

Ako začať s Cloud Computingom vo verejnom sektore



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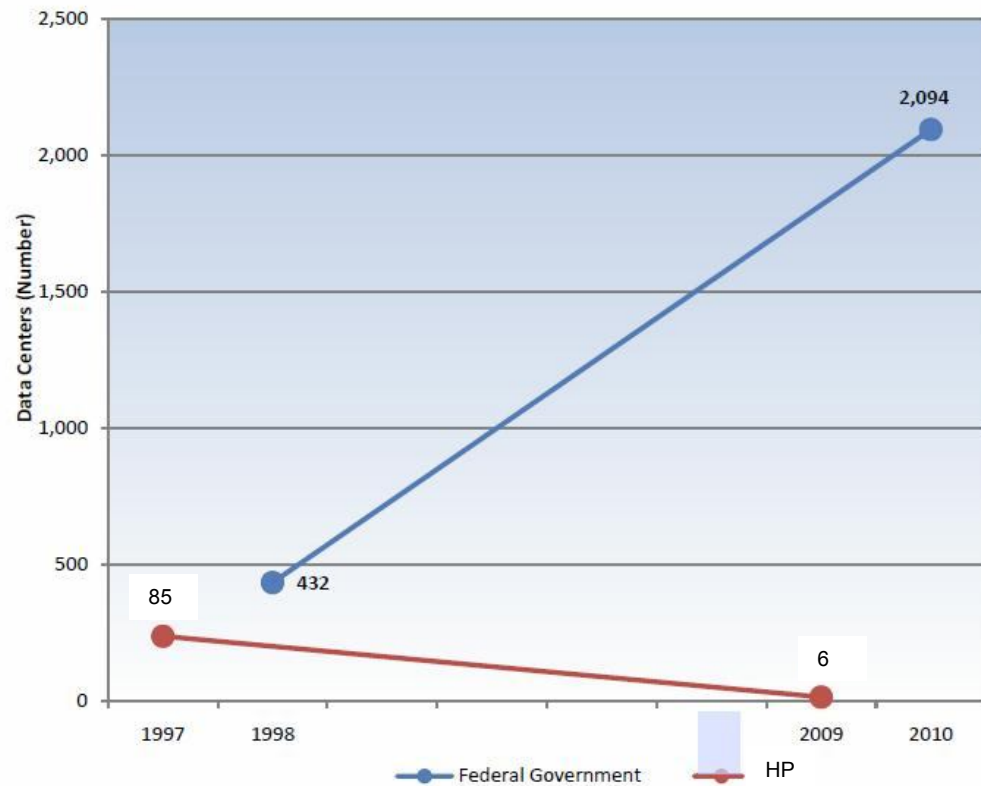
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Government Cloud v Spojených štátoch





The Case for Change



Efficiency

- Low asset utilization (server utilization < 30% typical)
- Fragmented demand and duplicative systems
- Difficult-to-manage

Agility

- Years required to build data centers for new services
- Months required to increase capacity of existing services

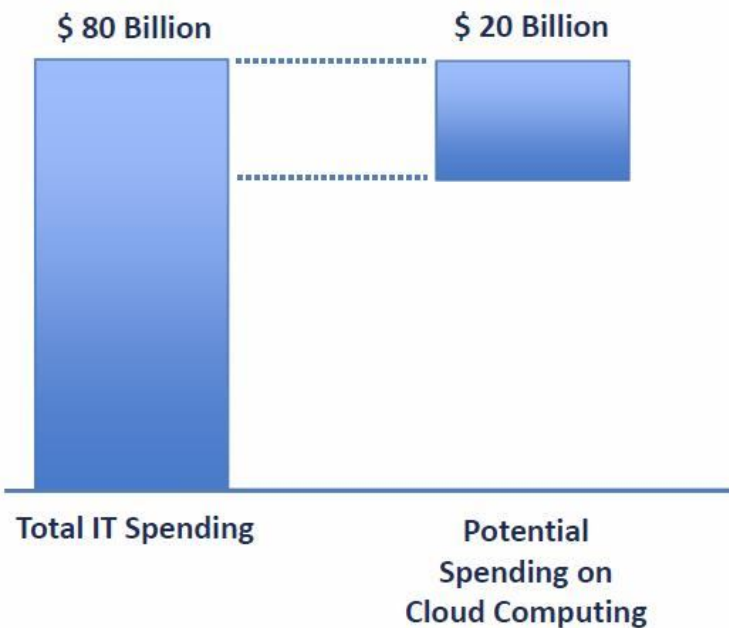
Innovation

- Burdened by asset management
- De-coupled from private sector innovation engines
- Risk-averse culture





Federal Government Cloud Computing Potential



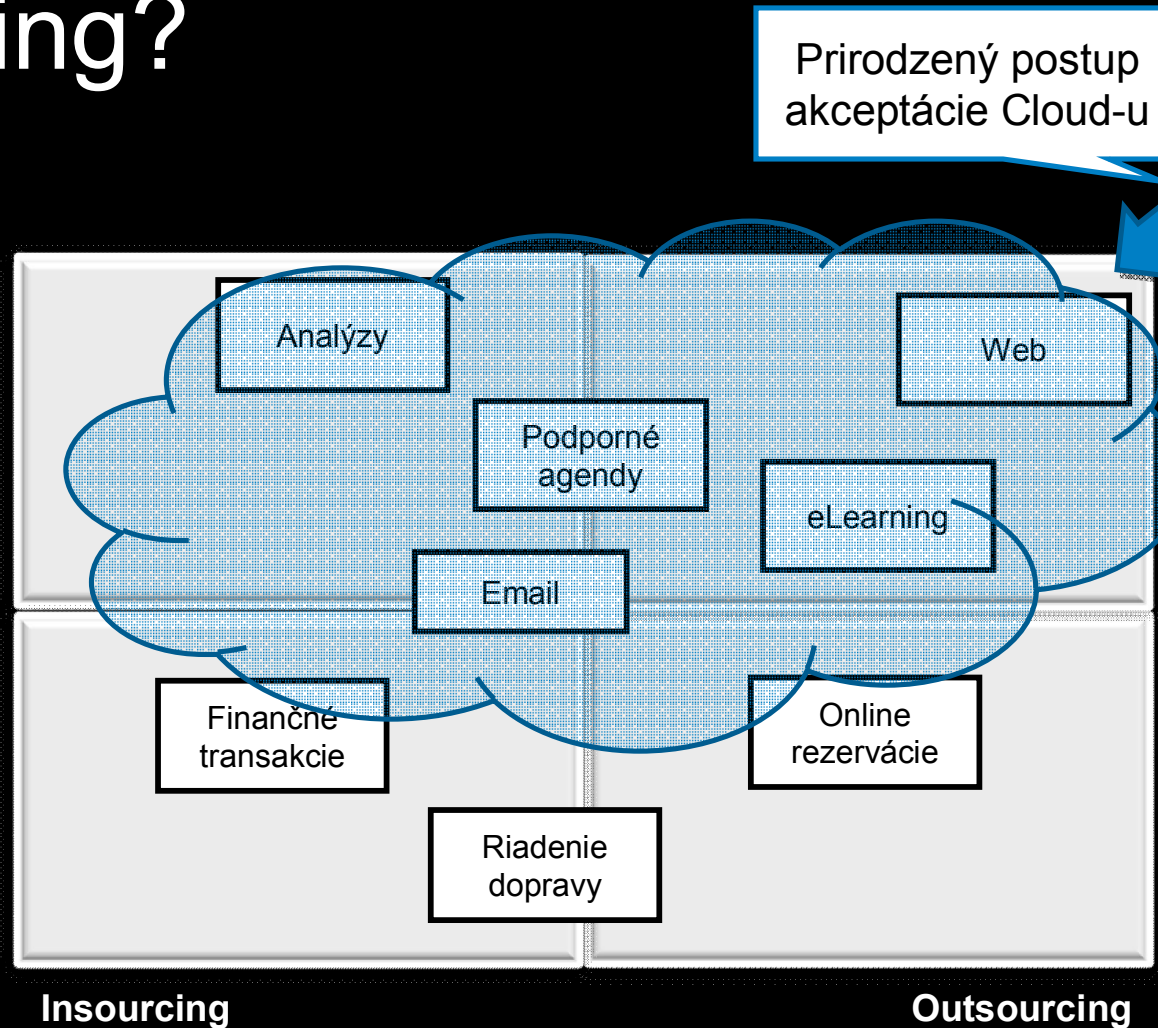
- Efficiency**
 - Improved asset utilization
 - Aggregated demand and accelerated system consolidation (Federal Data Center Consolidation Initiative)
 - Improved productivity in application development, application management, network, and end-user
- Agility**
 - Purchase "as-a-service" from trusted cloud providers
 - Near-instantaneous increases and reductions in capacity
 - More responsive to urgent agency needs
- Innovation**
 - Shift focus from asset ownership to service management
 - Tap into private sector innovation
 - Encourages entrepreneurial culture
 - Better linked to emerging technologies (e.g., devices)



Kde je priestor pre Cloud Computing?

Štandardná dostupnosť

Vysoká dostupnosť
(24x7, 99.9% dostupnosť)





Early Adopters



HHS

Electronic Health Records (EHS)

- Reduced time to go live from 1 year+ to 3 months
- Supports more than 100,000 Primary Care Practitioners



GSA

Cloud Email Migration

- \$15 M savings
- Migrating 17,000 users
- Eliminating redundant infrastructure at 17 global locations



Dept of Defense

Army Experience Center (AEC)

- Implementation cost 1/20 of estimate to upgrade legacy system (\$54 K vs. \$1 M+)
- Reduced recruiter workforce required to handle the same workload



Recovery Accountability & Transparency Board

Recovery.gov

- \$750 K savings
- Reallocate \$1 M+ to identify fraud, waste, and abuse



Dept of Defense

Air Force Personnel Services Delivery Transformation

- \$4 M annual savings
- Improved customer search times from 20 minutes to less than 2 minutes



Dept of Agriculture

Cloud Email Migration

- \$27 M savings
- Migrating 120,000 users
- Consolidating 21 fragmented email systems





Exponential Growth in Demand

Shifting from asset ownership to service provisioning

CATEGORY	SERVICE EXAMPLES	AGENCY EXAMPLES
Collaboration	<ul style="list-style-type: none">• Agency-wide email to the cloud• Office productivity tools	
Workflow	<ul style="list-style-type: none">• Employment verification• Grants management• Claims processing• Customer relationship management	
Infrastructure	<ul style="list-style-type: none">• Public-facing websites hosted in the cloud• Application development/testing• Content delivery• Virtualized data centers	
Business Intelligence	<ul style="list-style-type: none">• Data analytics• Performance management	
Information Security	<ul style="list-style-type: none">• Identity management• Security management services	



Defense Information Systems Agency (DISA) Computing Services Directorate

4,000,000+ users

13 facilities

445,000 sq ft raised floor

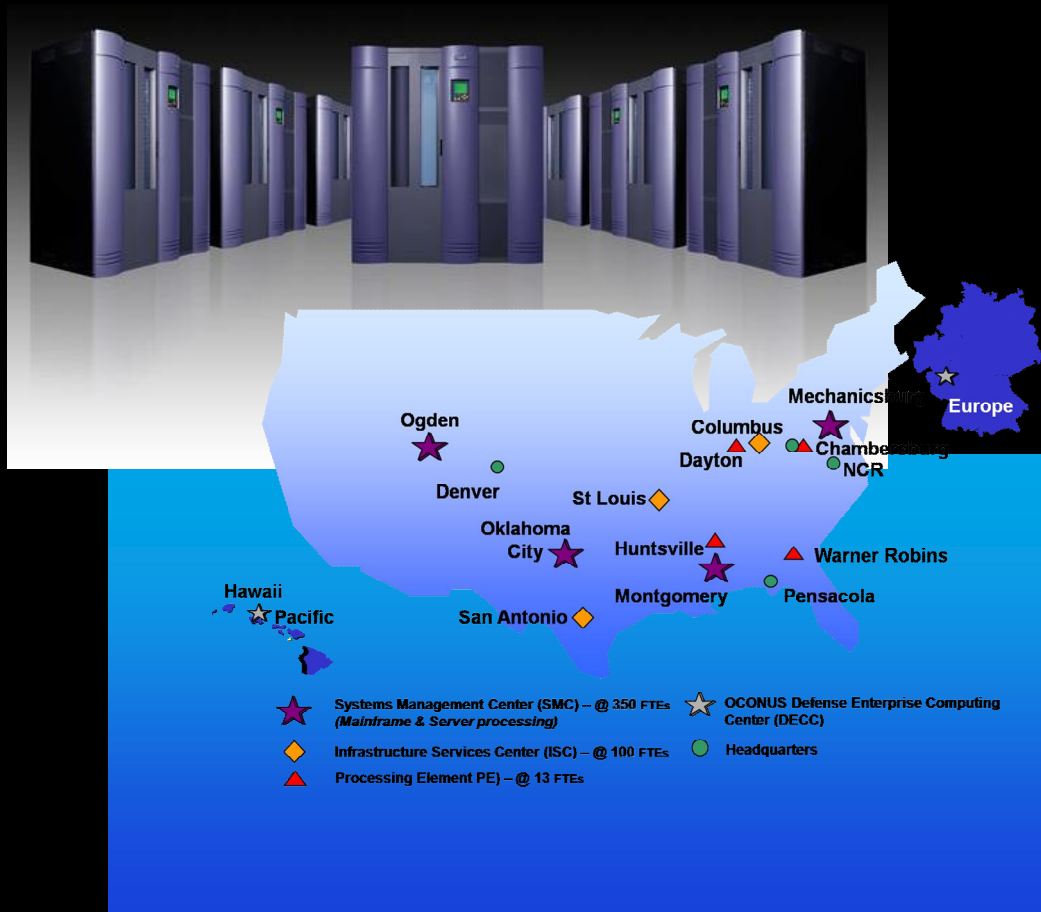
34 mainframes

6100 servers

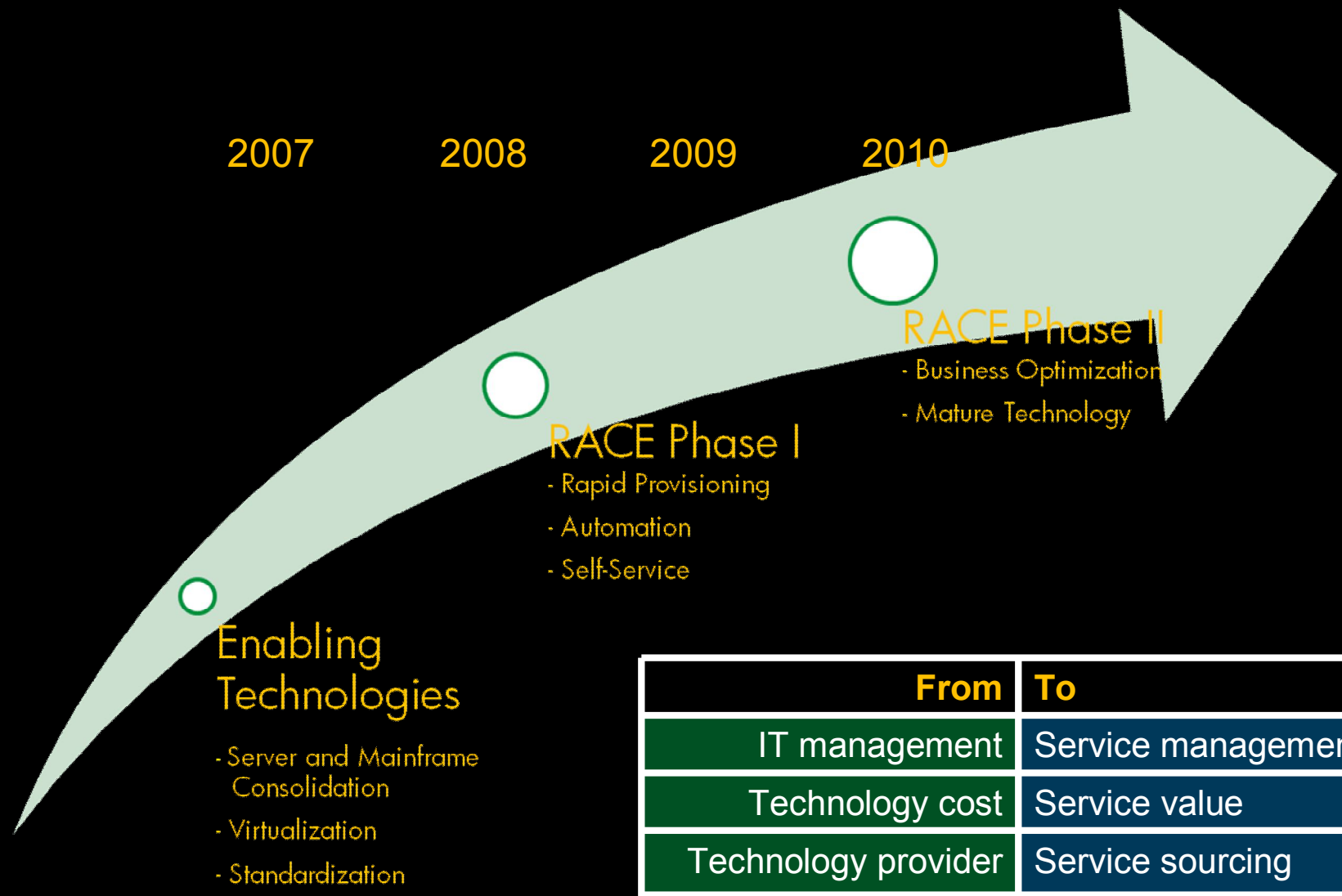
3800 terabytes of Storage

2,800 application / database instances

215 software vendors



RACE programme Rollout



From	To
IT management	Service management
Technology cost	Service value
Technology provider	Service sourcing
Cost center	Growth enabler

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The Evolution of RACE Cloud Computing at DISA (RACE 1.0)

Cloud Services

Cloud Management

PORTAL



CLOUD ORCHESTRATION
& ACCOUNTING



BUSINESS SERVICE MGMT



IT SERVICE MGMT



IT OPERATIONS



PROVISIONING



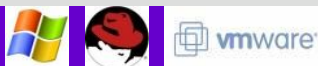
IMAGE BACKUP

CONFIGURATION MGMT



Cloud Infrastructure

PLATFORMS



PROCESSING



The Evolution of RACE

Cloud Computing at DISA (RACE 2.0)

Cloud Services

COLLABORATION

TEST
MANAGEMENT

VERSION
CONTROL
SERVICES

Cloud Management

PORTAL



CLOUD ORCHESTRATION
& ACCOUNTING



BUSINESS SERVICE MGMT



IT SERVICE MGMT



SECURITY MGMT



IT OPERATIONS



PROVISIONING



BACKUP/ARCHIVE



CONFIGURATION MGMT



Cloud Infrastructure

DATABASE



ORACLE

Microsoft
SQL Server

PLATFORMS



vmware

solaris



PROCESSING



STORAGE



NetApp

EMC²
where information lives

NetApp the new OR. Learn more.

Pentagon: Our cloud is better than Google's

U.S. military says its cloud computing platform is more secure, reliable than commercial offerings

By [Carolyn Duffy Marsan](#), Network World, 10/05/2009

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The U.S. Defense Department is opening [up its cloud computing platform](#) that military officials claim are safer and more reliable than commercial providers such as Google.

At a press conference Monday, the Defense Information Systems Agency (DISA) announced that it is allowing military users to run applications in production mode on its cloud computing platform, which is called RACE for Rapid Access Computing Environment.

[FAQ: Cloud computing demystified](#)

White Paper

HP CLOUD LEADERSHIP

Powering the world's largest **cloud infrastructures**

3 most popular social media properties in the U.S.

4 out of 5 of the world's **largest search engines**

8 out of 10 of the world's **most trafficked web sites**

7 out of 10 of the world's **largest cloud service providers**

Examples



150,000 user IaaS Cloud:

- Service on demand
- Predictable OPEX
- Lower CAPEX



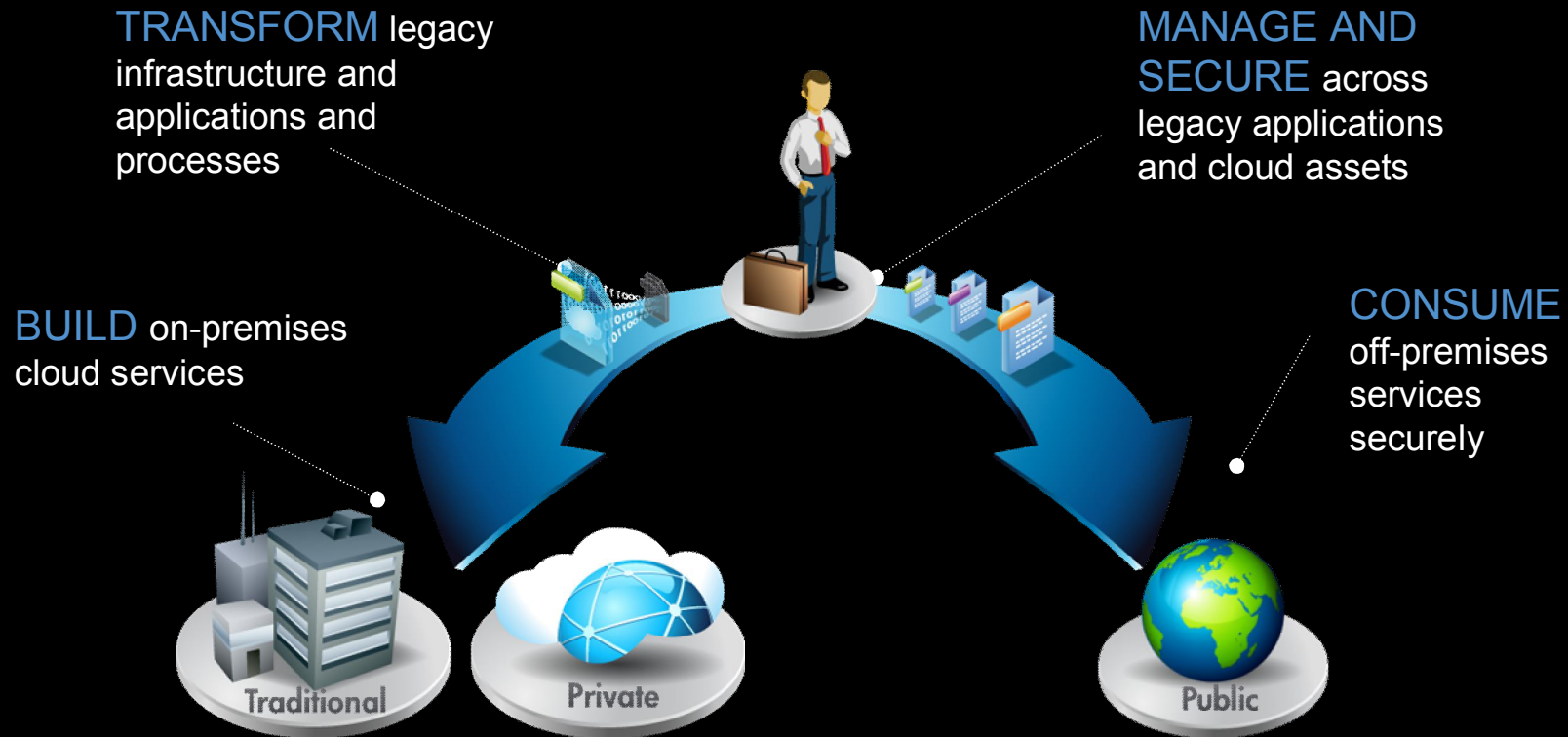
Large SAP SaaS Cloud:

- Up in 1 week
- Increased agility
- Unparalleled price/performance

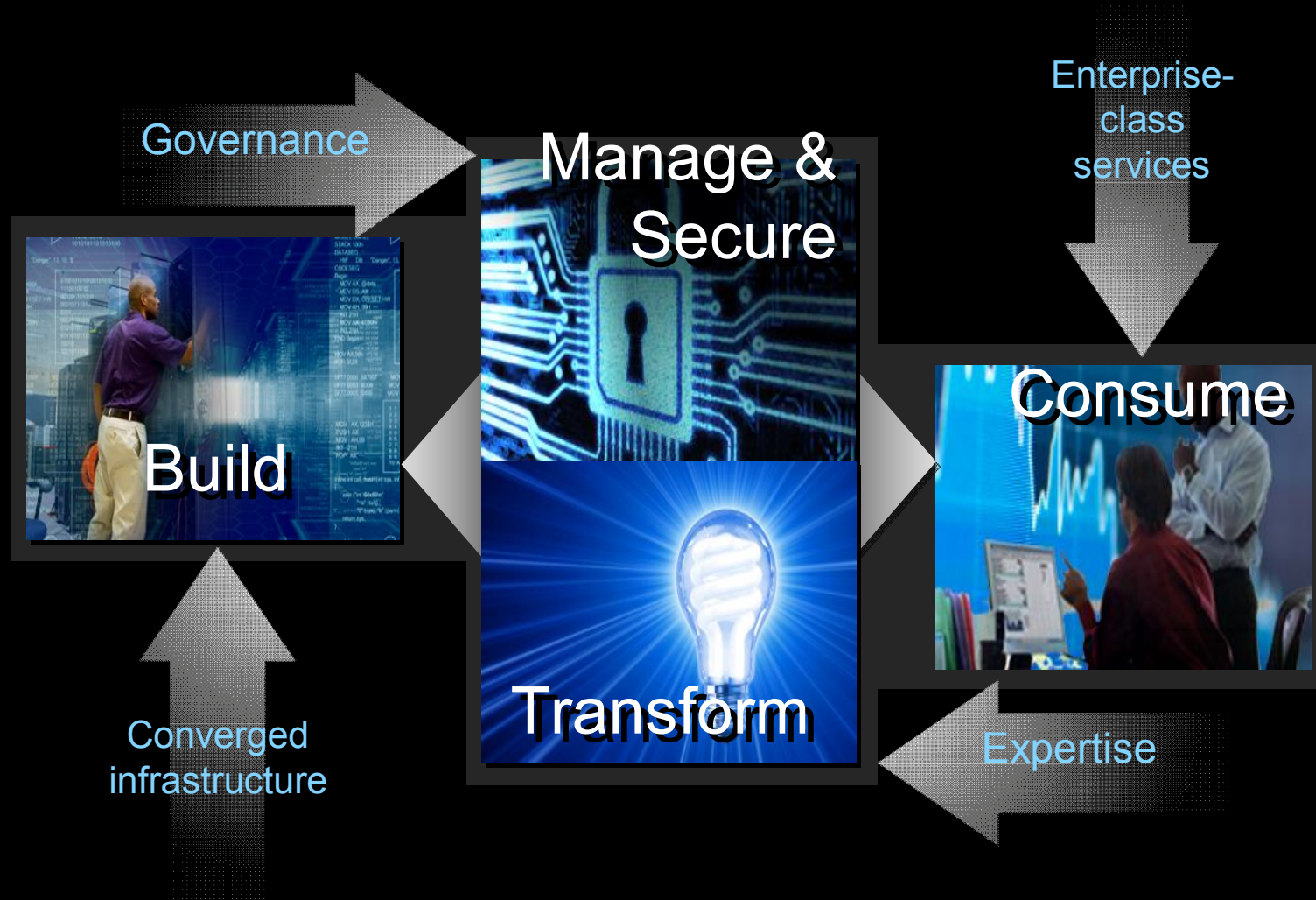


STRATEGIC ROLE OF IT CHANGING

IT becomes the builder and broker of services



HP's strategy addresses the complete cloud continuum



HP Cloud solution overview

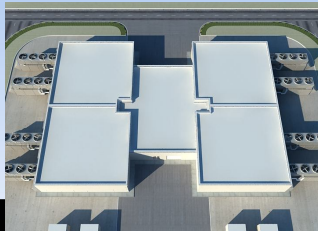
Public Cloud for Service providers

Aggregation Platform for SaaS

Private Cloud Portal

Self service portal
Service Request Catalog

HP Cloud HP Cloud Data Centers



CSA

Cloud Service Automation

Orchestrator : Operations Orchestration

Server Automation

Deployment Engine, Server Lifecycle, audit and compliance

Storage Automation

Deployment Engine, Storage Lifecycle, audit and compliance

Network Automation

Heterogeneous Network management

Database Automation

Heterogeneous Database management

3rd party Cloud Service providers

CloudSystem Matrix



Converged Infrastructure

3rd party HW and SW

Ďakujem

