



# Cloud Computing

*The Importance of Integrated Service Management*

IBM Software

# PCTY2010

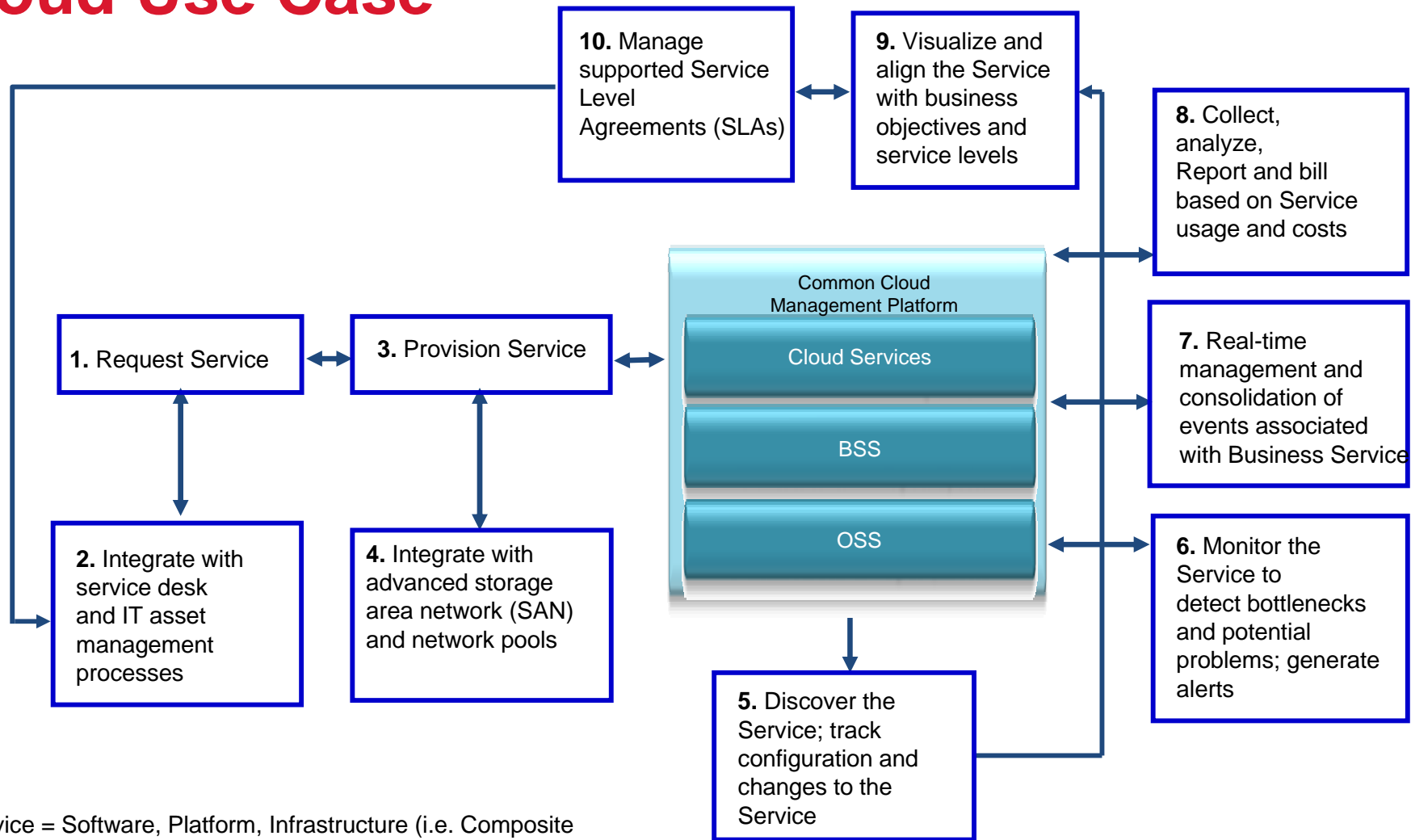


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**Optimising the World's Infrastructure**

**[27 May 2009 London, United Kingdom]**

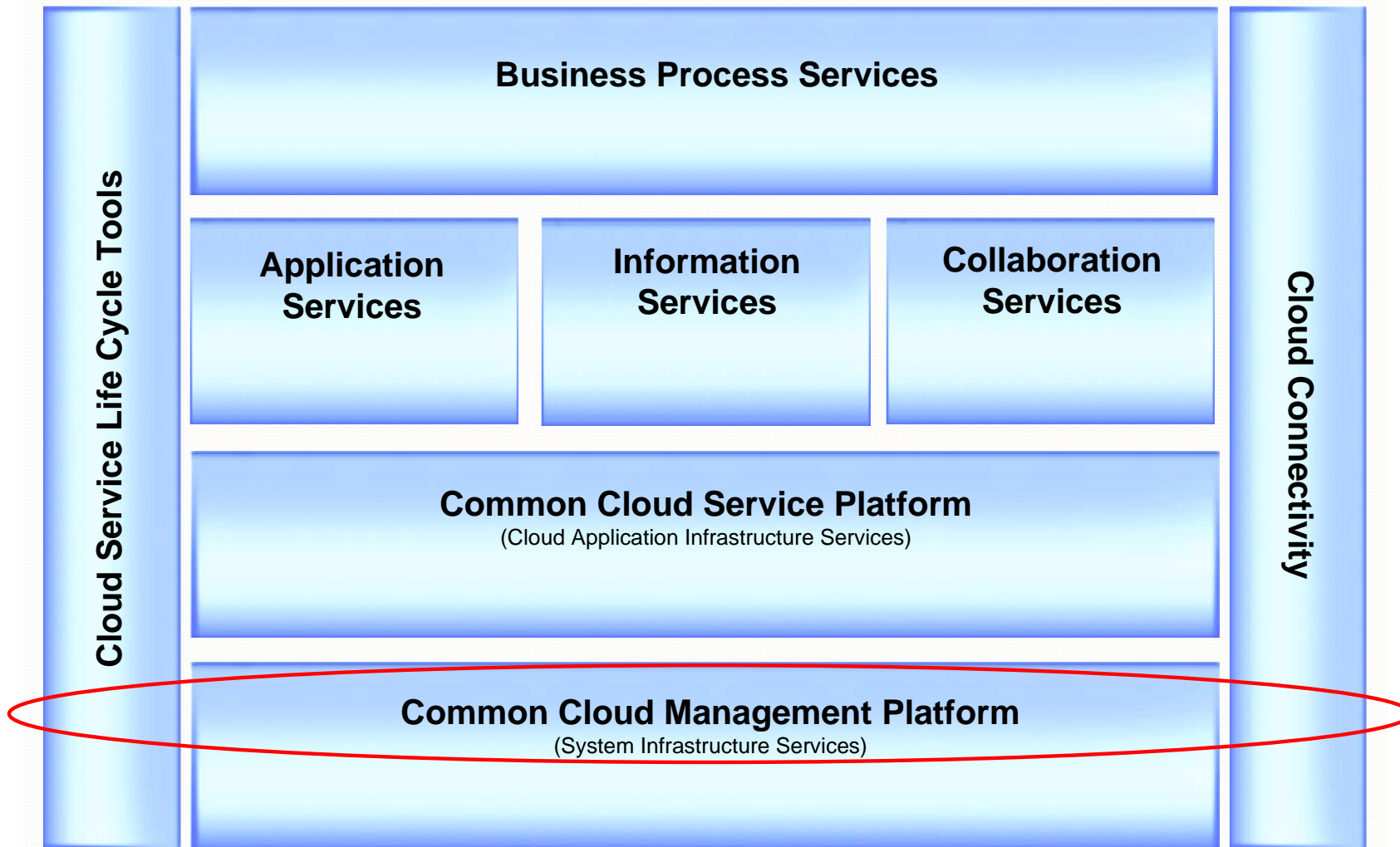
# Why is Service Management Important: Typical Cloud Use Case



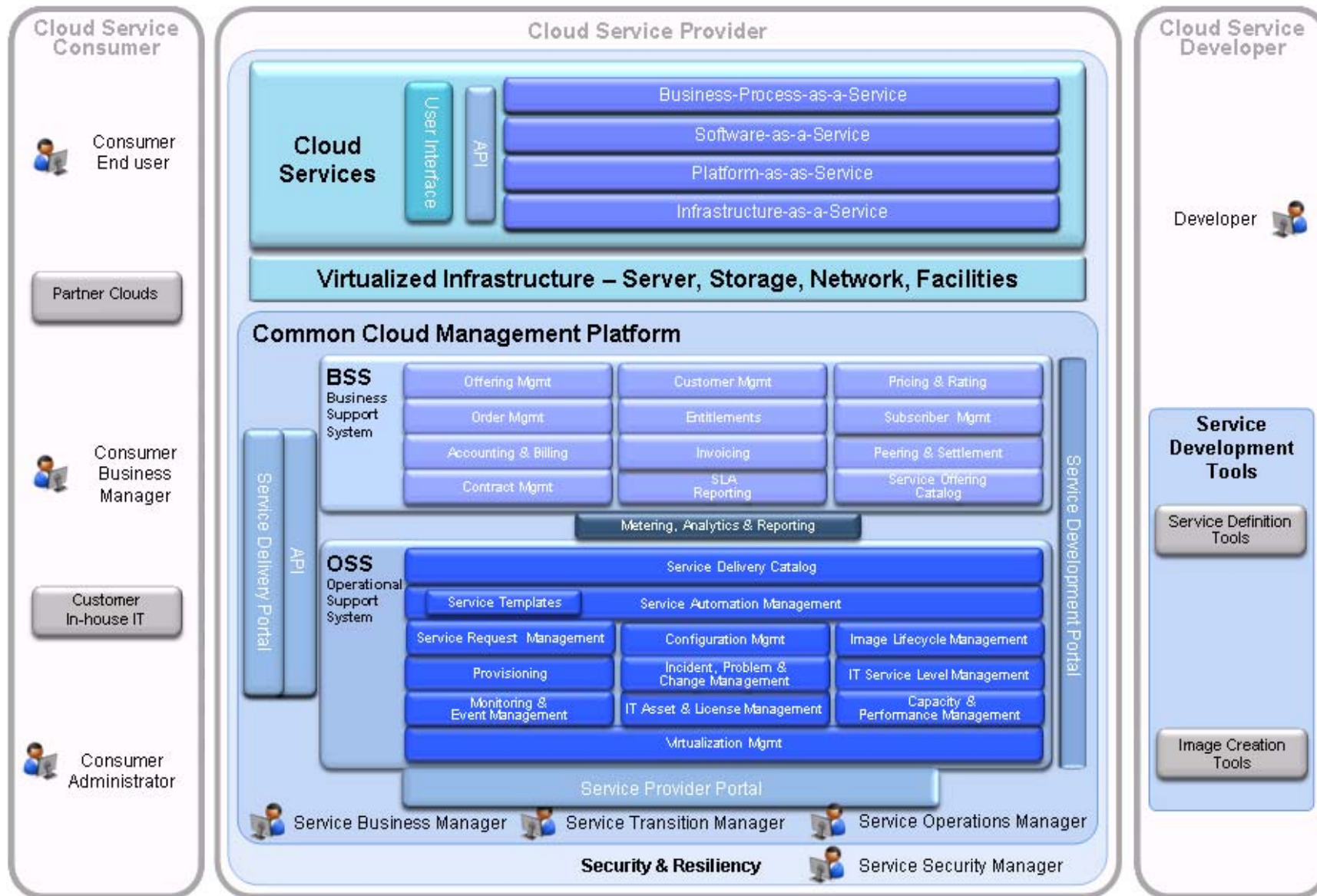
Service = Software, Platform, Infrastructure (i.e. Composite Application, Physical / Virtual OS, Middleware, Network, Storage)

Not in all cases will all steps exist in a client engagement

# Cloud Platforms and Services

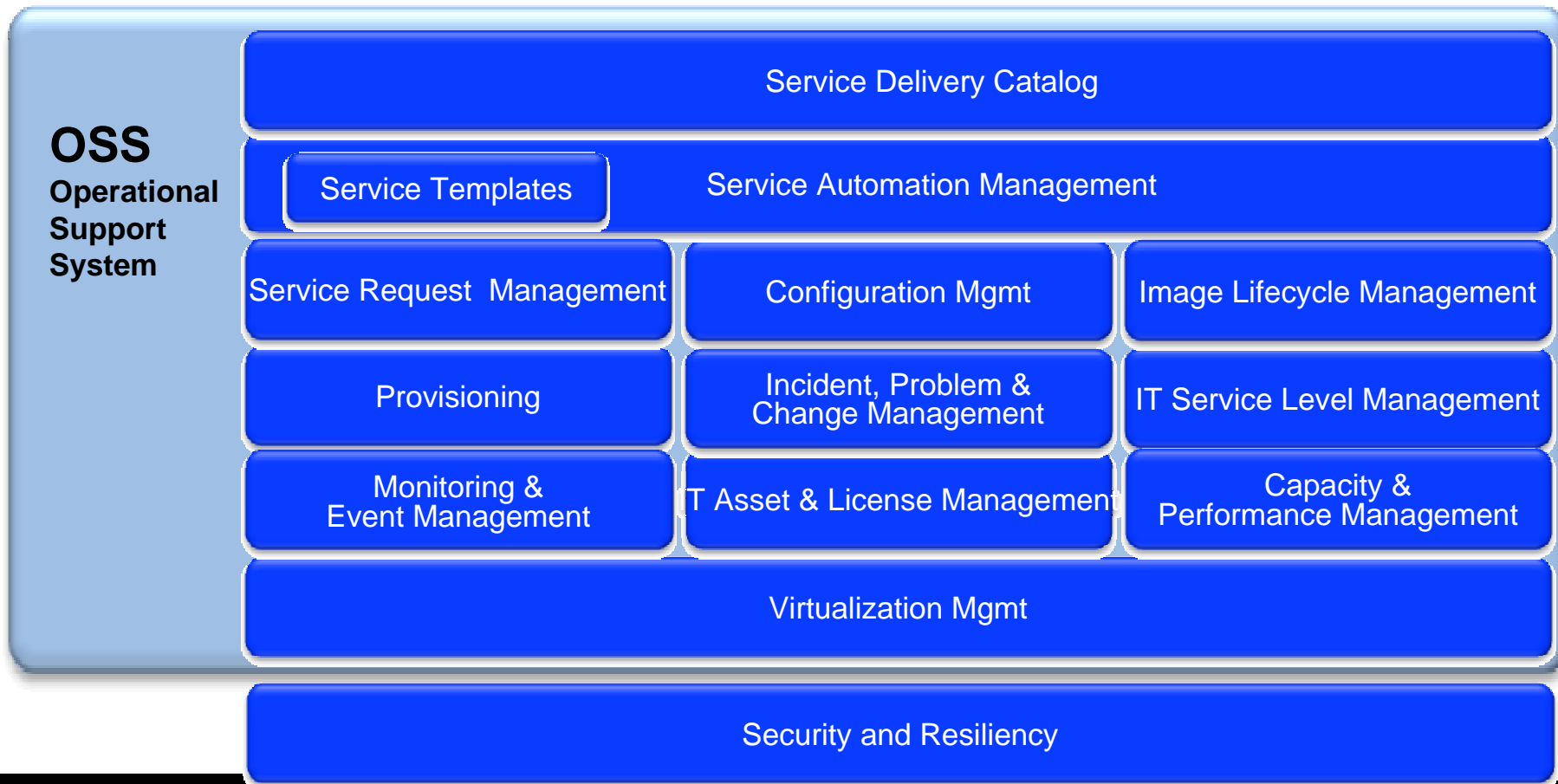


# Common Cloud Management Platform Reference Architecture

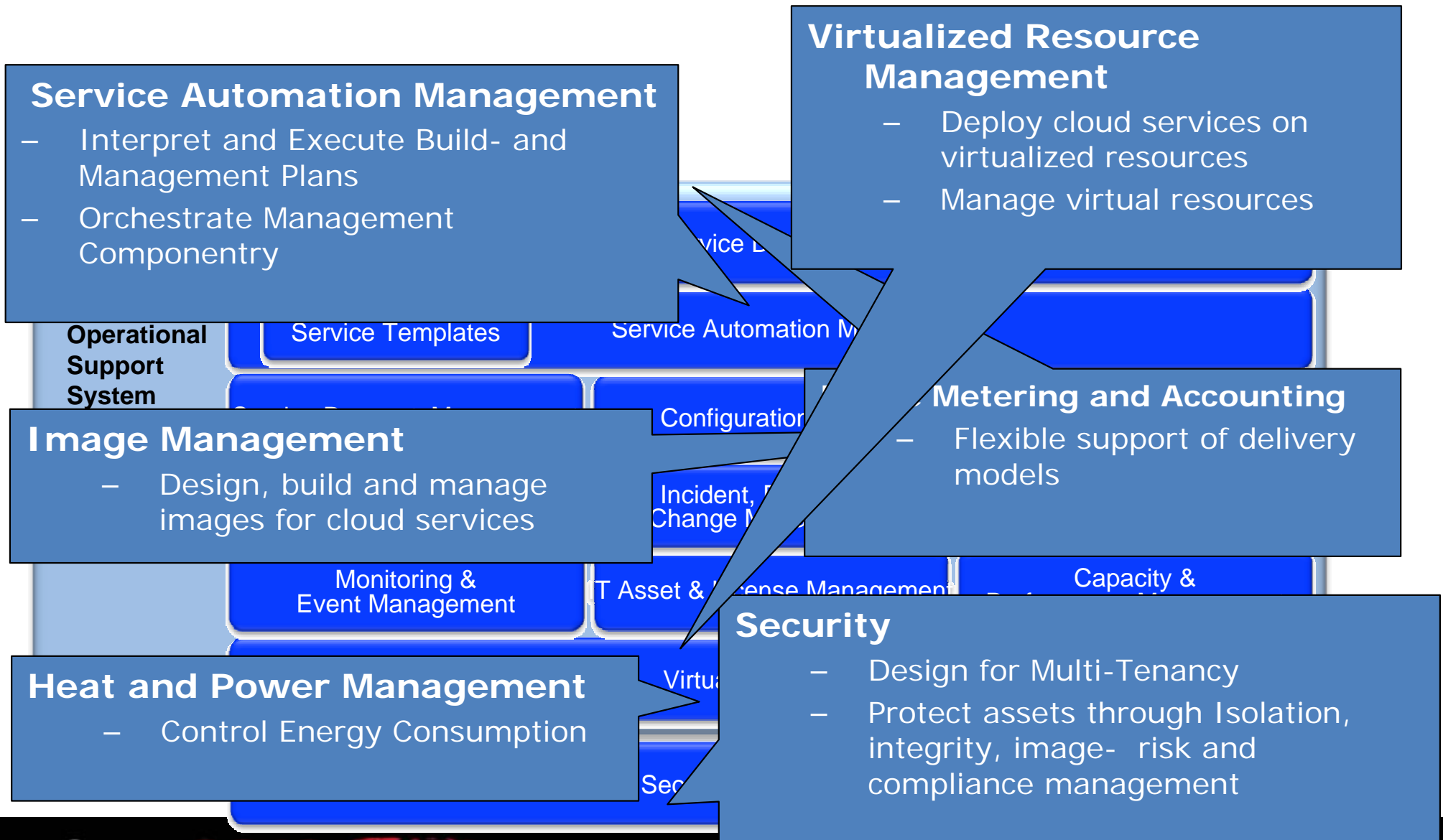


# Core operational support capabilities required Cloud platforms

- An operational support system is required to deliver cloud services
- Key capabilities are provided below and need to work together as a basis for customer cloud service delivery

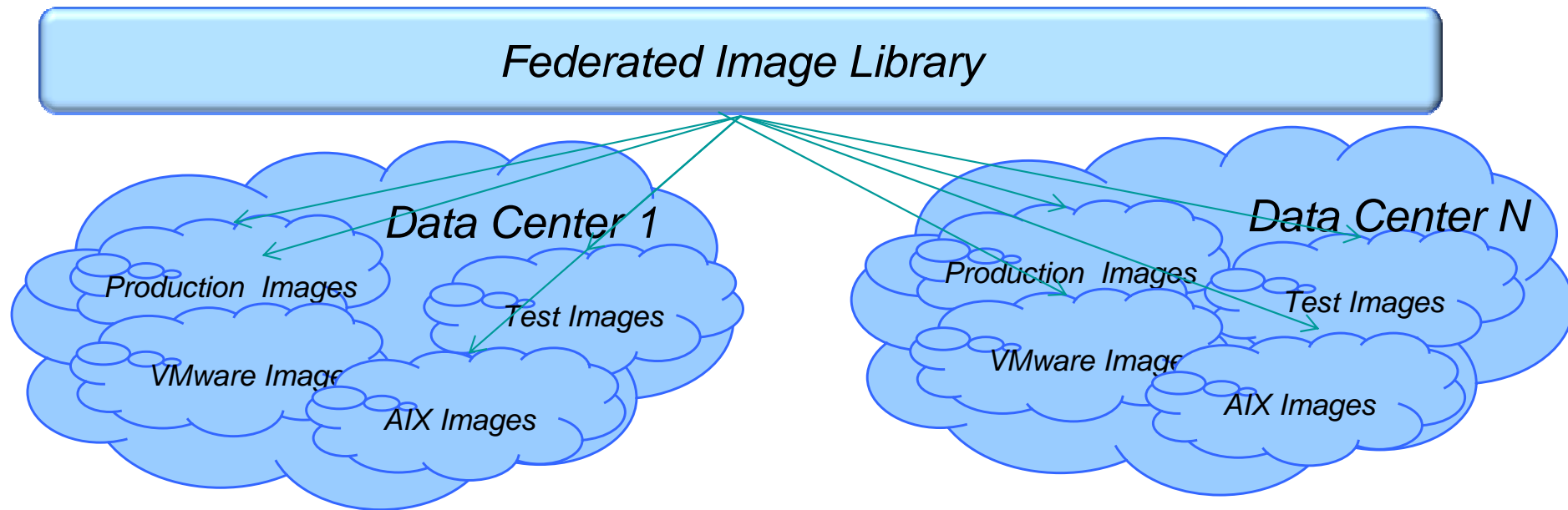


# Service Management Concerns in Cloud Computing

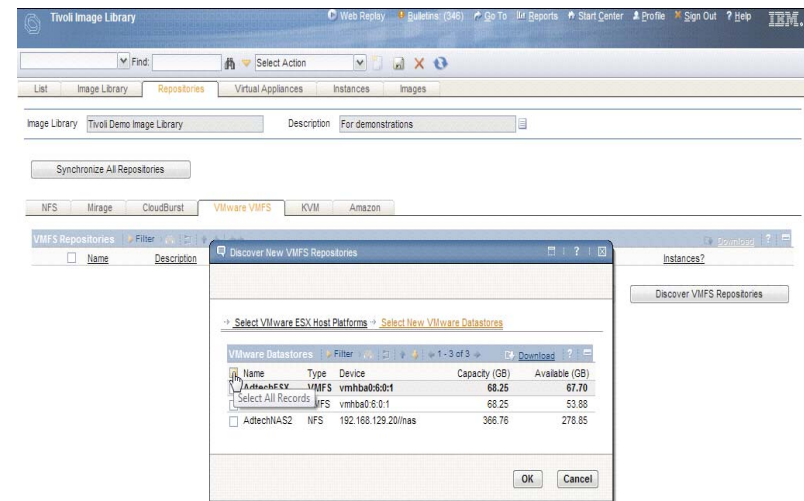




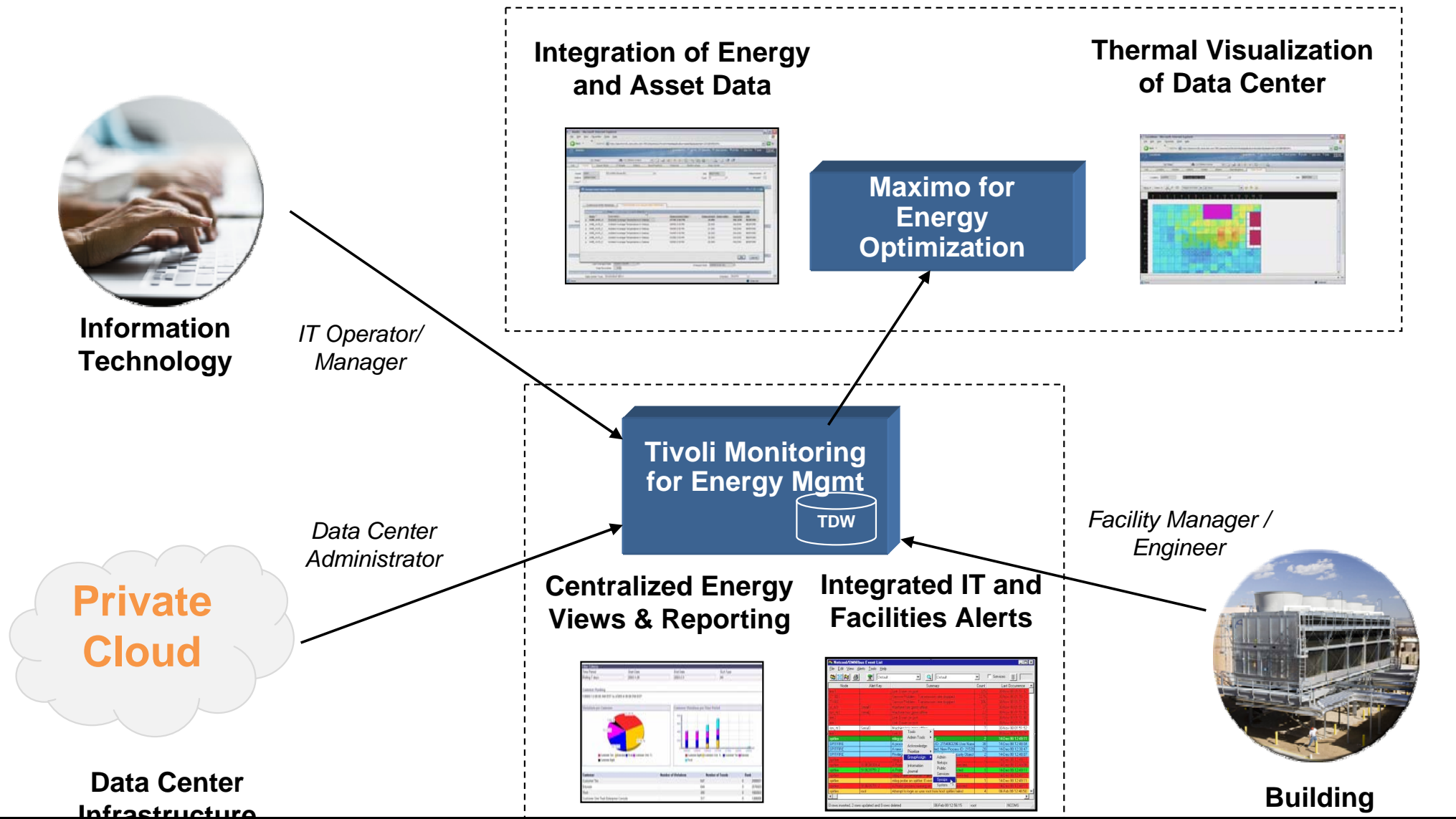
# Image Lifecycle Management



- Federates Master and Instance images wherever they are in the datacenter
- Tracks versions, owners, deployments
- Tracks content of images using OVF
- Tracks provenance (Parent/child)
- Manages replication
- Federates IBM and non-IBM platform repositories ( e.g. IBM Systems Director VMControl)



# Cloud Heat & Power Management





# Cloud Metering & Accounting

- Automated tracking of CPU, memory and storage resource allocation within TSAM.
- Inbuilt integration in TSAM to automatically interface transactions to TUAM.
- Definition of rates and costs of resources allowing full cost reporting of resources used.
- Flexible reporting engine with 40 template reports.
- Granular reporting allowing drill down, and detailed data filtering.
- Usage reporting driving change in behaviour to match resources to business needs (and release unused systems back into the resource pool).
- Providing the basis for chargeback implementation or invoicing in the future.

Usage and Accounting Manager

Logout Reports Spreadsheets Favorites Help Home

### Reports

- ▣ Invoices
  - Invoice by Account Level
  - Invoice by Account Level - Graph
  - Alternate Invoice
  - Run Total Invoice with Shifts
  - Run Total Invoice
  - Run Total Percent
  - Run Total Rate Group Percent
  - Account Total Invoice
  - Invoice with Shifts
  - Invoice with Shifts - Graph
  - Application Cost
- ▣ Account Reports
  - Account Summary YTD
  - Account Summary Daily
  - Account Summary Daily 2
  - Summary Crosstab - Charges
  - Summary Crosstab 2 - Charges
  - Summary Crosstab - Usage
  - Summary Crosstab 2 - Usage
  - Daily
  - Daily
  - Week Invoice
  - Week Invoice Number 1
  - Monthly Date Range: 12/1/2009 to 12/11/2009
  - Monthly
- ▣ Top Usage
- ▣ Variance
- ▣ Trend

The Big Time Company  
Corporate Headquarters  
3013 Douglas Blvd.  
Roseville, CA 95661  
United States of America

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**Account Bertrand**

	Units	Rate	Charge
TSAM - Server hours	51.00	0.05000000	2.55
TSAM - CPU hours	105.00	0.10000000	10.50
TSAM - Memory (hrs) for VMWare	8.58	0.01000000	0.09
TSAM - Memory (hrs) for system p.Lpar	98.30	0.05000000	4.92
<b>TSAM - Capacity for Cloud Services</b>			<b>18.06</b>

Total for: Account Bertrand 18.06

# IBM Security Framework & Cloud Computing

Authentication and role-based access control

- Federated Identity including single sign-on

Isolation Management

- Server, Storage and Network

Security for Image Management

- Security Metadata, Access Control, Authorization

Integrity management

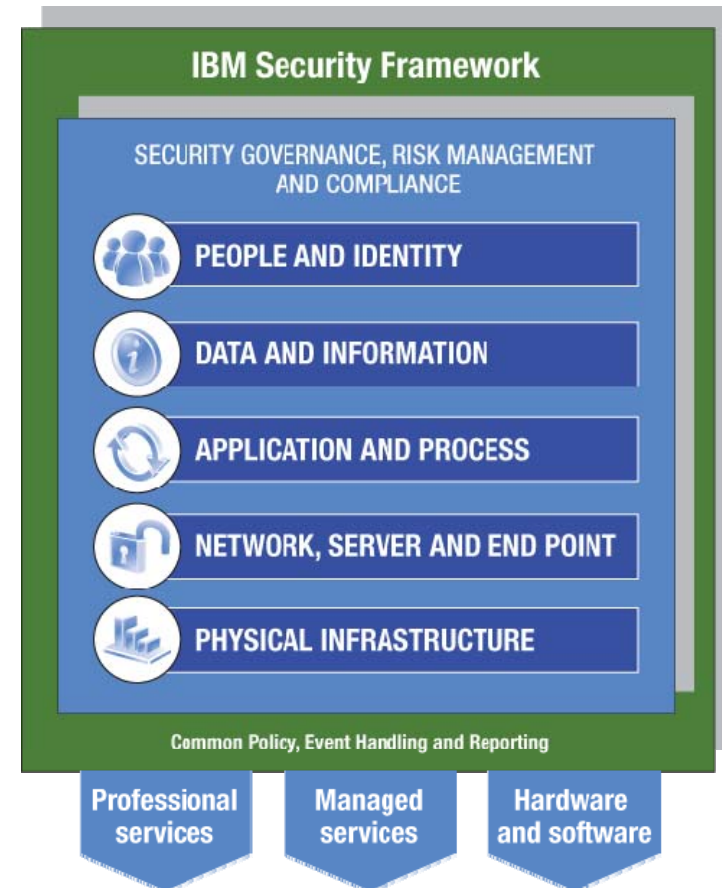
- Virtual Image integrity

Risk and Compliance

- Auditing and Configuration Management
- Enterprise-level Regulatory Compliance

Policy Management

Threat Management



# Optimizing Cloud Management Platform deployments

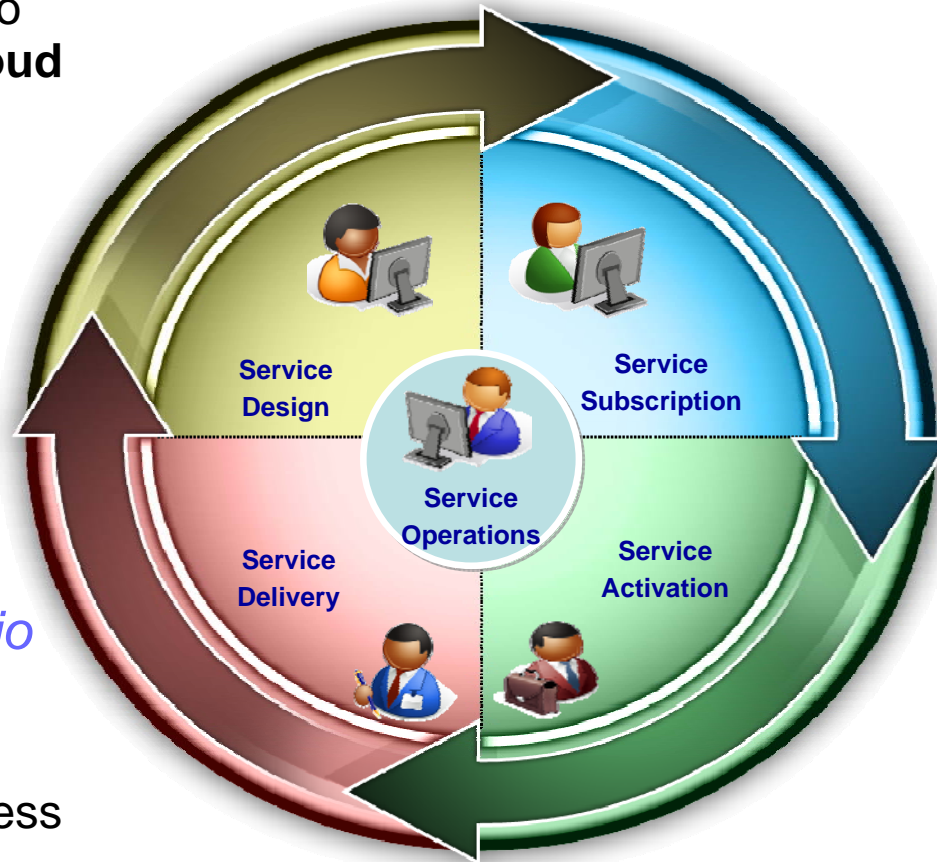
For those clients who wish to leverage a service management portfolio to build a **customized cloud solution**

*Tivoli Service Automation Manger (introduced in November 2008)*

+

*IBM Service Management Portfolio*

Powered by Tivoli process automation engine and Service Management products.



For those clients who wish to rapidly deploy a **turn-key environment** with little to no customization

*IBM CloudBurst (introduced in May 2009)*

A purpose built service delivery platform that leverages the same software components in the Tivoli Service Automation Manager as well as integrated purpose built workflows

# Case Study: SK Telecom

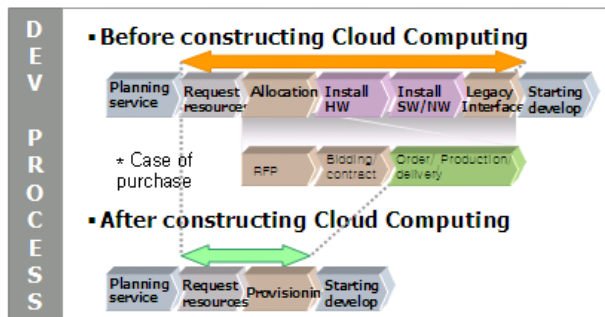


## Business Background

- SK Telecom is a unit of SK Holdings, one of South Korea's largest *chaebol* conglomerates
- SK Telecom has #1 market share in the domestic wireless market, and #2 market share in the domestic fixed line market
- SK Telecom is perceived as a technology leader in South Korea

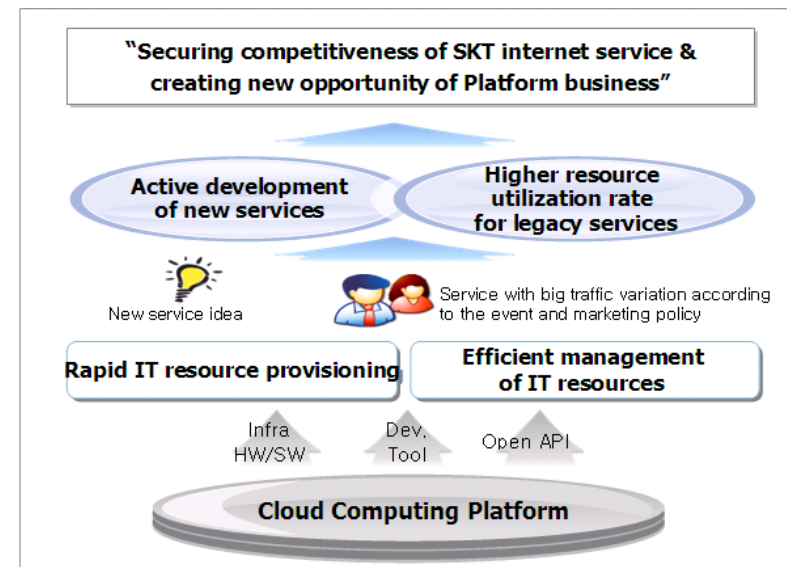
## Cloud Business Benefit

- Reduction of new service development time, achieving faster time to market
- Efficient management of resources, delivering reduction in capex & opex



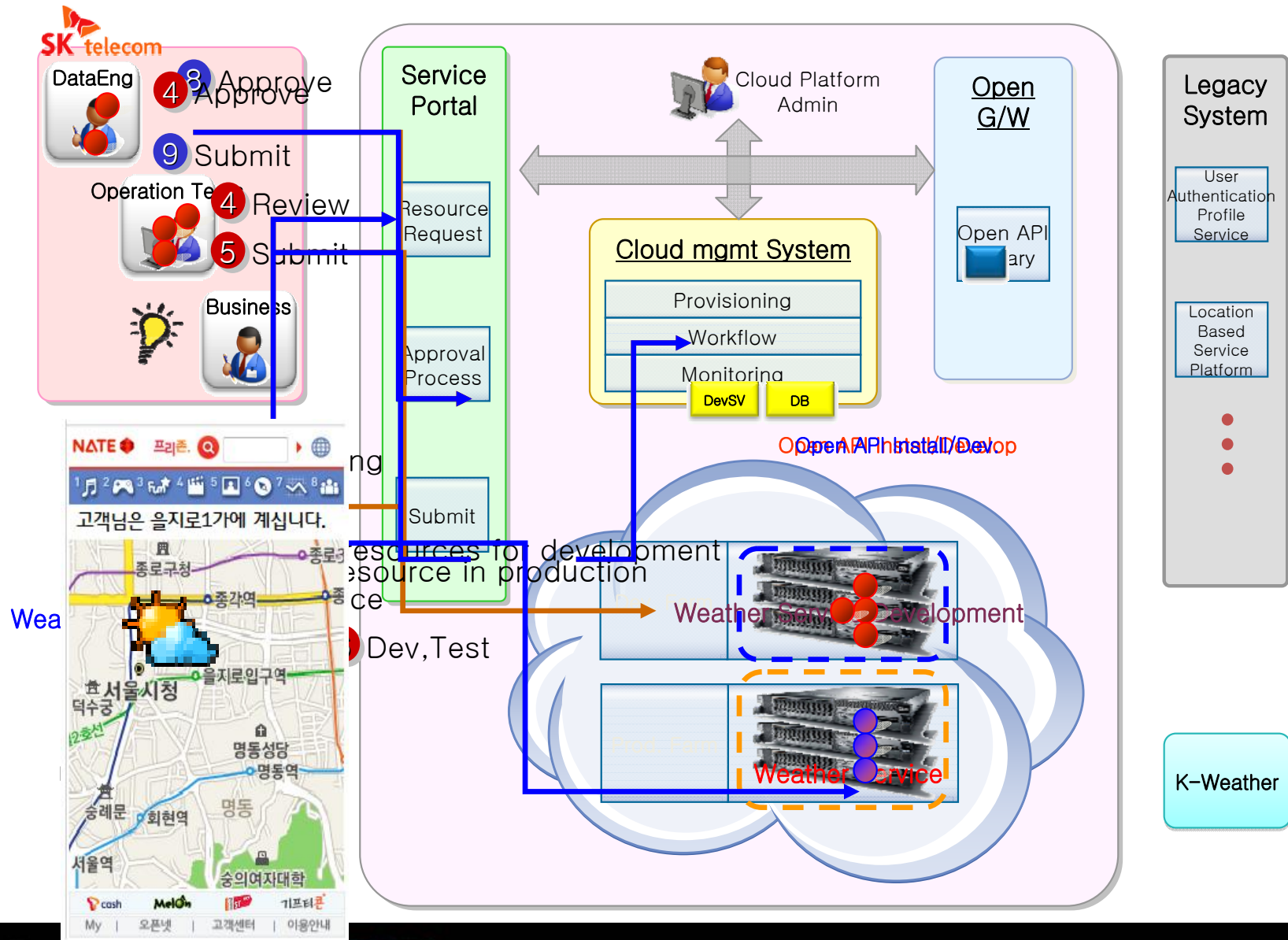
## Solution Overview

- Korean language portal based on API extensions to Tivoli Service Automation Manager
- Tivoli Provisioning Manager-based Development Platform-as-a-Service offering to allow Business Partners to quickly test, develop, and publish new end-user focused WAP services available on SK Telecom network
- Service Management-enabled Cloud Delivery platform to run new WAP services in a workload optimized fashion.





# Service Management Integration: SK Telecom



# In Summary...

- Cloud Computing Reference Architecture
  - OSS layer is comprised of key ISM elements
  - Supporting flexible deployment and business models
  - Enabling competitive delivery economics
- Integrated Service Management is essential for a Cloud Management Platform
  - Cloud Service Lifecycle Management
  - Image Management
  - Event Management, Business Service Management
  - Identity, Isolation and Compliance Management
- Enterprise use of Public Clouds will drive Hybrid Management, Security and Integration





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A red silhouette of a world map is positioned to the right of the '2010' part of the main title. The map shows the outlines of the continents in a solid red color.

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