

Huawei – Public Cloud

Swiss Networking Day

28.04.2016

www.huawei.com



Huawei 2015 at a glance



170+

Countries



228

Ranking in
Fortune Global 500
(Jul 2015)



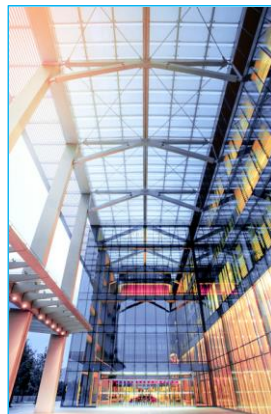
3.5 B

End users



31

Joint innovation
centers



76,000

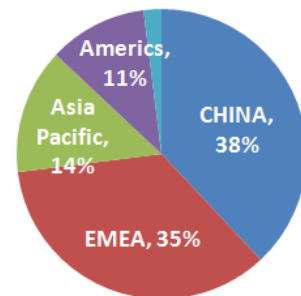
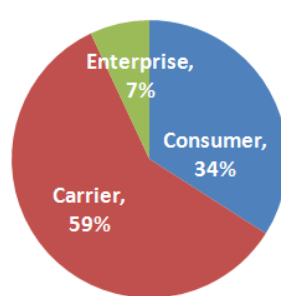
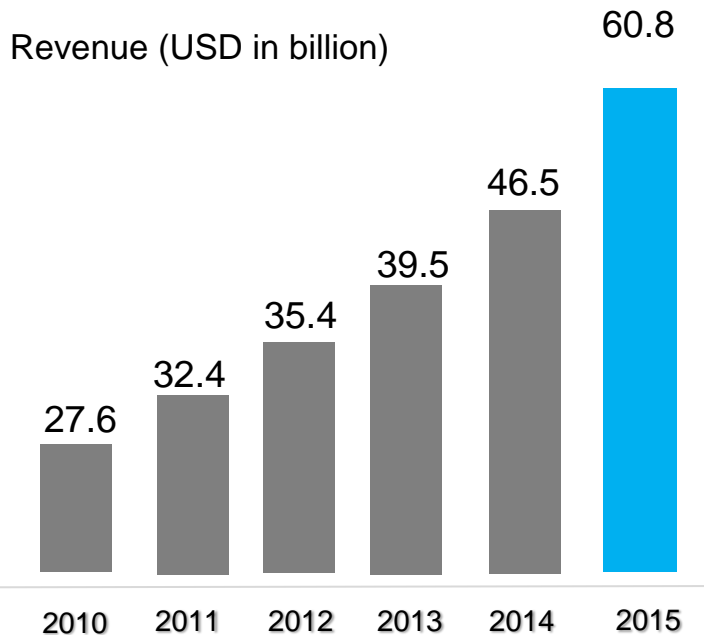
R&D
Employees



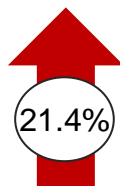
170,000

Employees

Strong Performance in 2015

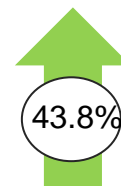


35.8 Mrd.



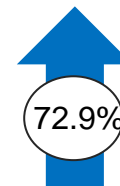
Carrier networks

4.3 Mrd.



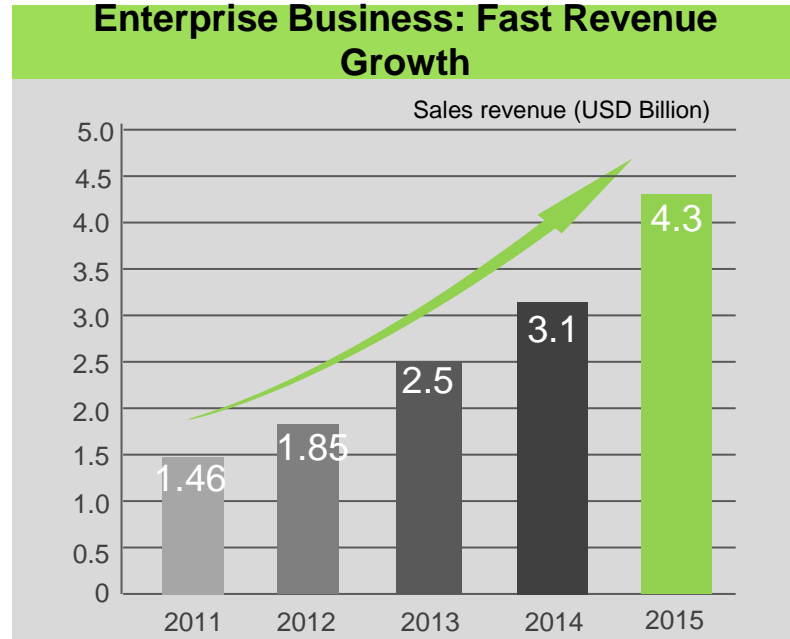
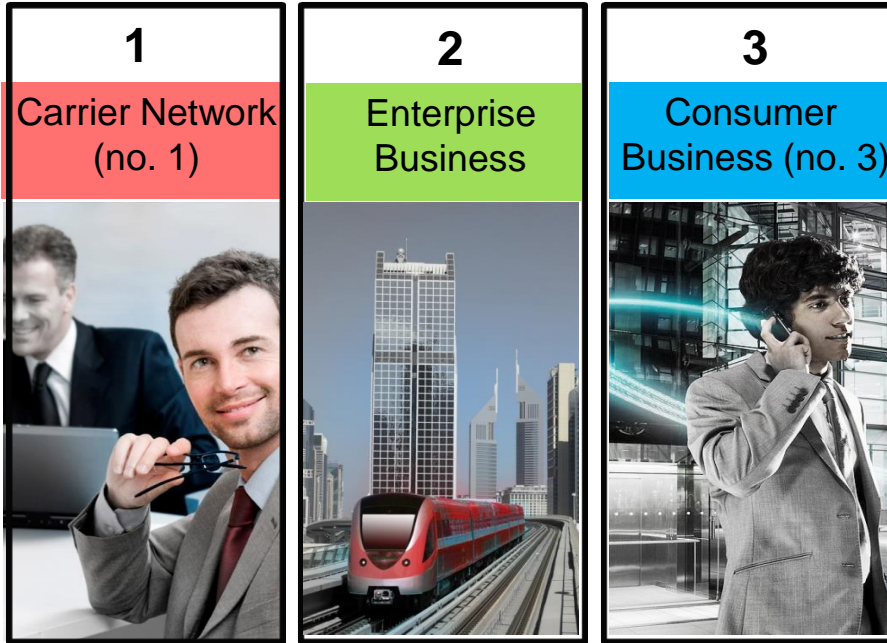
Enterprise

19.9 Mrd.



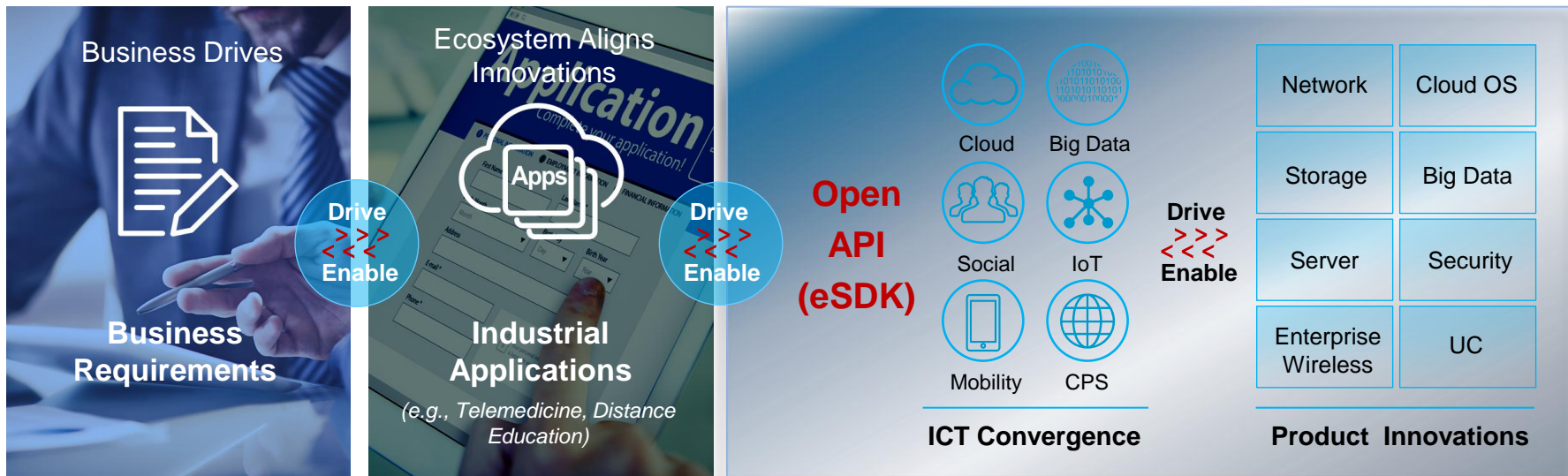
Consumer

Enterprise as strategic growth momentum for Huawei with relevant investments



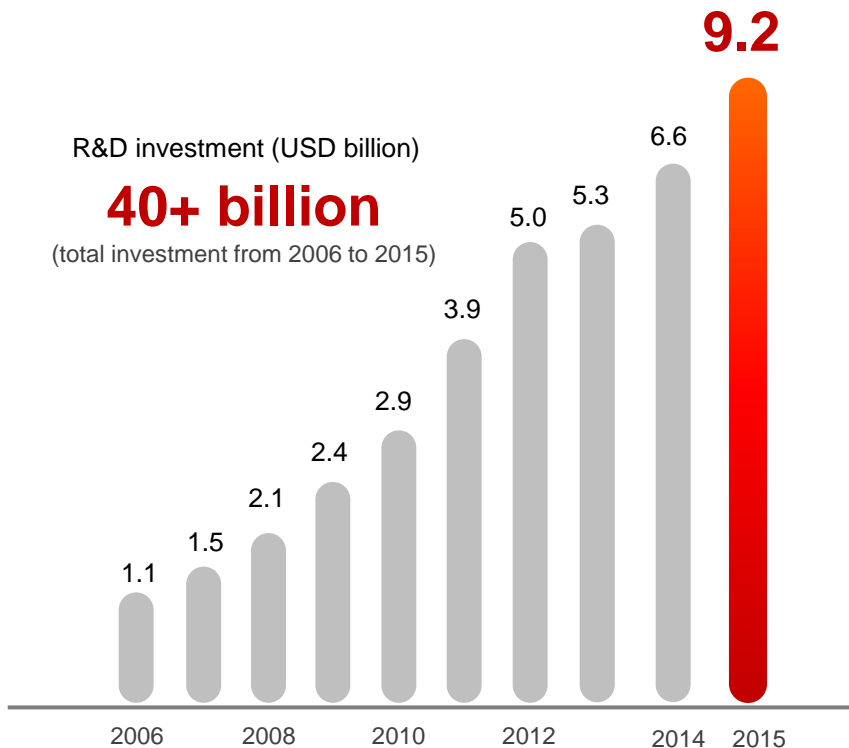
Enterprise is one of the growth engines of Huawei with the ambition to be a leading supplier – after 4 years already number 1 in the home market

Huawei Business-Driven ICT Infrastructure (BDII) powers new ICT Transformation



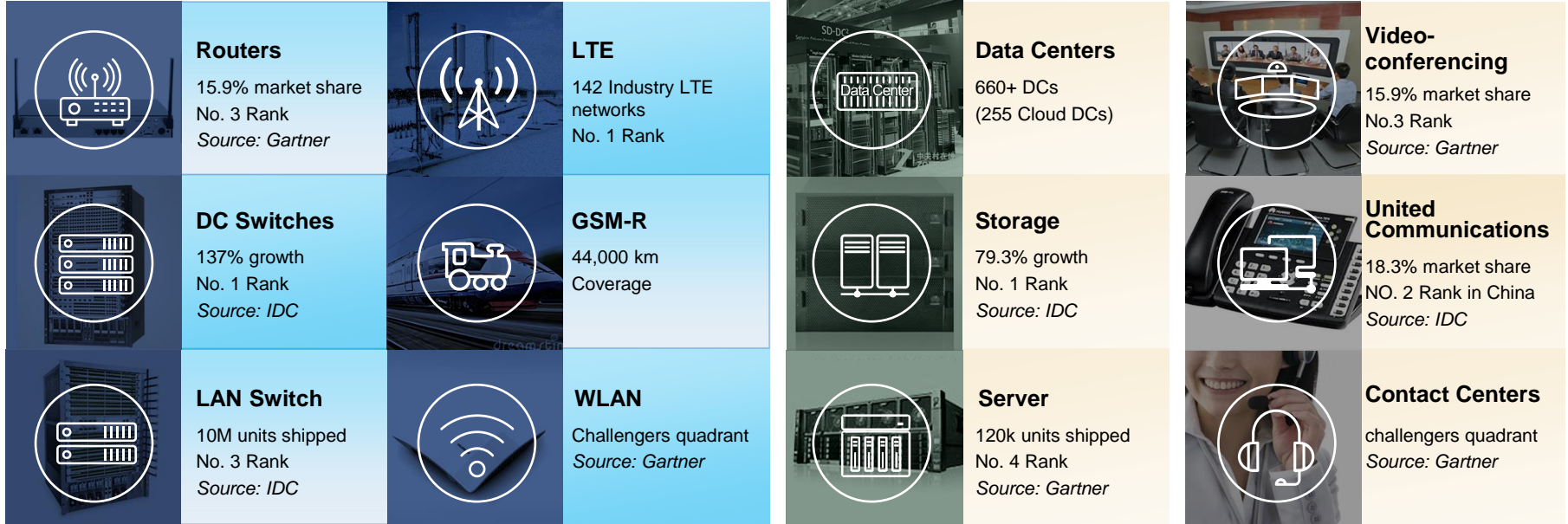
Ability to leverage the size of R&D and global Ecosystem of Huawei

Ongoing R&D investment – technological breakthrough

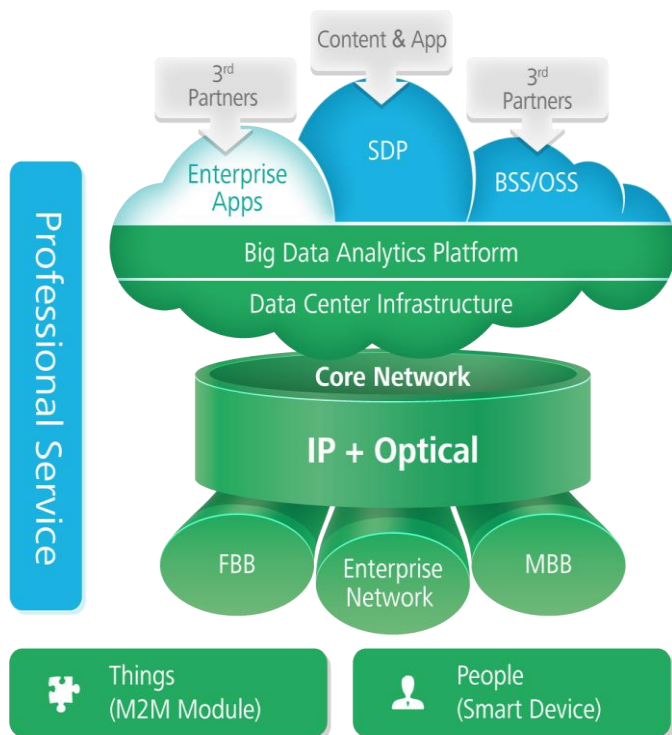


- 2015 R&D staff: **79,000** (45% of our workforce)
- 2015 R&D spending: CNY**9.2 billion** (15.1% of annual revenue)
- Funded **100+** new research projects in 2015 through the Huawei Innovation Research Program.
- Joint innovation in **16** research centers and **36** joint innovation centers worldwide.

Huawei's comprehensive Portfolio for Enterprises



Full Strategy Matching with Deutsche Telekom



Source: Huawei Strategy

CLOUD & IT TRANSFORMATION



Cloud
Big data
Data center

SEAMLESS INT'L TC



Fixed : LAN/ CPE/ FTTx etc.
Wireless: WLAN/ LTE/ eLTE/ LTE-M
FMC: Hybrid Router etc.

DIGITAL BUSINESS MODELS



M2M Platform
GW for Cars, Elevators, Meters...

Source: Deutsche Telekom

Frank Kohler

Senior Manager – **Global Solution Elite Team (GSET)**

Huawei Technologies Duesseldorf WEU HQ

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- Frank is part of GSET EMEA – responsible for innovation and transformation of IT/DC/Services
- Frank has over 21 years of experience in IT/DC, virtualization and cloud computing. Prior to joining Huawei's CTO Office Frank has worked for major players like IBM, Citrix and VMware in

global market.

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Our mission: Enabler of information age



↗ **Leader of Global ICT Solution**

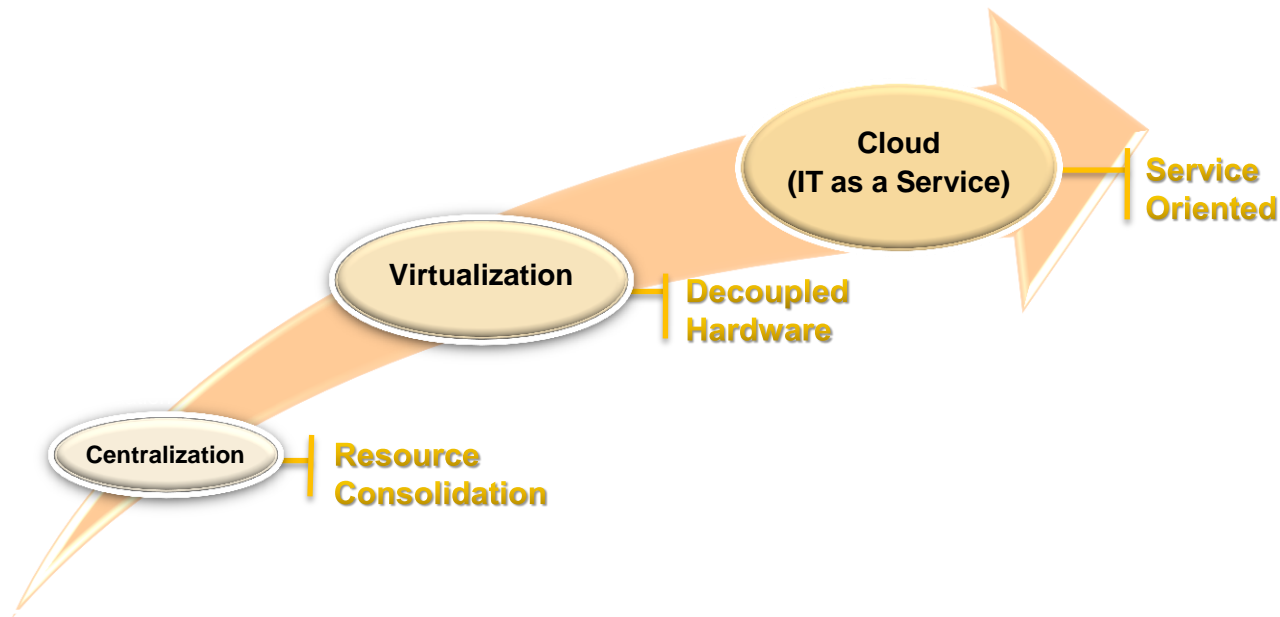
↗ **Leading IT Company**

Digital Natives consume [IT] differently
Instant gratification



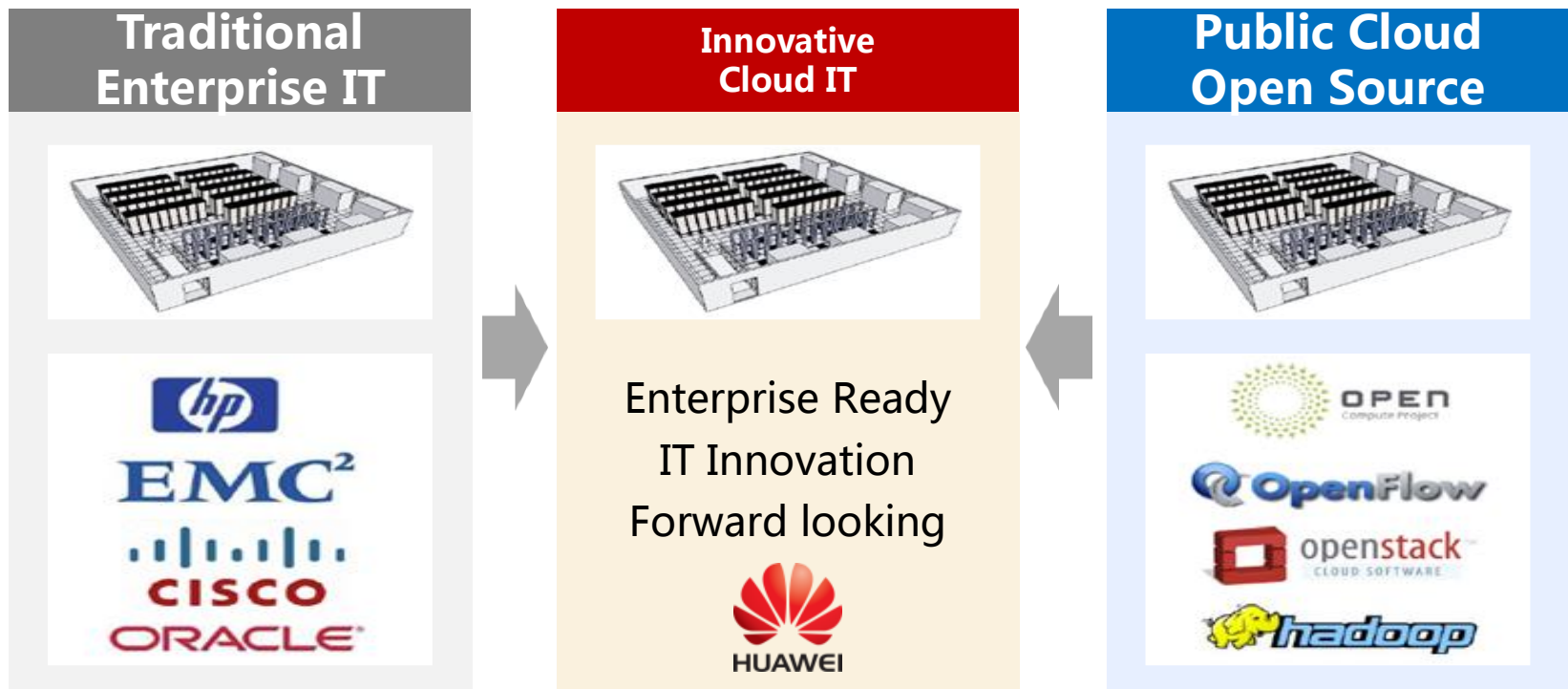
Cloud Transformation Roadmap

- Infrastructure Perspective



A well-designed To-Be Architecture is the key success factor.

Opportunities of compound advantages



Telco Public Cloud Solution

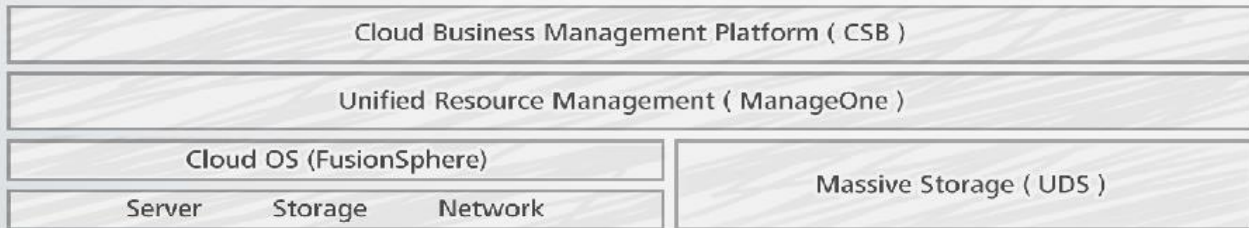
- SD-DC2 Blueprint
- Rich portfolio



SaaS ISV



SaaS Marketplace (3rd Party)



- System Integration
- Managed Service
- Operation Consulting

中文

Adapting public cloud in Europe

Huawei Web Services (HWS) success in APAC



A well-designed To-Be Architecture is the key success factor.

The Open Cloud Proposition



Clouds Should be Open

Enterprise Customers:

“Let me easily change and move”

Cloud Providers:

“Let me differentiate by adding my own IP”

Everyone:

“Don’t lock me in”

“Freedom to choose best tech
to meet Cloud Economics”



**OPEN
FOR YOUR
INNOVATION**

CLOSED FOR EVERYBODY ELSE



Audi logo (four interlocking rings)
R8

best of two worlds...



- Experts in Public and Hybrid Cloud with price aggressive solutions
- High agility and large development capacities



- #1 Cloud Provider in Germany and #2 in Europe
- Best in class cloud operations and strong customer relationship

Partnership in

Cloud Data Center

Public Cloud

Private Cloud

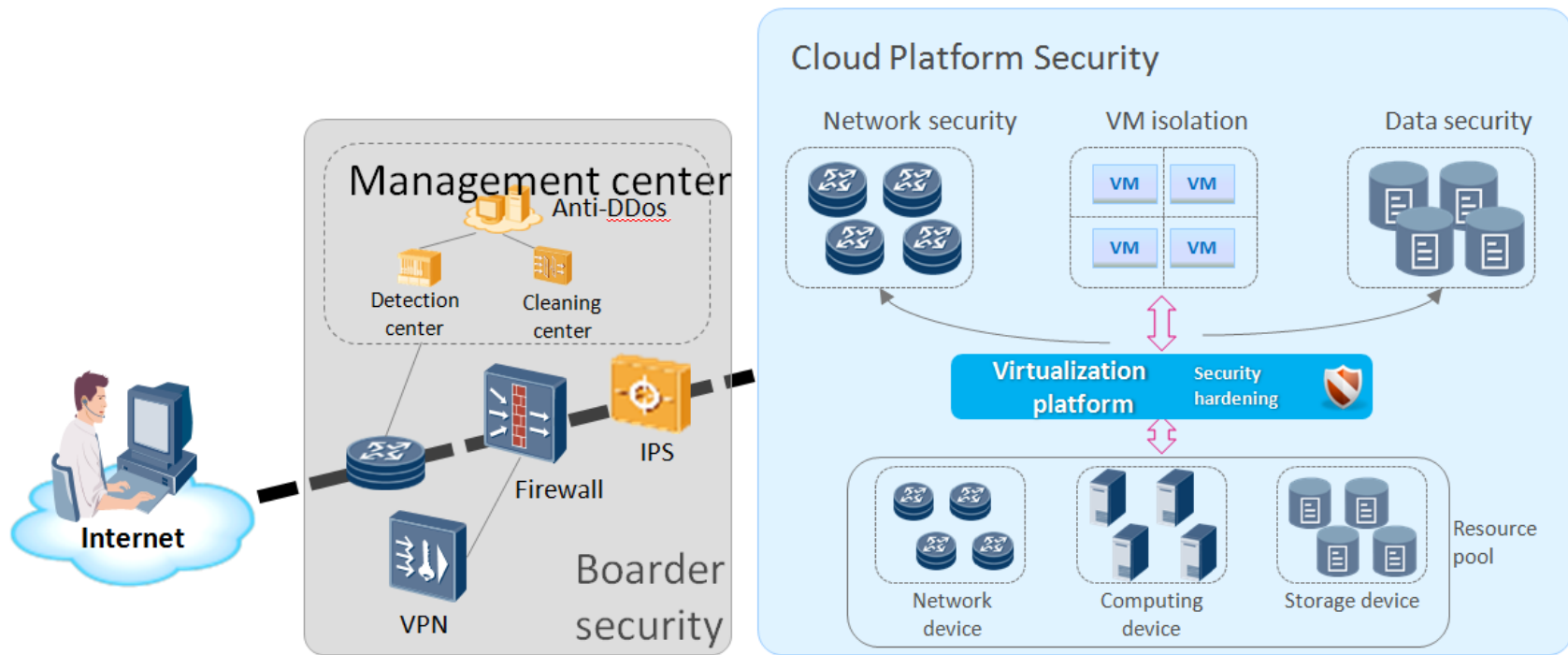


powered by

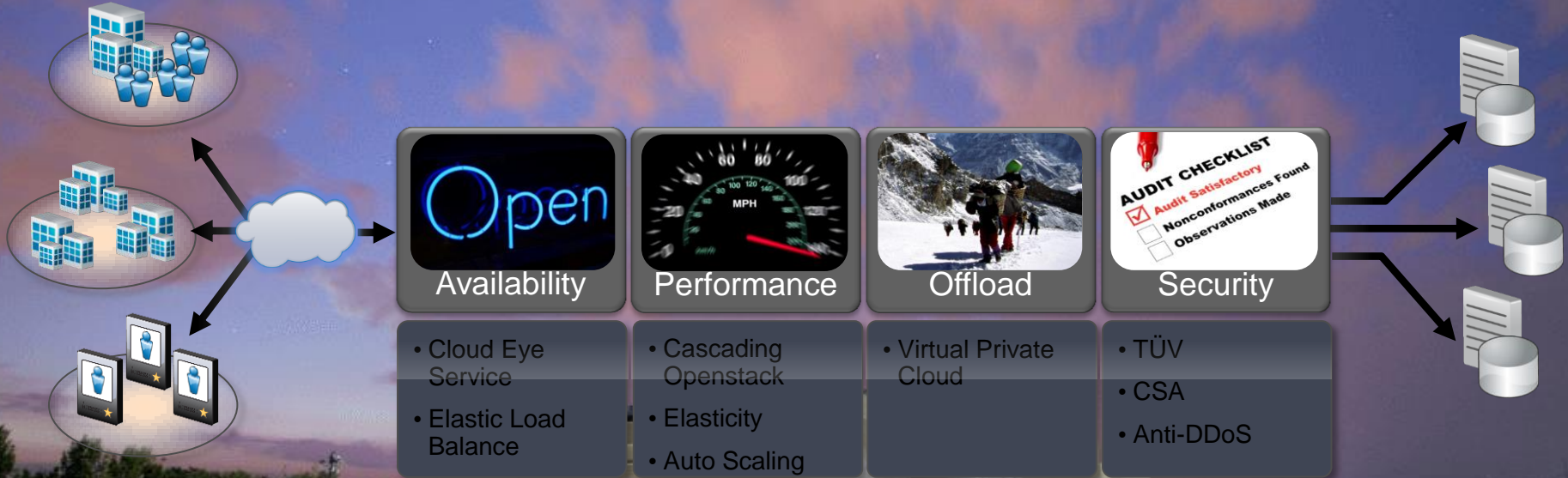
T-Systems

Common IT infra-structure

Secure and Stable Cloud Environment



Enterprise SLAs for the Cloud



OpenStack: What & Why?



What?

- Community, producing Open Source cloud projects
 - Object Storage: Rackspace Cloud Files code today
 - OpenStack Compute: Best of Rackspace Cloud Servers & NASA's Nebula project + daily contributions from community, First Release October 2010 + few month release cycle after
- Rackspace & NASA will run the open source stack in production

Why?

- Accelerate the pace of innovation through collaboration
- Drive standards through ubiquity; accelerate adoption
- Address fear of lock-in from proprietary stacks
- Unite an Ecosystem around Open APIs & platform
- Enable public/private/hybrid cloud interoperability

Openness

Future-proof with OpenStack



OpenStack
Potential
for
the desired
cloud
standard

Multi-cloud management
is efficiently supported

Docker Container Service
for simple migration of data and workloads

Ideal environment
for native applications

High degree of maturity
driven by many large industrial companies and the community

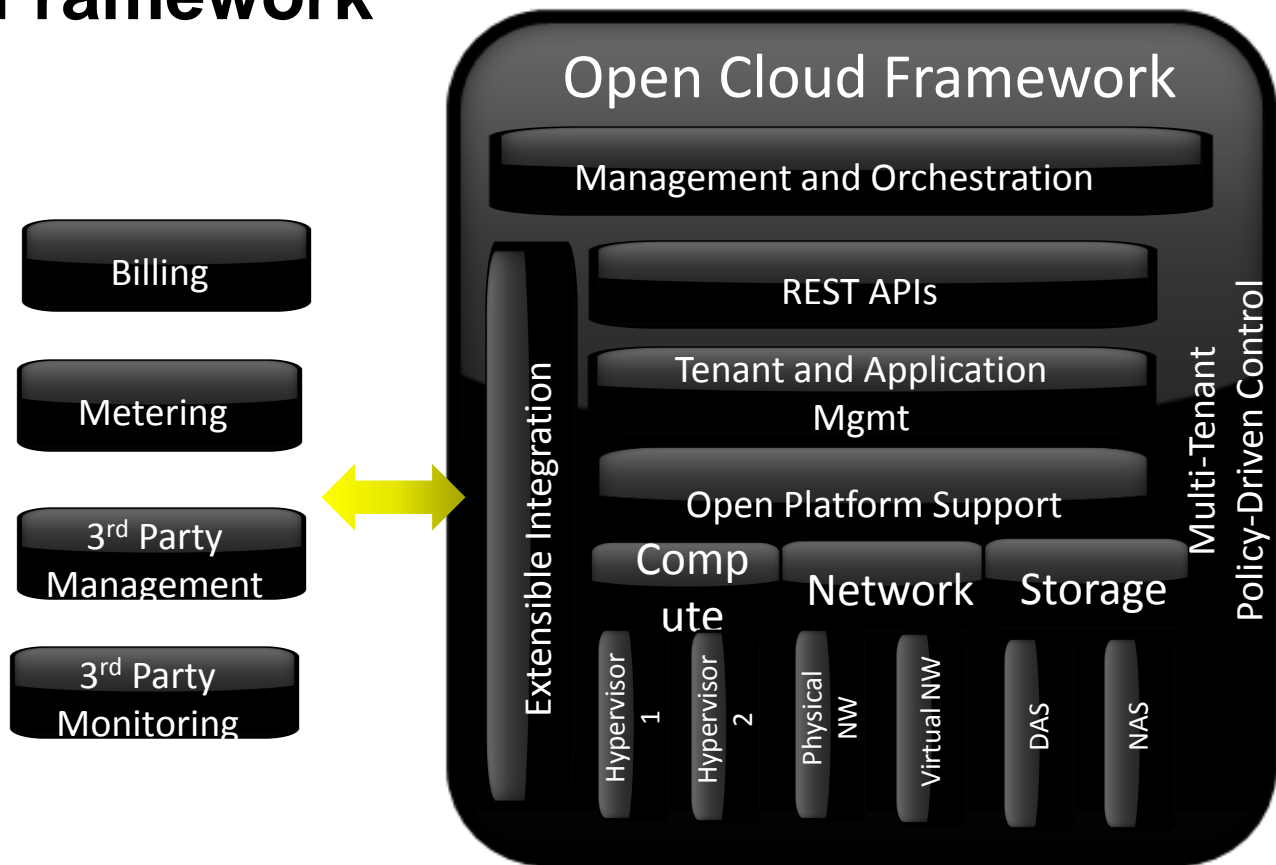
Independence
Reduction of technical dependencies, open standard API

No vendor lock-in
Freedom of choice with simple service exit

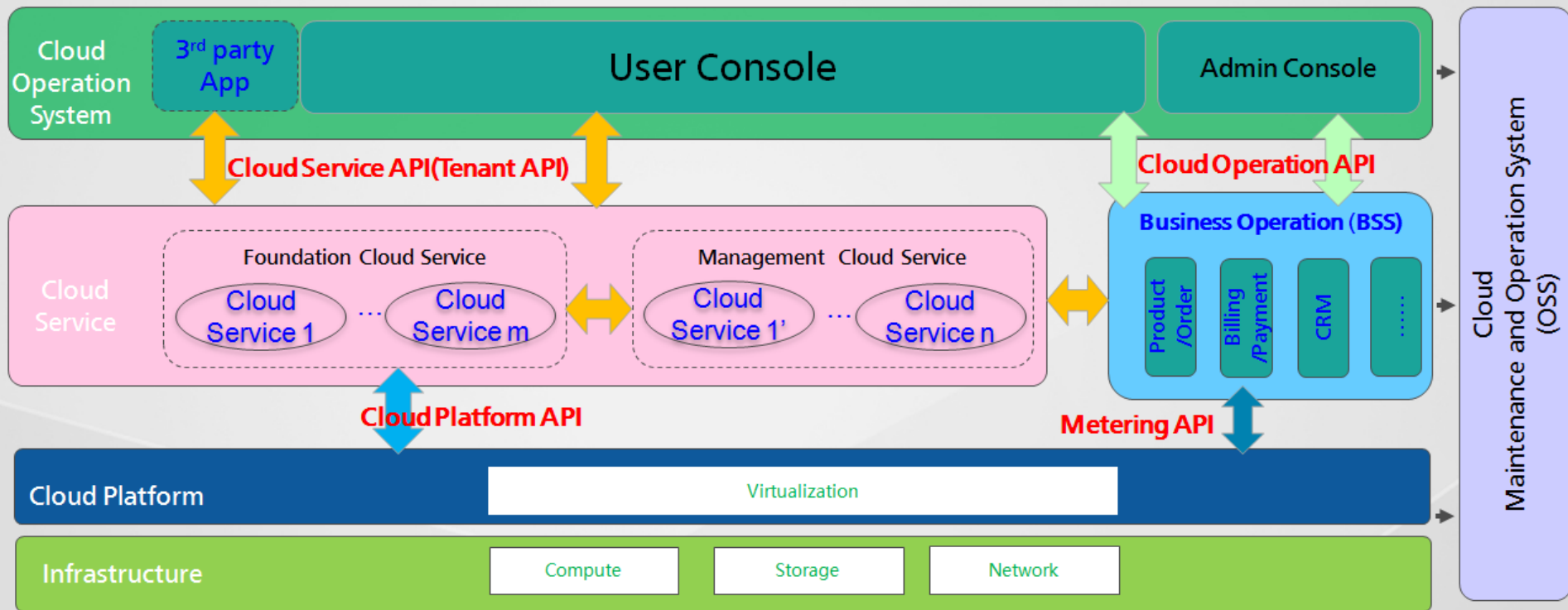
Already established
in the cloud environment

Openness out of responsibility FOR OUR CUSTOMERS' AGILE
BUSINESS 4.0 IN TIMES OF DIGITIZATION

Open Cloud Framework



Key Sub-systems of Public Cloud Architecture



Tenant API: for Console or 3rd APP
 Operation API: Operation Service

Cloud Platform API: for Cloud Service
 Metering API: Measure and Service SLA
 Maintenance API: Monitor, configure

HWS Service Catalogue Roadmap 2016 -18

HWS

- **Computing**
 - Elastic Cloud Server
 - Auto Scaling
 - Image Management Service
- **Storage**
 - Elastic Volume Service
 - Volume Backup Service
 - Object Storage Service
- **Network**
 - Virtual Private Cloud
 - Elastic Load Balance
 - Elastic IP Service
 - Anti-DDoS
- **Database**
 - Relational Database Service
- **Management and Deployment**
 - Cloud Eye
 - Identity and Access Management

HWS

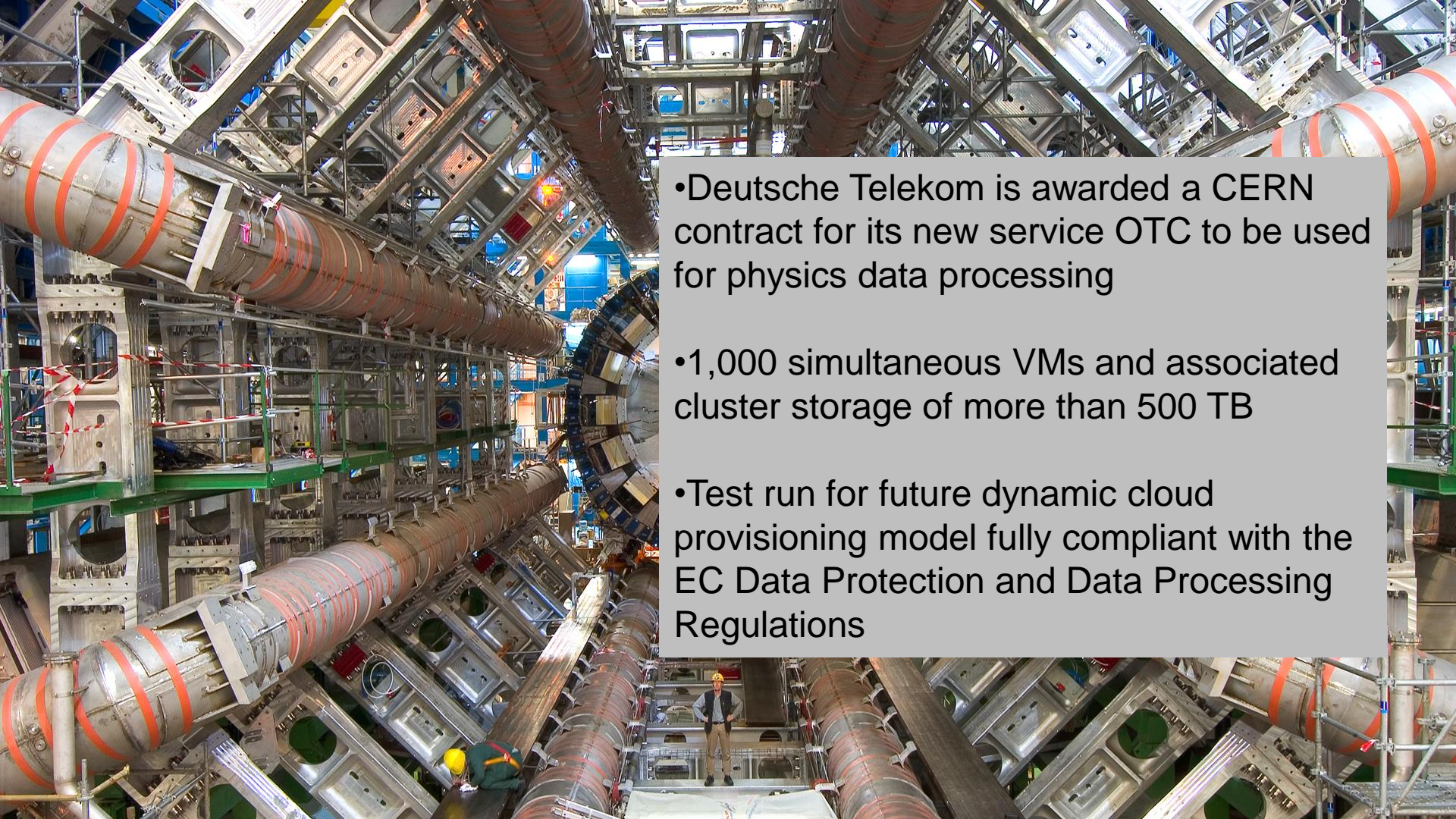
- **Computing**
 - Bare Metal Service (Network Automation)
- **Storage**
 - Cloud Server Backup Service
- **Network**
 - DNS and Antivirus Service
 - Web Application Vulnerability San Service
 - Web Application Firewall Service
- **Analytics**
 - Elastic BigData Service (basic Hadoop)
- **Enterprise Applications**
 - MarketPlace Service
 - Virtual Desktop Services (Workplace)
- **Developer Tools**
 - Extended App image catalogue for server software

HWS

- **Computing**
 - Docker Service
- **Storage**
 - Archive Service (off-line storage)
- **Database**
 - Distributed Cache Service (Redis)
- **Management and Deployment**
 - Hybrid Cloud Service (vCloud/AWS/Azure)
- **Analytics**
 - Elastic BigData Service(Spark)
 - Log Analysis Service
- **Developer Tools**
 - DevCloud
 - Cloud Application Engine(PaaS)
- **Enterprise Applications**
 - UC & Conference as a Service
 - SaaS

HWS

- **Management and Deployment**
 - DR as a Service
- **Analytics**
 - Telco carrier domain Big Data Service
 - Financial domain Big Data Service
- **Developer Tools**
 - Mobile App DevOps Service
- **Enterprise Applications**
 - e-Commerce as a Service



- Deutsche Telekom is awarded a CERN contract for its new service OTC to be used for physics data processing
- 1,000 simultaneous VMs and associated cluster storage of more than 500 TB
- Test run for future dynamic cloud provisioning model fully compliant with the EC Data Protection and Data Processing Regulations

Thank you.



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