Automation for Cloud

Stuart Holliday – Tivoli UKI Service Management Leader

IBM Software
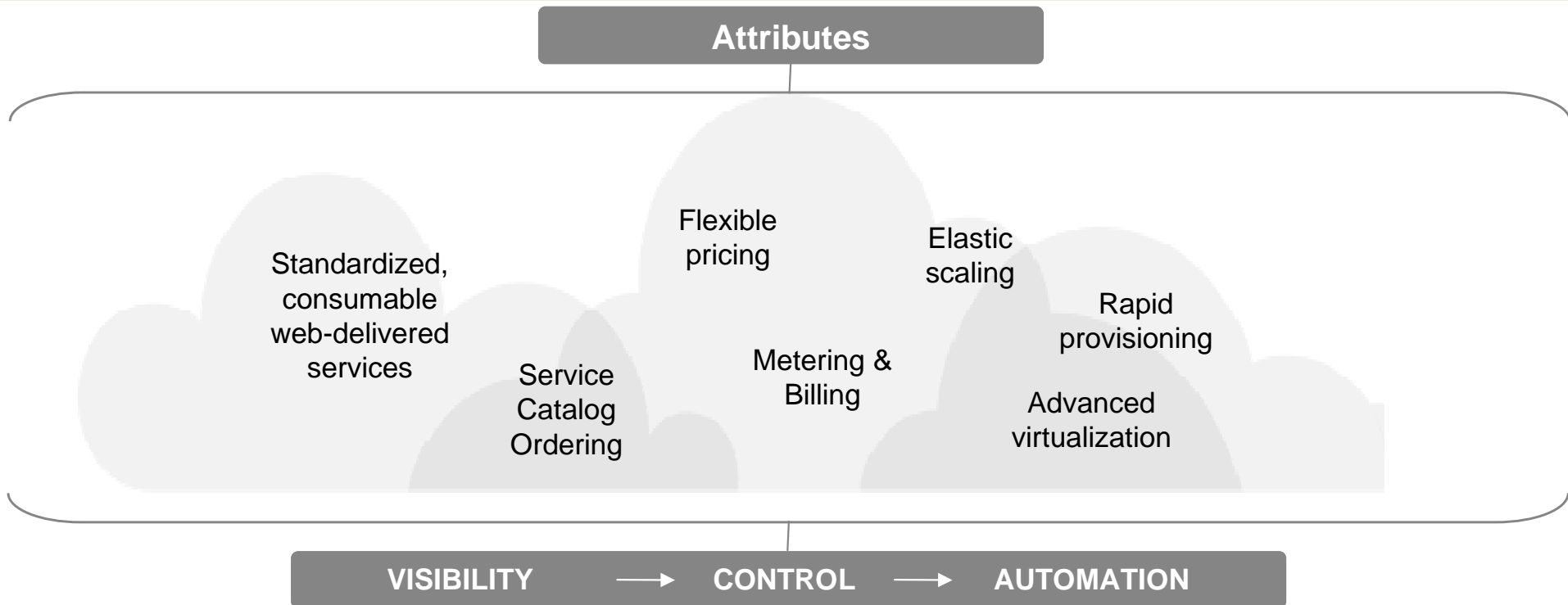
PCTY2010

Pulse Comes to You

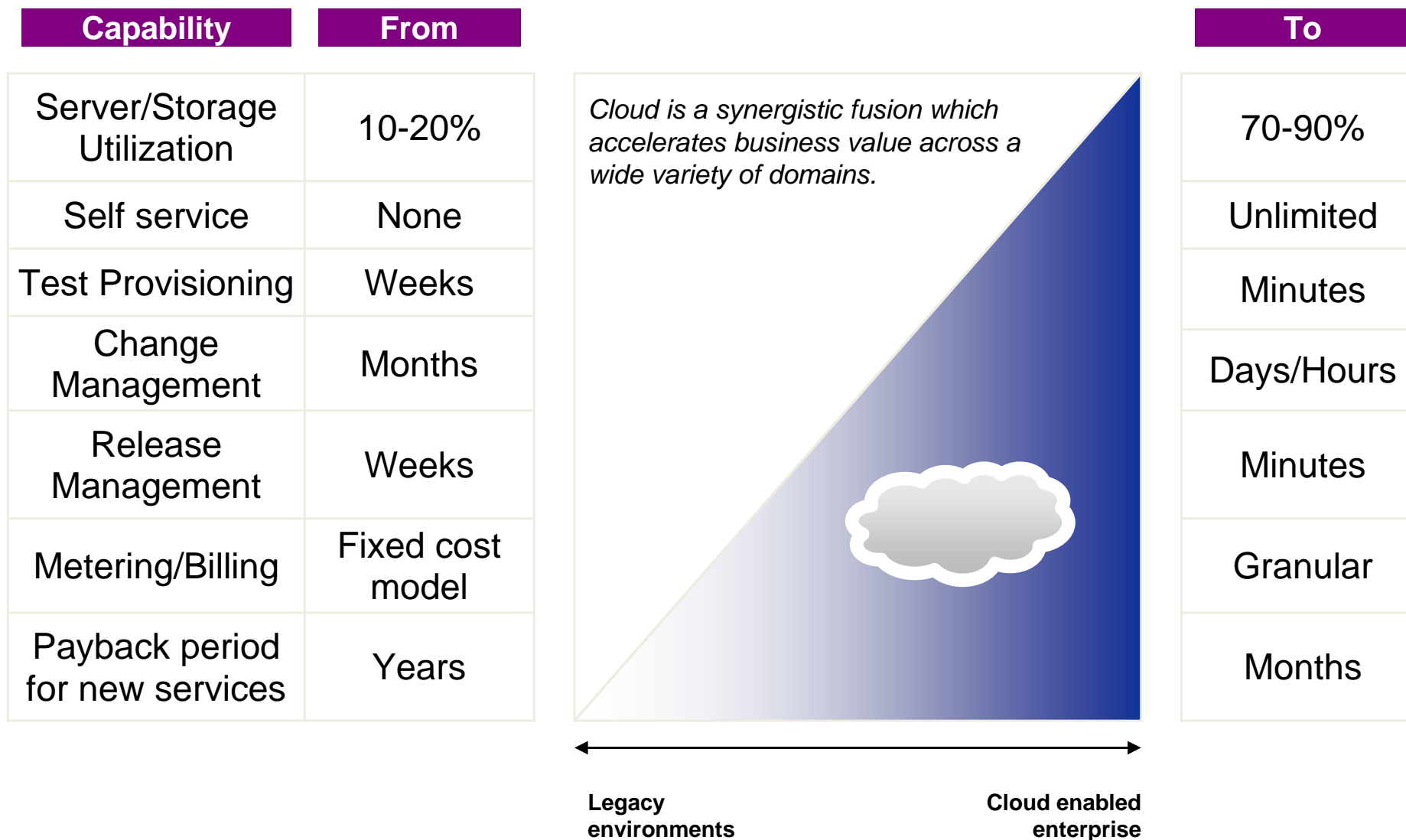**Optimising the World's Infrastructure**
3 November, IBM South Bank

Cloud Computing …

"Cloud" is an emerging consumption and delivery model for many IT-based services, in which the user sees only the service, and has no need to know anything about the technology or implementation

Attributes

Flexible pricing

Elastic scaling

Standardized, consumable web-delivered services

Rapid provisioning

Service Catalog Ordering

Metering & Billing

Advanced virtualization

VISIBILITY → CONTROL → AUTOMATION

....service oriented and service managed

So what's different about Cloud?

Capability	From		To
Server/Storage Utilization	10-20%		70-90%
Self service	None		Unlimited
Test Provisioning	Weeks		Minutes
Change Management	Months		Days/Hours
Release Management	Weeks		Minutes
Metering/Billing	Fixed cost model		Granular
Payback period for new services	Years		Months

Cloud is a synergistic fusion which accelerates business value across a wide variety of domains.

Legacy environments ← → Cloud enabled enterprise

IBM Service Management Delivers…

- ## Visibility
  - The ability to see everything that's going on across the infrastructure

- ## Control
  - The ability to keep the infrastructure in its desired state by enforcing policies

- ## Automation
  - The ability to manage huge and growing infrastructures while controlling cost and quality.
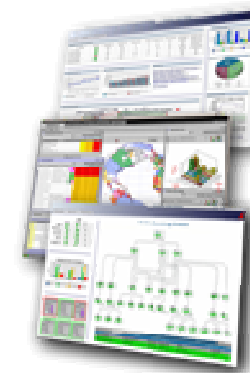
Visibility - *See Your Business*

Challenge

– Business and IT audiences lack the visibility and insight needed to directly support and deliver against business objectives

Solution - Real-time Visualisation

– **Dashboards** at each stage of the service lifecycle leverage existing assets and provide the real-time insight to help manage against business objectives

– **Discovery and Application Mapping** via automated tools to control governance, manage change and populate business service views
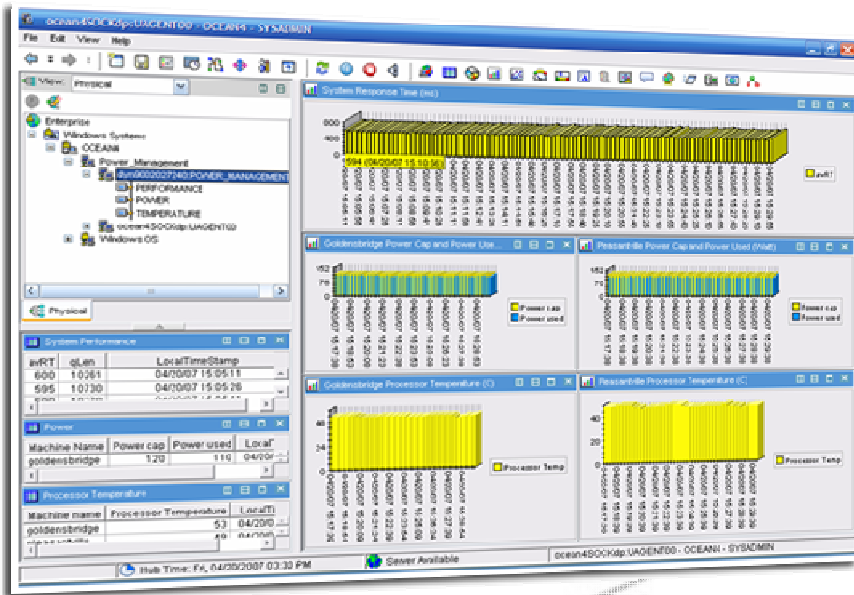
Dependencies, Change, BSM, Compliance, Audit

Industry, LoB, & Executive Dashboards
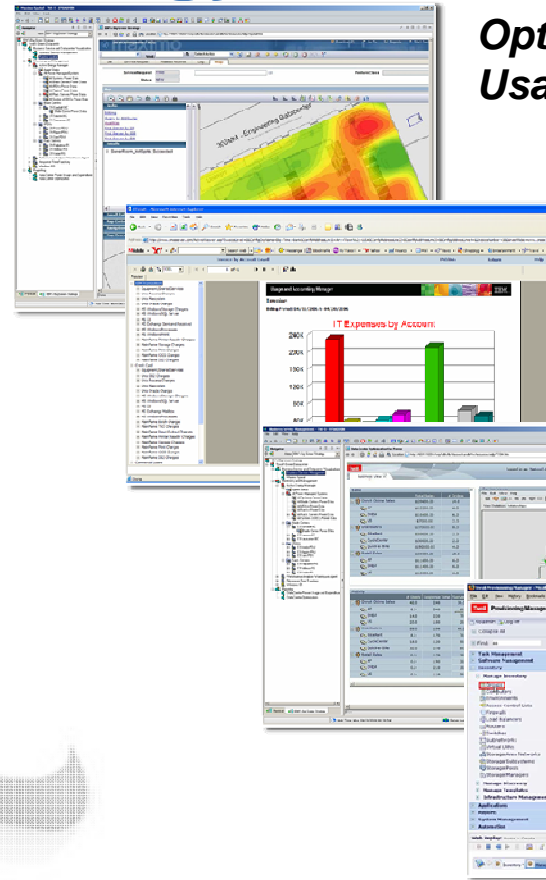
Risk, Security, & Compliance Dashboards
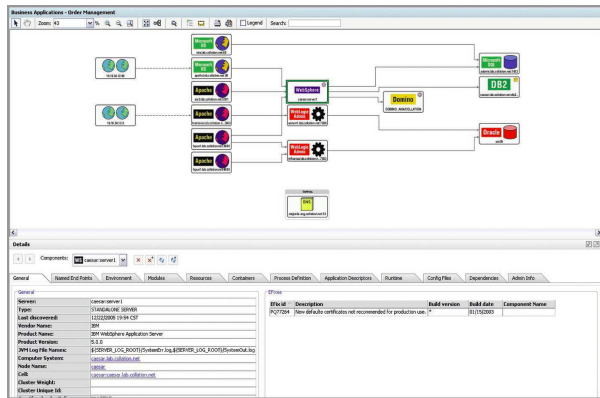
Portfolio and Project Management Dashboards

IBM Service Management Dashboards across the service lifecycle

Service Management Energy Efficiency

Optimize Assets by Energy Usage

Energy Accounting and Chargeback

Green Business Services

Monitoring for Energy Management

Energy Aware Provisioning

Integrated Energy Management

- Single interface for collecting energy data across IT, data center, and facilities assets

Industry Leadership

- Service management capabilities to allow for intelligent *real-time and predictive* energy management decisions while maintaining IT service levels

Control

Manage your Business

Challenge:

*   Business and IT struggle to address compliance needs on time, and help minimize risk and protect the brand

Solution: IBM Service Management solutions

*   Improve governance, maximize control & minimize risks effectively across the service lifecycle with a service management implementation that delivers service priority and context, bridges silos and leverages best practices

> *"These days, maintaining ITIL standards is an absolute necessity. IBM Maximo removes the headache of trying to keep up with them by automating compliance so we can focus on other core responsibilities."*
>
> *Dawn Allison, Manager of Systems Integration, BAE Systems*
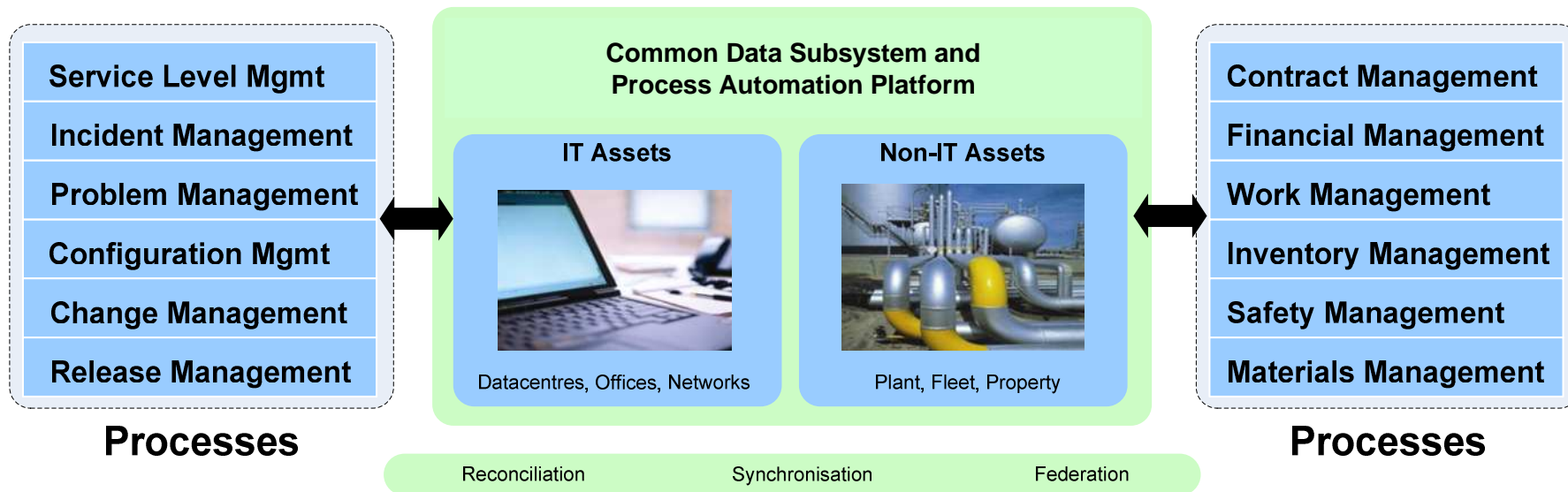
IBM Service Delivery and Process Automation

Offers a Unified Platform to seamlessly support Service Management Lifecycle, simplifying the transition from ITIL V2 to V3

ITIL

Control - _Manage your Business_

Applications -   Service Desk   Service Catalogue   Asset Management   Process Management

Process Runtime - Collaboration   Workflow   Escalation   Reporting   Security   Export

Service Level Mgmt	**Common Data Subsystem and Process Automation Platform**	**Contract Management**
Incident Management		**Financial Management**
Problem Management	**IT Assets** **Non-IT Assets**	**Work Management**
Configuration Mgmt		**Inventory Management**
Change Management		**Safety Management**
Release Management	Datacentres, Offices, Networks Plant, Fleet, Property	**Materials Management**

Processes   Reconciliation   Synchronisation   Federation   **Processes**

Monitor	**Modify**	**Metering**	**Provisioning**	**Discovery**	**Scheduling**
Event Management Event Correlation Performance Mgmt Impact Assessment Service Level	Configure Password Reset Remote Control Imaging Update / Patch	Usage Performance License Compliance Lifecycle	Software Distribution User Accounts Access Control Service Subscription Online Commercial Services	Inventory Configuration Network Topology Physical Topology Application Topology	Workload Scheduling Load Leveling Batch Processing

Automation
Optimize Your Business

Challenge:

- The business is driven by growth and frustrated by service development and delivery organizations inability to reliably introduce new services on a timely basis

  - _Cost of operations continues to increase at 10% CAGR, twice the rate of the IT budget*_

Solution: IBM Service Management solutions

- IBM solutions help increase efficiency and reliability with an integrated approach that includes task and process level automation across the service lifecycle

"Without the Portfolio Review and Analysis from IBM, we wouldn't have realized how much money we could save. Through the review and IBM software solutions, we've been able to cut our costs while delivering reliable services."

Bob Venable, Enterprise Systems Manager, BlueCross BlueShield of Tennessee

"The more we can simplify, streamline and automate processes, the better we can manage the growing complexity … we must handle business growth with our existing resources. IBM technology helps us achieve greater levels of efficiency at a lower cost."

Erwin Schaefer, Swiss Reinsurance

Management Concerns in Cloud Computing

Service Automation Management
– Interpret and Execute Build - Management Plans
– Service Class Compliant
– Orchestrate Management Componentry

Usage Metering and Accounting
– Flexible support of delivery models
– By user, department, business service with chargeback option

Virtualized Resource Management
– Deploy cloud services on virtualized resources
– Manage virtual resources through service life-cycle
– Visibility and end user experience

Maintaining integrity
– Discovery and Mapping
– Change, Remediation

Service Provisioning
– Server, Storage, Network, Security
– Process & Compliance

Management Platform
Operational Support System

Image Management
– Design, build, manage and terminate images for cloud services

Performance and Availability
– End used experience
– Route cause analysis
– Service trends

Heat and Power Management
– Control Energy Consumption

Security
– Design for Multi-Tenancy
– Protect assets through Isolation, integrity, image - risk and compliance management

Service Delivery Catalog
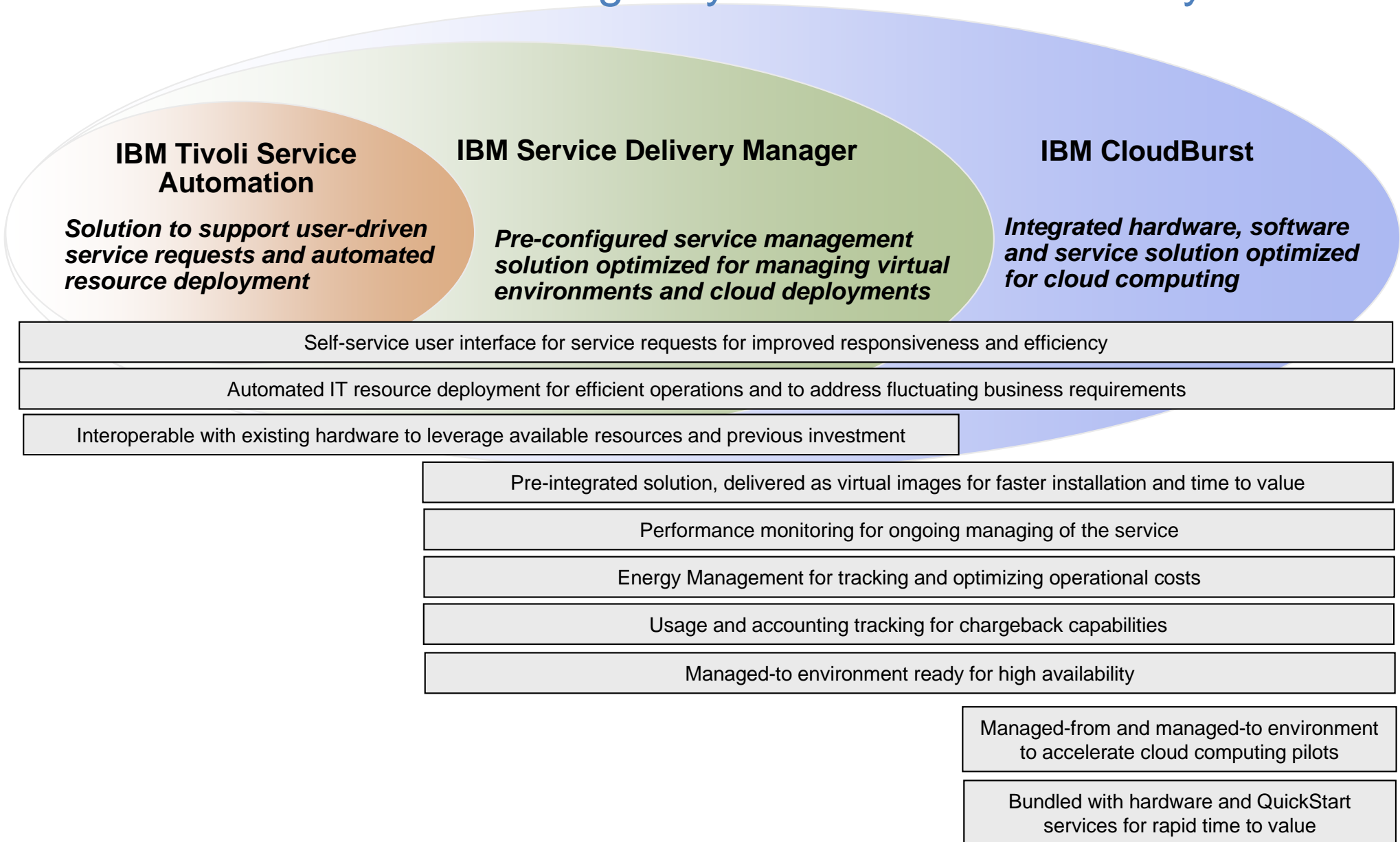
Templates

Service Automation Management

Configuration Mgmt

Image Lifecycle Management

Request Management

Provisioning

Incident, Problem Change Management

IT Service Level Management

Monitoring & Event Management

IT Asset & License Management

Capacity & Performance Management

Virtualization Mgmt

Security and Resiliency

Multiple entry points for automating the management of virtual environments and building a dynamic service delivery model

IBM Tivoli Service Automation

Solution to support user-driven service requests and automated resource deployment

IBM Service Delivery Manager

Pre-configured service management solution optimized for managing virtual environments and cloud deployments

IBM CloudBurst

Integrated hardware, software and service solution optimized for cloud computing

Self-service user interface for service requests for improved responsiveness and efficiency

Automated IT resource deployment for efficient operations and to address fluctuating business requirements

Interoperable with existing hardware to leverage available resources and previous investment

Pre-integrated solution, delivered as virtual images for faster installation and time to value

Performance monitoring for ongoing managing of the service

Energy Management for tracking and optimizing operational costs

Usage and accounting tracking for chargeback capabilities

Managed-to environment ready for high availability

Managed-from and managed-to environment to accelerate cloud computing pilots

Bundled with hardware and QuickStart services for rapid time to value

IBM Cloudburst – an Integrated Cloud solution

IBM Cloudburst

"Built for Purpose" Cloud Solution

Usage and Accounting
- Provide metering and accounting for cloud services
- Enable integration to billing systems if needed

Monitoring
- Monitor both physical and virtual server environments
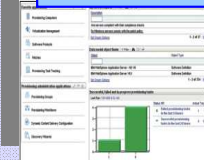
**High Availability**
- Make management system DB highly available

Virtualized HW Management
- Enhanced management of the virtual environment

Tivoli Service Automation Manager (TSAM)
- Orchestration of Cloud operations
- Integration point for service mgmt capabilities
- Service catalog and templates
- Automated provisioning of virtual systems

Security
- Provide an enhanced security infrastructure for cloud

Energy Management
- Energy management of the hardware infrastructure
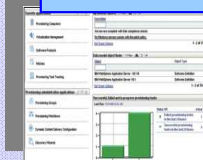
Server, Storage, Network HW
- Preinstalled and configured on IBM hardware
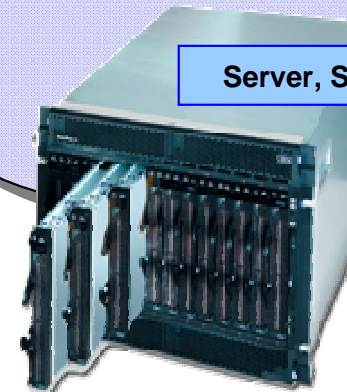
IBM CloudBurst

An integrated service management platform with network, servers, storage, quickstart services that enables the fastest Private Cloud Deployment Today

Customer Benefits

✓ **Improved time to value-** Quickly deliver a private cloud using a preloaded and integrated system

✓ **Improved innovation-** Dramatically improve business value and IT's effect on time-to-market by delivering services faster

✓ **Decrease capital expenses** – Maximize capital usage and reduce added capital expense**.**

✓ **Reduce complexity and risk-** With automation and standardization the human error factor is minimized.

✓ **Scales to the enterprise** – Able to scale and manage additional Platforms and Workloads

Quick Start Services

Service Management Platform

Virtualization and Systems Mgmt SW

Virtualized CPU, Memory, Storage

Network

Single product, single delivery, single installation, single invoice, single support structure

Core Components of Service Managed Clouds
Required for Service Management in the Data Center, IT Service Management and Integrated Service Management

For Locating and Requesting Services

Secure User Centric Self-Service Portal, Automation engine and Catalog
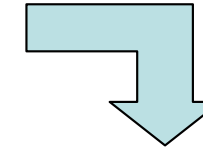
Deploying Cloud Services

Automated Provisioning and Image Management

Managing Cloud Services

Monitoring, Security and Metering

Reference architectural model for cloud computing
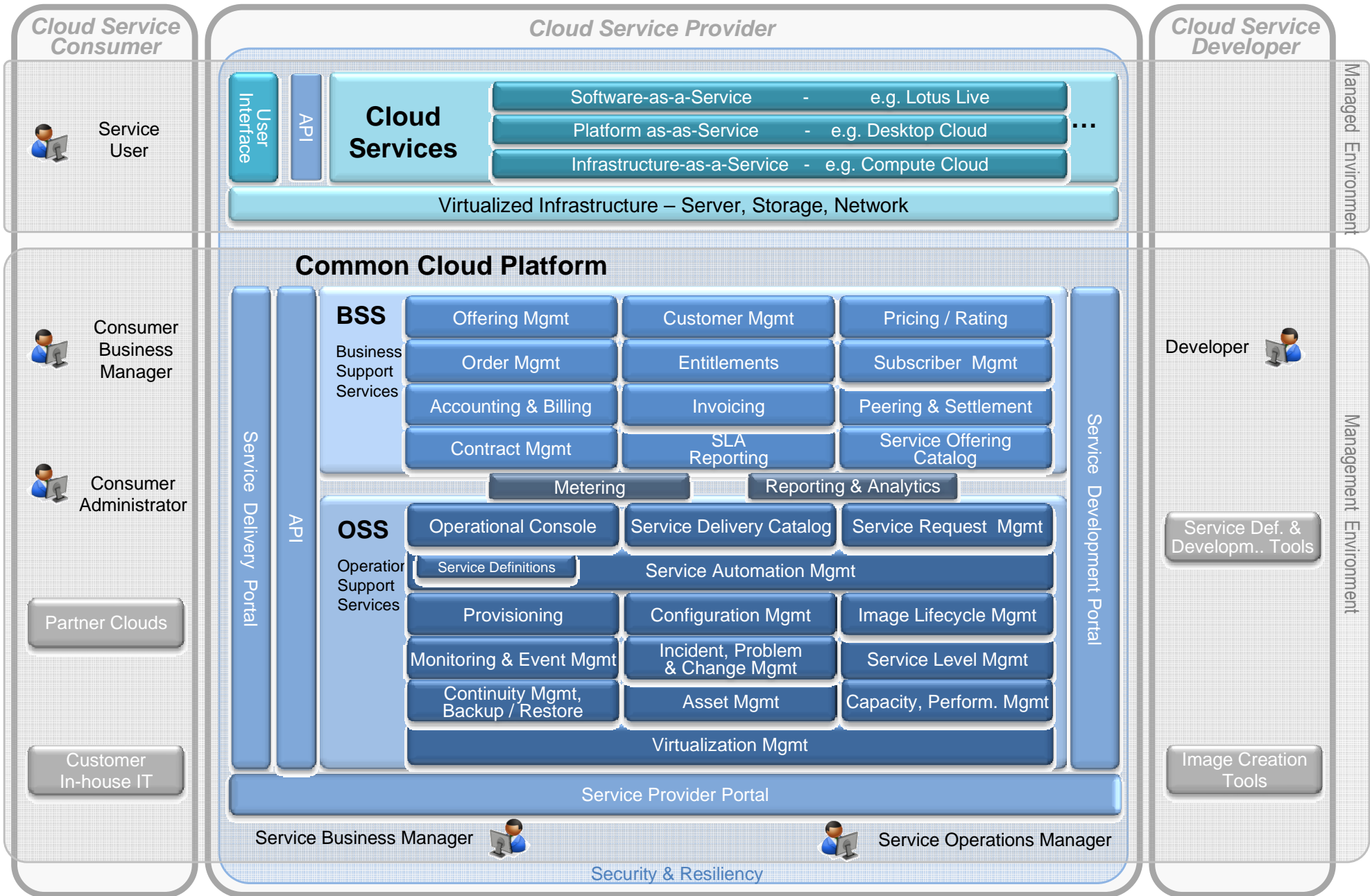
IBM Software

PCTY2010

Pulse Comes to You

For more information, please visit: <u>ibm.com/cloud</u>

Or contact <u>stuart.holliday@uk.ibm.com</u>

Client Examples

CLS Group

Handles $5.4trillion transactions daily

Eliminates settlement risk across multiple time zones

Provides a streamlined, resilient service, processing more than 50% of global foreign exchange transactions

A real-time, secure, flexible global system

Handled growth from 45k to 1.5M transactions daily

" It would have been difficult to have established and extended this resilient settlement system for one of the world's major financial markets without the commitment, skills and capabilities of IBM,"

— Rob Close, Chief Executive Officer of CLS Group and President and CEO of CLS Bank.

SK telecom

Development Platform-as-a-Service offering allowing Business Partners to quickly test, develop, and publish new end-user focused WAP services

Service Management-enabled Cloud Delivery platform to run new WAP services in a workload optimized fashion.

"Our efforts to develop services with IBM and other partners reflect the latest trends in Web 2.0, which will ultimately enhance our customers' experience. Together with venture capital firms our aim is to create new business opportunities by rapidly commercializing the ideas of content developers, further advancing the development of the Information and Communication Technology industry."

- Jong-tae Ihm, Senior Vice President and Head of SK Telecom's Data Network Office

NEDBANK

*Developers and testers are able to request their resources through **easy to use self service portals***

*Test environments are **provisioned in minutes** instead of weeks*

*Software configurations are **consistently deployed every time** using stored workflows*

"Within my team we're running anywhere between 10 and 25 projects at a time … every time we have to provision a new environment we take the time away from the project, and we have to go in and build a DR environment … the projects are suffering."

— Nicholas Parry, Enterprise Architecture and Design team, Nedbank