



Inovações em Data Center

- Huawei Strategy towards Banking Data Centers

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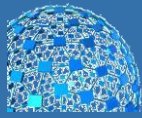
FSI Solution Director, Enterprise Business Group

LEADING NEW ICT

Technology Strategy towards Banking ICT

Top of CIO Minds

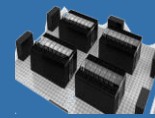
Optimizing ICT



SDN Based
Networking (DCN,
DCI & Branch)



ICT Security against
APT via Big Data



Cloud based
DataCenter

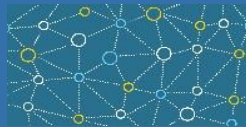


Big Data Analytics Via
Hadoop/Spark



Omni-Channel/CEBP via
UC/Mobility/BYOD

Product Lines



Enterprise Networking



Security



Data Center & Cloud



UC&C

Investment for Long Term Sustainability



Chipset



Mathematical Modeling

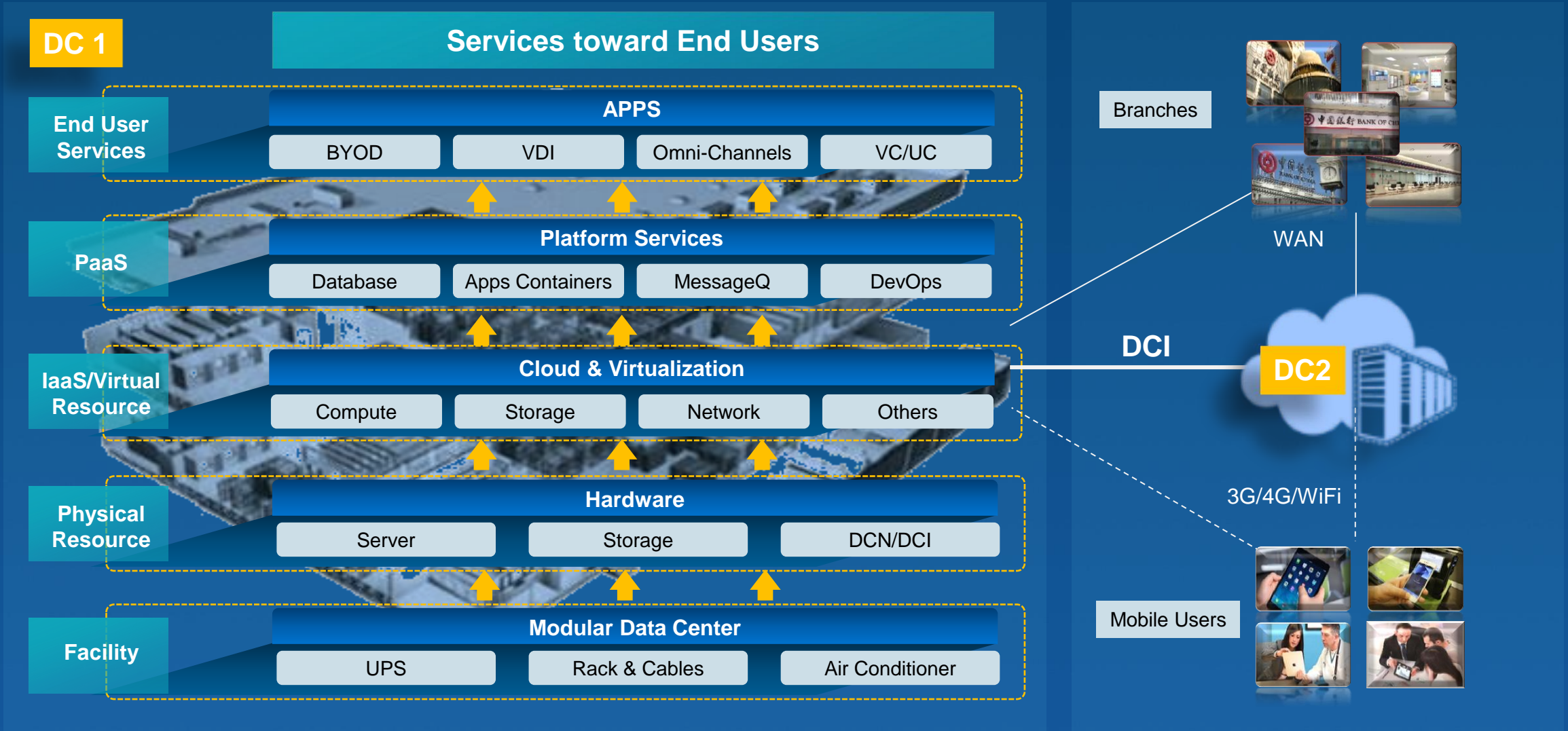


System Software

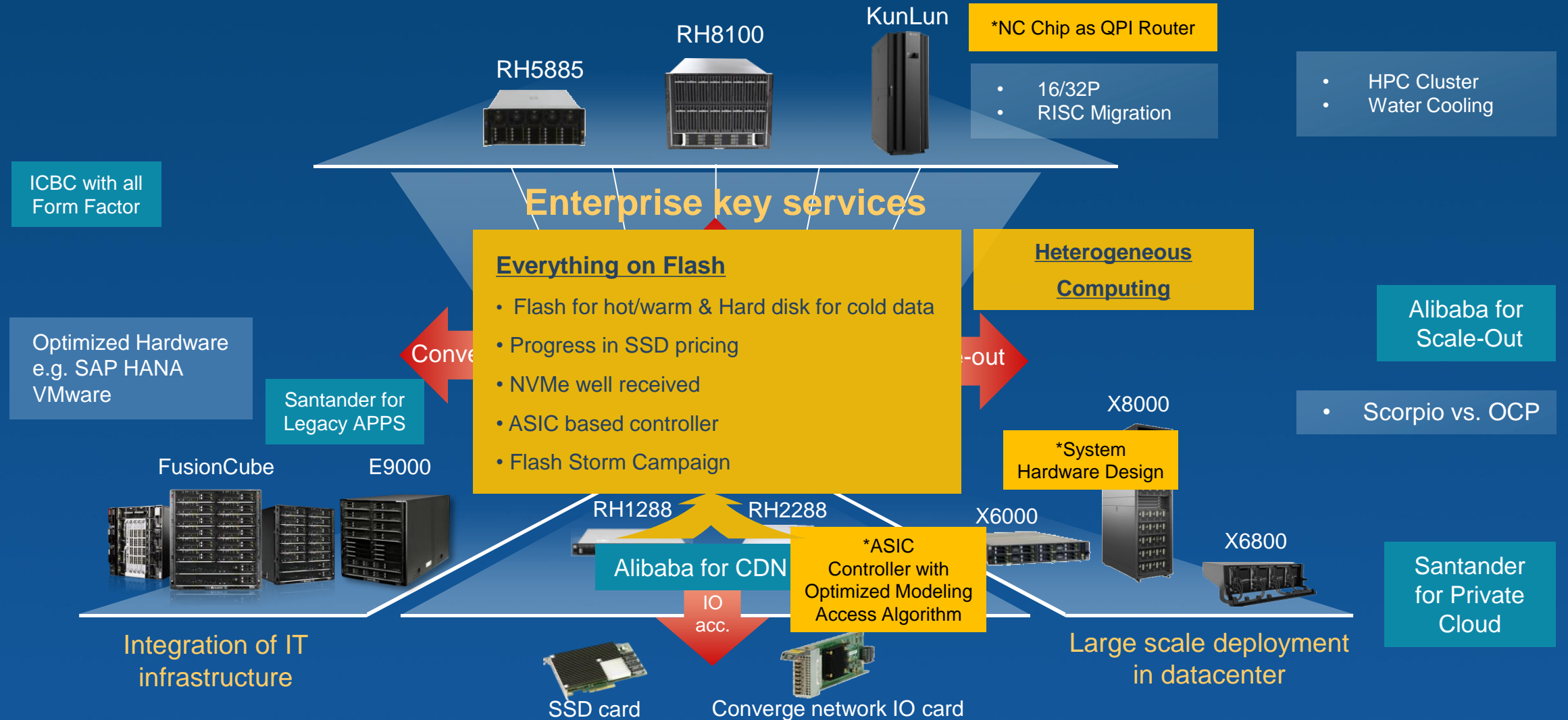


System Hardware

Layering Approach towards Innovation



DC Infrastructure: Scale-Up/Scale-Out/Convergent Server plus SSD



DC Infrastructure: Storage Media Transformation Accelerated

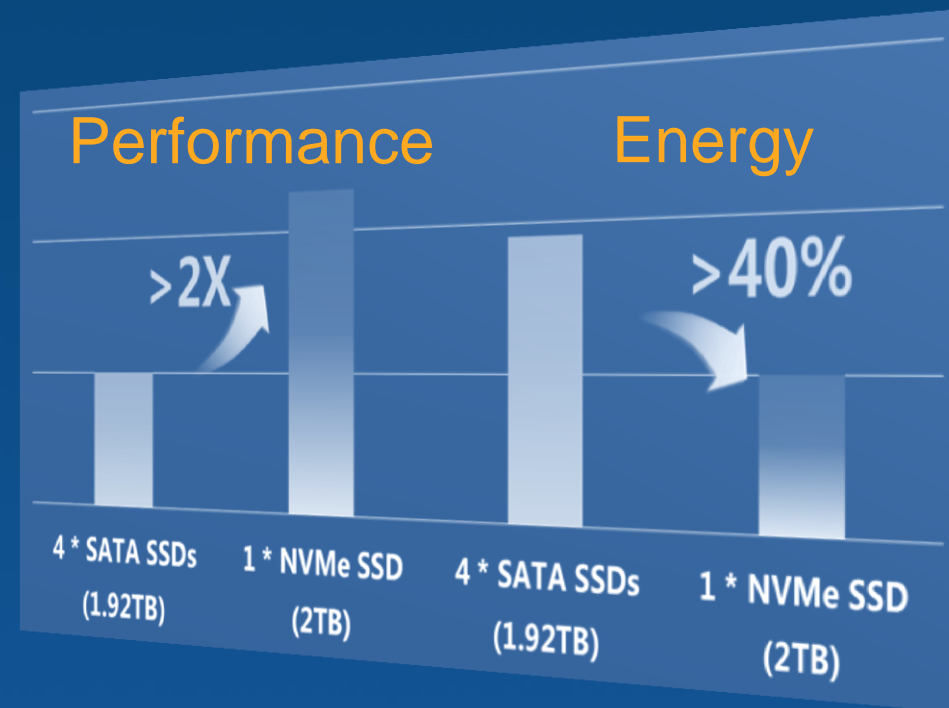
NVMe SSD Replacing SATA SSD
SSD Replacing HDD



ES3000 V3
NVMe SSD

One Capacity

Double Performance



DC Infrastructure : All-Flash Platform for IO Intensive/Latency Sensitive Systems/APPS

Unique Flash Technology

Performance Accelerated chips

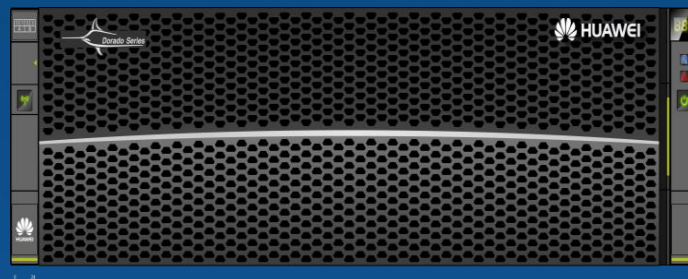
- Converged SmartIO Chip
- IO Process Acceleration Chip
- SSD Controller Chip

Flash-oriented OS

- Flash-aware IO Scheduling
- SSD Reconstitution Pool
- Cooperative Flash Management

Database Optimization

- Deep Optimization for Oracle/SAP
- Reference Architecture
- Best Practice



Dorado V3: New-gen AFA

Unique Platform Values

Extreme Performance

- IOPS > 4M
- Scale-out to 16 controllers
- Consistent latency < 500us

Rich Features

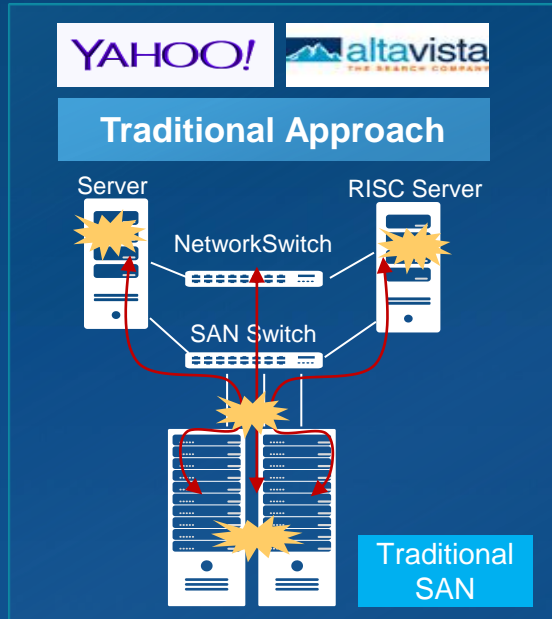
- Inline De-dup and Compression
- Heterogeneous virtualization
- QoS / Snapshot / Replication / Online Migration

Reliable

- DIF / NDU
- Active- Active DC solution

DC Infrastructure: from Centralized to Distributed Storage

Blocking in
Multi-Levels



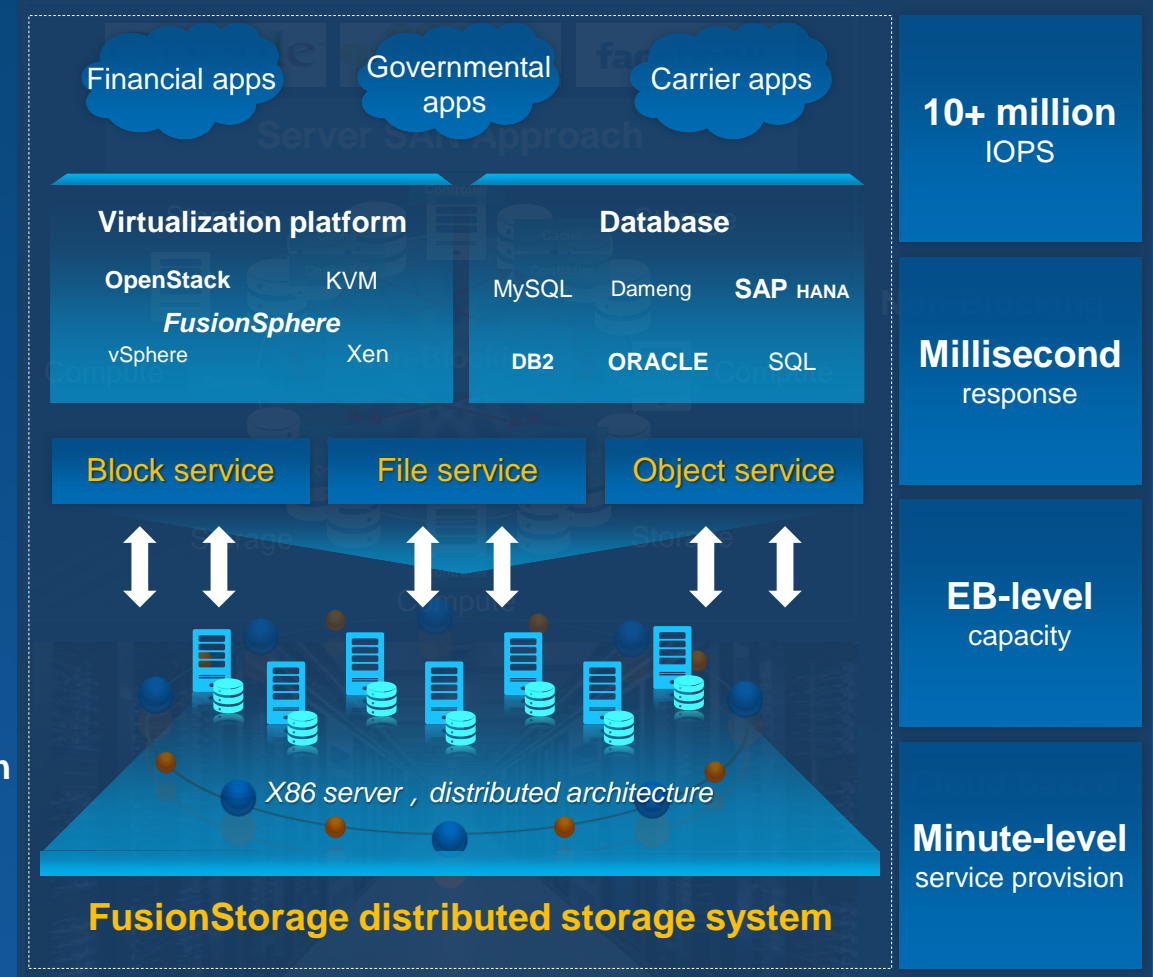
Traditional
Data Center



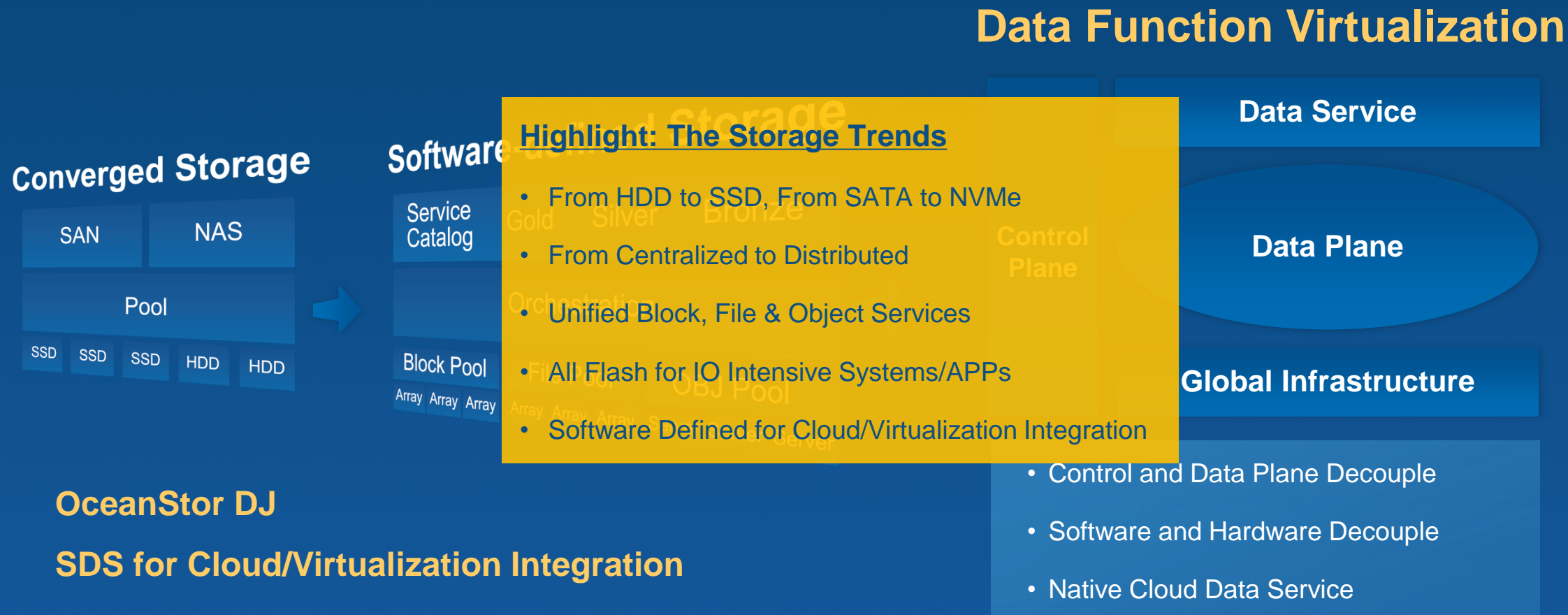
Migration
Accelerated



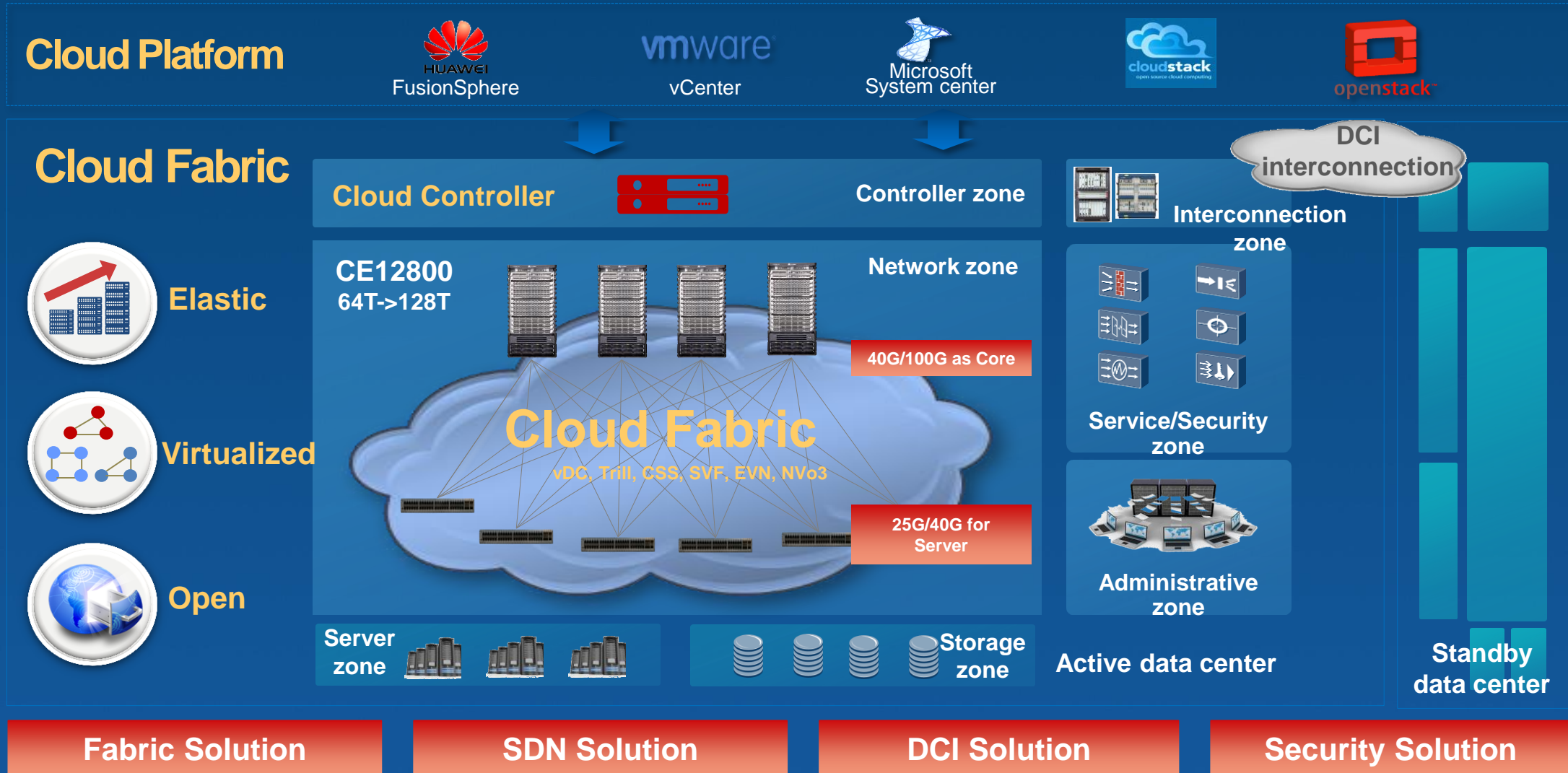
- Scale-Out
- Cloud/Virtualization Integration
- APPS Migration



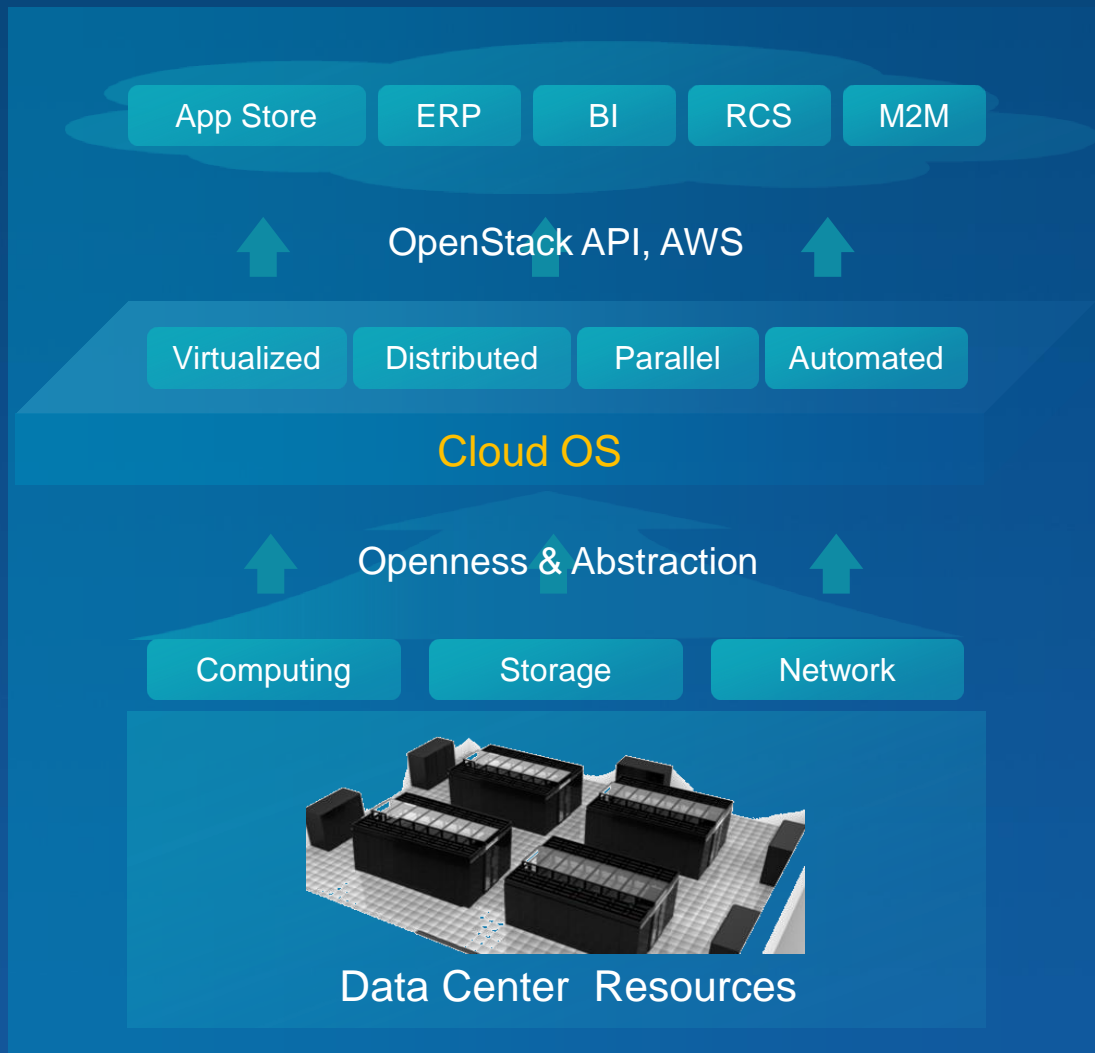
DC Infrastructure: Virtual Resource Pool via Software Defined



Innovative@DCN: Cloud based Data Center with SDN

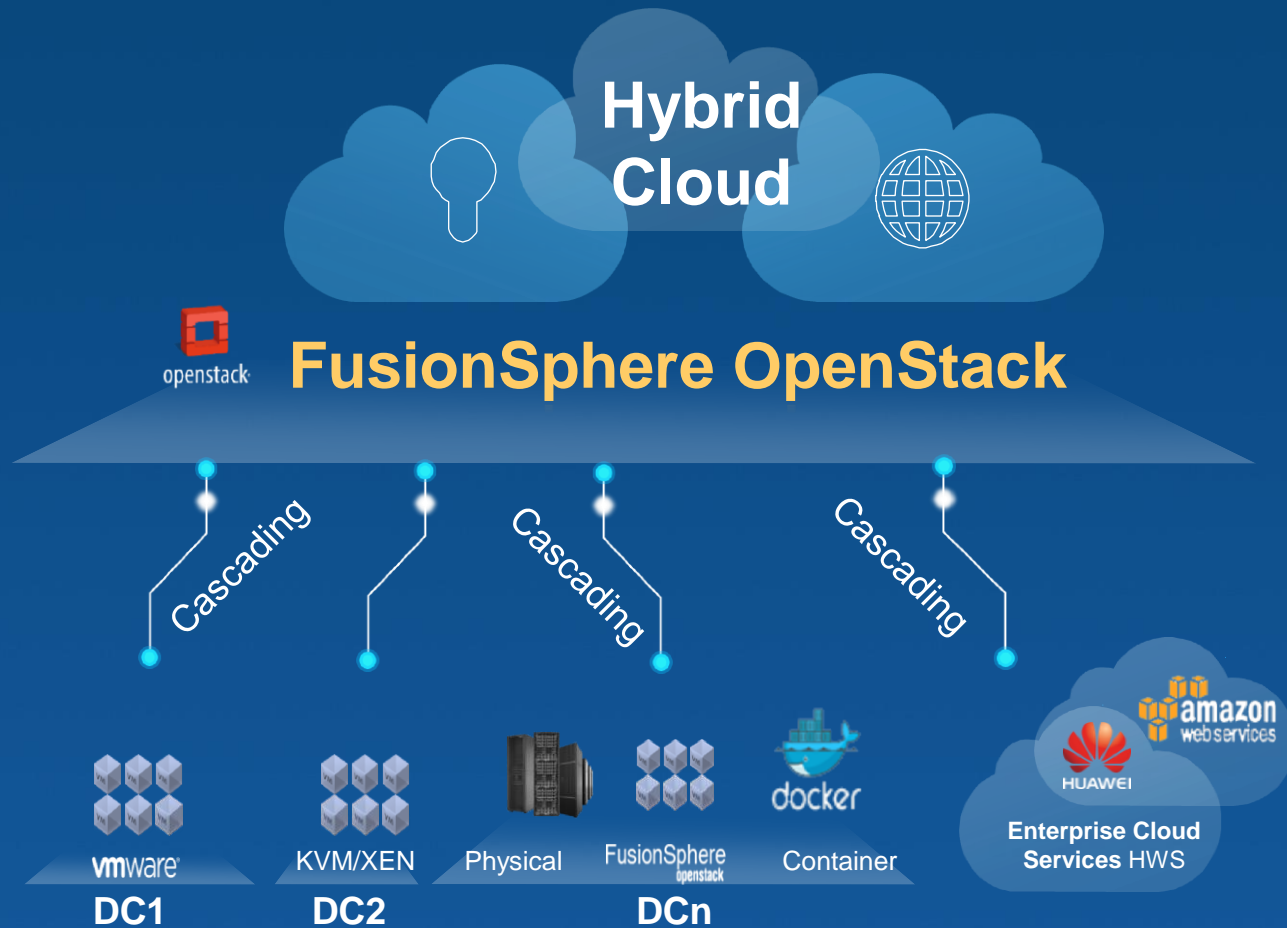


Cloud OS: OpenStack Deployment Accelerated



- ◆ Balance shifted towards Private vs. Public Cloud for Large Enterprise
- ◆ Data localized even for Public Cloud
- ◆ Hybrid Cloud: Per Service/Application allocation on Public/Private
- ◆ VMware coexistence & migration, Multi-vendor, Cascading
- ◆ IaaS focused, PaaS getting hot for pioneer
- ◆ OpenStack for IaaS, KVM for Virtualization, Kubernetes/Cloud Foundry/Cloudify for PaaS, Industry specific PaaS, direction clear, to be mature

Huawei Hybrid Cloud: Connect the Clouds



Open

Open

- Unified multi-clouds Manage
- OpenStack architecture, Open APIs

Enterprise class

Scalability & Reliability

- Auto scaling on schedule across clouds
- Auto V2V migrating across clouds
- DR across clouds

Innovation

Docker across clouds

- Service provision in seconds, rapid scalability and migration

Banking Active-Active Solution — Intra-city, Load Balancing

Core
service
system



Personal
consumer
credit



International
settlement



Foreign
exchange
trading



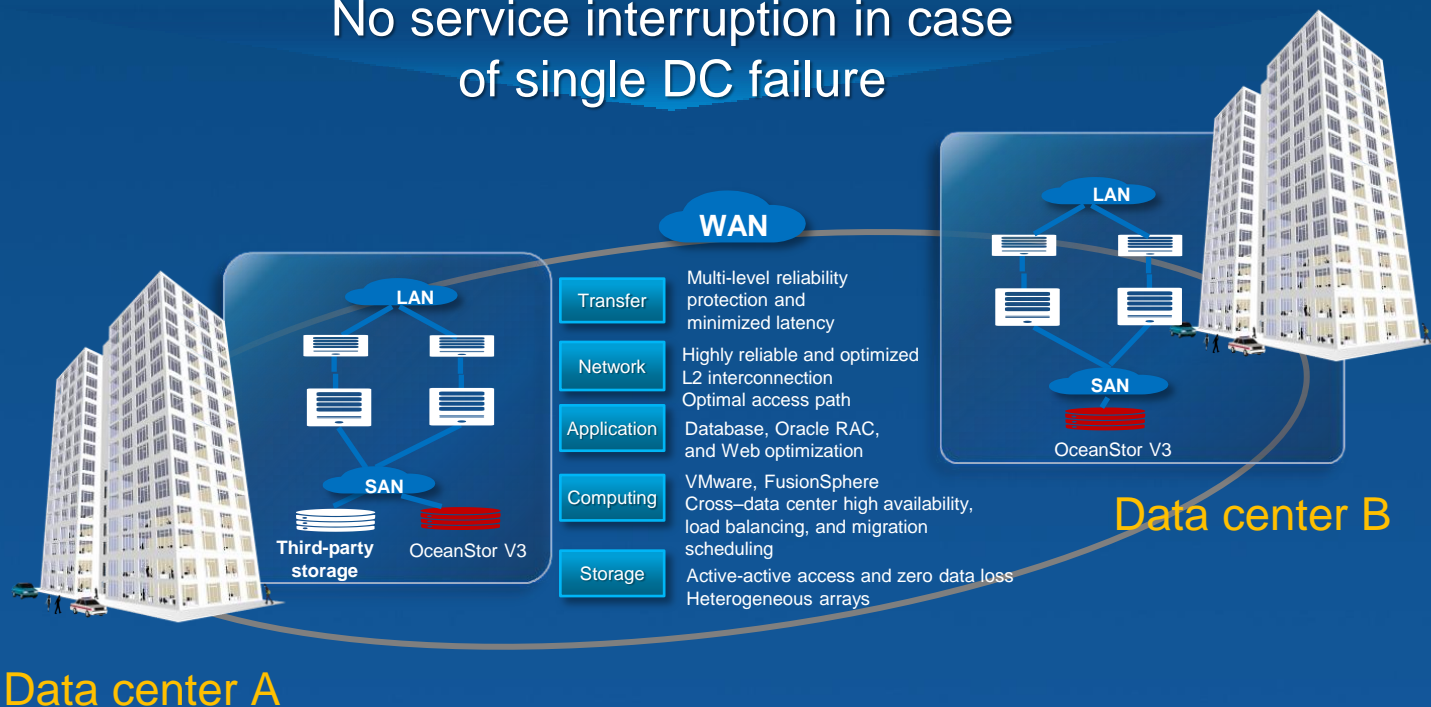
Integrated front-
end system



No service interruption in case
of single DC failure

Highlights

- Zero service interruption and data loss
- Intra-city end-to-end active-active, load balancing
- Active-active gateway-free arrays, improving performance by 30%
- Visualized DR management, doubling management efficiency
- Smoothly extending the live network to 3DC



Note: China market-oriented

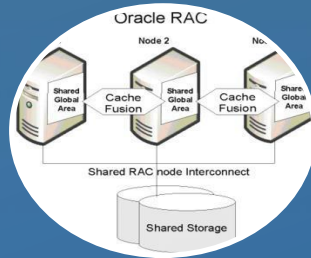
ICBC/Huawei Joint Innovation for Banking Vertical



中国工商银行
INDUSTRIAL AND COMMERCIAL BANK OF CHINA



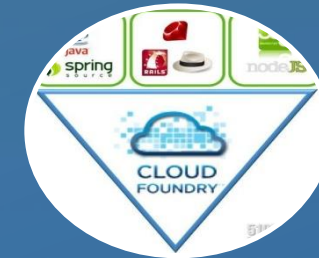
HUAWEI



Optimized Legacy
Infrastructure
(Open & Dynamic)



Transform to Open and
distributed platform
(IaaS & Distributed App.)



Innovative application
platform development
(PaaS)

Infrastructure Cloud + Agile Operation + Process Optimization

Cloud Platform

Cloud Network

Cloud Service

Huawei Enterprise Big Data Platform: Agile, Smart and Trusted



Agile

- Open architecture with performance linearity and scalability
- Rich toolkit for efficient development and management/maintenance
- Powerful SQL for business migration

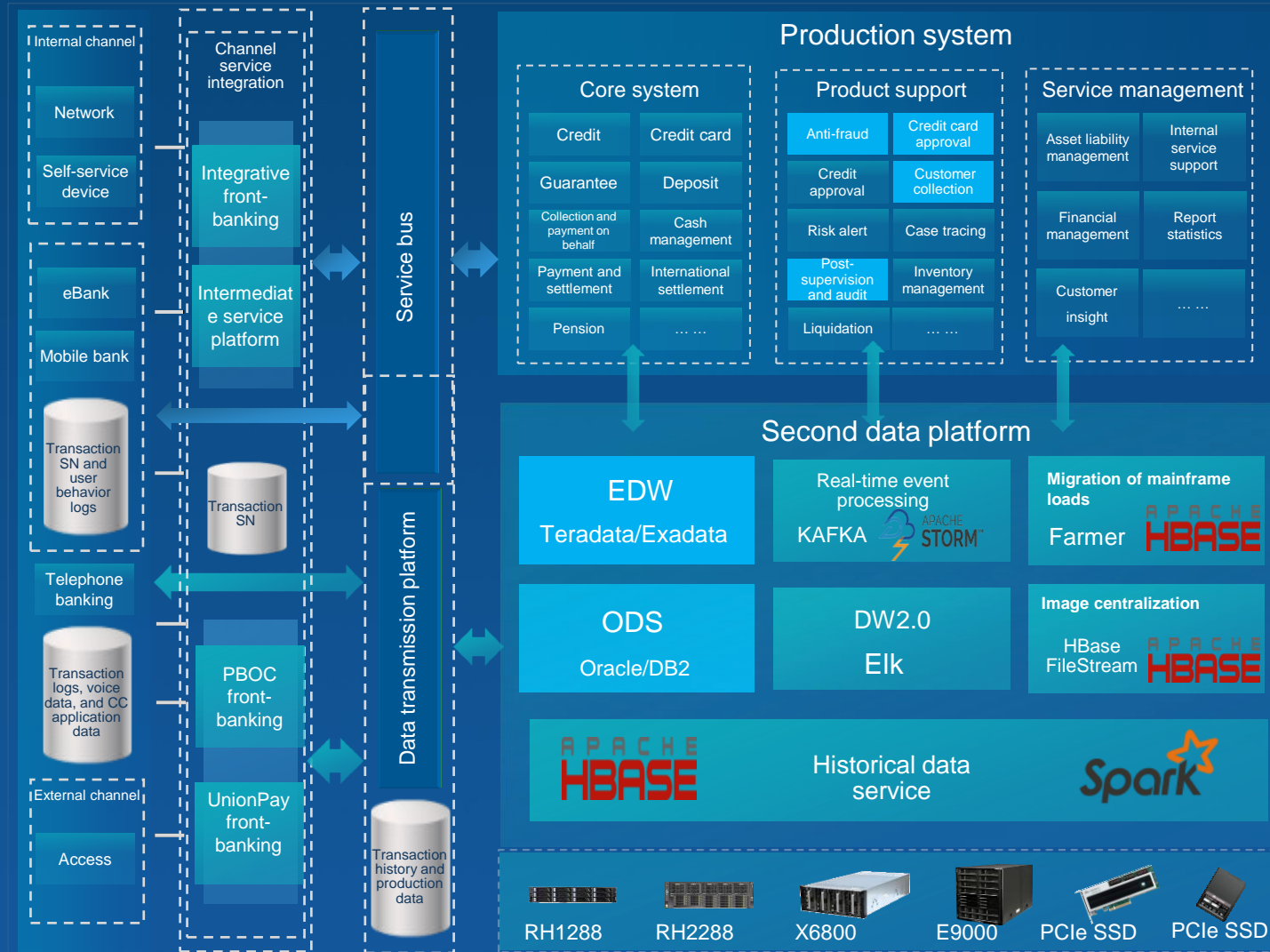
Smart

- All-Data model for in-depth analysis
- In-house developed modeling algorithm, precise and efficient

Trustworthy

- Full function HA, disaster recovery & financial-grade security
- Open & trust for Win-Win partnership

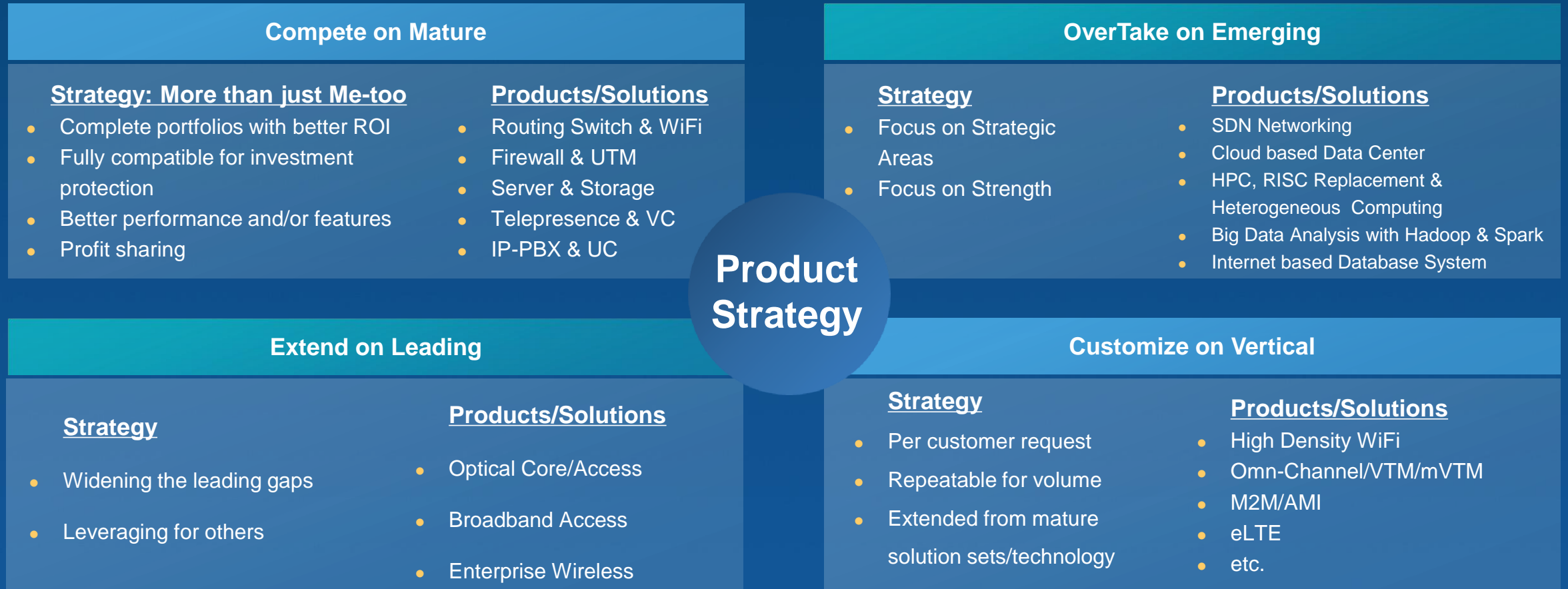
2nd Data Platform as the 1st step for Big Data



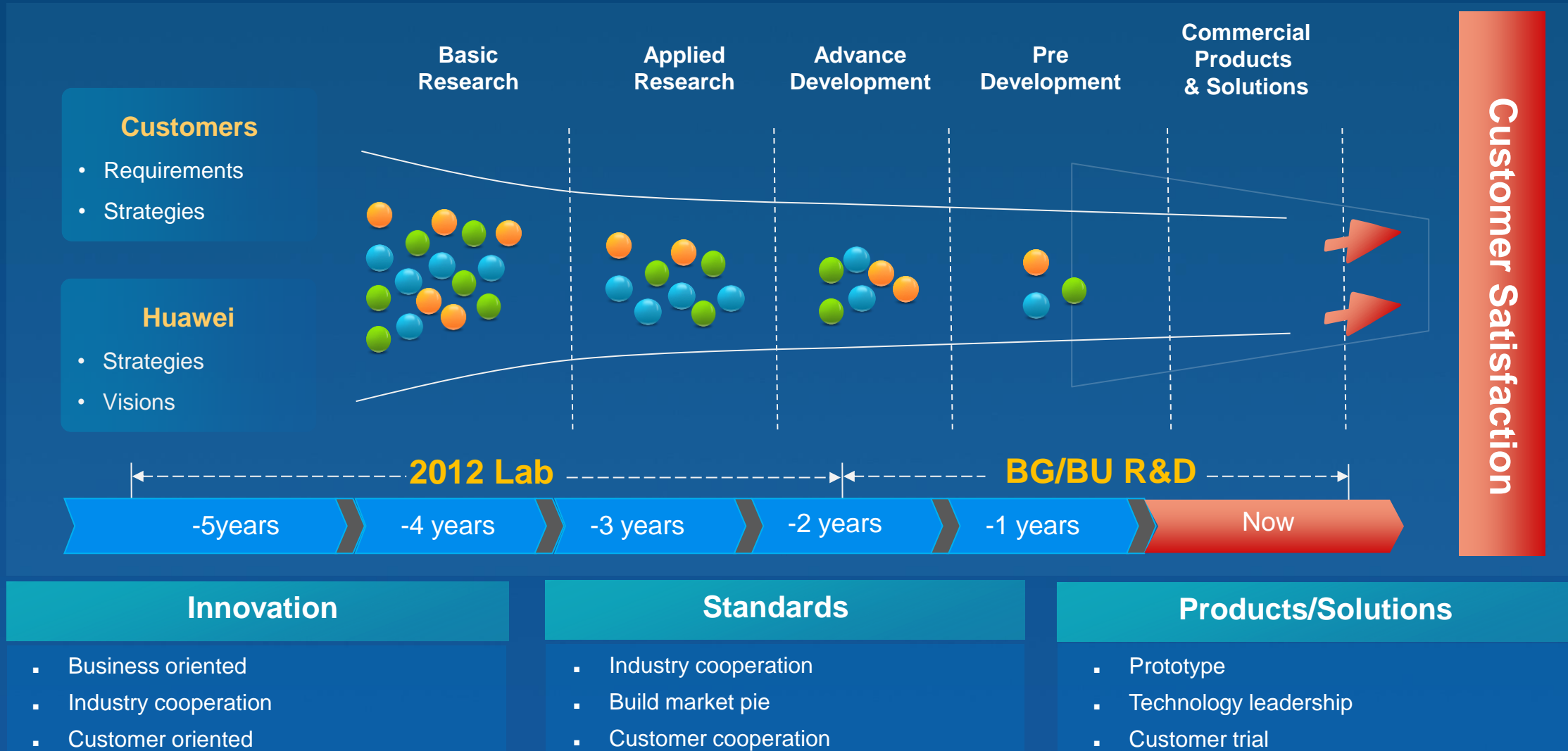
Highlights

- High-performance massive data processing platform:
 - ✓ PB-level massive data storage
 - ✓ Linear expansion to 4000 nodes on a x86 server
 - ✓ Real-time processing of big data streams
- Real-time query of historical data
- Distributes mainframe/midrange computers query loads, reducing TCO
- Supports more data types, such as videos, images, and languages
- Provides standard SQL interfaces, simplifying development

Strategic Partner for Long Term Growth with Less Cost



Engineering plus Scientific Research



Summary





THANK YOU

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