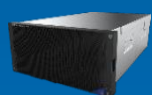


Rack-Scale
Server

Mission
Critical
Server



TS860



K1 Power E980



K1 Power E950

High
Density
Server



i48



i24

Storage

High-
end



HF18000



AS18000



AS6800

Mass
storage



MDC2000

Middle-
end



AS5800



AS5600



AS5500

Entry-
level



AS2600



AS2200



AS2150



MDC2000



CDC2000

Switch



FS8500



FS8600



FS8900



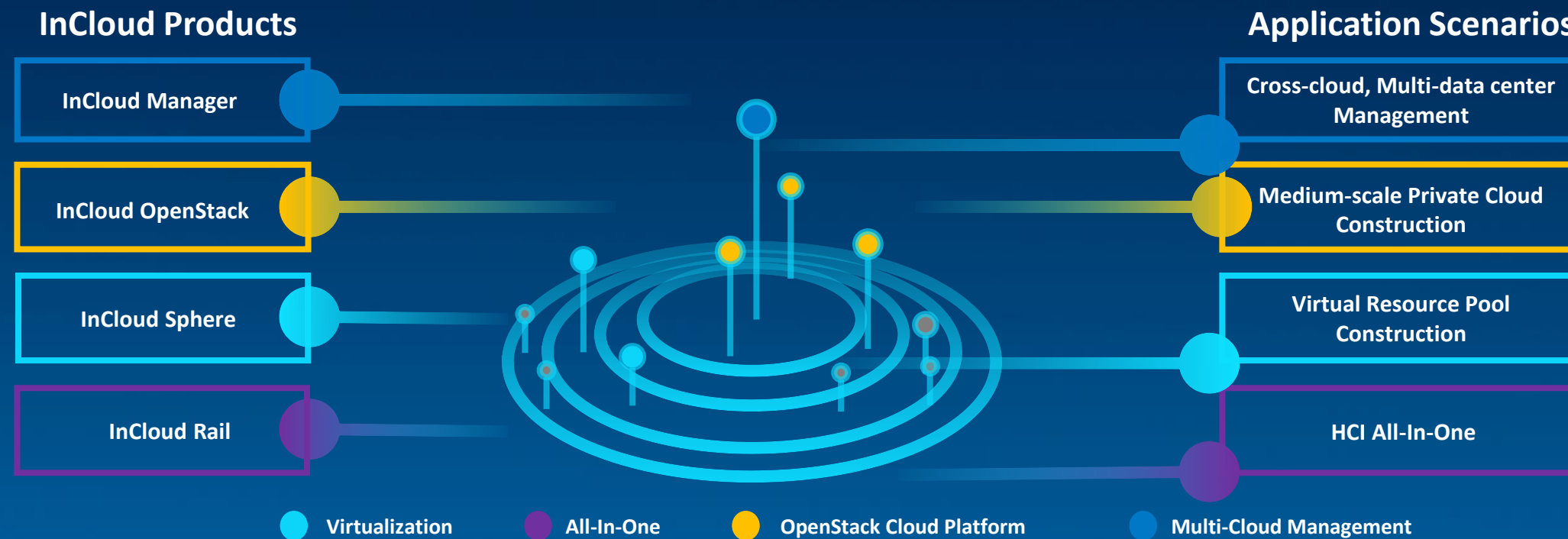
SDC2000



RDC2000

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InCloud series of products can provide the corresponding product scheme for different application scenarios of cloud users.



Virtualization	Private Cloud	Multi-Cloud Management
ICR/ICS+X86+SAN	ICOS/ICS+ICM	ICOS+ICM

Data Center Full-Stack Services

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Infrastructure Planning, Construction, O&M Stack Services

Relying on the experience of high-standard data centers in multiple industries, it provides data center consulting and planning, professional design, integration implementation, commissioning and verification, evaluation and optimization, and operation and maintenance services for the full life cycle closed-loop service capabilities, and has built more than 120K+ data center racks for customers , covering public cloud, dedicated cloud, edge computing power and other fields.

Consultancy	Design	Implementation	Commissioning	Verification	Assessment & Optimization	Maintenance Service
➤ Planning ➤ DC Location ➤ Budgetary estimate	➤ DC design ➤ Intelligent design ➤ Project costs	➤ Detailed design ➤ Construction renderings ➤ Project mgmt.	➤ M&E commissioning ➤ Low voltage commissioning ➤ Software commissioning	➤ Dummy load test & verification ➤ Emergency Plan Verification ➤ Functional verification	➤ Overall project evaluation ➤ Energy Efficiency Evaluation Optimization ➤ Usability Evaluation Optimization	➤ Onsite service ➤ O&M team construction ➤ O&M tool construction

325↑

National Class A data center

20+

Construction Qty.

153

National Green Data Center

10+

Construction Qty.

- Provide the **construction, operation and maintenance** of computing data centers in over **20 provinces** across the country, to build digital information infrastructure, and develop an integrated platform as a service



Beijing-Tianjin-Hebei Data Centers



Data Center Cluster in Shandong Province



Data Center Transformation of Information Port



National Ministry of Commerce Data Center



Sichuan Meishan Smart City Data Center



Bank Intelligent Data Center

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The project remains committed to embodying the principles of **green and digital** construction, fully compliant with **GBI and LEED** certification standards. Inspur offers stable and reliable data center infrastructure supply and M&E engineering services, catering to the growing business demands of customer.



GFA: 18,000m²



Green



Efficiency



Reliable



Tier-III Data Center

- 15 MW IT Load Capacity
- 5 Storey Data Centre Building
- N + 1 Prefab Chiller & Cooling Tower
- N+2 Fan Wall
- N+1 Generator
- 2N / N+1 UPS



❑ Data Center Project in Singapore

Located in the north central part of Singapore, DODID is the first high-level green data center certified by **Uptime Tier III**. The designed PUE is **below 1.4**, with a total capacity of **10MW**.

- ✓ Integrated construction and installation of dynamic environment discipline of data center, such as sensing equipment
- ✓ Deployment of dynamic environment monitoring software in data center to improve operation management level
- ✓ Provide customized portal to improve the convenience of data center customers

❑ Data Center for X Company in Ethiopian

Located in Addis Ababa, the capital of Ethiopia, Inspur provides **one-stop services** for infrastructure design, installation, delivery, implementation, maintenance and training of the data center.

- ✓ Internal decoration facilities of the machine room, installation of diesel generator and ATS of the machine room power system
- ✓ Data center security system
- ✓ Monitoring center (NOC), video wall and workbench



Successful Cases

Inspur Data Center Practice in China

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Successful Cases

Inspur Cloud Data Center, Jinan, China

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- 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.
- It adopts modular design, fully utilizing the local natural climatic conditions, achieving **38% of the time using natural cooling**, and being selected as one of the **first batch of the "National Green Datacenter List"** in 2017.

Park Scale	Data Center Scale	Energy-saving	
• 160,000 square meters • Capacity: 30,400 cabinets and 1 million servers	• 21,600 m² of building area in Phase I • 3,800 cabinets, 120,000 servers	• 38% fully natural cooling • 25% partly natural cooling	
			

Hebei Data Center is one of the largest park-level data centers in the Beijing area, with a total capacity of **21,000 racks**. The average annual PUE is as low as **1.3**, according to **A+** and Uptime **Tier III+** dual standards



✓ **Hyperscale**

The largest park-level data center around Beijing, with a total design capacity of 21,000 racks, and the first phase of construction include 7,600 racks.



✓ **Safe and Reliable**

Designed in accordance with Tier III standards, the system availability reaches 99.98%, carrying core services for first-level IT private cloud, network management, and 5G



✓ **Green and Energy Saving**

Using green energy-saving technologies such as natural cooling sources, heat pipe backplanes, and modular power supply. The average annual PUE is approximately 1.3



✓ **Intelligent Management**

Operated and managed by Inspur DCIM and IDOC system to ensure the safe, reliable and stable operation of new generation infrastructure and digital applications



Langfang data center
for a leading communication operator in China





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ALL FOR QUALITY SERVICE