



# Pulse Comes To You 2012

Business Without **LIMITS**



**Cloud**

Rethink IT and Reinvent Business  
with **IBM SmartCloud**

# Pulse Comes to You 2012

Business without **LIMITS**

**ASEAN**



## SMARTCloud Foundation

Desmond Koh

Cloud Computing Solution Architect  
Cloud Computing Client Engagement,  
Tivoli, World Wide



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# On today's Smarter Planet, organizations are taking new approaches to optimizing increasingly dynamic business services, processes & relationships



**Build operating  
dexterity**

**Reinvent customer  
relationships**

**Uncover new  
Profit opportunity**



# Cloud enables Innovation and Business Transformation while managing change and complexity

## Enduring relationships

Gain customer insight and use it to improve products & services



## Speed & dexterity

Create new models of self-service and deployment  
For new products & services

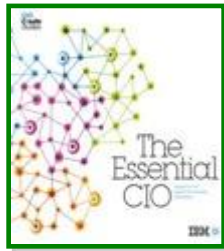
## IT without boundaries

Simplify access to information and services improving outcomes



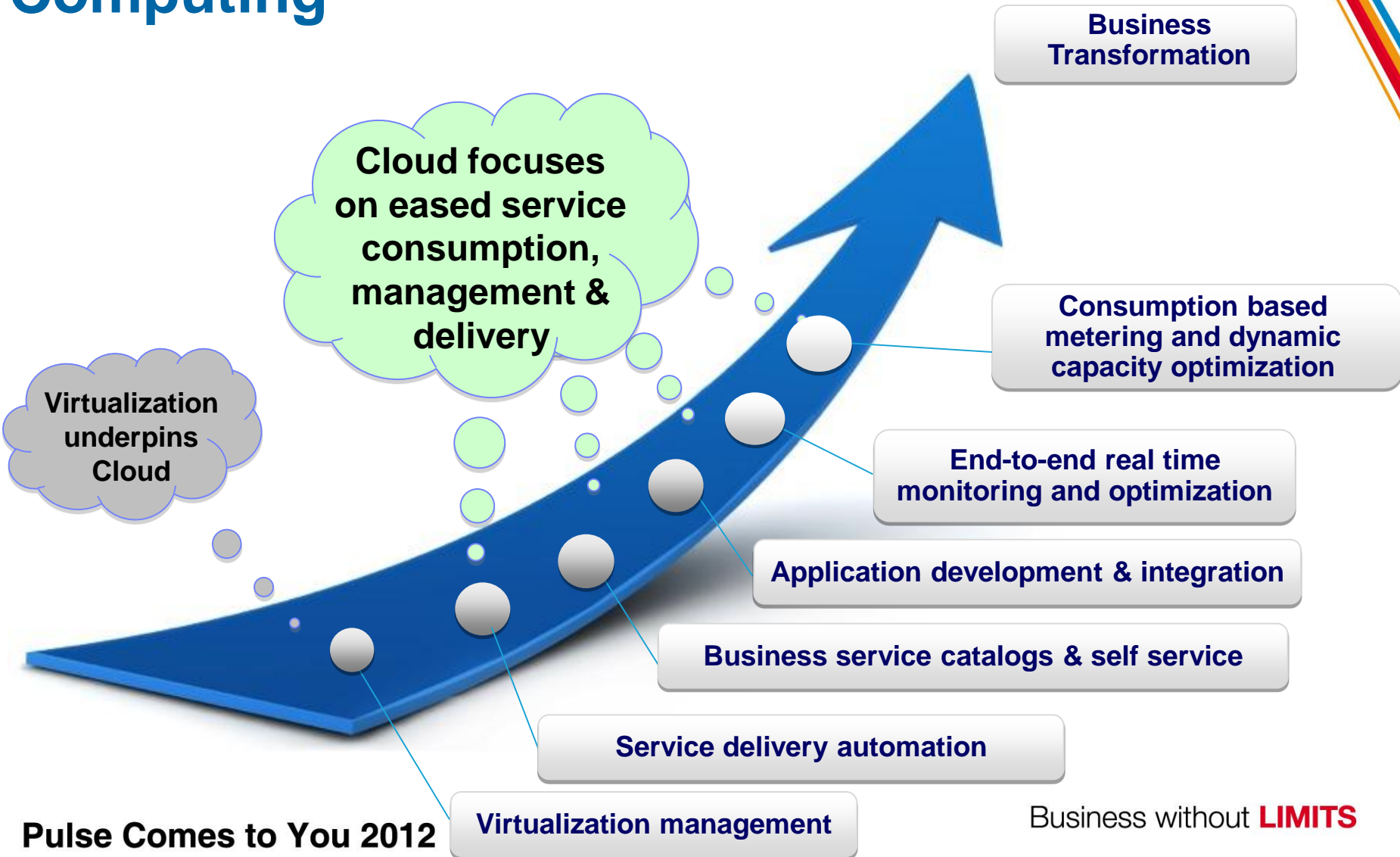
## Value creation

Define and deliver new business value in real time



**68%** ranked Cloud Computing as their most important initiatives for the future

# Organizations are now moving beyond virtualization to higher value stages of Cloud Computing

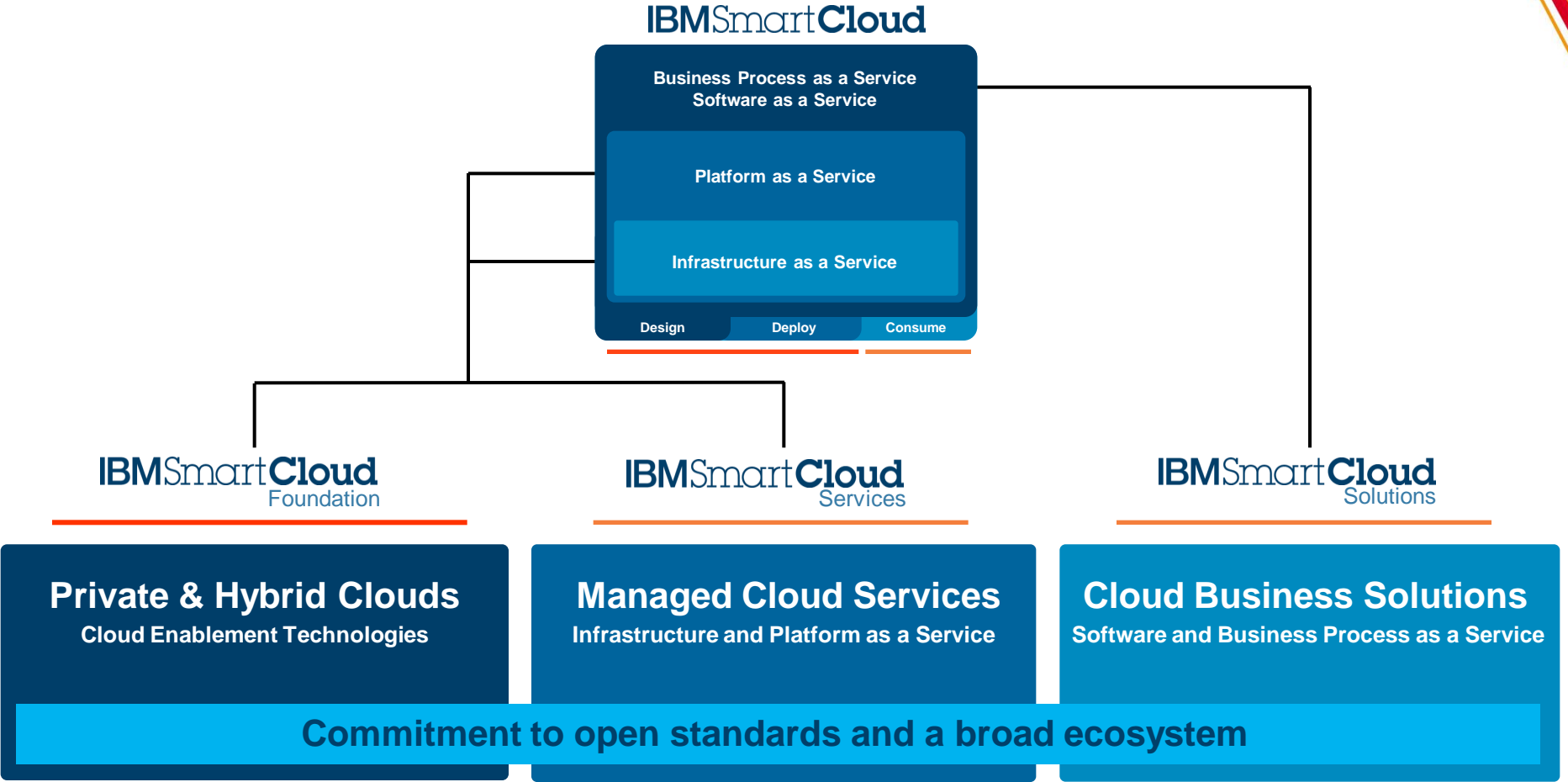


# Creating a cloud environment requires a strong foundation – beginning with the underlying systems – all the way up the stack

- SLAs not enough - Trust but verify!
- Complexity managed from the bottom up
- Innovation at every layer (hdwr/sfwr)
- Choice of platform & performance
- Commitment to Open Standards



# IBM cloud capabilities are built upon a common platform, with open standards, and are flexible to meet your business and IT needs





# With IBM SmartCloud Foundation, we are helping clients build scalable private cloud environments with unparalleled time-to-market, integration and management

- Resilient to the **velocity** of **changing business needs**
- **Choice & flexibility** in hybrid environments
- Enterprise-class, **workload-aware** services
- Built-in **analytics** for improved insight and decision making

## IBM SmartCloud Foundation



# With IBM SmartCloud Foundation, we help companies build scalable private cloud environments

## IBM SmartCloud Foundation

### Platform as a Service Technologies



Lifecycle



Resources



Environments



Applications



Integration

### Infrastructure as a Service Technologies



Infrastructure



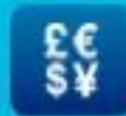
Administration



Performance



Security



Usage

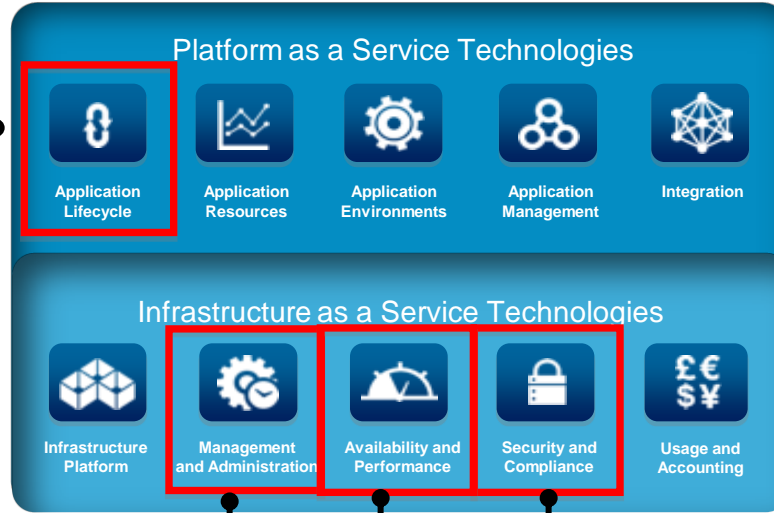
- *Hybrid connectivity*
- *Workload aware deployment*
- *Middleware patterns*
- *Workload management*
- *Scaling and elasticity*
- *Intuitive and simple administration*
- *Enterprise class image management and provisioning*
- *Monitoring and analytics*

# IBM SmartCloud Foundation

## AUTOMATION

- Integrated lifecycle management of cloud services (DevOps)
- Collaborative service development, testing and service provisioning
- Customized workload patterns tied to provisioning engine

## IBM SmartCloud Foundation



**NEW!**

- IBM SmartCloud Control Desk
- IBM SmartCloud Storage Continuous Delivery
- IBM SmartCloud Virtual Storage Center

**Updated**

- IBM SmartCloud Provisioning
- IBM SmartCloud Monitoring
- IBM SmartCloud Application Performance Manager
- IBM SmartCloud Workload Automation

## CONTROL

- Simplified administration enabling rapid, scalable provisioning while controlling image sprawl
- Reduce service disruptions with integrating service desk, change & maintenance management
- Lower costs and improve overall performance by virtualizing and better controlling storage resources

## VISIBILITY

- Improved visibility into the performance of cloud resources and services optimizing usage & QoS
- Health analytics for capacity planning and workload placement improving utilization
- Secure the Cloud by enforcing policy-based access controls, including from mobile devices

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## Accelerate application delivery with purpose-built services

- Workload patterns
- Scalable, elastic runtimes
- Virtual applications
- Virtual systems

### Simplify cloud application delivery with shared services

- Databases, data streams
- Message routing

### Collaborative application development for predictive and error-free deployment

- Deployment planning & automation
- Change & config management
- Requirements management
- Design & development
- Quality management

### Improve utilization, cost and performance of server, storage and networking assets

- Unified server, storage and network mgmnt
- Virtual machine mobility and management
- Energy consumption monitoring & mgmnt
- Workload optimized platforms

### Command center for flexible, automated cloud service delivery

- Resource orchestration and management
- Image lifecycle management
- Service Catalogue
- Provisioning

### Optimize the deployment and management of 3<sup>rd</sup> party and in-house applications

- Workload patterns for 3<sup>rd</sup> party applications

### Manage and integrate traditional, private and public cloud services

- Application & Data Integration
- Hybrid public & private clouds

### Understand cloud service and resource usage, managing against financial metrics

- Usage metering
- Accounting
- Payments
- Billing

### Protect cloud services and data against threats, maintain compliance to mandates

- Security Information & Event Management
- Access & Identity Management
- Intrusion Prevention

### Holistically see and understand quality of service metrics and continuously improve

- Monitoring & Analytics
- Event management
- Backup & Recovery
- High Availability





## Accelerate application delivery with purpose-built services

- IBM PureApplication System
- IBM Workload Deployer
- IBM WebSphere Virtual Enterprise
- IBM WebSphere Portal Hypervisor
- IBM WebSphere Application Server Hypervisor
- IBM WebSphere Message Broker Hypervisor
- IBM WebSphere Process Server Hypervisor
- IBM WebSphere Business Monitor Hypervisor
- IBM Lotus Web Content Mgmt Hypervisor
- IBM Transactional Database Pattern for Cloud
- IBM Data Mart Pattern for Cloud

## Simplify cloud application delivery with shared services

- IBM DB2 Hypervisor Edition

## Collaborative application development for predictive and error-free deployment

- Rational Automation Framework
- Rational Software Architect Deployment Planning & Automation
- IBM SmartCloud Continuous Delivery / DevOps

## Improve utilization, cost and performance of server, storage and networking assets

- IBM PureFlex System
- BladeCenter Foundation for Cloud
  - SmartCloud Entry (Starter Kit)
- IBM Server and Storage solutions
- IBM SmartCloud Virtual Storage Center

## Command center for flexible, automated cloud service delivery

- SmartCloud Provisioning (ISAAC)
- TSAM/ISDM/SmartCloud Orchestration
  - Tivoli Provisioning Manager
  - SmartCloud Control Desk
- Tivoli Workload Scheduler for Virtual Data Centers

## Optimize the deployment and management of 3<sup>rd</sup> party and in-house applications

- TBD from 3<sup>rd</sup> parties

## Manage and integrate traditional, private and public cloud services

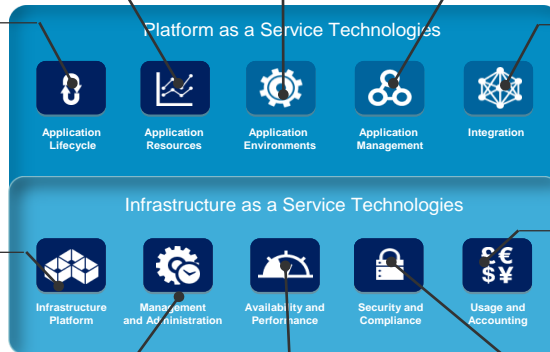
- IBM WebSphere Cast Iron Cloud Integration

## Understand cloud service and resource usage, managing against financial metrics

- Tivoli Usage & Accounting Manager

## Protect cloud services and data against threats, maintain compliance to mandates

- IBM Security Virtual Server Protection
- IBM Professional Security Services



## Holistically see and understand quality of service metrics and continuously improve

- SmartCloud Monitoring (ITM for VE)
- Tivoli System Automation (Distributed)
- Tivoli Storage Manager for Virtual Environments
- SmartCloud Application Performance Management

## Strategy, Design and Implementation Services

- GTS Infrastructure, Security, Network, Design and Strategy Services
- Smart Business Desktop Cloud
- GBS Strategy, Implementation, Appl Dev't and Testing Services
- \* Smart Business Storage

# The journey to cloud consists of key steps to drive a set of capabilities that transform an IT infrastructure

**1** **Integrate**  
Build an efficient IT infrastructure

**2** **Automate**  
Improve speed and dexterity

**3** **Orchestrate**  
Deliver IT without boundaries

- Consolidate and virtualize servers, storage, and networking
- Streamline systems management

- Deliver self-service provisioning
- Automate IT service deployment
- Simplify administration

- Increase agility by managing multi-tenant environments
- Speed innovation through seamless orchestration

# Working with clients during all aspects of their cloud journey

**1** **Integrate**  
Build an efficient IT infrastructure

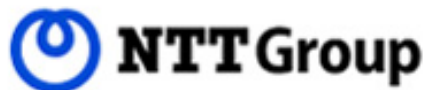
- Consolidating down to 5 datacenters from 200
- 70% reduction in annual licensing
- 30% reduction in TCO

**2** **Automate**  
Improve speed and dexterity

- Improved new application time-to-market by 35x (3-4 months down to 2-3 days)
- Increased hardware utilization by 50%

**3** **Orchestrate**  
Deliver IT without boundaries

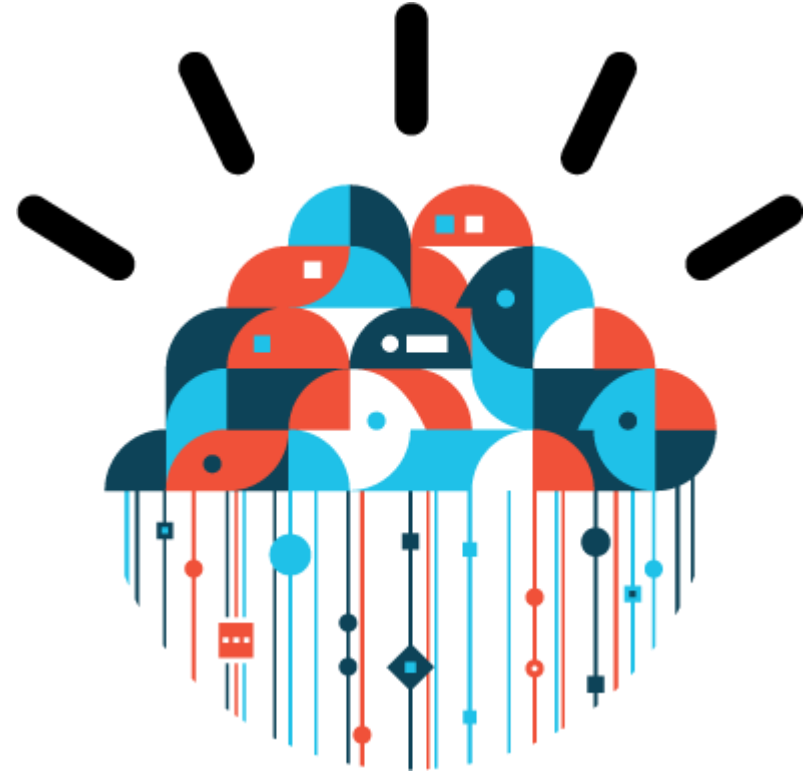
- Reduced from 700 servers to only 16 IBM HX5 servers
- Reduced rack space by 94% from 578 to 32 units
- 97% reduction in energy costs



# The time has come to rethink IT and reinvent business – with IBM SmartCloud

## Ask the fundamental questions:

- Is your organization achieving the levels of innovation required to complete in today's environment?
- Is your organization able to nimbly put lucrative ideas into action?
- Does your organization incorporate the best ideas—even if they come from outside?
- Are you developing internal capabilities that would be better handled by others?



Go to [ibm.com/smartcloud](http://ibm.com/smartcloud) for more information.

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**Thank You**





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