

Management for the Mobile-Cloud Era

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Cloud Management Business Unit

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vmware®

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Mobile-cloud Era

- The CIO paradox

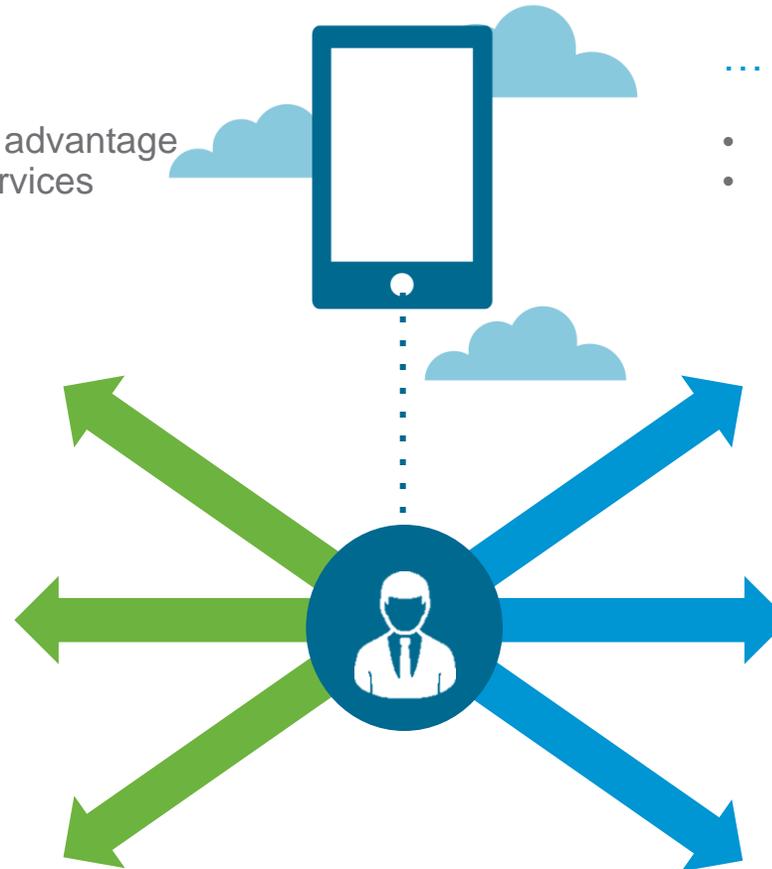
New expectations...

- Create competitive advantage
- New products & services

Be strategic

Quickly adopt technology

Boost innovation



... and the prior responsibilities

- Run global infrastructure
- Support business-critical applications

Stay secure

Avoid legacy debt

Drive operational excellence

Reality Bites



Budget issues

- Budgets flat/declining (proportionally)
- Need to spend more on innovation

Skills

- In short supply
- Accelerating pace of new technology

Legacy systems

- Integration on and off-premises
- Complex data models

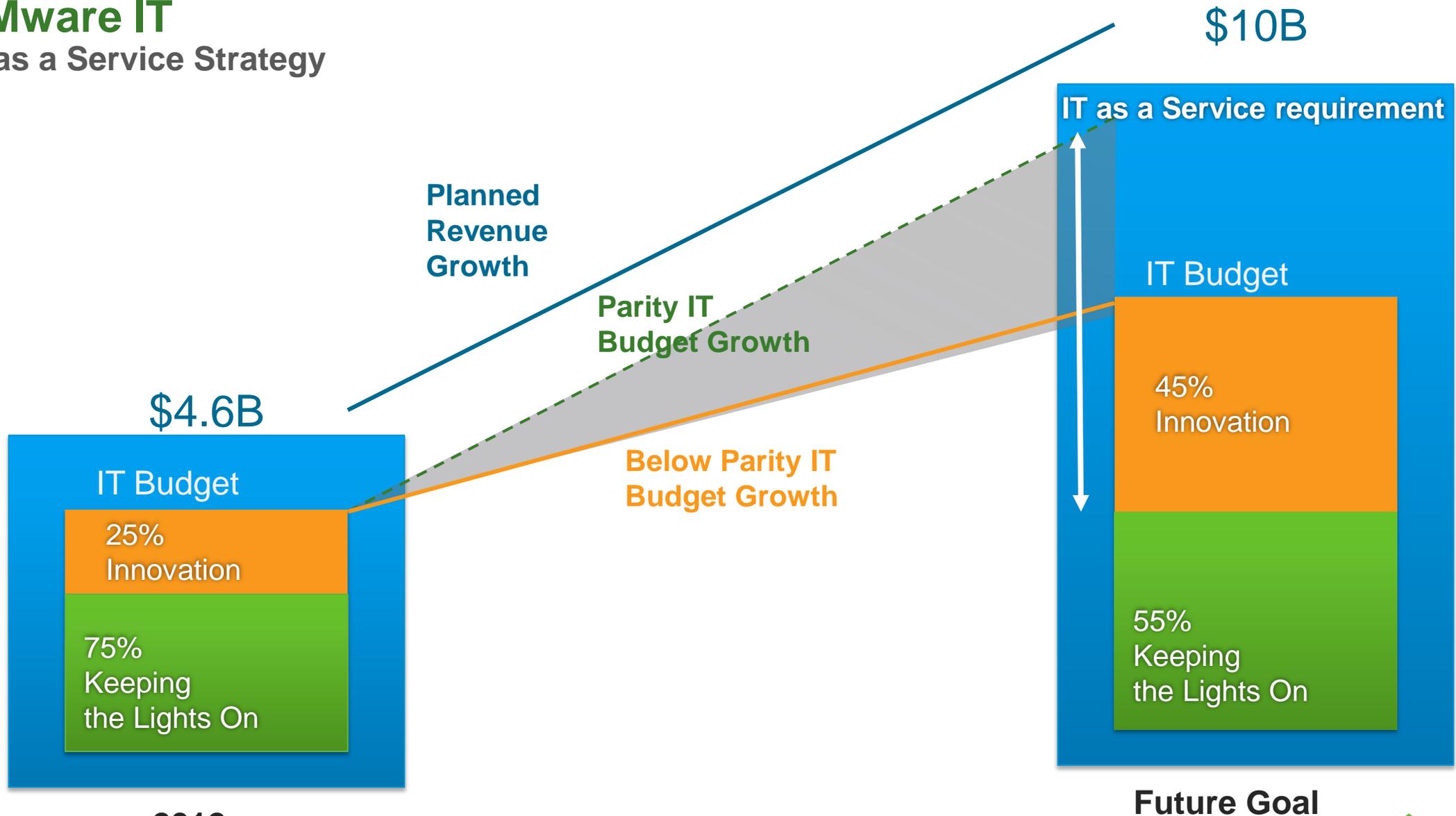
Legacy process

- Ticket-driven across silos
- Not standardized

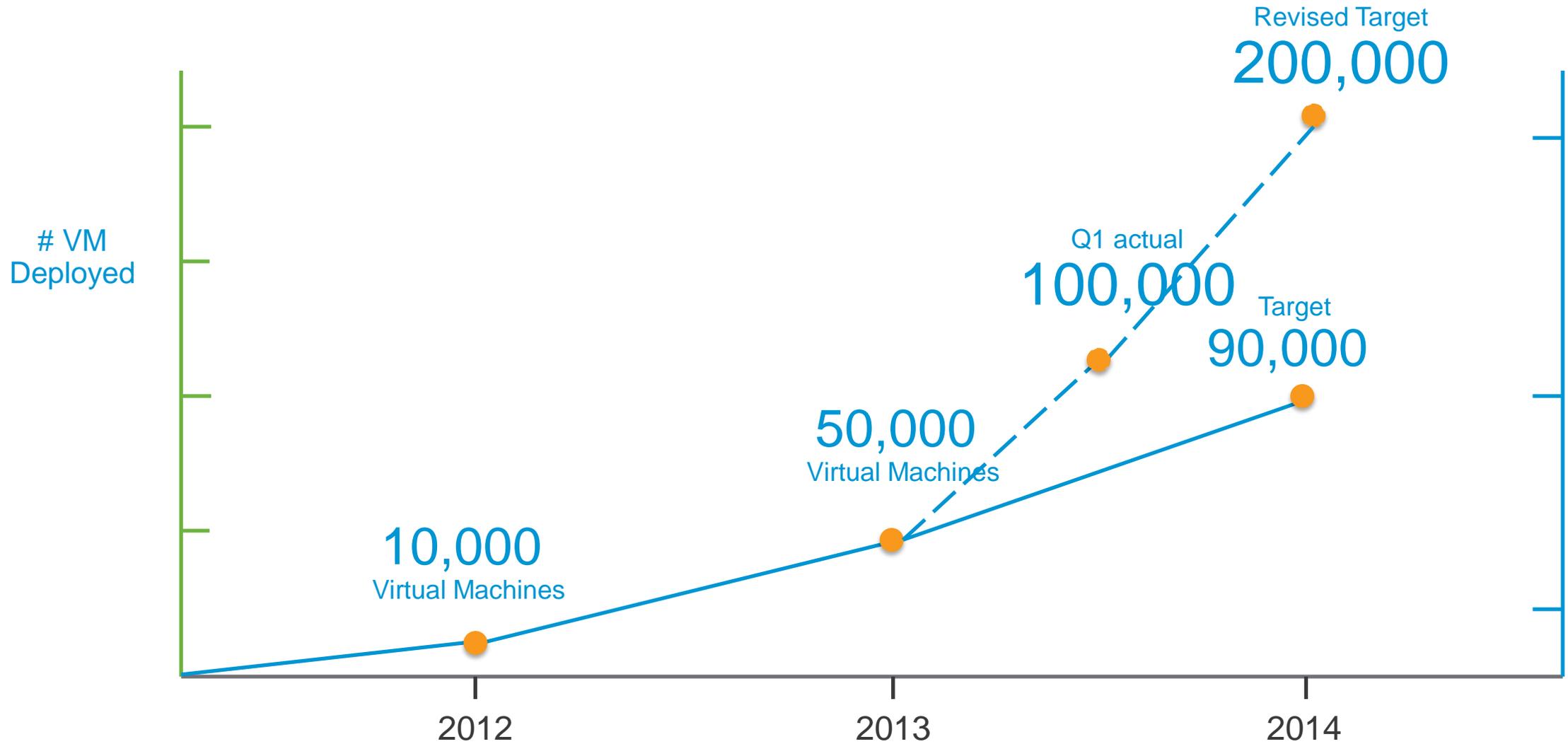
... Your Real Problem?
Your material, successful business today.

VMware IT

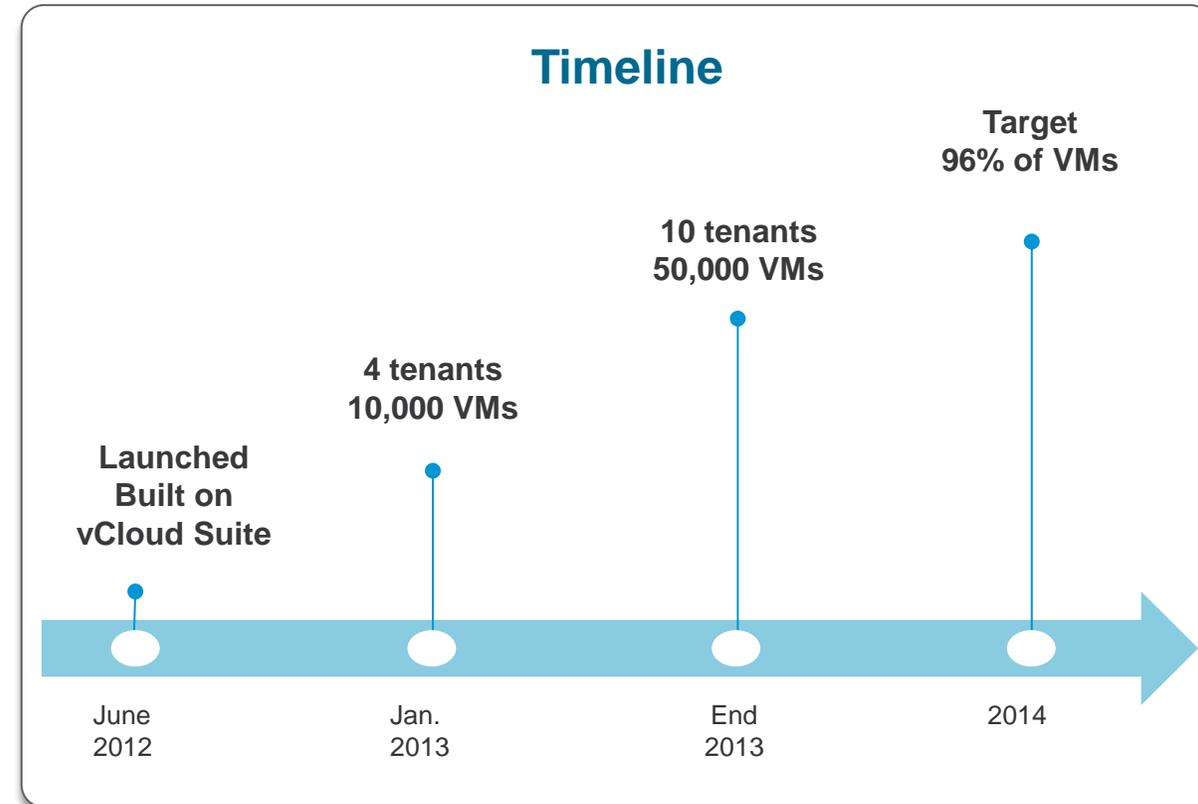
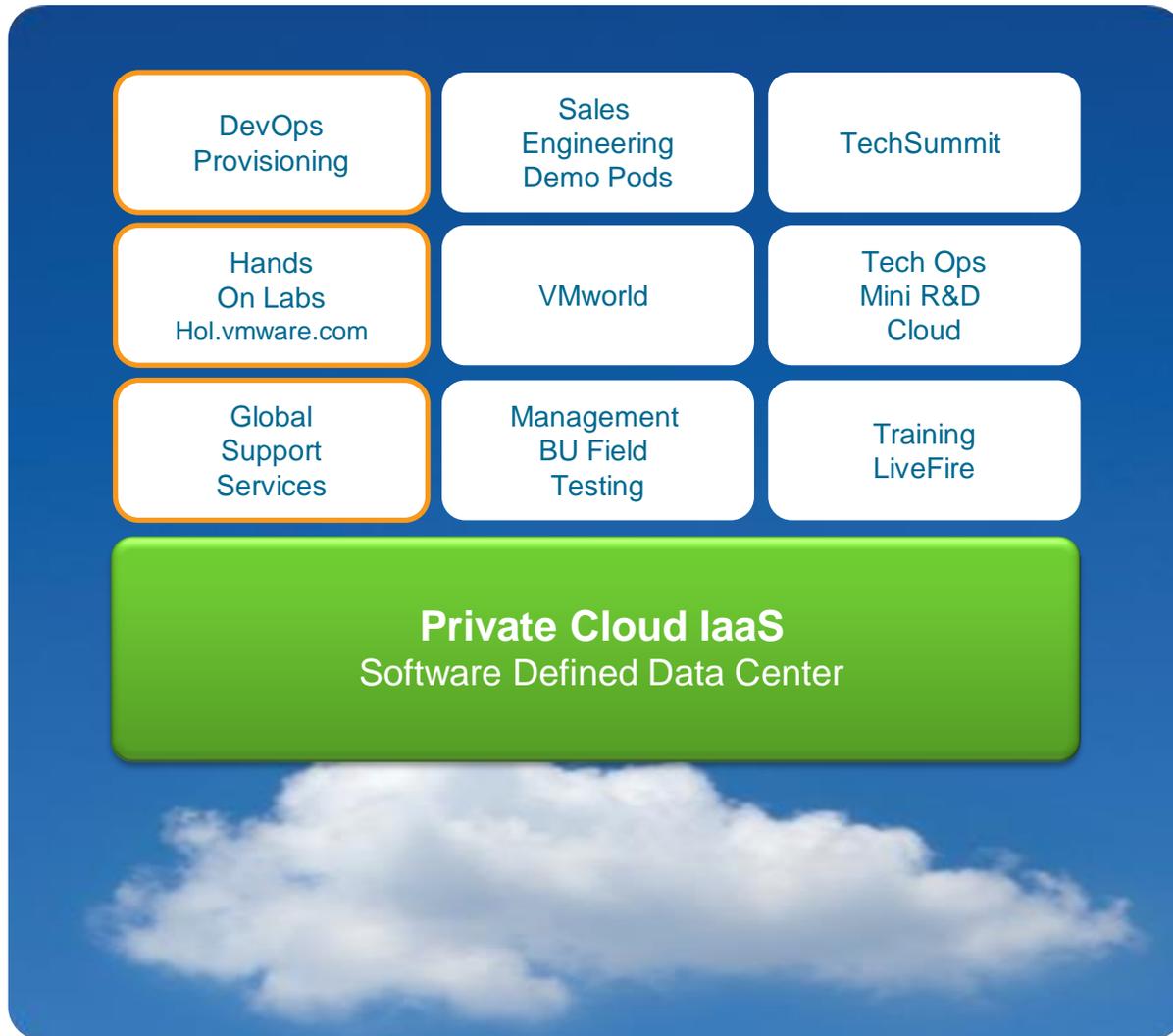
IT as a Service Strategy



VMware IT Private Cloud – 2014 Reality



VMware IT Project “OneCloud” Explosive Tenant Growth

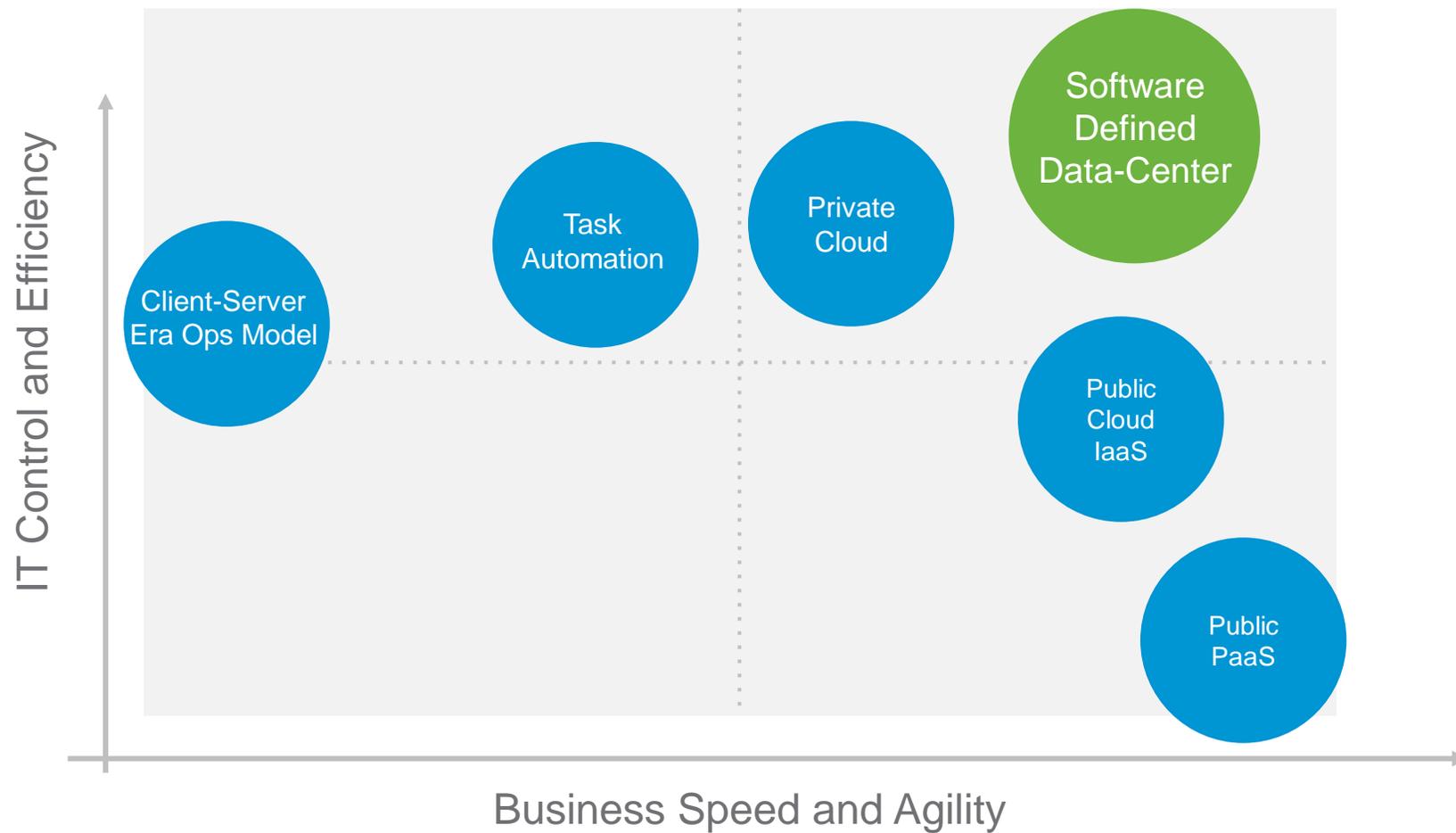


- Very low cost per VM
- “Cloud first” policy in IT



What are your strategic Options

Strategic Alternatives

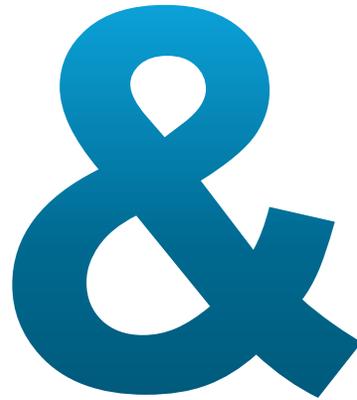




The Software-Defined Data Center: A New Path Forward



**Traditional
Apps**



**Cloud-Native
Apps**

The Architecture for Today AND Tomorrow



Management by Policy

All Apps

Open Cloud Infrastructure

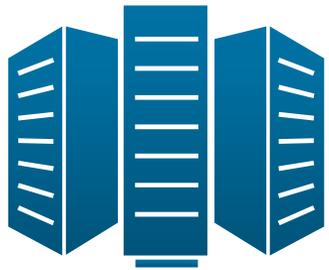
Hardware Choice

vRealize Suite, VMware's Cloud Management Platform

Traditional Applications



Cloud-Native Applications



On-Premise



Cloud Automation



Cloud Operations



Cloud Business



As-a-Service



Physical



Virtual



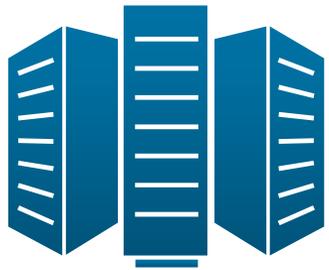
Cloud

vRealize Suite

Traditional Applications



Cloud-Native Applications



On-Premise



Cloud Automation



Cloud Operations



Cloud Business



As-a-Service



Physical



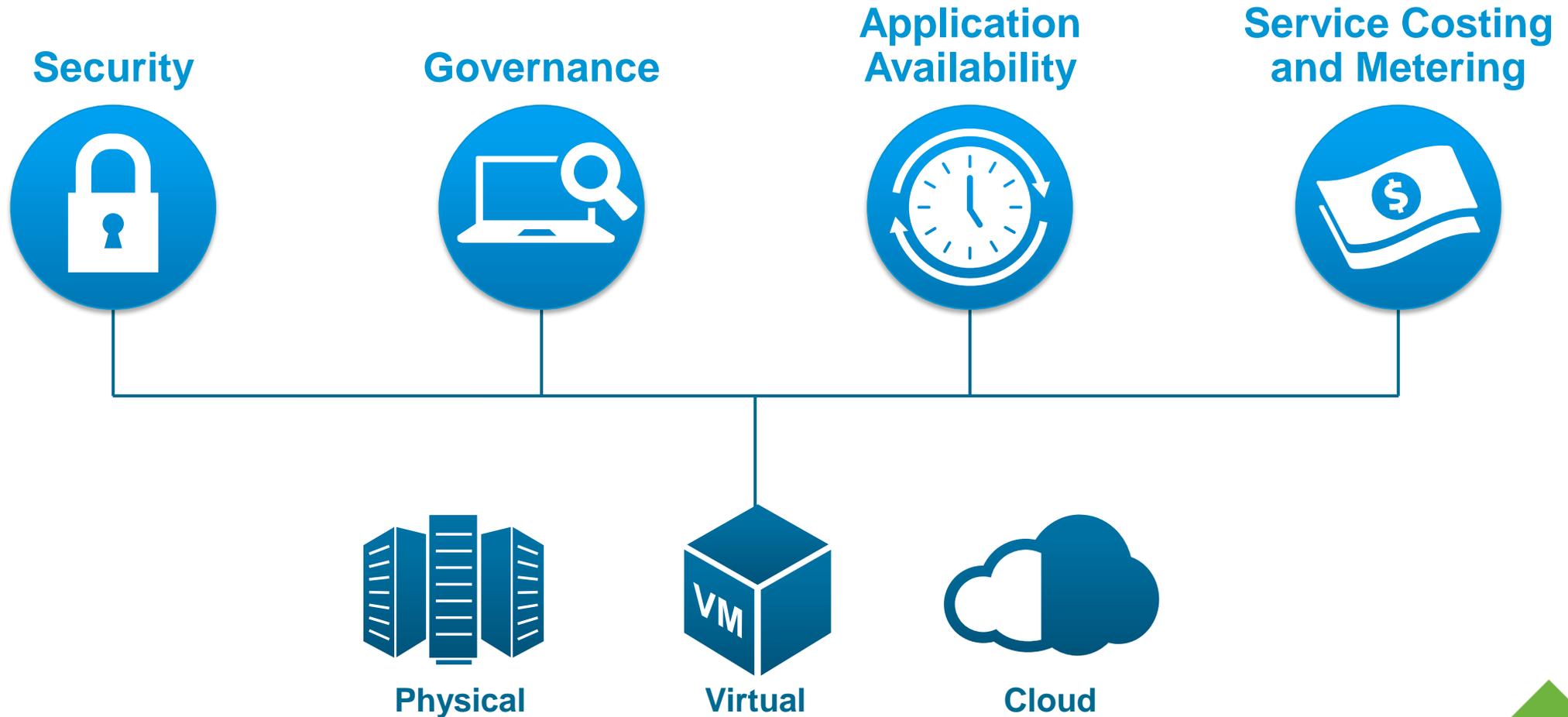
Virtual



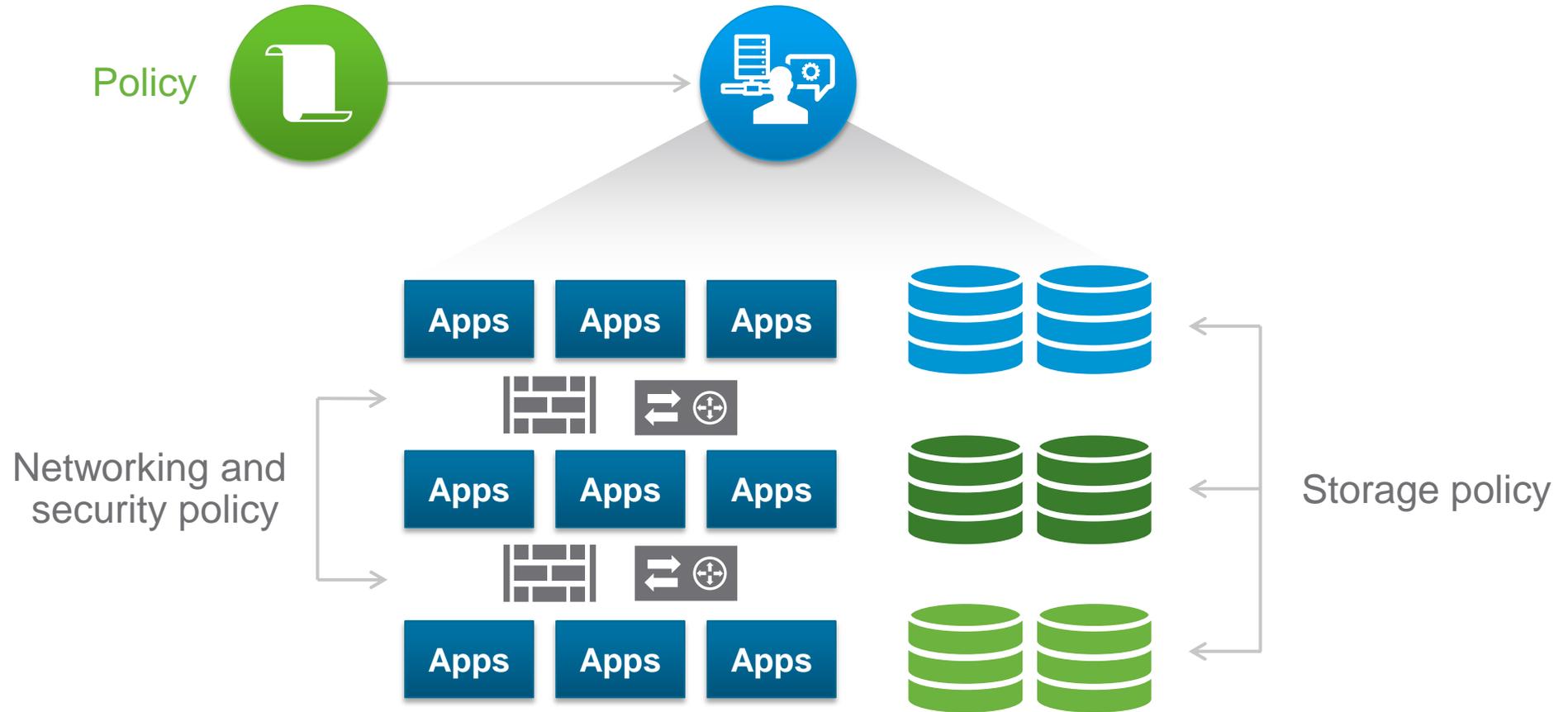
Cloud

Register for the Beta
vrealizeair.VMware.com

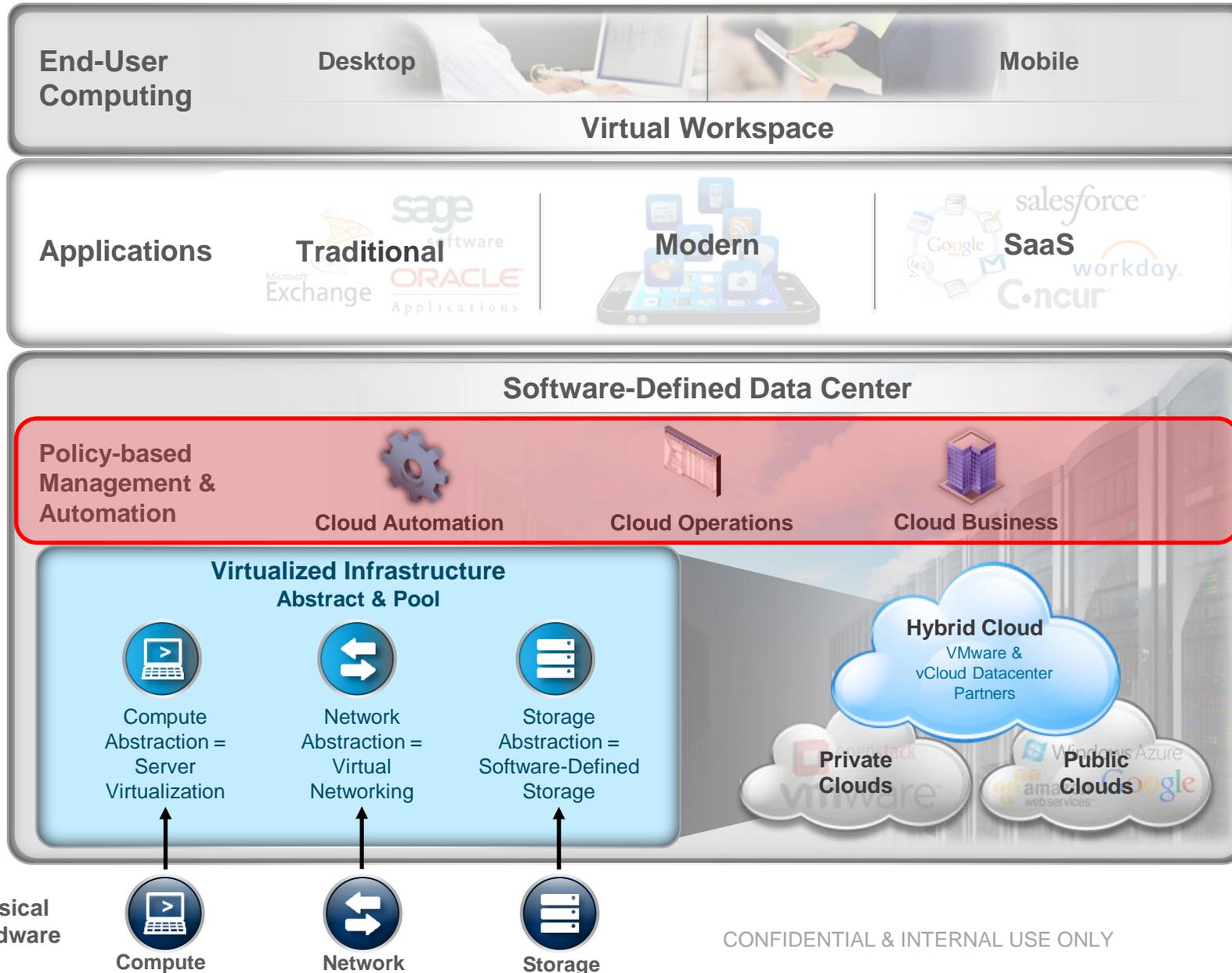
Software-Defined Data Center Policy Based Cloud Management



Software-Defined Data Center Policy



Management and Automation in the Software-defined Enterprise



VMware Cloud Management

The Control Plane for the Software-Defined Data Center and the Hybrid Cloud



Cloud Automation

Automated, self-service delivery of personalized IT services

Service Catalog
Governance
Release Automation



Cloud Operations

Intelligent, automated operations with comprehensive visibility from apps to storage

Service Health
Capacity Optimization
Configuration Standards



Cloud Business

Complete transparency into costs and quality of all IT services

Cost Transparency
Benchmarking
Service Quality Mgmt

Virtualized Infrastructure Abstract & Pool



Compute
Abstraction =
Server
Virtualization



Network
Abstraction =
Virtual
Networking



Storage
Abstraction =
Software-Defined
Storage

Hybrid Cloud

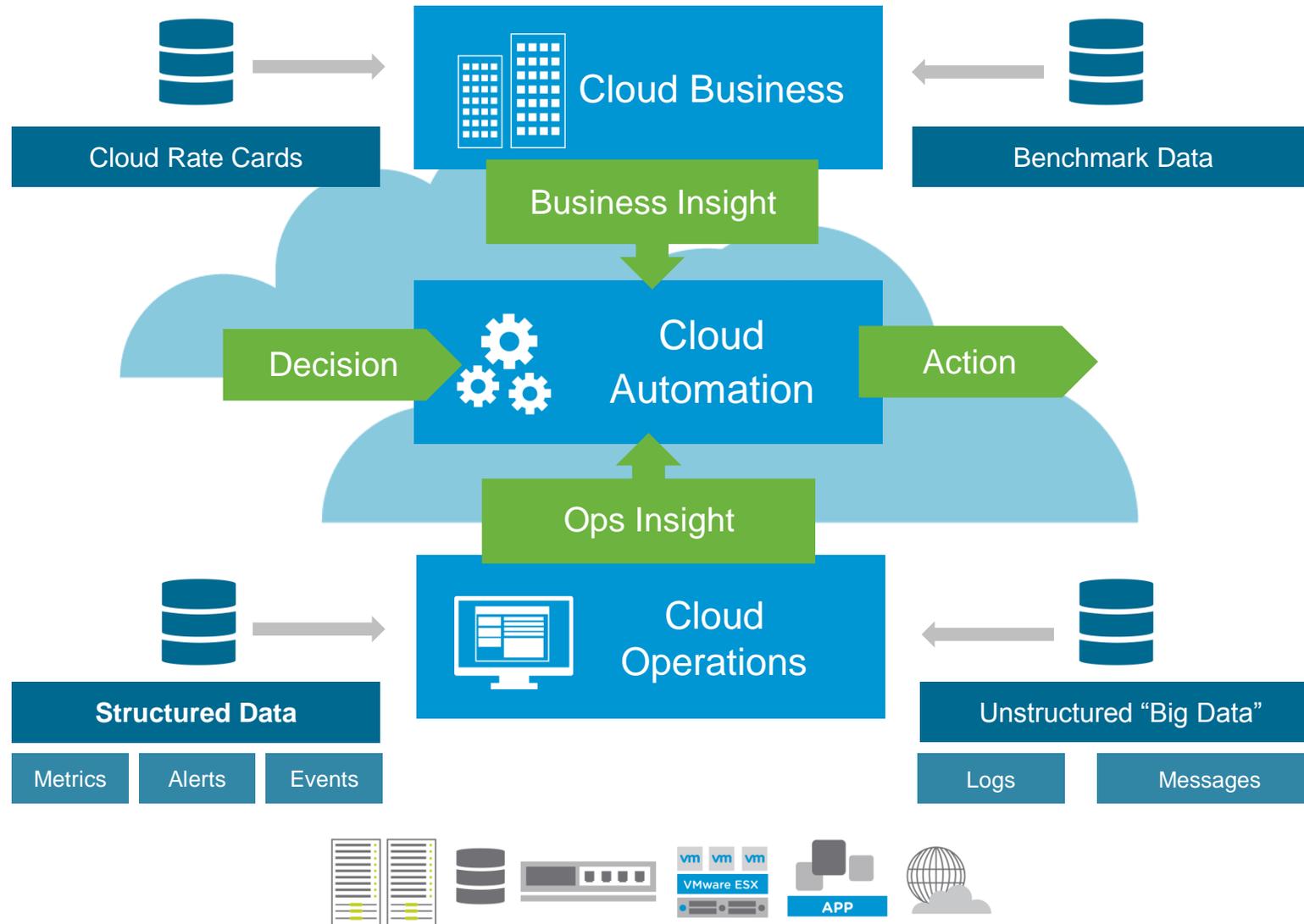
VMware &
vCloud Datacenter
Partners

Private
Clouds

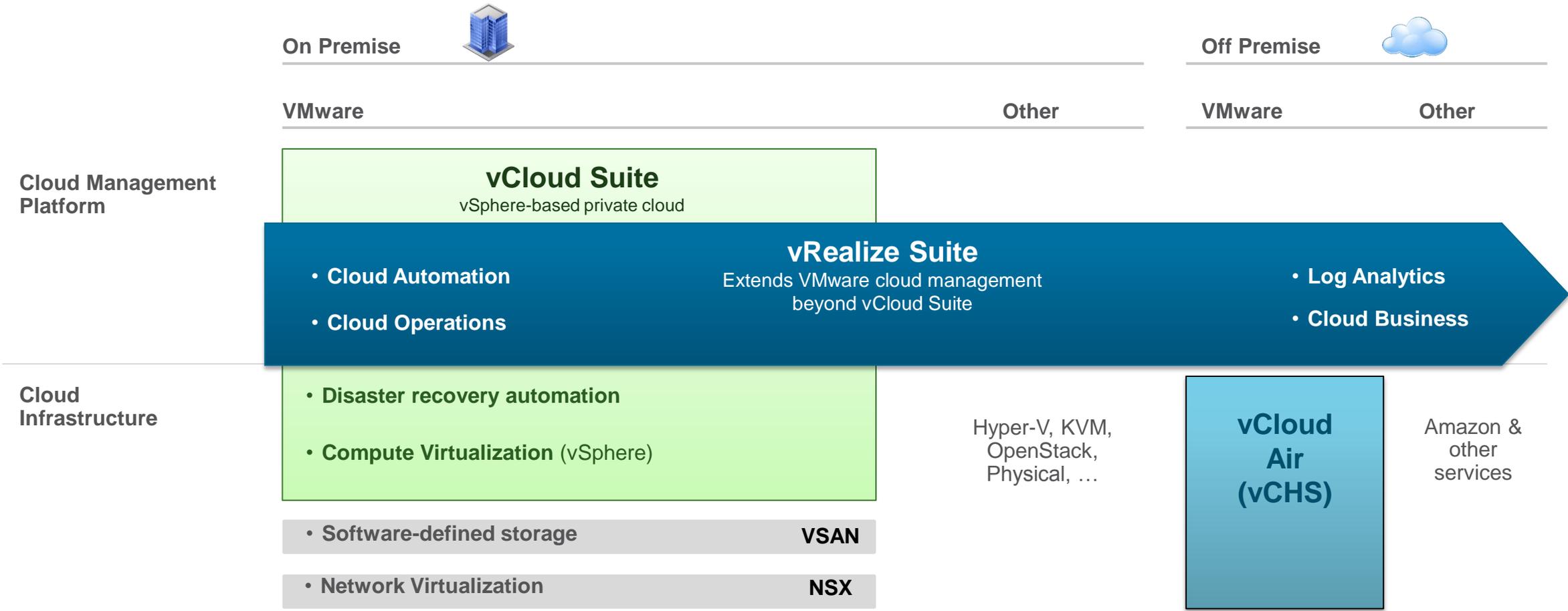
Public
Clouds

Insight → Decision → Action

VMW Total Cloud Management
= Continuous Improvement



Positioning of vRealize and vCloud Suite



Cloud Automation

Devops – The Journey



Capabilities

- Service portal, On-demand application and infrastructure
- Automated or guided workflow
- Ecosystem (e.g. Puppet, Chef)

Business Value

- Agility, transparency
- Efficient IT processes

IT Value

- Lower cost, secure control
- **DevOps transformation**

APPLICATION RELEASE PROCESS

Development

Test

Production

Change



On Demand applications and infrastructure

The screenshot displays a 'Service Catalog' interface. At the top, there are navigation tabs: Home, Catalog, Items, Requests, Inbox, Advanced Services, Administration, Infrastructure, and Business Management. Below the tabs, the user is logged in as 'Chris Lennon (clennon@elmbafts.com)'. The main area is titled 'All Services (21)' and contains a grid of service cards. Each card includes an icon, a title, a brief description, and a 'Request' button. The 'AWS LAMP Stack' card is highlighted with an orange border. The left sidebar lists categories: All Services, Active Directory Services, Compliance Services, DevS, IaaS, IT Admins, PaaS, Phoenix Project, and Public Cloud.

Service Name	Description
Admins - Windows 200...	For IT Admins to deploy their own Windows 2008 R2 Server without approvals into...
Java Environment	Application Blueprint CentOS 6.3
AWS LAMP Stack	LAMP Stack in support for the Phoenix Project. Includes Webmin and basic su...
.Net Environment	.Net Development environment
CentOS 6.3 32bit	Application Blueprint CentOS 6.3
Change AD Account Pa...	Request password reset form
Compliance Assessm...	Request Compliance Assessment on a single machine and receive i...
Create a New Service A...	Creates a service account and sets a password for the user.
Create Service Accoun...	Creates a user in an organizational unit and sets a password for the user.
Patch Assessment Re...	Request Patch Assessment on a single Windows or Linux machine and receive i...
Phoenix Project - Prod...	Multi-tier application with full support for load balancing, firewall segmentation...
Red Hat Enterprise Lin...	Red Hat Enterprise Linux version 6.5 (PV, EBS-Disked)
Request Access to AD ...	Adds one user as a member of a user group.
Snap N Patch	Takes snapshot of machine before applying patches. Also selects machine for i...
vCHS - PLT Phoenix Pro...	Provision Phoenix application to vCHS Public Hybrid Cloud with full i...
Windows 2008 R2	Base Windows 2008 R2 Server
Windows 2012 Server	Base Windows 2012 Server
Windows 7	Windows 7 Desktop for Engineering and Operations
Windows 8.1 Enterpri...	Windows 8 Desktop for Engineering and Operations

The sidebar contains several widgets. At the top is 'REPORTS' with a 'Help' link. Below is 'Demand Analysis' showing '51 VM(s)'. The 'Allocation' widget features a pie chart with the following data:

Category	Percentage
Sales	33%
Dev	27%
HR	27%
Rest	13%

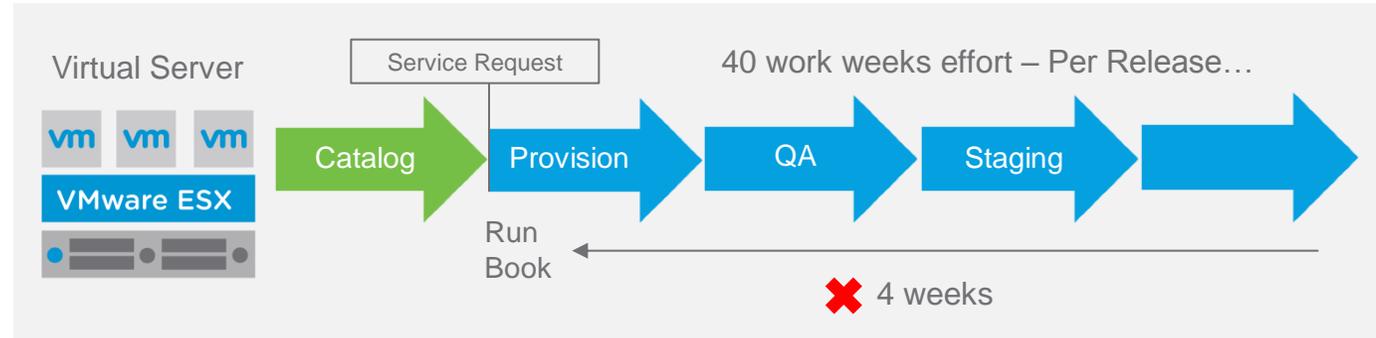
Below the pie chart is 'Largest Changes' with the following data:

Category	Value	Change
Dev:	\$2,975	↑
Sales:	\$3,545	↑

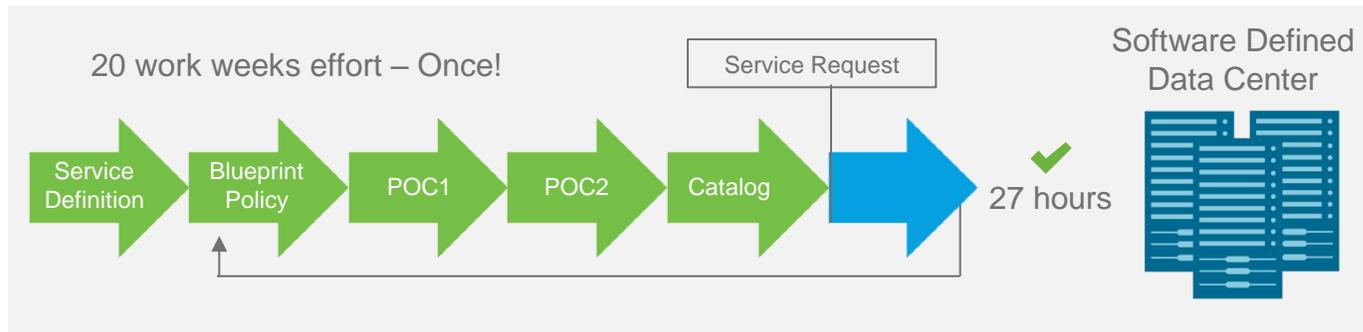
VMware IT Private Cloud – Traditional Application Agility

Example
Oracle ERP With
custom web portal
and load balancers

Manual Process

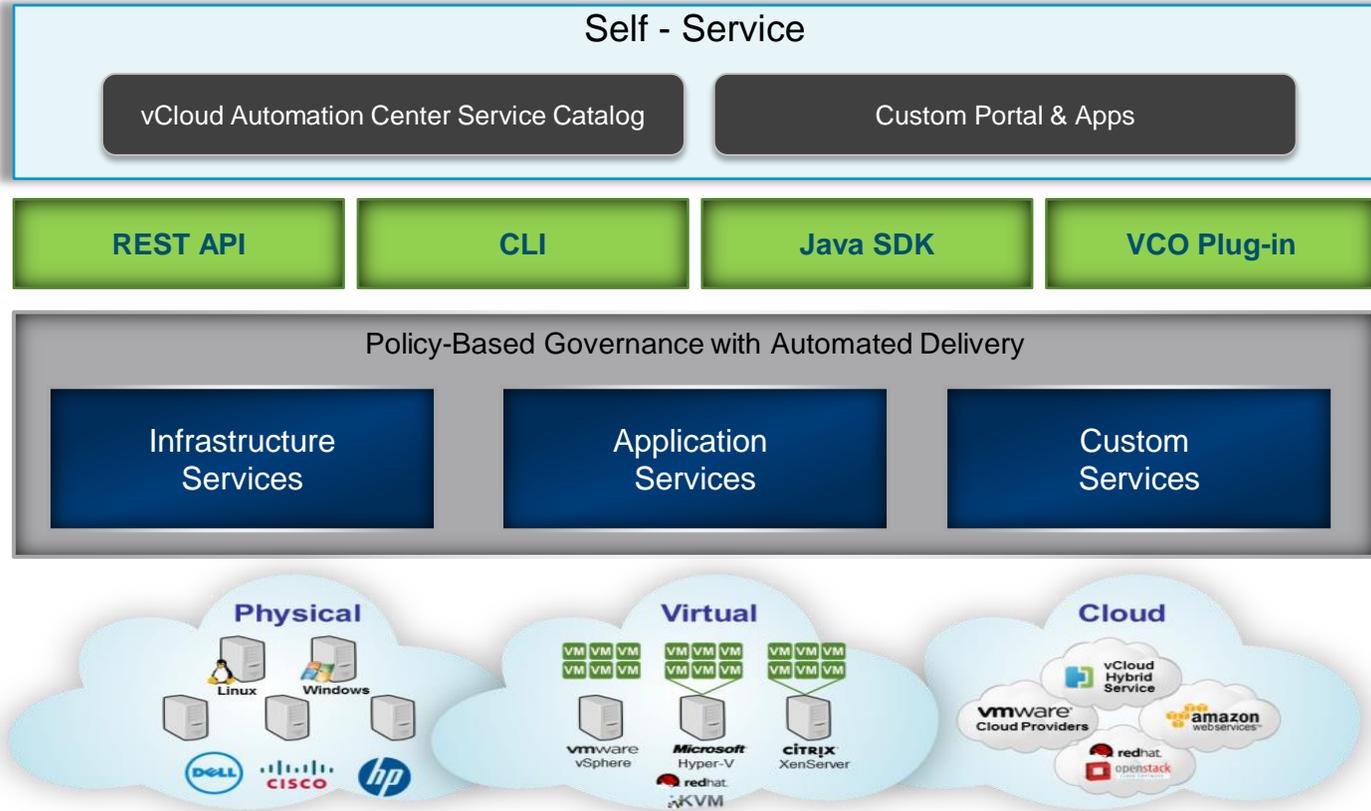


Automated Process



It takes less time/effort to convert the runbook into blueprints...
...than it takes to “run” the runbook...

Access vCAC Services Via APIs, Programmatically



Features

Consumer API

- Requesting new services
- Managing existing services

Available Interfaces

- Rest API
- CLI
- Java SDK
- VCO Plug-in

Benefits

- Access vCAC Services from other applications, programmatically

Cloud Automation Customer Success



- Implemented a software-defined data center with automated provisioning
- Faster time to market based on IT as a service
- Faster, more efficient provisioning of applications and services



Reduced provisioning time from 2-4 weeks down to 1-2 hours.

“VMware provided the most complete solution that was really built for the cloud era, versus other solutions that may have been retrofitted for cloud.”

— Michael Lebiezinski, Director of Private Cloud Engineering

Cloud Operations

Intelligent analytics, apps to storage

Capabilities

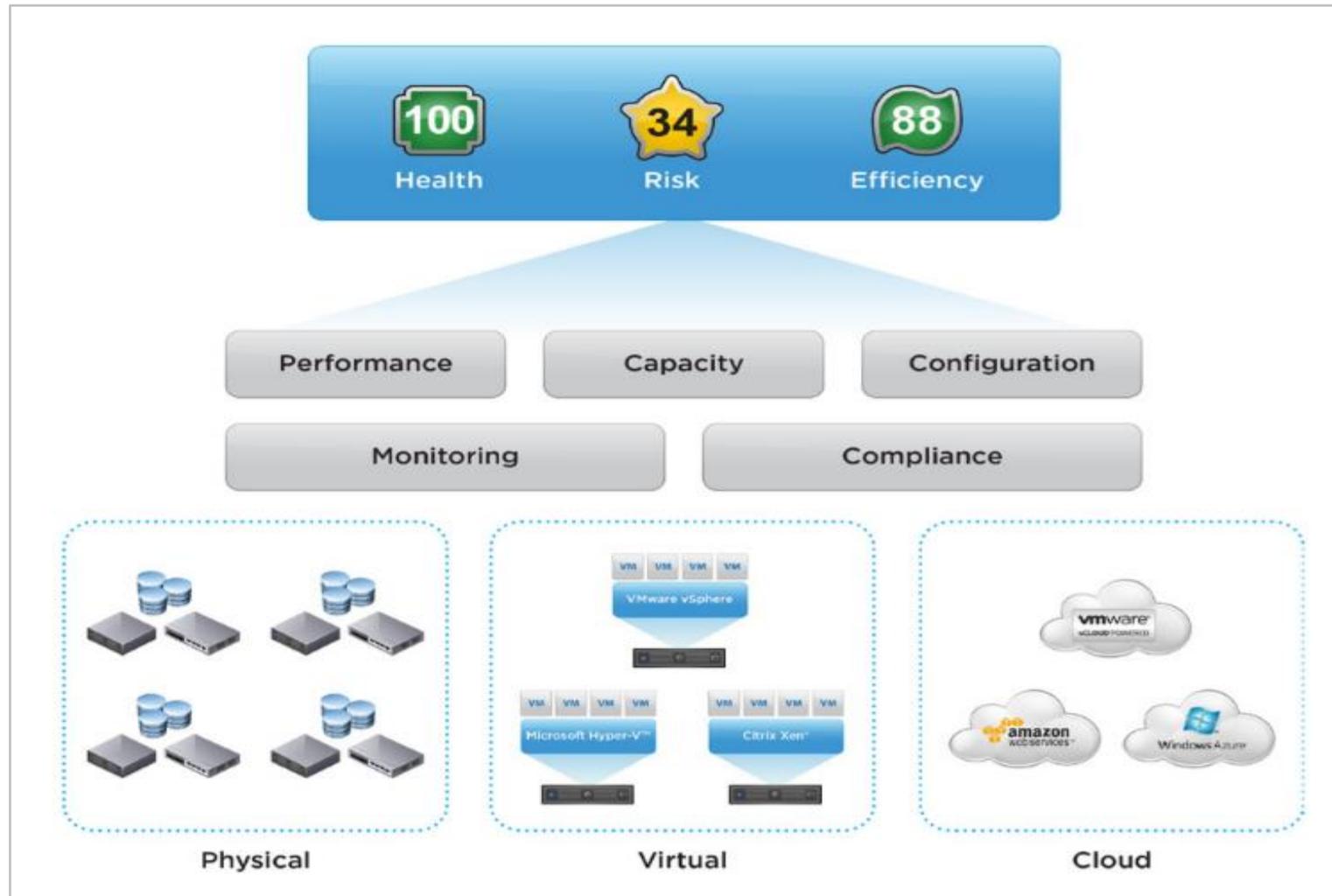
- Intelligent Operations
- Policy-based response
- Unified Management

Business Value

- Ensure service quality everywhere
- Drive down “run the business” costs

IT Value

- Common management platform
- Both cloud-native and traditional applications



Application Health – in vSphere, AWS, Physical

vCenter Operations Manager | User Preferences | Logout vCenter Operations | Support | Help | Thursday, August 16, 2012 12:20:42 PM

HOME | DASHBOARDS | REPORTS | ENVIRONMENT | ALERTS | FORENSICS | ADMIN

Hybrid Cloud Overview | Application Overview | **AWS Cloud** | RainPole Cloud | BlueLock Cloud | Private Cloud & VMs | Application Drill Down | Manager | Hyperic Objects | Heatmap Save

Dashboard Tools: EDIT | CLON | IMPORT

HEALTH STATUS

- Online Sales (AWS_Cloud_App) Last 6 Hours NOW **63**
- Cust Serv (AWS_Cloud_App) Last 6 Hours NOW **96**

HEALTH TREE

- Online Sales (AWS) (...)
- AWS CLOUD (CLOUD...)
- rhel-db2 (AWS)
- aws-rhel-sql2 (Linux)
- aws-rhel-sql2 Oracle...

HEATMAP

- Online Sales (AWS)
- Cust Serv (AWS)
- rhel-app1
- rhel-app2
- rhel-db1
- rhel-mdb1
- rhel-db2
- rhel-mdb2

METRIC GRAPH

aws-rhel-sql2 Oracle 9i: Session PGA Memory

Aug 16 1:10 AM | Aug 16 2:20 AM | Aug 16 3:30 AM | Aug 16 4:40 AM | Aug 16 5:50 AM | Aug 16 7:00 AM | Aug 16 8:10 AM | Aug 16 9:20 AM | Aug 16 10:30 AM | Aug 16 11:40 AM | Aug 16 12:50 PM | Aug 16 2:00 PM

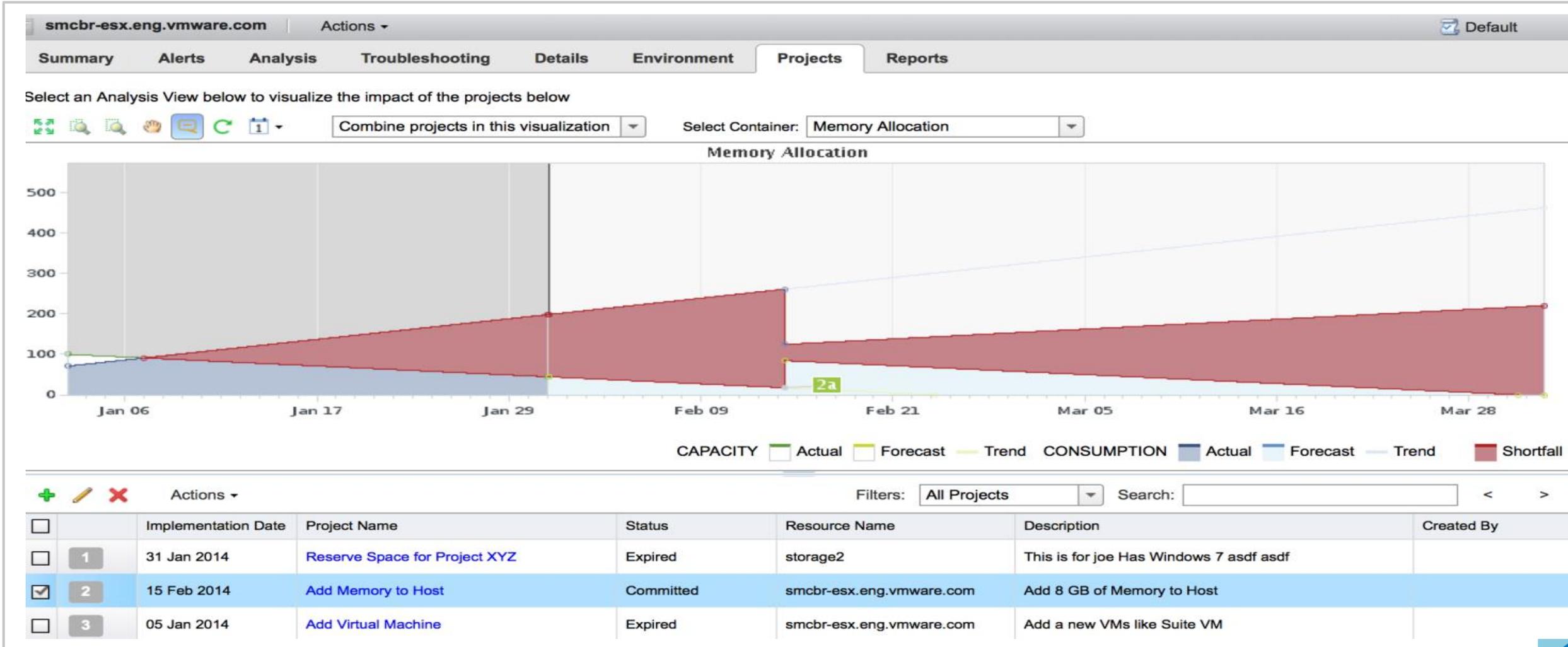
H: 78,407,880 | L: 40,442,552

Hyperic adapter

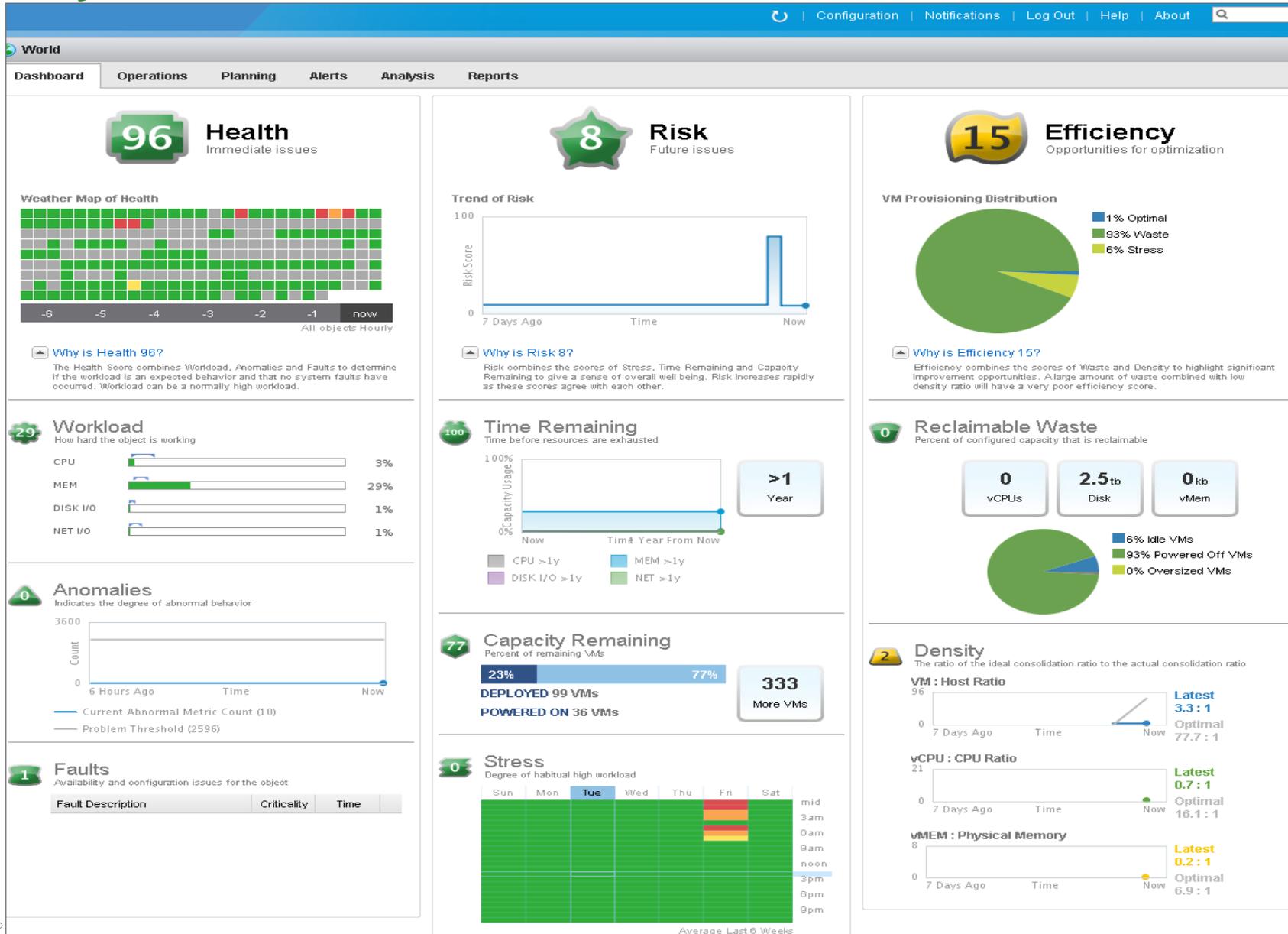
Annotations:

- Oracle database on a Linux machine is in bad health
- Drill down into problem metrics
- Application component seems problematic

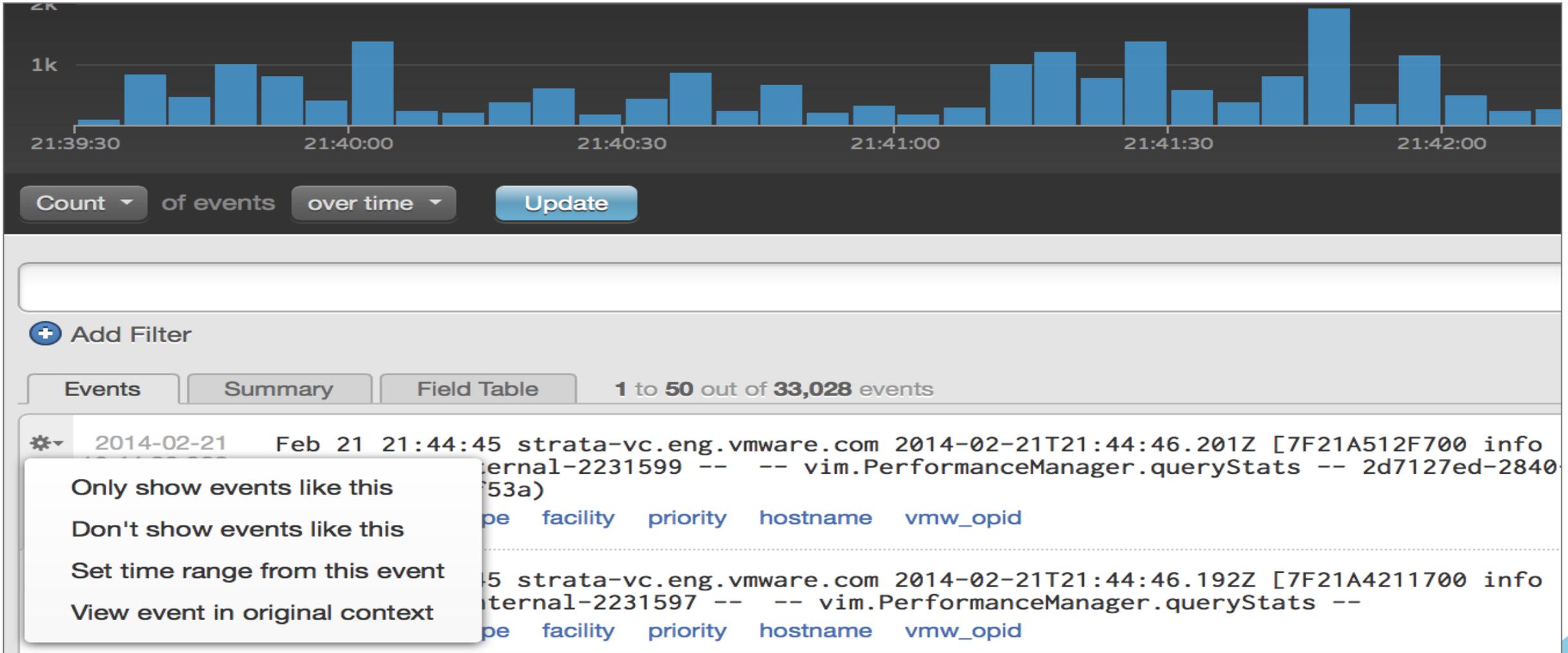
Capacity Management



Intelligent Analytics



Log Management (LogInsight 2.0) – Lower Cost + 6x FASTER



Cloud Operations Customer Success

Global Aerospace
Company

Reduced CapEx/OpEx:

- Reclaimed 92% over-provisioning of hardware for VMs
- Saved \$1.5-\$2M in infrastructure (not including maintenance)
- Reduced alert volume from 500-1000 threshold alerts a day, to 50-100 vCenter Operation alerts



Improved visibility and better planning:

- Reduced troubleshooting time by 50%
- Capacity planning 40% faster and more accurate

The Largest
Specialist
Hospital in
Ireland



vCenter Log Insight

Improved visibility and faster problem solving:

- Reduced troubleshooting time from days to hours
- Allowed solving previously unknown problems

“Right out of the box, having everything in once place and being able to visualize the logs and dashboards was very helpful.”

Lead consultant for the hospital

Cloud Business

Complete transparency into costs and quality



Capabilities

- Automated service model update
- Displace rate card in service catalog
- Link cost to user, BU, project

IT Value

- Show cost of services delivered
- Make fact based sourcing decisions

Business Value

- Transparency in service cost and quality
- Application portfolio rationalization
- Data Center modernization

Efficient Cost, Value Analysis

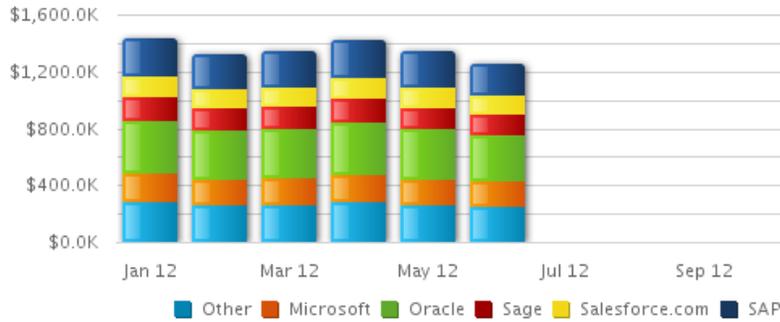


Applications Cost Analysis: June 2012

YTD Cost (% vs. YTD Budget): \$8,101.5K (N/A)
Cost (% vs. Last Year Cost): \$1,256.2K (-13.59%)
Allocated Cost (% of Cost): \$1,113.4K (88.63%)

Cost vs. Budget Trend

Cost of top Cost Objects vs. Budget over time - verifies Cost alignment and top contributors.



YTD Cost vs. Budget

Verifies Budget status.

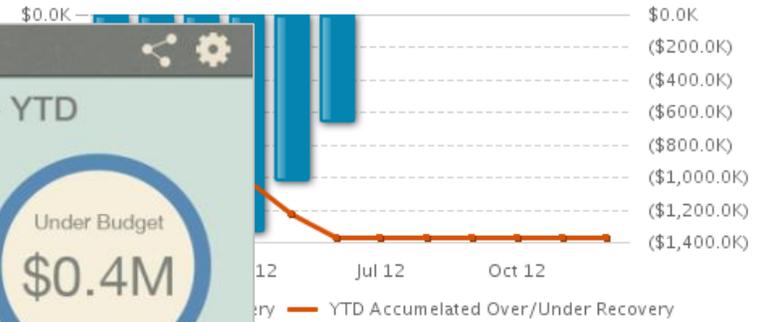


Over/Under Recovery

YTD status for Over/Under charges.

Monthly Over/Under Recovery

YTD Over/Under Recovery



Cost Breakdown by Cost Object

Summary of finance status for Applications Cost Objects.

Cost Object	Cost	Previous Month	YTD Cost
HP Open View	\$130.6K ↓	\$137.3K	\$837.3K
Microsoft	\$175.3K ↓	\$182.5K	\$1,121.0K
Oracle	\$325.6K ↓	\$349.9K	\$2,115.5K
Sage	\$144.7K ↓	\$153.7K	\$927.9K
Salesforce.com	\$133.5K ↓	\$144.3K	\$853.5K
SAP	\$232.0K ↓	\$252.4K	\$1,510.8K
Siebel	\$114.5K ↓	\$120.7K	\$735.5K
Total	\$1,256.2K	\$1,340.9K	

vmware ITBM Companion

Total Cost: Actual vs. Budget - YTD

IT Budget

\$2.2M

Under Budget

\$0.4M

- Cost / Budget
- Over / Under Recovery
- IT Accounts
- Business Services
- Consumers
- Cost Centres
- Year to Date
- Last 12 Months
- Current Month
- Current Quarter

Client Computing

Over \$25K / 7%

Applications

Under \$43K / 16%

IT Overhead

Over \$145K / 34%

Email

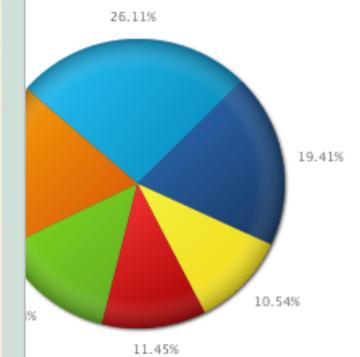
Under \$18K / 13%

Helpdesk

Under \$35K / 32%

by Cost Object

their contribution to the total Cost.



Enhanced Business Management

- Understand Fully Burdened Costs
 - Based on vendor data and industry averages

- Simplify Showback Setup
 - Auto Populate vCAC Cost Profiles



Server Hardware	357,000	
Storage	389,600	
OS Licensing	48,260	
Maintenance	162,334	
Labor	243,500	
Network	292,200	
Facilities	97,400	
Total Monthly Cost (\$)	1,652,000	

- Compare Private to Public Cloud Offerings



- Enhanced Organizational Reporting
 - Cost and pricing by vCAC tenants, business groups

OVERVIEW | CLOUD COST | OPERATIONAL ANALYSIS | DEMAND ANALYSIS | CLOUD COMPARISON | PUBLIC CLOUD REPORTS S

vCenter Server | vCloud Director | vCloud Automation Center | Public Cloud VMs

Export Clear Filters Search Vms

VM Name	Business Group Name	Blueprint Name	Tenant Name	Owner	vCPU	Total Monthly Cost	Total Monthly Price
Amar-251-07	AmarBG	BP-Amar-251-1	QETenant	fritz@coke.vmware.com		\$49.40	\$162.05
						\$0.00	\$0.00
						\$0.00	\$0.00

er NDA ONLY

Cloud Business Customer Success

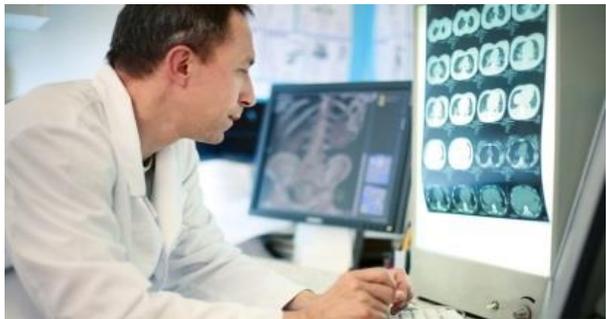


Global Cosmetics Firm
with 25,000+ employees

“Now, when we tell our business units how much IT will cost, the numbers are accurate and in the context of the business. We can answer specific questions about what the business units are paying for and why services cost what they do.”

VMware IT Business Management has given the IT team tremendous visibility from a process and operational perspective...making better decisions has been a natural outcome of increased visibility.”

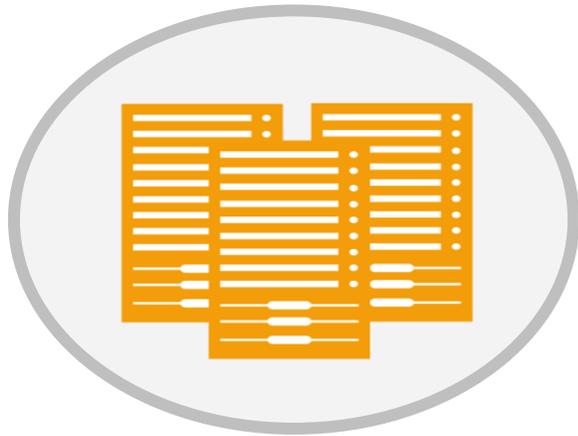
— Executive Director of IT



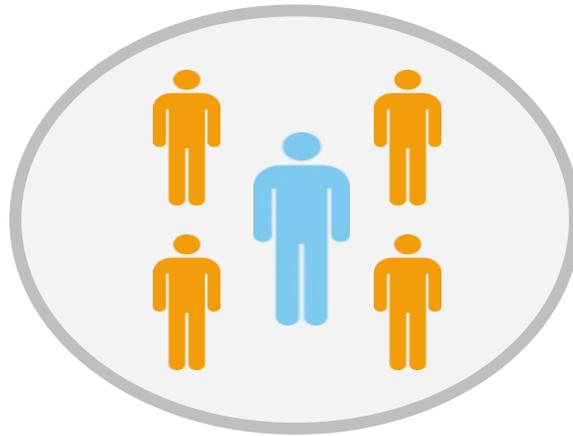
Healthcare Technology Provider with
18,000 customers

- Saved £1million in IT costs
- Automatically processed more than 500,000 cost items a month
- Provided customers with complete visibility and control on their IT spending
- Shift to proactive cost control rather than a plan and budget approach

Partnering for Your Operations Transformation



**Build on your existing
IT investments:**
Software-Defined
Data Center



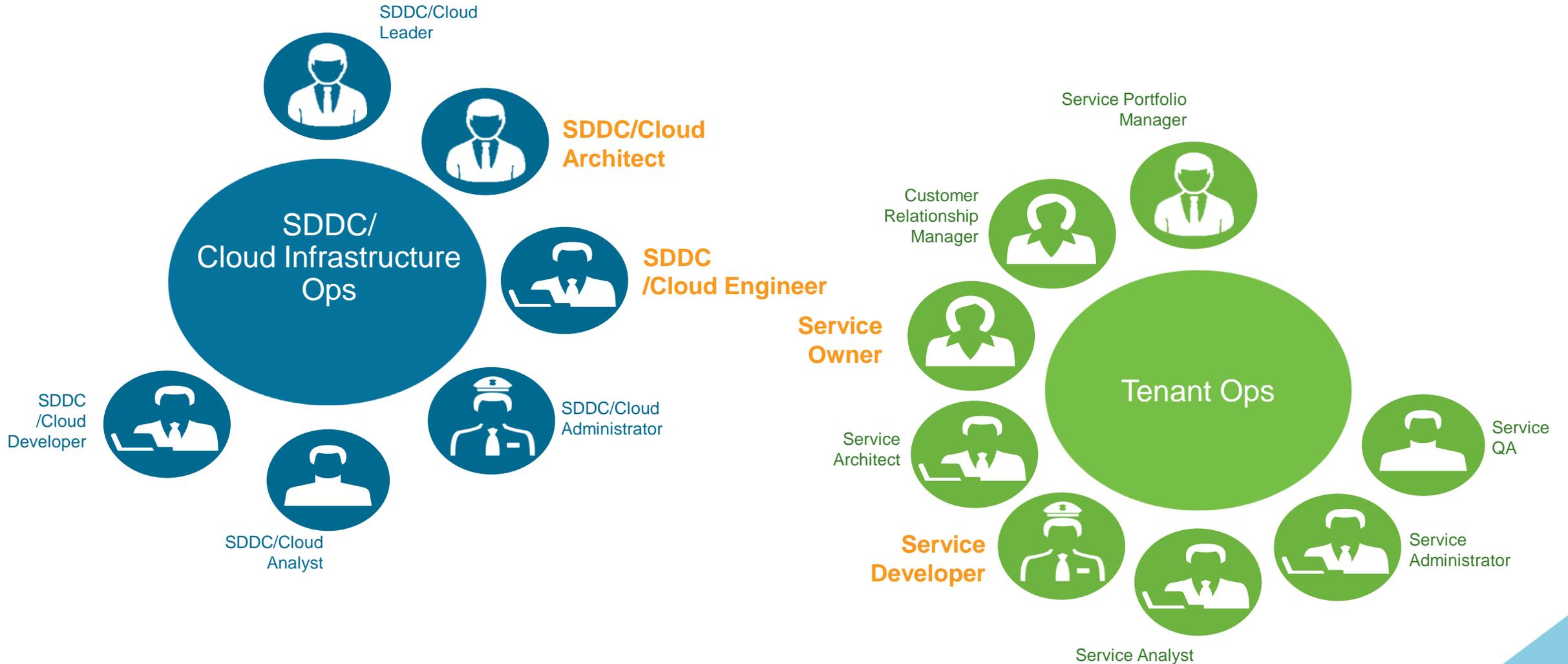
**Build on your
existing teams:**
Skills development, process change, IT
transformation



**Focus transformation on business
outcomes:**
Cost savings, innovation, business
growth

Roles and Skillsets

...both modified and new to support process and tool change



What Do I Get Out of IT as a Service Strategy?



Business User



IT Professional

Self-Service
Portal

Cost
Transparency

Instant Access

Pay for Use

Never hear “No” from IT

Easier to
Deploy

More Control

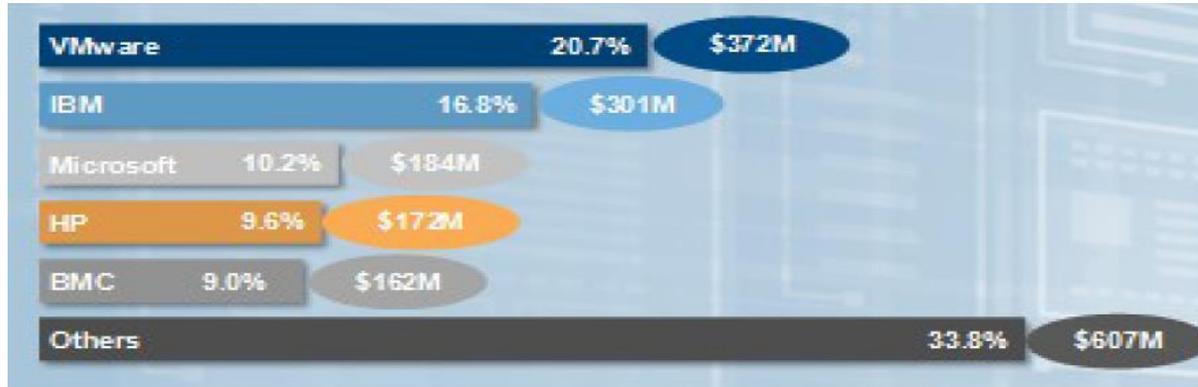
Easier to Manage

Less
Complexity

Never say “No” to the Business

VMware Cloud Management Leadership

1st in Cloud Systems Management Software



IDC 2013
Vendor
Shares
Reports



1st in Data Center Automation Software

“... VMware is in a position to garner a significant portion of the CMP market to support enterprise hybrid clouds...”

Market Guide for Cloud Management Platforms
From Large Software and Emerging Vendors
- **Gartner**

vmware®

451 Research

CLOUD MANAGEMENT AND AUTOMATION

Delivering the Enterprise Cloud Console

Tools for cloud management and automation are poised to become the 'assembly line' for integrated cloud services.

CLOUDSCAPE

1st in four of six Cloud Management and Automation categories:

- Self-service Catalog
- Unified Cloud Management Console
- Cloud Governance
- Metering and Billing

- 451 Research

Proven Value



Thank you!

uStrategize IT!

vRealize IT!