



Cloud Computing and SaaS

Towards a new model

Jordi Busquets,
IBM Innovation Center

Our world is not only getting smaller and flatter...



...It's getting smarter!



Our world is becoming

INSTRUMENTED



Our world is becoming

INTERCONNECTED



Virtually all things, processes and ways
of working are becoming

INTELLIGENT

As the world gets smarter, demands on IT will grow.



Smart traffic systems



Intelligent oil field technologies



Smart food systems



Smart healthcare



Smart energy grids



Smart retail



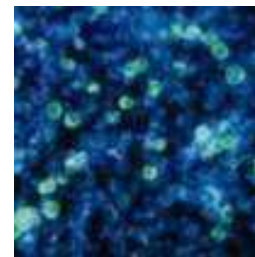
Smart water management



Smart supply chains



Smart countries



Smart weather

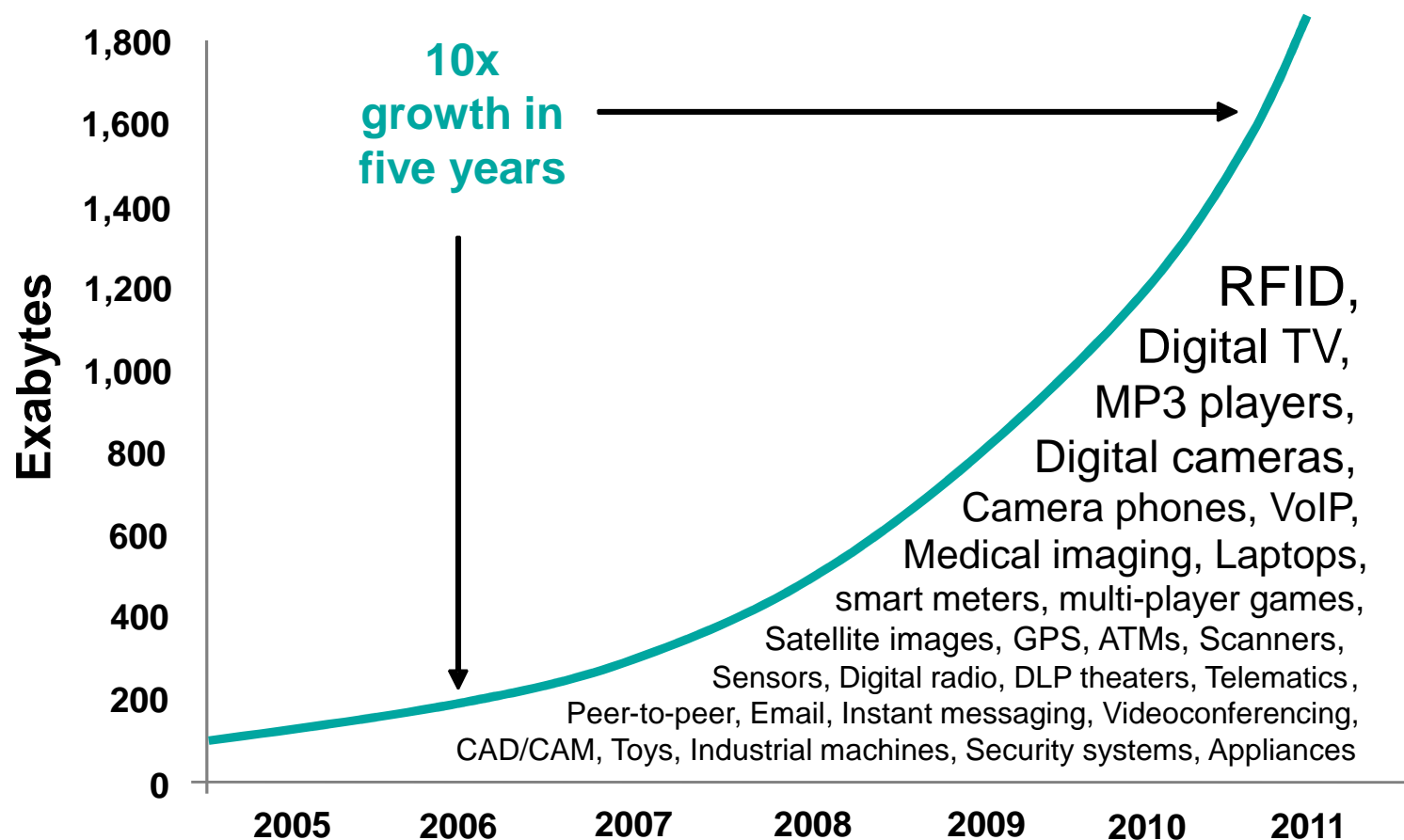


Smart regions



Smart cities

By 2011, the world will be 10 times more instrumented than it was in 2006. Internet connected devices will **leap from 500M to 1 Trillion**.



Approximately 70% of the digital universe is created by individuals, **but enterprises are responsible for 85% of the security, privacy, reliability, and compliance.**

IT infrastructure is reaching a breaking point.

85% idle

In distributed computing environments, up to 85% of computing capacity sits idle.

1.5x

Explosion of information driving 54% growth in storage shipments every year.

70¢ per \$1

70% on average is spent on maintaining current IT infrastructures versus adding new capabilities.

\$40 billion

Consumer product and retail industries lose about \$40 billion annually, or 3.5 percent of their sales, due to supply chain inefficiencies.

33%

33% of consumers notified of a security breach will terminate their relationship with the company they perceive as responsible.

It's time to start thinking differently
about infrastructure.

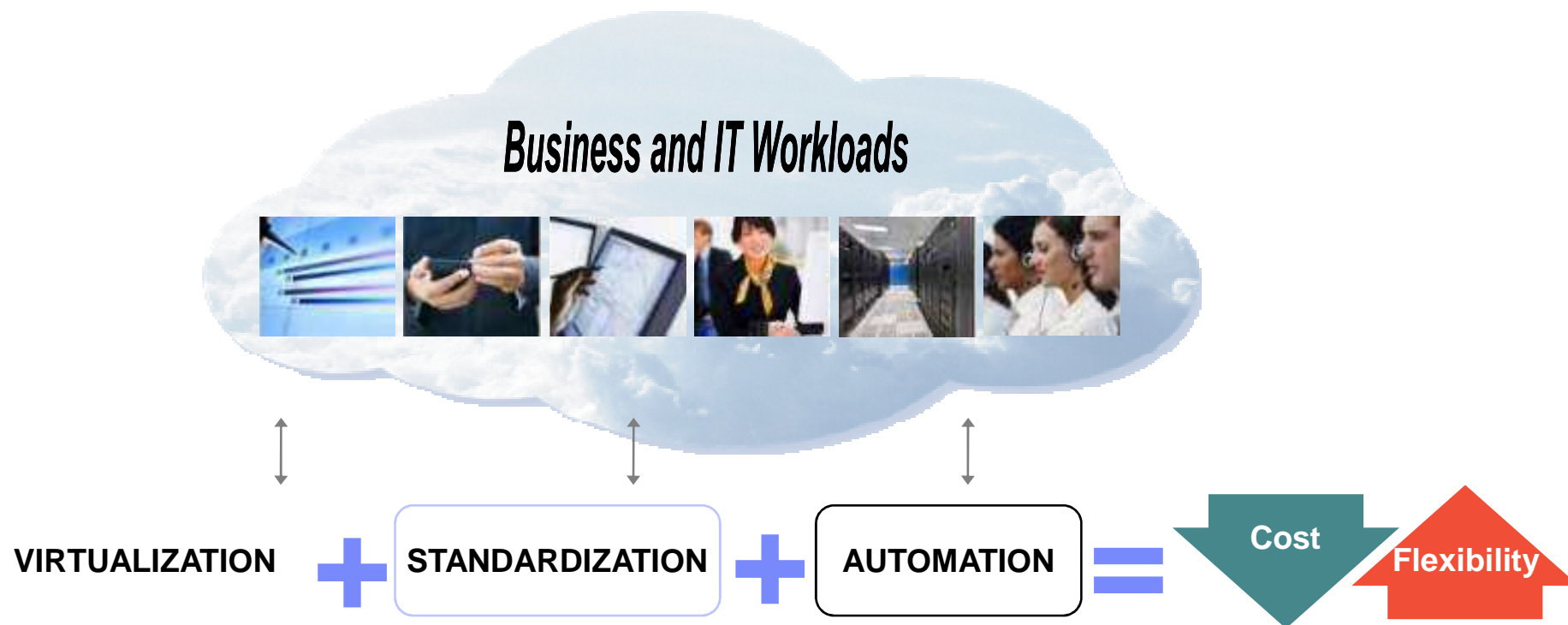
It's time to think on Dynamic
Infrastructure and Cloud

Infrastructure needs to become more dynamic ...



... to bring together business and IT
to create new possibilities.

Infrastructure needs to become more dynamic ...



... to free budget for new investment and speed deployment of new capabilities.

Defining cloud computing.

Cloud computing is a new **consumption and delivery model** inspired by consumer Internet services. Cloud computing exhibits the following 5 key characteristics:

- On-demand self-service
- Ubiquitous network access
- Location independent resource pooling
- Rapid elasticity
- Pay per use



“Self-service” plus standardization drives lower costs and unlocks productivity.



**SELF-SERVE
PORTAL**



**SERVICE
REQUEST**

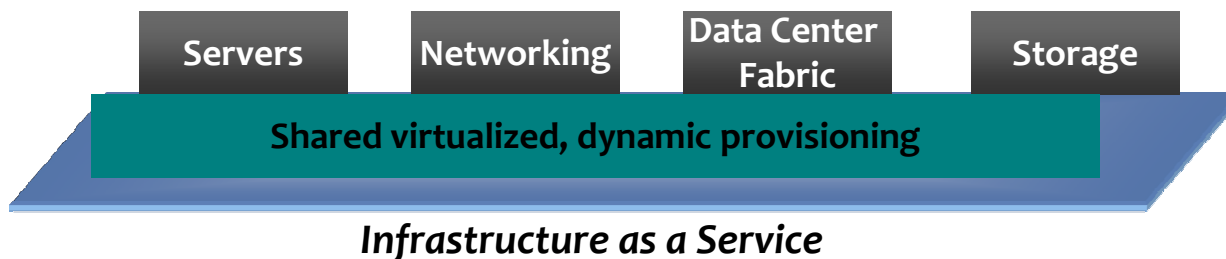
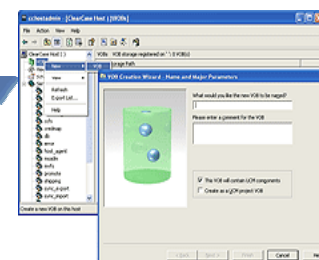
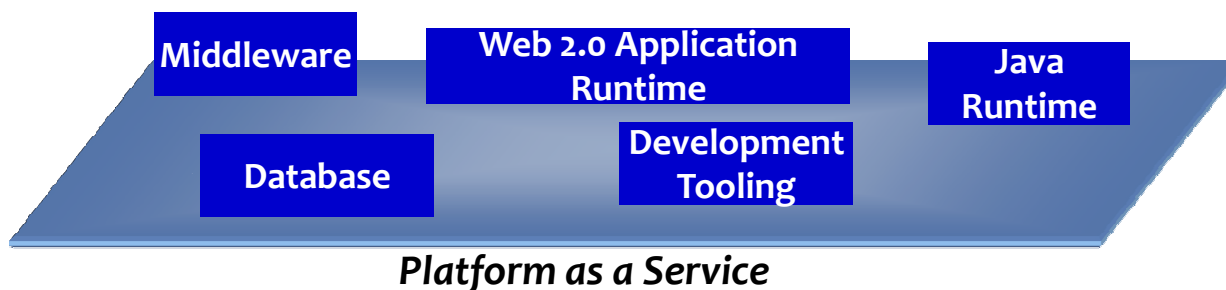
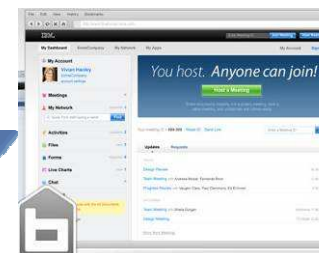
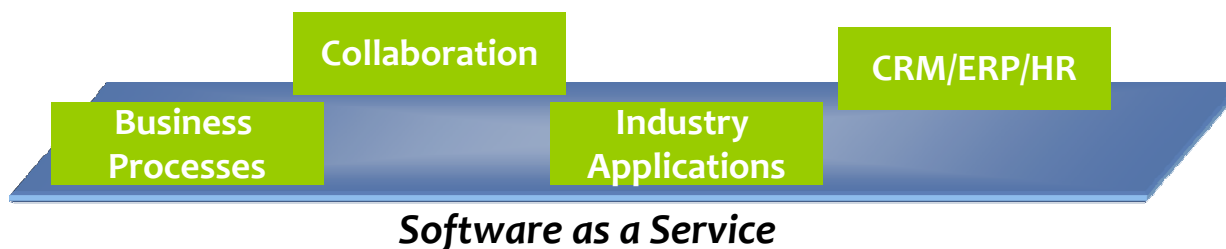


**SERVICE
PROVISIONING**



**DYNAMIC
INFRASTRUCTURE**

Service Levels in Cloud





**Mission Critical,
Personalization, Efficiency,
Reliability, Security,
Privacy, Compliance,...**

- **Mission Critical**
- **Packaged Apps**
- **High Compliancy**

- **Test Systems**
- **Storage Cloud**
- **Developer Systems**

**....Standarization,
Capex/Opex, Quick
Deployment, Flexibility,
Extra Capacity,...**

- **Variable Storage**
- **Software as a Service**
- **Web Hosting**

What IT Services workloads are we seeing move to cloud delivery?

- 1 Single virtual appliance workloads
- 2 Test and Pre-production systems
- 3 Mature packaged offerings, like e-mail and collaboration (see <http://www.lotuslive.com>)
- 4 Software development environments
- 5 Batch processing jobs with limited security requirements
- 6 Isolated workloads where latency between components is not an issue
- 7 Storage Solutions/Storage as a Service
- 8 Backup Solutions/Backup & Restore as a Service
- 9 Some data intensive workloads if the provider has a cloud storage offering tied to the cloud compute offering

What IT Services workloads may not be ready for cloud delivery today?

- 1 Workloads which depend on sensitive data normally restricted to the Enterprise
 - Employee Information - Most companies are not ready to move employee sensitive data to a server into a public cloud.
 - Health Care Records - May not be ready to move until the security of the cloud provider is well established
- 2 Workloads composed of multiple, co-dependent services
 - High throughput online transaction processing
- 3 Workloads requiring a high level of auditability, accountability
 - Workloads subject to Sarbanes-Oxley, for example
- 4 Workloads based on 3rd party software which does not have a virtualization or cloud aware licensing strategy
- 5 Workloads requiring detailed chargeback or utilization measurement as required for capacity planning or departmental level billing
- 6 Workloads requiring customization (e.g. customized SaaS)

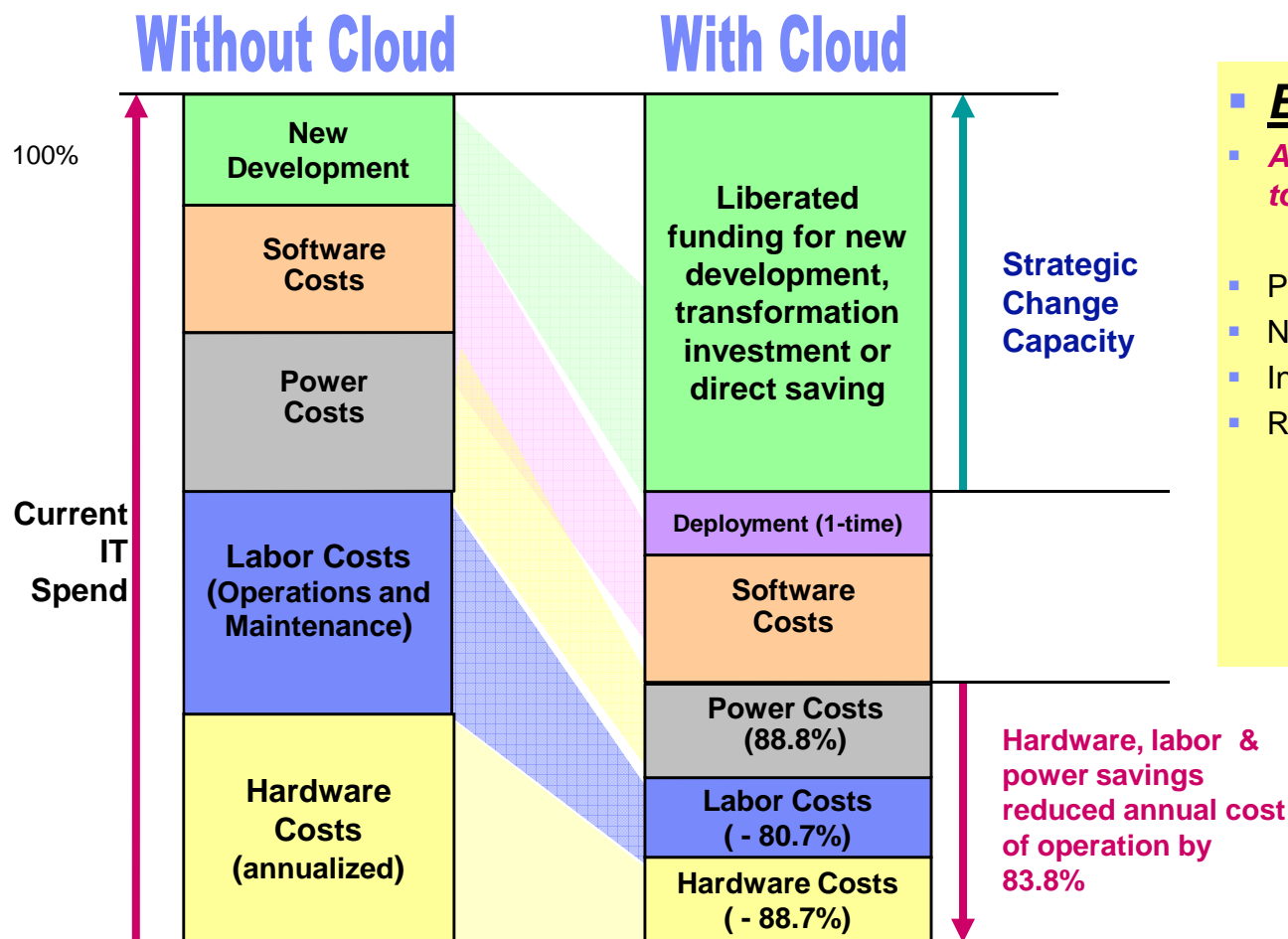
Clients have achieved significant benefits ...



- **Reduced IT labor cost by 50%** in configuration, operations, management and monitoring.
- **Improved capital utilization by 75%**, significantly reducing license costs.
- **Reduced provisioning cycle times from weeks to minutes.**
- **Improved quality**, eliminating 30% of software defects.
- **Reduced end user IT support costs** by up to 40%.

...working with IBM to deploy cloud computing solutions.

Business Case Results : IBM TAP Greenfield Cloud Deployment.



- **Business Case Results**
- **Annual savings: \$3.3M (84%) \$3.9M to \$0.6M**
- Payback Period: 73 days
- Net Present Value (NPV): \$7.5M
- Internal Rate of Return (IRR): 496%
- Return On Investment (ROI): 1039%

Note: 3-Year Depreciation Period with 10% Discount Rate

IBM Cloud Strategy

1. **Cloud Delivered Services** for customers.

(Smart Business Services)

Examples :

- Information Protection Services
- LotusLive
- Lotus Sametime Unyte
- Rational AppScan
- BPM BlueWorks...and more to come...



2. Help ISVs & developers to design, build, deliver and market Cloud and SaaS Services.

(IBM Partnerworld)

200+ ISVs in SaaS Specialty

- 3,000 ISVs in SaaS Community
- Extensive SaaS enablement and go to market resources
- Amazon Web Services
- New SaaS adapted licensing models

3. Help customer integrate Cloud Services into their business.

(Smart Business Services)

- Global Business Services practices for Salesforce.com and SuccessFactors.
- Rational tools for optimizing SaaS investments
- Tivoli Provisioning Manager
- Tivoli Service Automation

Tivoli[®]



4. Help businesses to build their own private/hybrid cloud environments

(Smart Business Services)
(Smart Business Systems)

- Computing on Demand Centers
- **Cloud Consulting Services**
- **Cloud Implementation Services**
- IBM CloudBurst
- Tivoli Software



IBM Cloud Computing Services Offerings

A portfolio of leadership products and services for optimizing with cloud computing that continues to grow to support customers with cloud building and cloud delivered offerings.

Cloud Consulting



- Infrastructure Consulting Services for Cloud Computing
- Business Cloud Consulting Services
- Security and Resiliency Consulting Services for Cloud
- Resiliency Certification for Cloud Computing

Cloud Delivered



- Computing on Demand
- Information Protection Services
- LotusLive
- BPM BlueWorks
- SOA Sandbox
- IBM Smart Business Development and Test
- IBM products on Amazon EC2

Cloud Implementation



- IBM Smart Business Test Cloud
- IBM Smart Business Desktop Cloud
- IBM Smart Analytics Cloud
- IBM Smart Business Systems: IBM Cloudburst

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Cloud Delivered



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- [Information Protection Services](#)
- [SOA Sandbox](#)
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- [Lotus Live](#)
- [BPM BlueWorks](#)

Cloud Implementation



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Cloud Delivered



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Cloud Implementation



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A woman in a maroon blazer is sitting at a desk, looking up and raising her right fist in a celebratory gesture. A laptop is open on the desk in front of her. The background is a bright, modern office with glass walls. The text 'Thank You' is overlaid in the center of the image.

Thank You

Backup foils

- IBM Cloud Computing Offerings

Developing a cloud computing strategy & plan is needed.

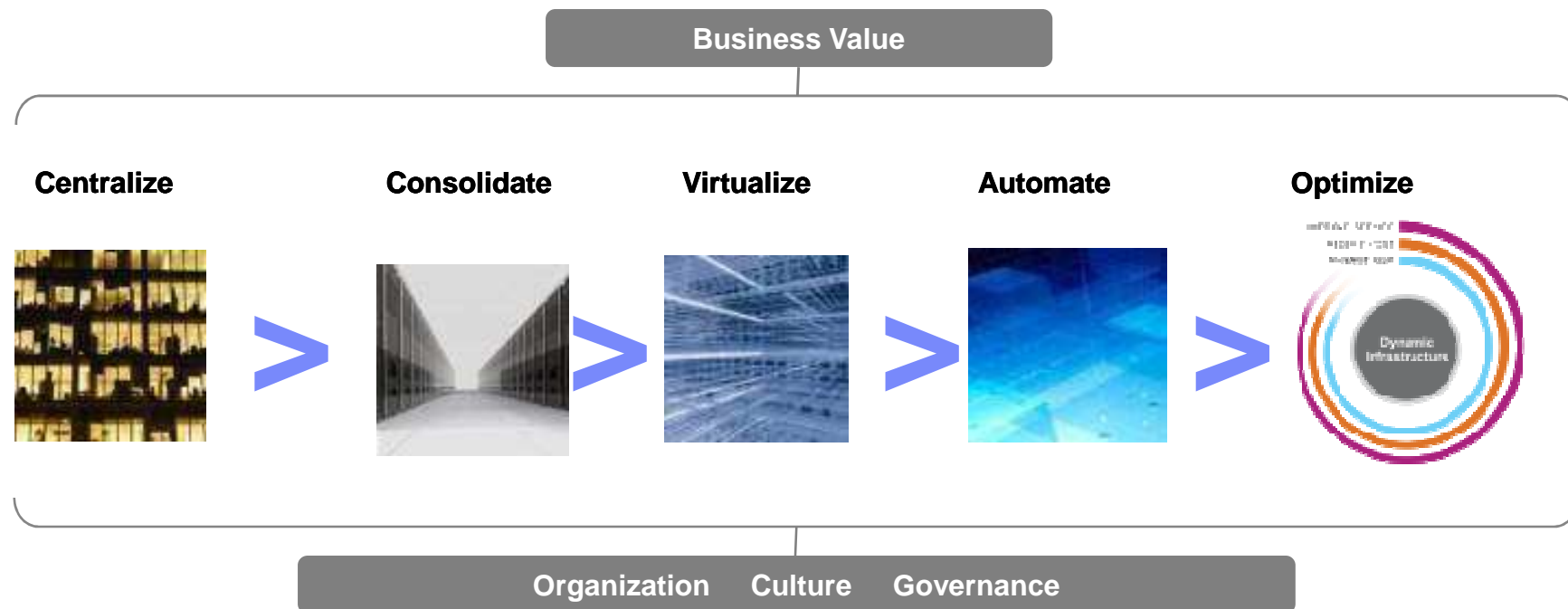
- **Without a strategy, Cloud computing can be a threat to the CIO and IT team**
 - **Reduced control of IT services delivered over the Internet**
 - **Perceived cost gap between a cloud service and traditional IT**
- **With a strategy, Cloud computing is a huge opportunity for the CIO**
 - **Lower costs, more responsive IT, optimized delivery**
 - **Greater range of services and capabilities**
 - **Greater visibility in billing / chargeback to LOBs**
 - **Better control of the users' systems, desktops, and services access**

5 Steps to Cloud

1. IT Roadmap
2. Architecture
3. Workload Assessment
4. Enterprise / Cloud Mix
5. Implementation



The journey to cloud...

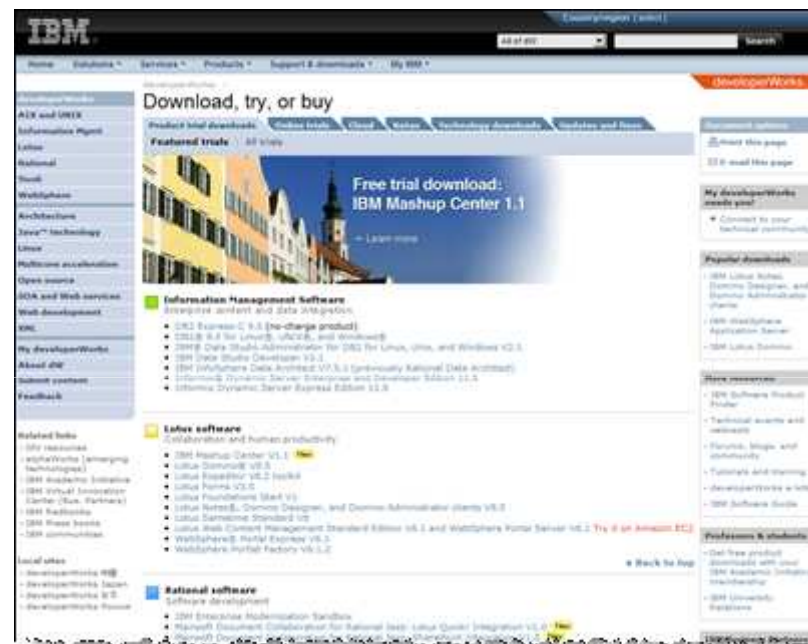


....requires an integrated and orchestrated approach.

developerWorks provides easy access to trial versions of the latest IBM Software

Test-drive IBM Rational software

- Download free trial versions of the Rational products you've seen today:
 - Rational Method Composer
 - Rational Portfolio manager
 - Rational Requisite Pro
 - Rational ClearCase
 - Rational ClearQuest



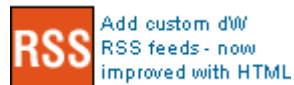
For trial downloads and a collection of supporting materials, including complimentary tech support, discussion forums, installation guides, demos and tutorials visit:

ibm.com/developerWorks/downloads

developerWorks podcasts

The screenshot shows the IBM developerWorks website interface. At the top, there's a navigation menu with links for Home, Solutions, Services, Products, Support & downloads, and My IBM. Below this, the main content area is titled 'My developerWorks: Podcasts' and includes a list of podcast episodes. Each episode entry shows a small image of the host and guest, the episode title, a brief description, the date, and options to 'Listen' or 'Download'. The sidebar on the left contains various links and categories, and the right sidebar has options to 'Print this page' and 'E-mail this page'.

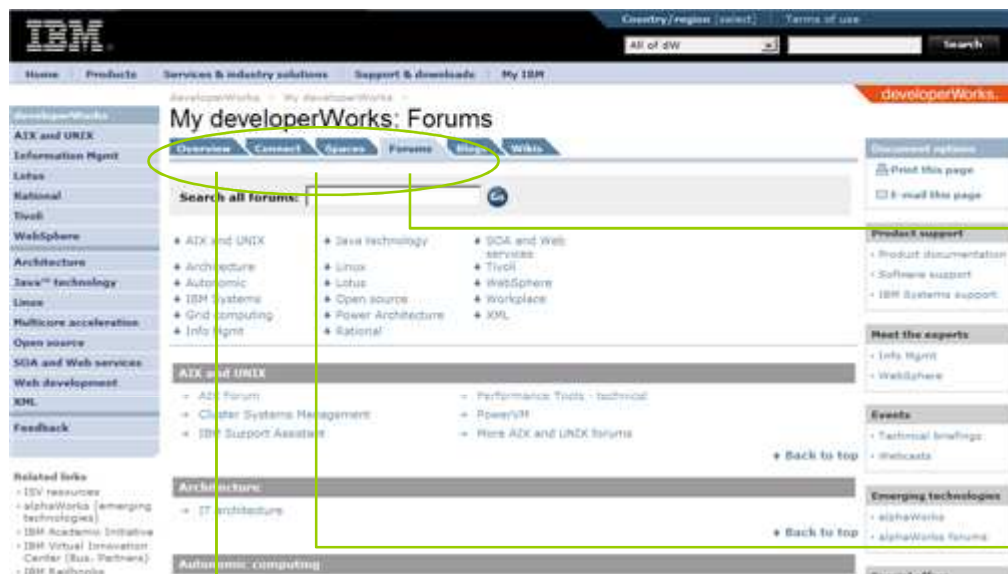
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developerWorks forums



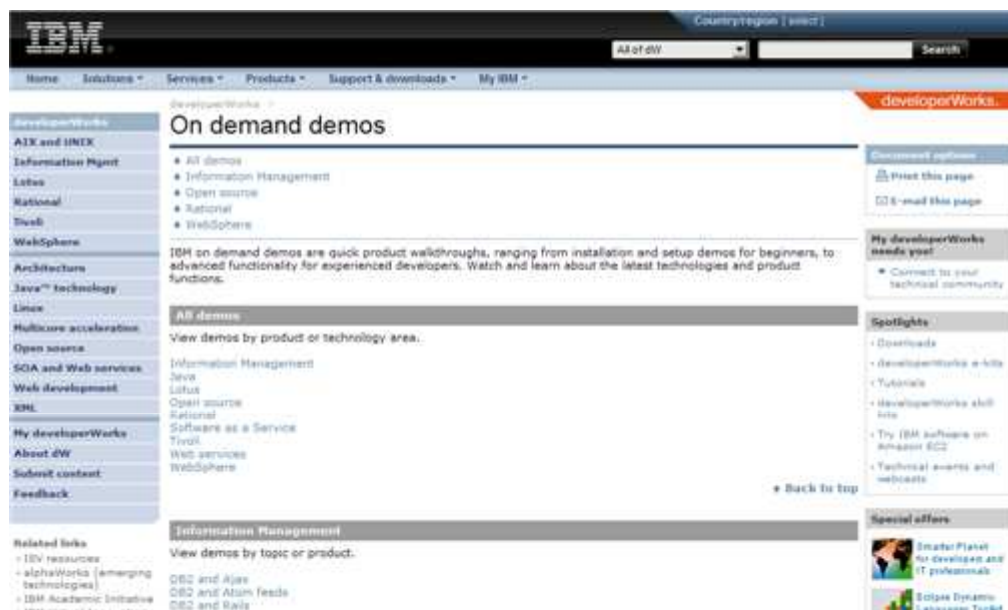
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 - Short video clips
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- Additional product and technical resources to accompany each demo

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Technical events and webcasts

The screenshot displays the IBM developerWorks website page for "Technical events and webcasts". The page features a navigation menu at the top with options like Home, Solutions, Services, Products, Support & downloads, and My IBM. A search bar is also present. The main content area is titled "Technical events and webcasts" and includes a sub-section for "developerWorks Live! briefings". Below this, there are links to "View by geographic" and "View by country/region". The page lists several briefings, categorized into "Two day briefings", "One day briefings", and "Half day briefings". Each category lists specific events with brief descriptions. For example, under "Two day briefings", there are "FileNet workshop: Discovering the value of IBM FileNet P8 v4.5" and "Software development conference". Under "One day briefings", there are several items including "Capitalize on the Power of an IBM solution", "Discover the value of WebSphere business process management", and "IBM i & Rational software: Innovative solutions for applications, people, and teams". Under "Half day briefings", there are "Building SOA solutions and managing the service lifecycle", "Discover the value of quality management: Rational Quality Manager", "Eclipse: Empowering the universal platform", "Enabling applications for Software as a Service and cloud computing", and "Hacking 101". The right sidebar contains a "We're here to help" section with "Call me" and "E-mail us" buttons, a "Document options" section with "Print this page" and "E-mail this page" buttons, a "My developerWorks needs you!" section with a "Connect to your technical community" button, and a "Spotlight" section with "Rational Software Remote Conferences 2009", "Get hands-on experience with the IBM SOA middleware portfolio", and "Try IBM software on Amazon EC2".

- Attend a developerWorks live! technical briefing, and keep up-to-speed on the latest trends in the industry. You'll see how IBM tools can help you get the most value from your IT investments.

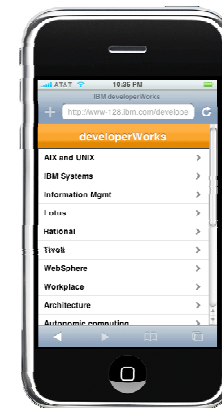
- Find out what technical events are taking place

- Join a webcast or download a podcast

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- ✓ developerWorks on Facebook
www.facebook.com/apps/application.php?id=5663866319



The Facebook logo, consisting of the word "facebook" in white lowercase letters on a dark blue rectangular background.

The Netvibes logo, featuring a green square with a white plus sign followed by the word "netvibes" in a blue, lowercase, sans-serif font.

The My Yahoo! logo, with "MY" in black uppercase letters and "YAHOO!" in red uppercase letters with a registered trademark symbol.

The iGoogle logo, with "i" in blue and "Google" in its multi-colored font.



IBM Innovation Centers

- The worldwide IBM Innovation Centers offer a wide range of no-charge workshops, seminars and briefings conducted by highly trained subject matter experts.

Software as a Service

- **New** For startups: Running IBM on the Amazon Elastic Compute Cloud (EC2) and Simple Storage Server (S3)
Learn how to use IBM product images in the Amazon cloud through live lectures and a demonstration
- Introduction to Software as a Service, multi-tenancy, and cloud computing
Learn how to adopt the SaaS model using IBM middleware and how the Amazon EC2 environment can help meet your development and deployment needs.
- Software as a Service: Getting started with IBM software on Amazon Web Services featuring WebSphere sMash & DB2
Learn how you can get an existing application up and running in the Amazon EC2 environment with pre-loaded IBM middleware.

<https://www-304.ibm.com/jct01005c/isv/spc/events/index.jsp>

Questions

Download a PDF of this presentation from
www.ibm.com/developerworks/offers/techbriefings/cloud_computing.html

IBM Smart Business Test Cloud

A secure, private cloud environment clients can use to test applications before sending them to production

Testing Challenges

- Poorly configured tests environments
- Lack of automation of identical setup
- Underutilized testing resources
- Lack of resources
- ...

IBM Smart Business Test Cloud

- Creates a more efficient test environment that improves productivity and reduces costs
- Includes an operating system, middleware, storage, network and virtual images, along with pre-integrated set of services, from planning through implementation
- Clients can leverage their existing systems or IBM's new CloudBurst

Customer Benefits:

- **Reduce IT labor cost by 50% +**
- reduce labor for configuration, operations, management and monitoring of the test environment
- **75% + Capital utilization improvement; Significant license cost reduction**
- **Reduce Test Provisioning cycle times from weeks to minutes**
- **Reduce risk and improve Quality- eliminate 30% + of all defects that come from faulty configurations.**

IBM Smart Business Development and Test on the IBM Cloud

Announcing a *Technical Preview on the IBM Cloud*

- What is it?
 - A dynamically provisioned and scaled runtime environment that provides everything needed to develop and test applications.
 - Application lifecycle management offerings from Rational that can be provisioned as services on the cloud and new capabilities of existing Rational offerings to exploit cloud resources.

- What are we announcing?
 - A technical preview of the IBM Software Delivery Services for the Cloud announced at the Rational Software Conference on June 1st.
 - Starting on June 30th, the Rational conference registered customers can access the technical preview.



Customer Benefits:

- **Instant self-service provisioning of Rational solutions in the cloud** - lower TCO, no installation cost, reduced labor for configuration, no capital expense
- **Pre-configured services integration on the Jazz platform** - preconfigured software embodying best practices
- **Dynamic/elastic computing for tests and builds**
- **Virtualized development infrastructure for test and build** - faster and more flexible deployment of development/testing environment

<http://www-949.ibm.com/cloud/>

IBM Smart Business Desktop Cloud

Characterized by thin clients, with higher levels of security and resilience, improved backup and recovery...and reduced cost and complexity associated with managing the desktop/laptop environment

Allows clients to create a **private cloud** that enables internet-based PCs and other devices to access applications and data through a **centrally managed computing environment**

Main Objective: Reduce costs related to end users

Use cases:

- Take out cost of supporting end users
- Insure compliance with new regulations
- Insure IT asset protection (subcontractors)
- Support "Mobility" initiatives
- Very applicable to distributed environments (central administration, providing new content)
- Optimize productivity
- Reduce consumption costs

Customer Benefits

- **Reduce deskside support costs by 85-90%**
- **Reduce help desk calls by 20-40%**
- **Reduce OS and application update costs**
- **Easily ensure desktop security and resiliency**
- **Use up to 73% less power over traditional fat client deployments**



LotusLive

An online social networking and collaboration service from IBM



Our Strategy

- Deliver a set of services that dramatically simplifies and improves the interactions organizations have with their customers and partners

Why choose LotusLive

- Easy to use, integrated services - allow customers to easily connect and work with people outside or inside their organization
- Affordable – with no up front infrastructure investment. starting as low as \$3 per per month
- Designed with integration in mind - allowing customers to extend their on-premise investments to the cloud AND create new applications with 3rd-party integration via partners
- The trust and reliability you expect from IBM



Easy Collaboration, Powerful Social Networking Services



LotusLive Meetings

A full-featured online meeting service that integrates Web, audio and video casting



LotusLive Engage

An integrated suite of tools that combines your business network with collaboration and conferencing services



LotusLive Notes

An online version on IBM's popular Lotus Notes email, and calendar & scheduling capabilities.



LotusLive Events

An online event management service, helping you create, host and manage online conferences



LotusLive Connections

An integrated suite of tools that combines your business network with collaboration services



LotusLive iNotes

A Web-based messaging service for exchanging e-mail and personal calendar

IBM Computing on Demand

“Cloud computing “Infrastructure as a Service” solution of choice... *because security matters*”

Highlight Features

- Scale beyond in-house data center limits
- Align IT costs to business needs
- Pay for use infrastructure “hardware rental”
Full Server or Virtual Server Instances
- Seven Global CoD Cloud centers
New York, London, Tokyo - more to come
- Major infrastructure
13,000 processors and 56 TB storage

Offering Overview

- Computing on Demand Base Access
VPN Access, Mgt Node, Scheduling Tool
- Three Capacity Models
Dedicated: offsite, private cloud, multiyear
Variable: infrastructure rental, weekly
Dynamic: infrastructure rental, hourly
- Hosted in a secure IBM CoD Cloud Center

Customer Testimonials

“IBM Computing on Demand exceeded our expectations ... they have never let us down. We have always been able to get the hardware we require, when needed, with the security service levels we depend on.”

-IT Director, Leading Variable Annuity Provider

“We anticipate saving 70% on infrastructure cost by utilizing IBM Computing on Demand.”

- CFO Petroleum Service Provider



IBM Information Protection Services (IPS) on the IBM cloud

Pg 1 of 4

IPS uses cloud-based technologies to help alleviate the burden of protecting your information with professionally managed business continuity and resiliency services

Challenges

- Explosion of data growth
 - Increasing complexity of information
- Need a **reliable, cost-effective solution to manage and protect your data**

- With [IPS Remote Data Protection](#) **automatically back up** via your existing network **through the cloud**
- With [IPS Email Management Express](#) you have a comprehensive, **cloud-based standby email system**
- With [IPS Fastprotect online](#) you can use Tivoli's proven CDP product as a service to backup your PC's and laptop's



The United States Golf Association depends on IBM IPS cloud services, both the Email Management Express for email recovery and Remote Data Protection to back up their servers.

Jessica Carroll, managing director of IT for the nonprofit governing body of golf, says her existing backup and disaster-recovery plans were well designed for business conditions five years ago. But they were no longer adequate for today's world in which companies can't afford to be down for even brief periods of time. She looked for a better option and found a cloud-based business resiliency service from IBM. "IBM's reputation and the services it was offering were enterprise class," Carroll says. "I knew right away this was the way to go. The product was so strong."

IBM Smart Analytics Cloud

Challenges

- Many companies labor to maintain **multiple BI tools** across numerous departments around the enterprise
- It is exceedingly **difficult** to support and comply with corporate and **regulatory standards**
- Higher costs of delivering analytics
- De-centralized or departmental BI deployments **prevent the growth of a common set of skills** that may be applied throughout the enterprise

IBM Offering

- Combines the industry-leading **IBM System z** server with **Cognos software**, and **IBM services** to create a **simple, secure, and highly available private cloud for delivering business intelligence and analytics services** to diverse users across the enterprise lines of business from a **private cloud**
- Creates a **core, concentrated service approach to delivering BI tools** across the lines of business
- Pre-serves the **LOB control to own and manage their end-to-end BI solution**
- Supports **simpler enforcement and auditing of corporate and regulatory standards**
- Provides the skills and infrastructure to develop a corporate **Business Intelligence Competency Center**



SOA Sandbox

*IBM's Free, Cloud Computing Environment for Experiencing IBM SOA Middleware
& Getting Started with SOA*

- **Get hands-on experience with the IBM SOA middleware portfolio in a risk-free, cloud environment available 24x7 at no cost.**
- **Access SOA demos, white papers, technical presentations, solution architecture guides, and other valuable information**
- **Learn how SOA can help you address your unique business challenges and provide tangible value to your enterprise**

The SOA Sandbox allows customers the convenience of experiencing IBM middleware without having to install it locally. Within minutes, you can begin creating practical, SOA-based applications while test-driving a broad selection of IBM middleware products. Exercises in the SOA Sandbox are added and continuously updated.

Materials in the Sandbox are based on common solution patterns derived from more than 7,000 customer implementations using SOA offerings from IBM.

IBM offers seats to the SOA Sandbox that allow a potential customer to dig deeper into our product offerings over a period of up to 30 days by invite.



IBM BPM BlueWorks

A set of cloud-based BPM tools and content enabling Business Leaders, Business Analysts, and Business Professionals to experience the value of BPM by creating BPM Business Designs in the cloud, leveraging pre-built content, and collaborating through community tools.

BPM BlueWorks Features:

- Pre-built content and process maps
- Online collaboration and BPM asset sharing
- Integrated BPM business design tools:
 - Strategy mapping
 - Capability mapping
 - Process mapping
- On-ramp to IBM BPM Suite for simulation, testing, and deployment
- Secure cloud provisioning to protect content and assets

Get started quickly and easily with BPM in a zero-cost cloud environment

- *Understand the business value of BPM*
- *Build BPM expertise*
- *Capture business intent and translate strategy into process improvement opportunities*

BPM BlueWorks Launch:

- BPM BlueWorks will launch on 6/30/09
- Companies can register:
 - *First registered user becomes company admin*
 - *Subsequent registrants must be approved by admin*



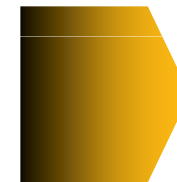
Smart Business Systems: IBM Cloudburst

Operations have **industrialized** to become smarter.

Telcos automate traffic through switches to assure service and lower cost.



Manufacturers use robotics to improve quality and lower cost.



Banks use automated teller machines to improve service and lower cost.



... breakthroughs like these are enabled by service management systems.

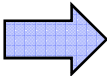
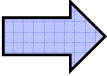
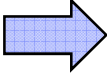
IBM CloudBurst : *Private Cloud “In a box”*

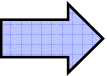
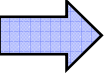
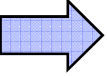
Designed from client implementations

- For IT executives seeking a breakthrough in:
 - delivery of service
 - reduction in cost
 - transformation of the data center into a Dynamic Infrastructure
- A product that **integrates service management software with servers, storage, and Quickstart services to enable a private cloud**
- “Built for Performance” based on architectures required by specific workloads
- Optimized for test/dev workloads or production implementations
- Available with several attractive **financing options**

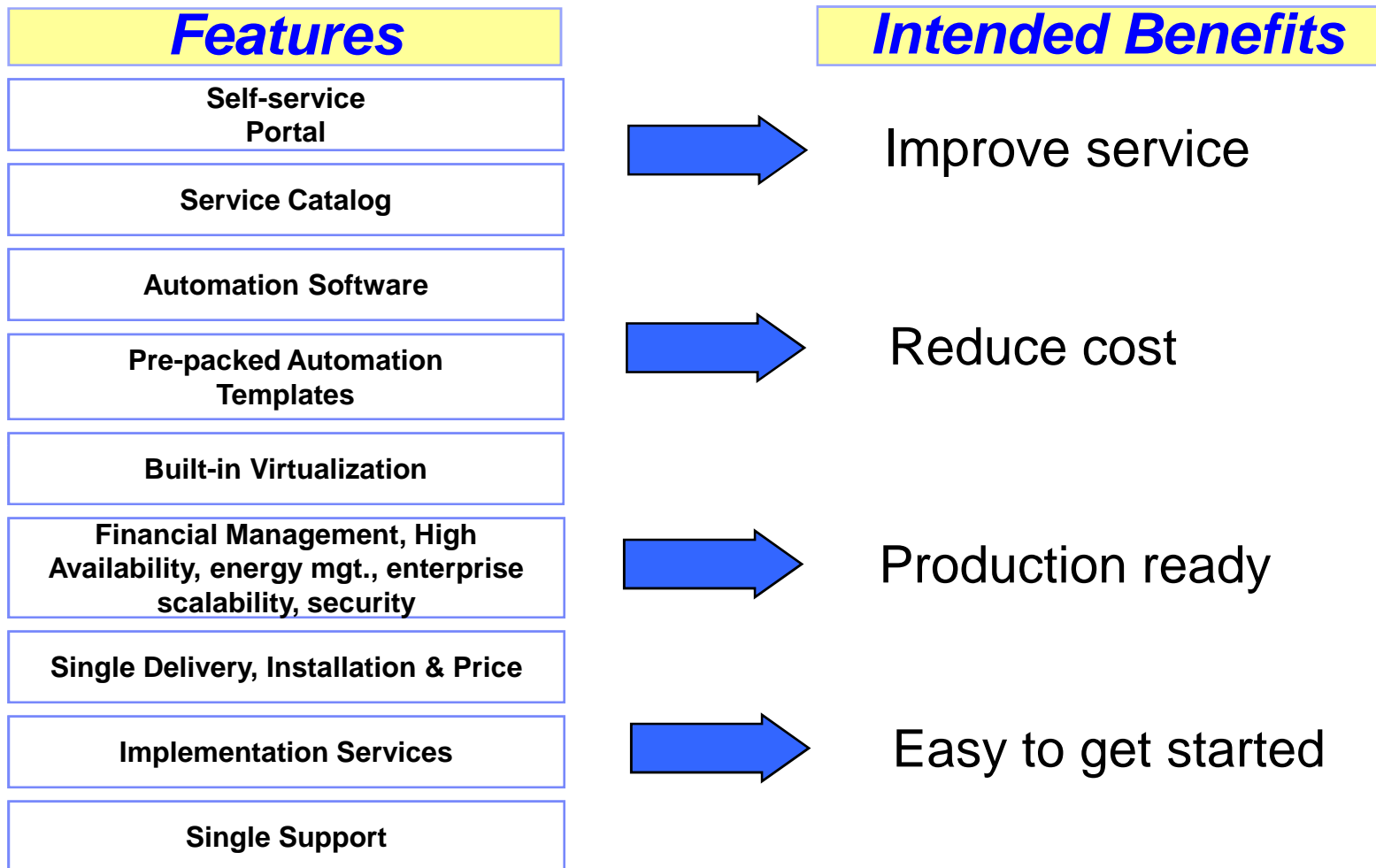


IBM Cloudburst addresses the following challenges...

- Frustrated customers  ▪ Self service and fast service satisfies customers
- Skilled resources tied up on mundane tasks  ▪ Automated tasks, happier more productive staff
- Tedious and error prone process  ▪ Automated provisioning lowers costs and improves service

- Manual processes slow down access for developers  ▪ New user experience with easy-to-use self-service portals
- Test environments take weeks to set up  ▪ Test environments provisioned in minutes
- Inconsistent configurations impact software quality  ▪ Software configurations consistently deployed every time

How? IBM CloudBurst delivers from the factory...



IBM's new Infrastructure Strategy & Planning for cloud computing service can help you develop a strategy, architecture, and roadmap

Features:

- Business and IT executive workshop to identify if cloud computing can drive business value.
- ROI value case and diagnostic assessment of the current environment to determine strengths, gaps and readiness.
- Strategy, plan, architecture, and roadmap to successfully implement the selected cloud delivery model.

Customer Benefits:

- **Lower Cost** – Identify opportunities to reduce capital and operating expense across the infrastructure.
- **Improve Service** – Streamline processes and services, improve efficiency and effectiveness.
- **Reduce Risk** – Architect a secure and resilient model that mitigates operational exposures and protects data.



***Strategy, Value Case,
Architecture,
Roadmap for Cloud***

Security and resiliency – two most common concerns

High-level cloud security concerns

Less Control

Many companies and governments are **uncomfortable** with the idea of their information located on **systems they do not control**. Providers must offer a high degree of security transparency to help put customers at ease.

Data Security

Migrating workloads to a **shared** network and compute **infrastructure** increases the potential for **unauthorized exposure**. Authentication and access technologies become increasingly important.

Reliability

High availability will be a key concern. IT departments will worry about a **loss of service** should outages occur. Mission critical applications may not run in the cloud without strong availability guarantees.

Compliance

Complying with SOX, HIPPA and other **regulations may prohibit** the use of clouds for some applications. Comprehensive auditing capabilities are essential.

Security

Providers must supply easy, visual controls to **manage firewall and security settings** for applications and runtime environments in the cloud.

IBM Security Consulting Services

Building secure cloud environments with IBM security expertise

- **Strategy and Planning** - Helps deliver a comprehensive, detailed assessment of your business and IT security risks
- **Vulnerability assessment and security architecture**
 - Automated scans to identify vulnerabilities
 - Documentation of gaps in key security controls
 - Policy design and definitions for secure controls
- **Security Roadmap** - Prioritized recommendations against business goals for security best practice improvements that help mitigate business risks



CLIENT BENEFITS

- **Identify and mitigate security exposures with a comprehensive assessment of your security strengths and weaknesses and streamline on-going management**
- **Enable business-aligned security controls to help avoid fine, pass audits, reduce litigation, and manage regulatory compliance**
- **Help reduce costs and complexity of security management and ease staffing pressures**
- **Leverage existing IT infrastructure to protect current IT investments and benefit from existing technology**
- **Simplify protection of your valuable, business-critical and/or confidential data**
- **Build adaptable security infrastructures and implement security best practices**

IBM Resiliency Consulting Services – Assessment and Planning Pg 2 of 2 - Resilient Cloud Validation

Validating cloud delivery resiliency for compliance and improved customer service

- BCRS has over 40 years of experience of making clients infrastructures resilient and is now applying that knowledge to Cloud.
- RCV validates the resiliency of any company delivering applications or services through public or private cloud environments, and its ability to sustain those resilience capabilities over time.
- Two step process includes validation of documented architecture and hands on testing to validate resiliency



Customer Example:

A large defense contractor client was interested in the Resilient Cloud Validation program for several reasons. Their primary goal was to combat the very real fear in the industry that clouds should only run applications that you can actually do without for a couple of days.

Since their end-user clients are all DOD, they needed to be able to prove to them that the proposed Cloud services could provide the same level of reliability that traditional data center centric service offerings provide.

The Resilient Cloud Validation program demonstrates to their clients and to the press that they are running a true cloud service that can be trusted.

DeveloperWorks on EC2



developerWorks Cloud Computing Resource Center.

Develop, deploy, and manage applications, paying only for the time and capacity you use, while scaling up or down to accommodate changing needs or business requirements.

 **Information Management Software**
Enterprise content and data integration

- DB2 Express-C 9.5
- Informix Dynamic Server Developer Edition 11.5

 **Lotus software**
Collaboration and human productivity

- WebSphere Portal Server and Lotus Web Content Management Standard Edition

 **WebSphere software**
Integration and application infrastructure

- WebSphere sMash

<http://www.ibm.com/developerworks/downloads/cloud.html>

IBM WebSphere CloudBurst Appliance

Deploying and Managing WebSphere in a Private Cloud



- **Cost-effective** – reduce hardware, software, and administration costs
- **Automate management** of WebSphere products in a private cloud
- **Fast deployment and repeatability** with pre-defined WebSphere patterns
- **Usage tracking** for chargeback and management reporting
- **Secure appliance** based on widely adopted WebSphere DataPower foundation
- **Integrates** with Rational development tools, Tivoli management software