



# Cloud A Simplified View

**Rob Courtney**

**GM Public Sector**

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# The game is changing (Source: Gartner)

- 50% of U.S. 21 year olds have created content on the Web
- 70% of U.S. 4 year olds have used a computer
- >31 billion Google searches were performed last month — vs. 2.6 billion 3 years ago

**Content Access and Management  
are Key Enablers for IT**



The computer in your cell phone today is  
a **million times cheaper**,  
a **thousand times more powerful**, and  
about a **hundred thousand times smaller**  
than  
the **one** computer installed at MIT in 1965





# CONSUMER TECHNOLOGY IS THE DRIVER

## Traditional Client

- Standard PC
- Enterprise-owned
- Corporate image and installed applications

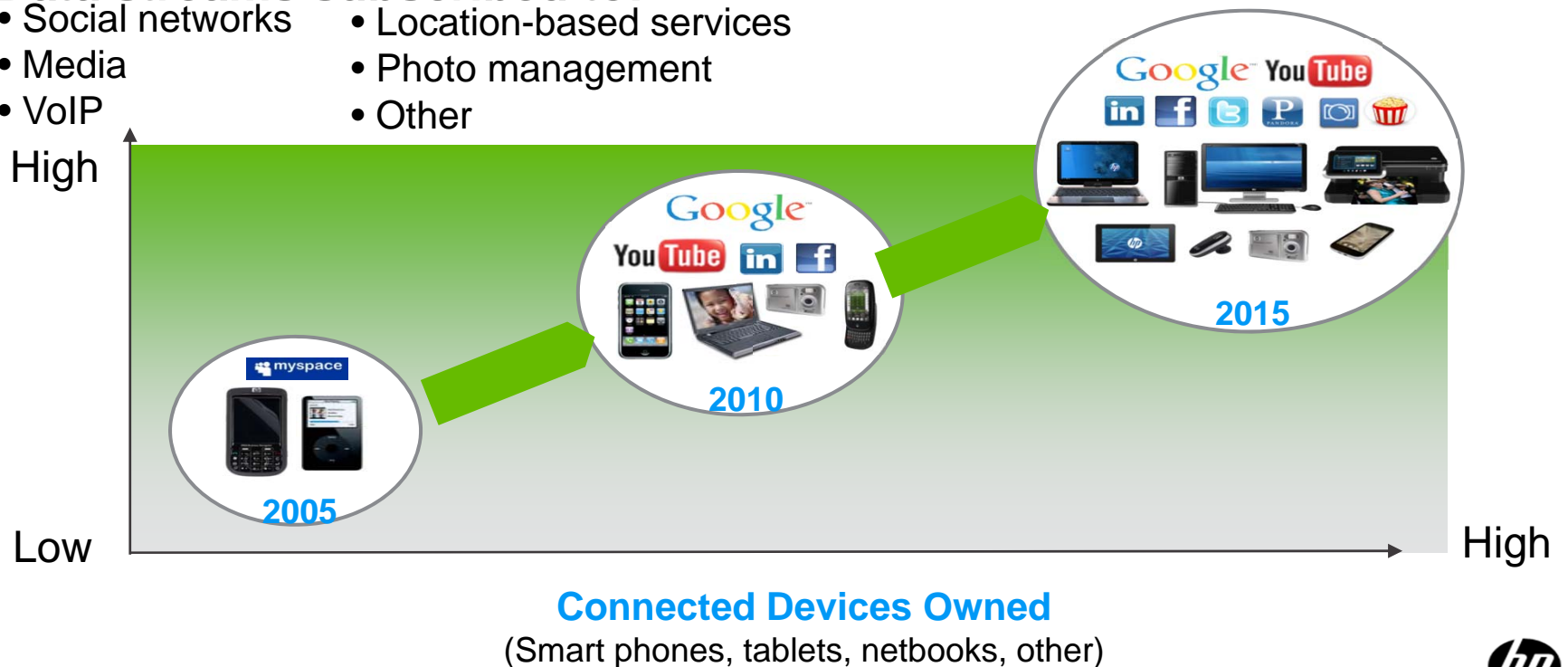


## Emerging Client

- Multifunction device, mobile
- Remotely hosted (terminal services)
- Remotely hosted (virtual desktops)
- Non-enterprise-owned
- "Bubbles" (virtual machines)
- Streamed applications
- Software as a service

# The Changing Dynamics of the Connected Consumer

- Content consumed and devices owned are increasing exponentially
- Data streams subscribed to:
  - Social networks
  - Media
  - VoIP
  - Location-based services
  - Photo management
  - Other



# Applications Growing & Growing

Select popular apps

**Natalie On Twitter**

News, Sports, Weather	
Social Networking	
Local	
Entertainment	
Games	



# TECHNOLOGY IMPERATIVES

What got you here  
.... won't get you there



# CLOUD DEFINED

As defined by the US National Institute of Standards and Technology, cloud computing offers a number of evolving service and deployment models.

Essential  
Characteristics



Service  
Models



Deployment  
Models



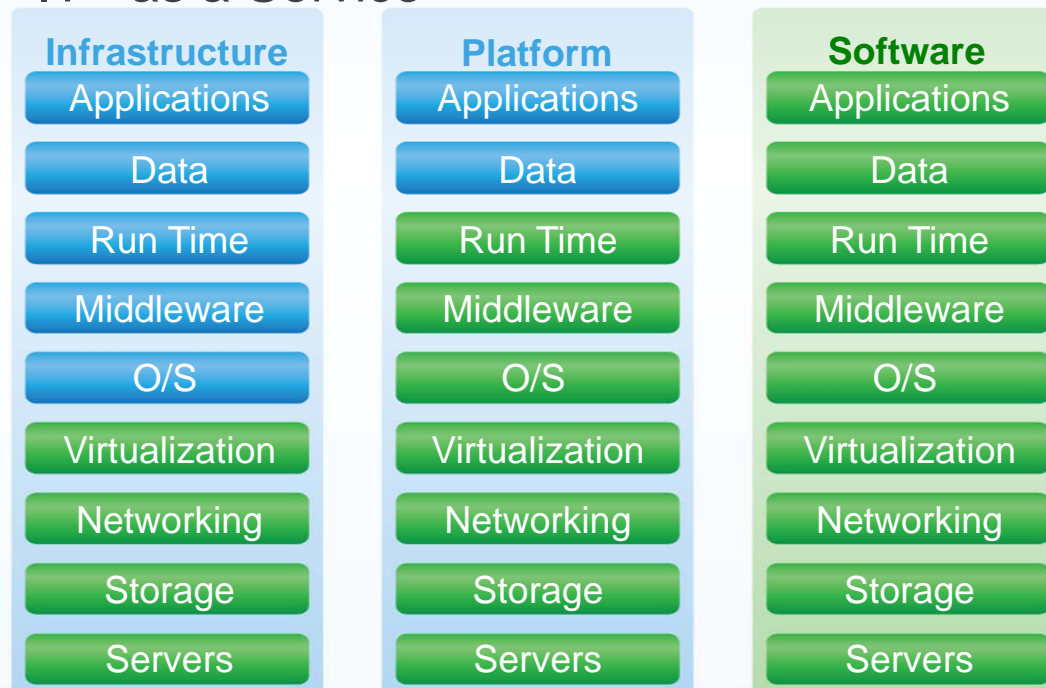


# CLOUD SERVICE MODELS

## Traditional Model



## “IT” as a Service



Customers can utilize multiple models simultaneously as needed to meet different business needs

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You Manage

Service Provider  
Manages



# Why Cloud?

Simple – Deal with Customer challenges

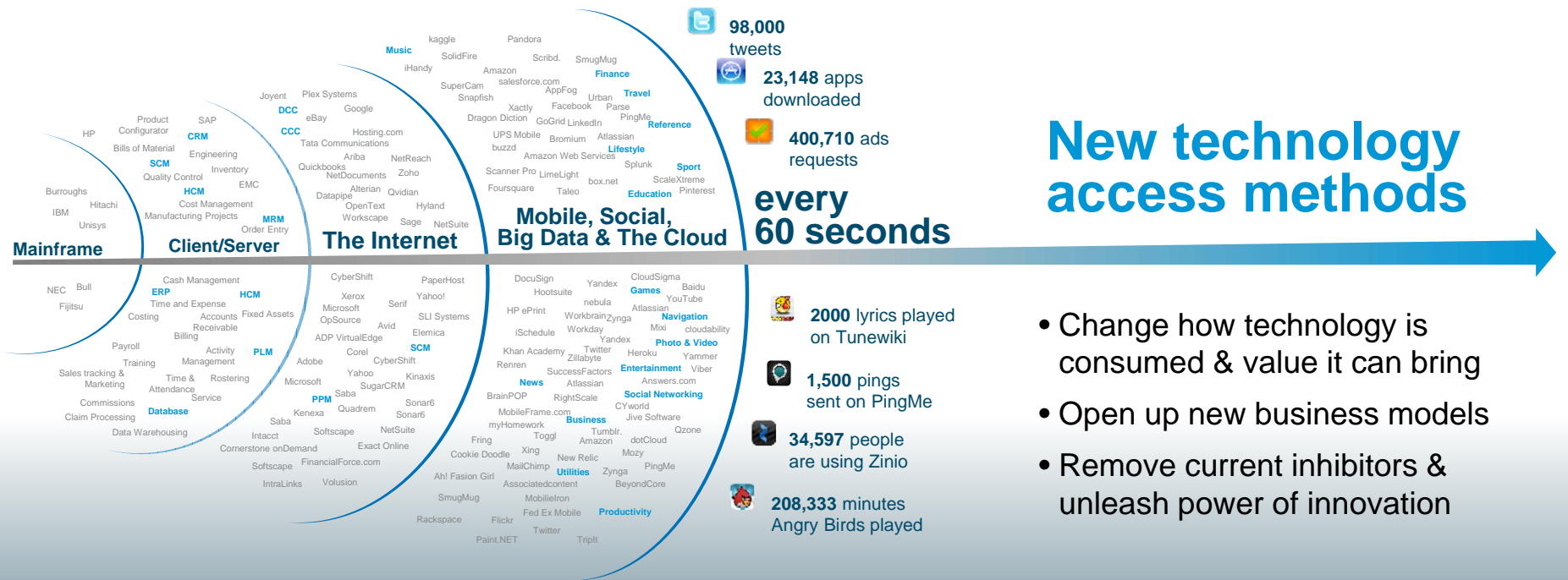
***SPEED  
INNOVATION***

***ENHANCE  
AGILITY***

***IMPROVE  
FINANCIAL  
MANAGEMENT***



# Accelerating innovation & change



# Shifts enabling unconstrained IT access

**Infrastructure**  
ANYWHERE

**Applications**  
ANYWHERE

**Information**  
ANYWHERE

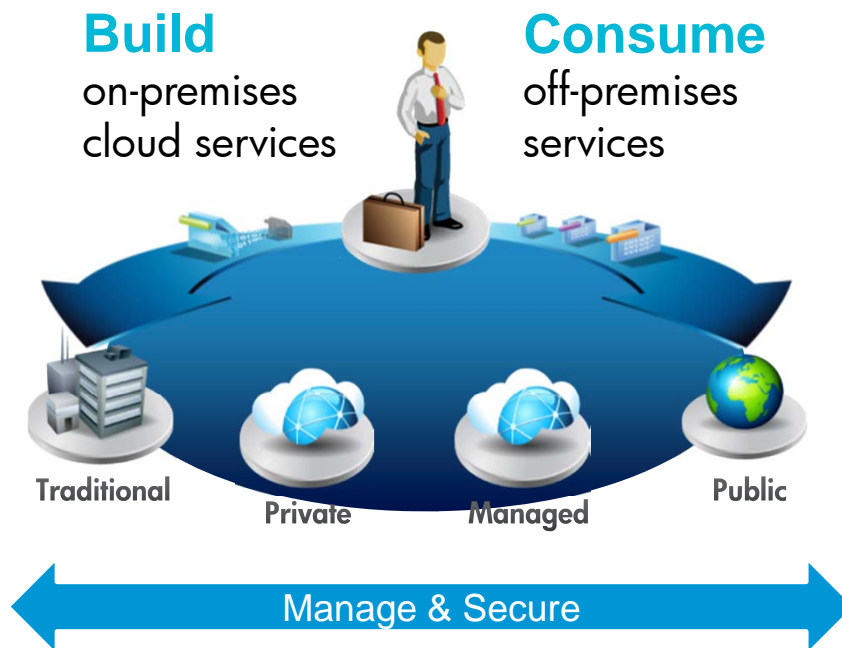
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**Services**  
ANYWHERE





# ”Services Anywhere” with hybrid delivery



## IT Imperatives

- Build & consume right mix of services based on service requirements
- Leverage best of traditional IT, private, managed & public cloud
- Manage & secure hybrid environment to reap value & mitigate risk

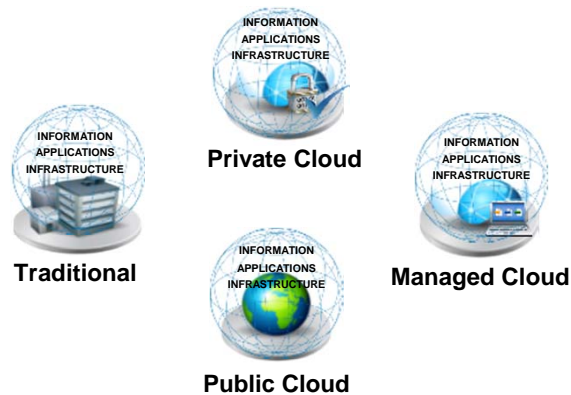
# Hybrid delivery engineered for the future

## Traditional IT



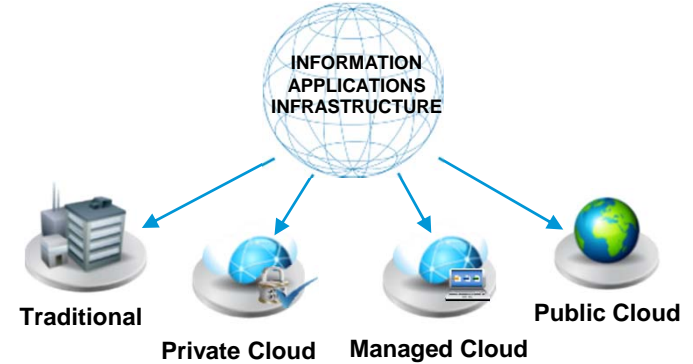
Dedicated  
Physical  
Homogenous  
Inflexible

## Evolving Current State



Disparate Architectures  
Different Management & Security  
Inconsistent Development Environments  
Increased Complexity

## Future



Common Architecture  
Converged Management & Security  
Open & Standards Based  
Develop Once, Run Anywhere  
Flexibility & Portability

# HP Converged Cloud

Hybrid delivery based on common architecture across traditional & all cloud models



## Choice

- **Open**...standards-based across all delivery models
- **Heterogeneous**...hypervisors, development, infrastructure
- **Extensible**...partner ecosystem

## Confidence

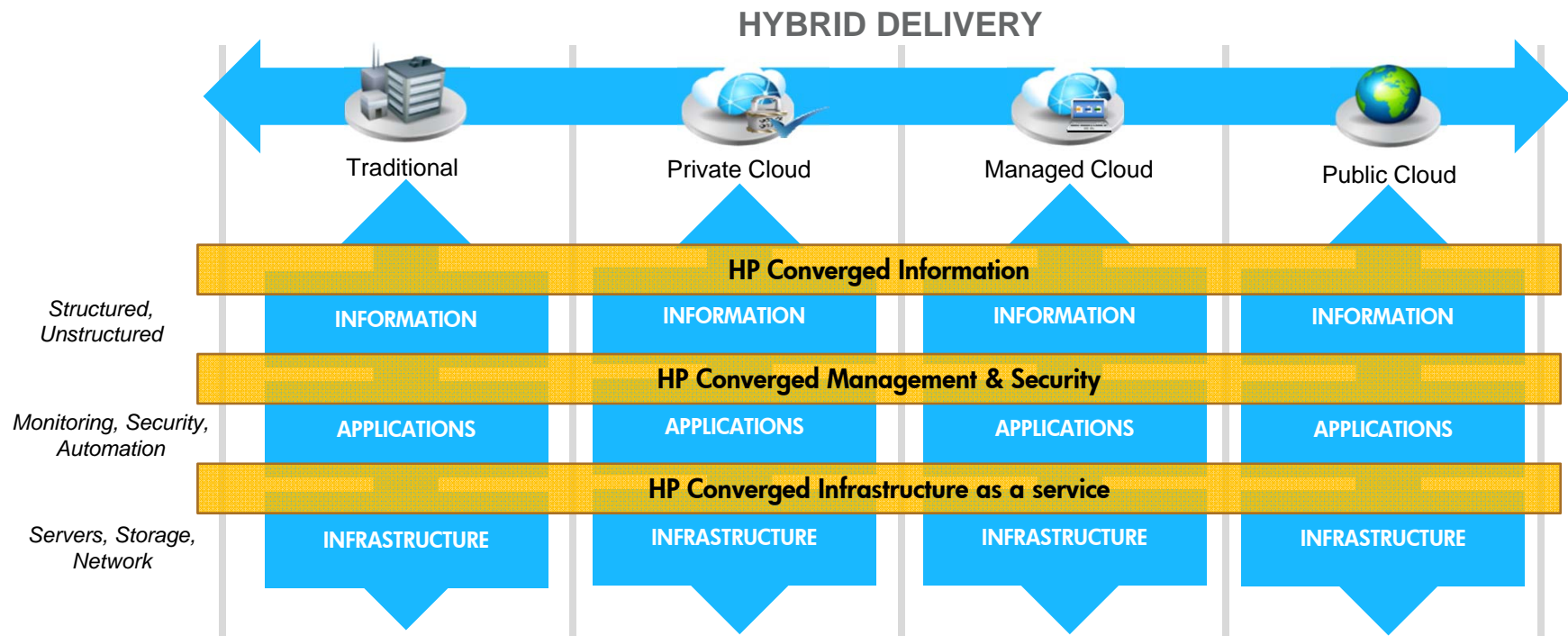
- **Security**...across info, apps, infrastructure, delivery models
- **Management** ...end to end
- **Automation**...for cloud based architectures & processes

## Consistency

- **Common architecture**...across all delivery models
- **Portability**...for flexibility & optimization
- **Consumption experience**...one simple model

# HP Converged Cloud

Built on market leading HP intellectual property & OpenStack technology



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# Market Adoption, Collaboration & Experience

**8 out of 10**

of the world's most trafficked websites

**4 out of 5**











of the world's largest search engines

**3 most popular**

social media properties in the U.S.

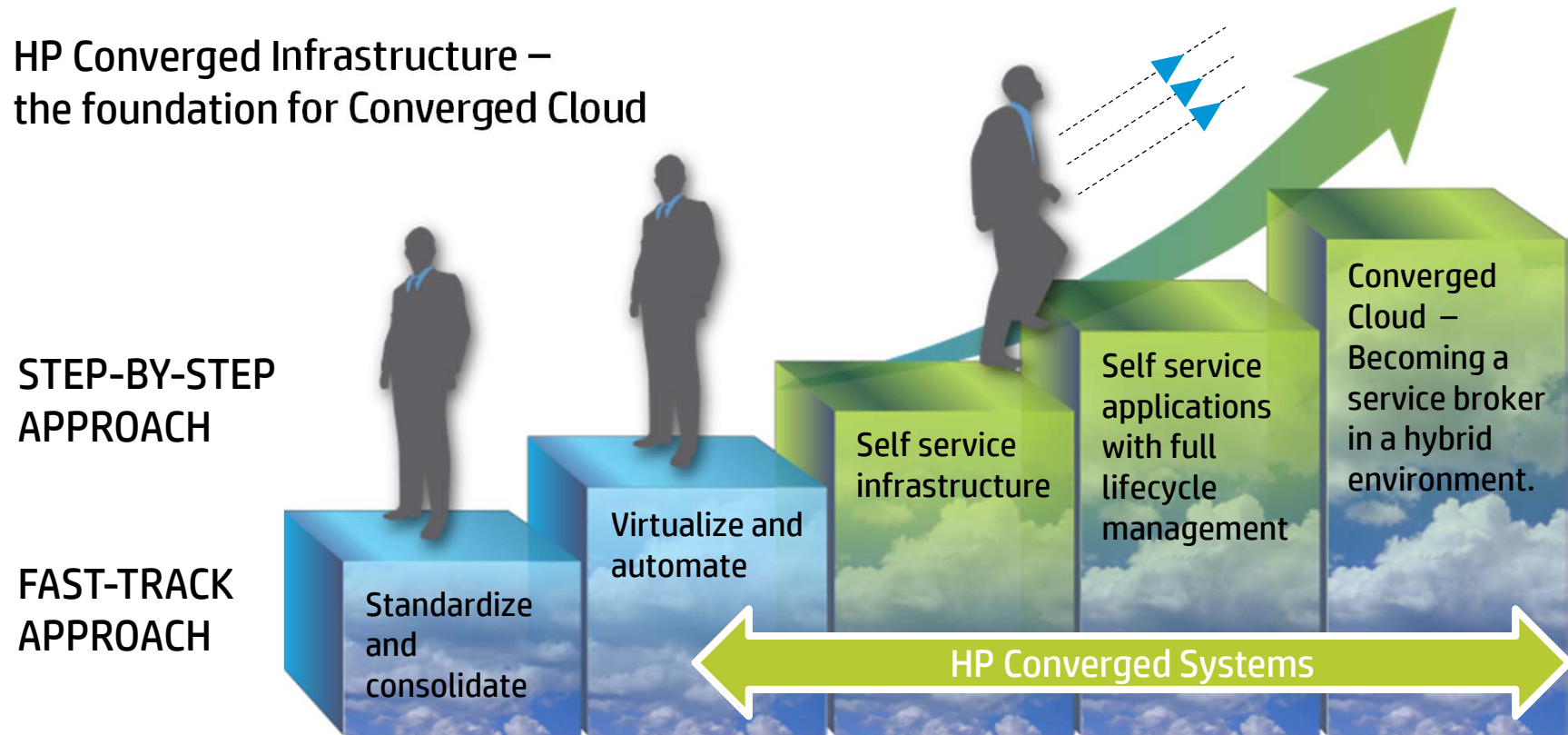
**4 of 5 leading**

hosting providers recognized by analysts

- Powering **~575 private and public clouds** with HP CloudSystem
- **~180 Managed Cloud** customers
- Launched HP (Public) **Cloud Services** (Thousands of registered customers)
- **> 100 Cloud Maps** for key partners   **Microsoft**  **ORACLE**  **redhat.**  **SAP**  **SAS**  **TIBCO**  **vmware**
- Managing **world's largest private cloud** with 50PB of storage (Autonomy)
- Delivering services to **90+ million Snapfish users**
- **CloudAgile Program**  **verizon**  **terremark**  **SFR**  **shi**  **DATAPIPE**  **SAVVIS** 

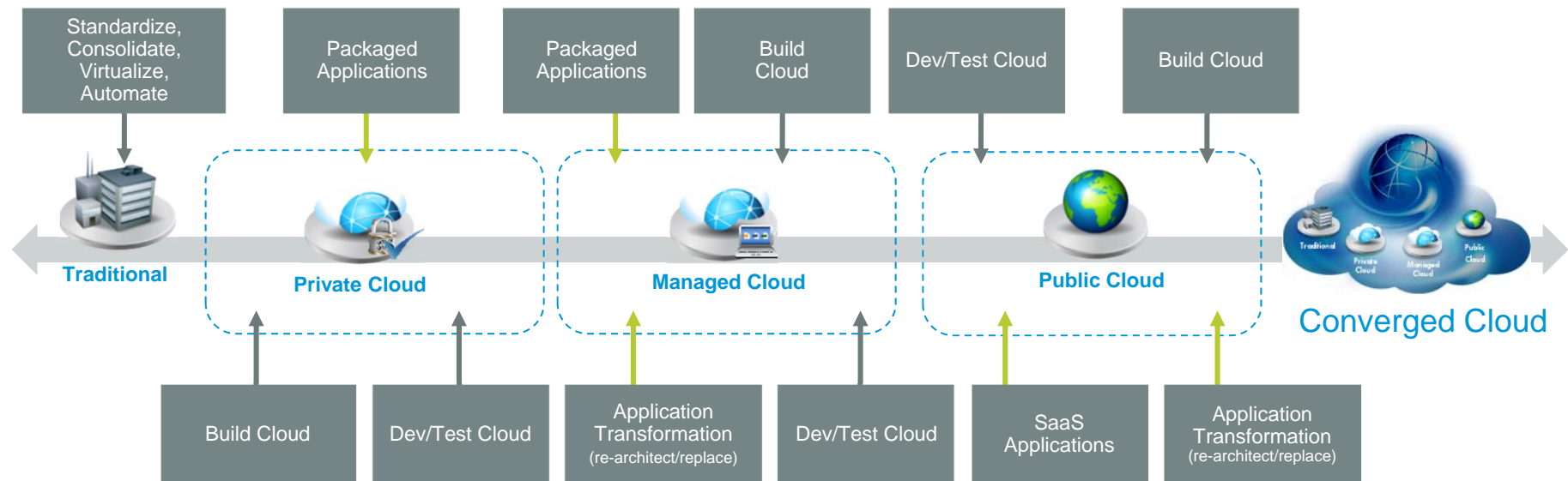
# The journey to convergence and cloud

HP Converged Infrastructure –  
the foundation for Converged Cloud

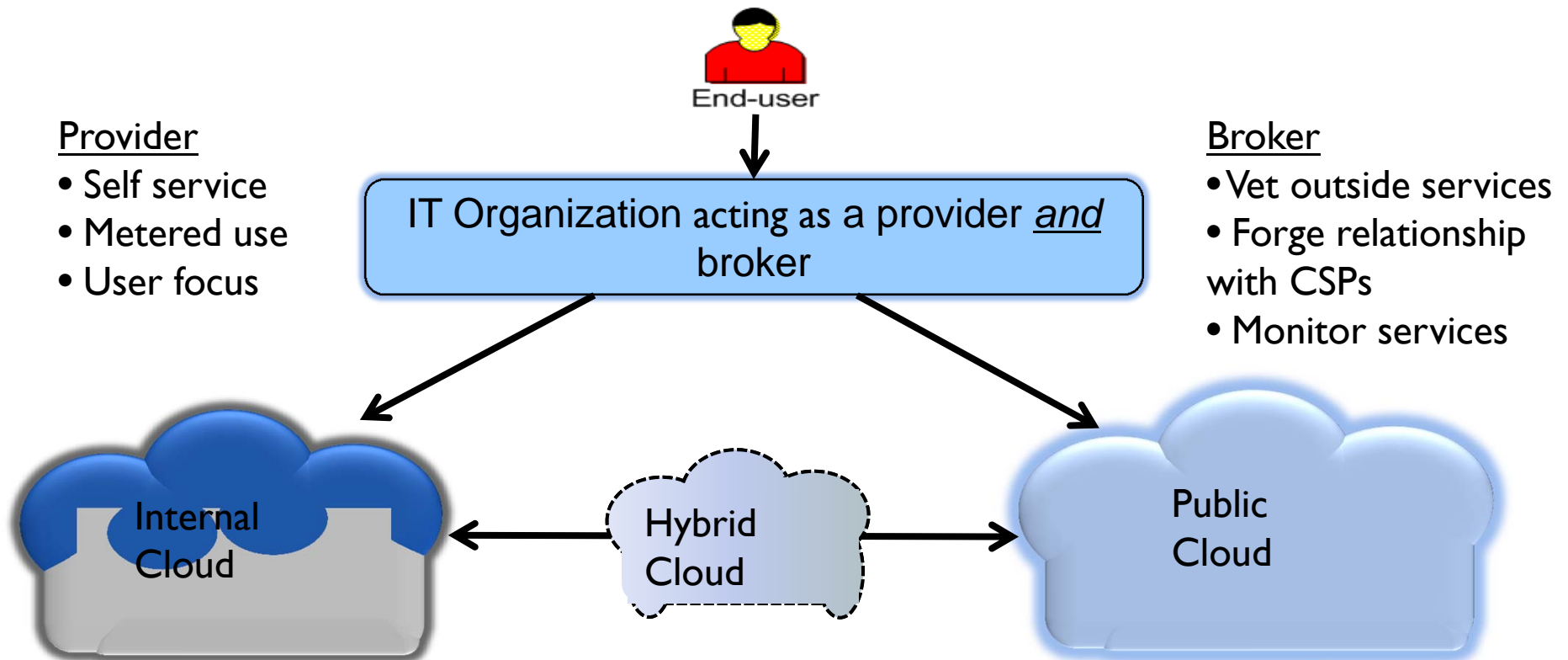


# It will be a journey...with different on-ramps

Customers will start with different use cases...and create unique paths



# Hybrid IT: The Cloud Computing Strategy



## Provider

- Self service
- Metered use
- User focus

## Broker

- Vet outside services
- Forge relationship with CSPs
- Monitor services



# Strategic Role of CIO Changing

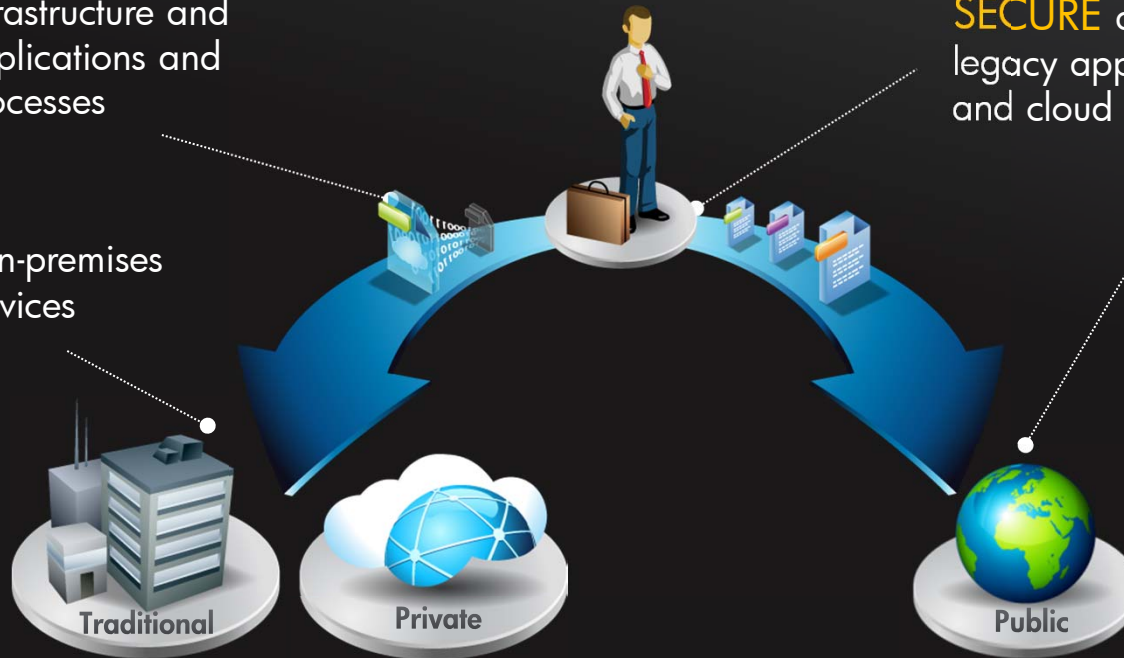
CIO becomes the builder and broker of services

**TRANSFORM** legacy infrastructure and applications and processes

**MANAGE AND SECURE** across legacy applications and cloud assets

**BUILD** on-premises cloud services

**CONSUME** off-premises services securely



# What sets HP apart

Most comprehensive convergence solution for your data center

Designed for  
convergence



*Not piece parts*

Open



*Not closed*

Proven Experience



*Not just hardware*



# HP Converged Cloud versus competition



- Industry leading Converged Infrastructure
- Superior Management & Security
- Open, standards based approach
- Heterogeneous support (hypervisor, OS, infrastructure)



- No Single point of accountability
- Vendor lock-in
- No hybrid delivery
- No application portability



- Lacks integrated systems
- Heavy service engagement
- No application portability



- Vendor lock-in
- No hybrid delivery
- No application portability
- Lacks partner extensibility



# Converged Cloud: Real benefits today

## SPEED INNOVATION

**McKesson:** Eliminated wait time for development servers with faster provisioning



**NNIT:** Helped customers accelerate clinical trials for faster time-to-market



## ENHANCE AGILITY

**GS1:** Rapidly deployable services; reduced time to complete recall from months to days



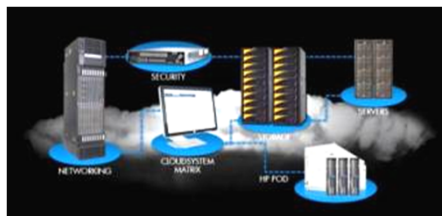
## IMPROVE FINANCIAL MANAGEMENT

**Server Cloud Canada:** Cost-effectively delivered infrastructure as a service; projected 1 million CAD annual savings





# HP Converged Cloud is uniquely positioned



## BEST-IN-CLASS TECHNOLOGY

- Converged Infrastructure
- Converged Management & Security
- Converged Information



## HYBRID DELIVERY

- Spans traditional IT, private, managed & public cloud
- Supports infrastructure, applications & information



## OPEN, EXTENSIBLE ARCHITECTURE

- Enables service flexibility & portability
- Heterogeneous (hypervisor, deployment, development, infrastructure)
- Designed with partners in mind



## EXPERIENCE

- Thousands of customer engagements
- Knowledge running large-scale cloud environments

# Is your IT staff ready?

To think like and compete with cloud service providers (CSPs)?

To *make* less and *assemble* more?

To give up some direct control?

To manage vendors?

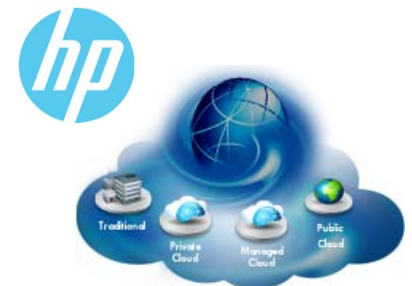
To be business people?

To experiment?



# Recommendations

- Understand your business: Don't jump into Cloud just because it is "the thing to do"
  - Identify those business processes that could benefit from cloud automation: Internal or External
- Decide on what would make sense internal vs. external
  - SLA requirements will clearly answer this question today
- Cost Analysis
  - Know your internal costs. Without that, you are blind
- Expect a hybrid IT approach
- Foster Executive buy-in and support
- Challenge your IT staff to experiment and build new skills



# HP Converged Cloud



Choice

Confidence

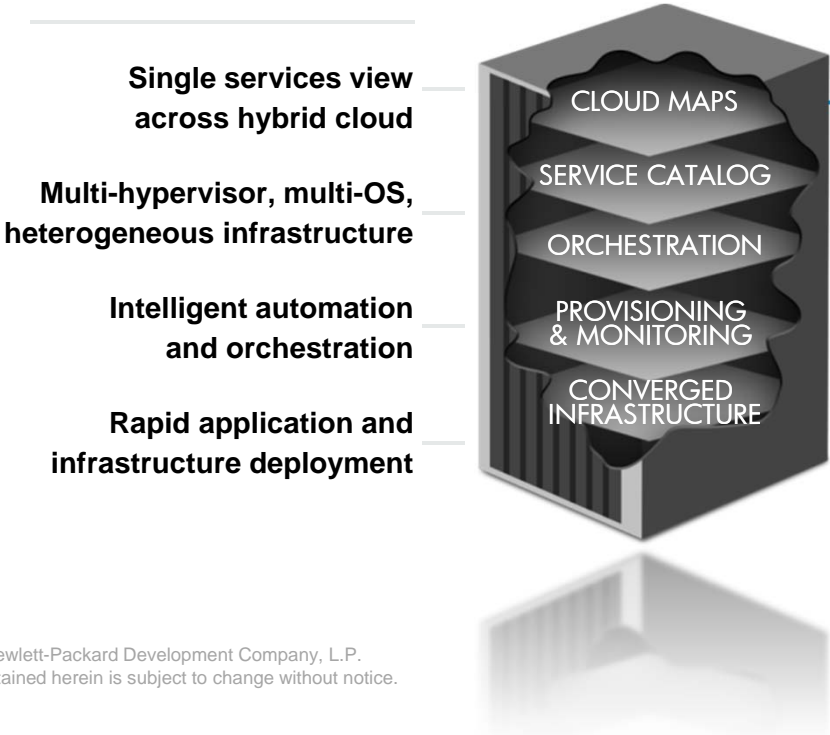
Consistency

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# HP CloudSystem

Most complete, open, integrated system



**CITRIX**<sup>®</sup>



**Microsoft**<sup>®</sup>

**ORACLE**<sup>®</sup>



**SAS** | THE POWER TO KNOW.

**TIBCO**  
The Power of Now™

**vmware**<sup>®</sup>



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# Thank you

## Discussion / Q & A

Rob Courtney ( )

937-604-4704

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