

Smart Work for a Smarter Planet:

Business Aligned IT Discovery Series 2009.

Get Instrumented, Intelligent, and Interconnected.
And Ready for a Smarter Planet.



Deploying a Dynamic Infrastructure

Business Resiliency Priorities, Capabilities and Experiences

Satheesh Kumar
Disaster Recovery Services Sales Leader
Global Technology Services



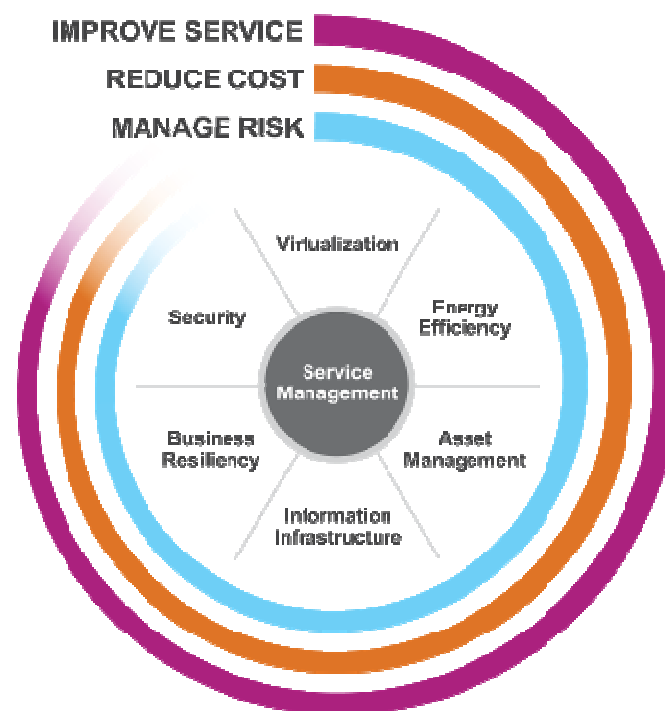
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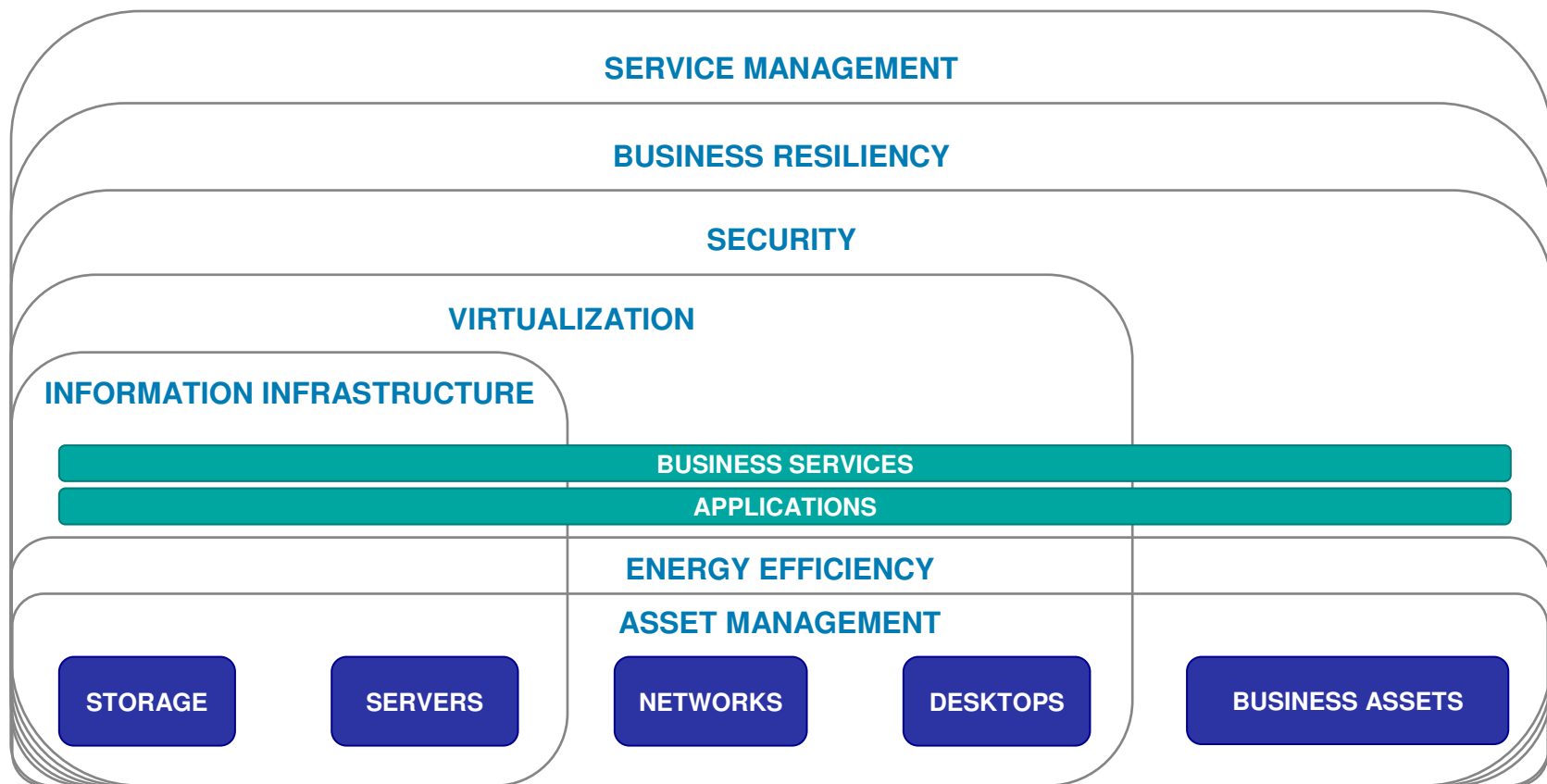
Agenda

- **An overview of Business Resiliency**
- **How Business Resiliency is being exploited in the market**
- **How ISM Group applies Business Resiliency and Continuity**
- **Business and IT priorities for Business Resiliency**
- **How IBM is enabling Business Resiliency with our clients**
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Business Resiliency delivers capability for a portion of infrastructure, applications and business services



Business Resiliency



Business resilience is the ability to ...

... have continuous IT and Business Operations, while rapidly adapting and responding to risks, as well as opportunities. The outcome is to be a more trusted partner, and enable growth.



Business Resiliency – the need

The world is riskier, requiring businesses to seriously consider business resilience as part of the business and IT strategy.



- **Changing environment**
 - Expanding risk exposures
 - Increased global and regional interdependencies
 - Higher risks with complicated Supply Chains
- **Heightened impact of business disruption**
 - Greater financial implications of downtime
 - Brand vulnerabilities
 - Data integrity requirements
- **More complex regulations**
 - Changing industry and regulatory standards
 - Geographic dispersal requirements
 - Varying regulations per country

ComputerWeekly.com

Bacs system failure hits 400,000 salary payments

Friday 30 March 2007
Up to 400,000 people will receive their salary three days late because the Bacs payment processing system - used by every bank in the UK - experienced a failure on Wednesday. By Will Hadfield

H1N1 flu water



LATEST H1N1 FLU STORIES

16 new unlinked flu cases
Football team tests negative
M'sia shuts school
HK lists 65 new flu cases
30 Chinese students have flu

abc NEWS

iTunes back to normal after holiday traffic quadruples

ABC News:
December 28, 2006

US government loses hard disk

DigitalLife: May 2009

Singapore Grand Prix ticket system crashes due to incredible demand

Business and Law
By Theo Valich
Friday, February 15, 2008 08:24

Business Impact



- Downtime ranges from **300–1,200 hours per year**, depending on industry¹
- In some industries, downtime costs can equal **up to 16 percent of revenue**¹
- For **32 percent** of organizations, just four hours of downtime could be severely damaging²
- Online **security attacks** are accelerating, causing downtime and loss of revenue
- Business Resilience and Security are **top areas of concern and spend** for midsize businesses
- **Data is growing** at explosive rates—growing from 161 exabytes in 2007 to 988 exabytes in 2010³
- Some industries are **enforcing fines** for downtime and inability to meet regulatory compliance

¹ Infonetics Research, *The Costs of Enterprise Downtime: North American Vertical Markets 2005*, Rob Dearborn and others, January 2005.

² Continuity Central, "Business Continuity Unwrapped," 2006, <http://www.continuitycentral.com/feature0358.htm>

³ The Expanding Digital Universe: A Forecast of Worldwide Information Growth Through 2010, IDC white paper #206171, March 2007

Resilience Domain Functional Groupings



RESILIENCE DOMAIN

Availability

Recovery

Continuity

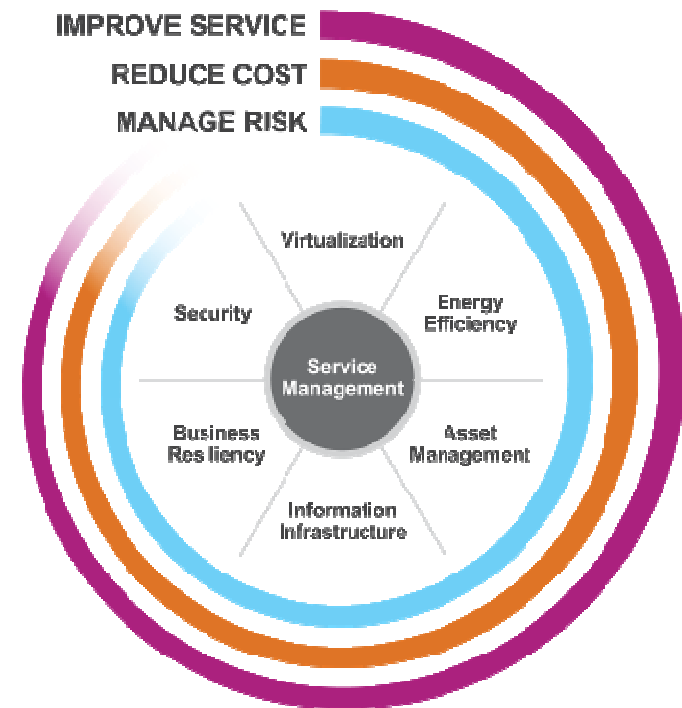


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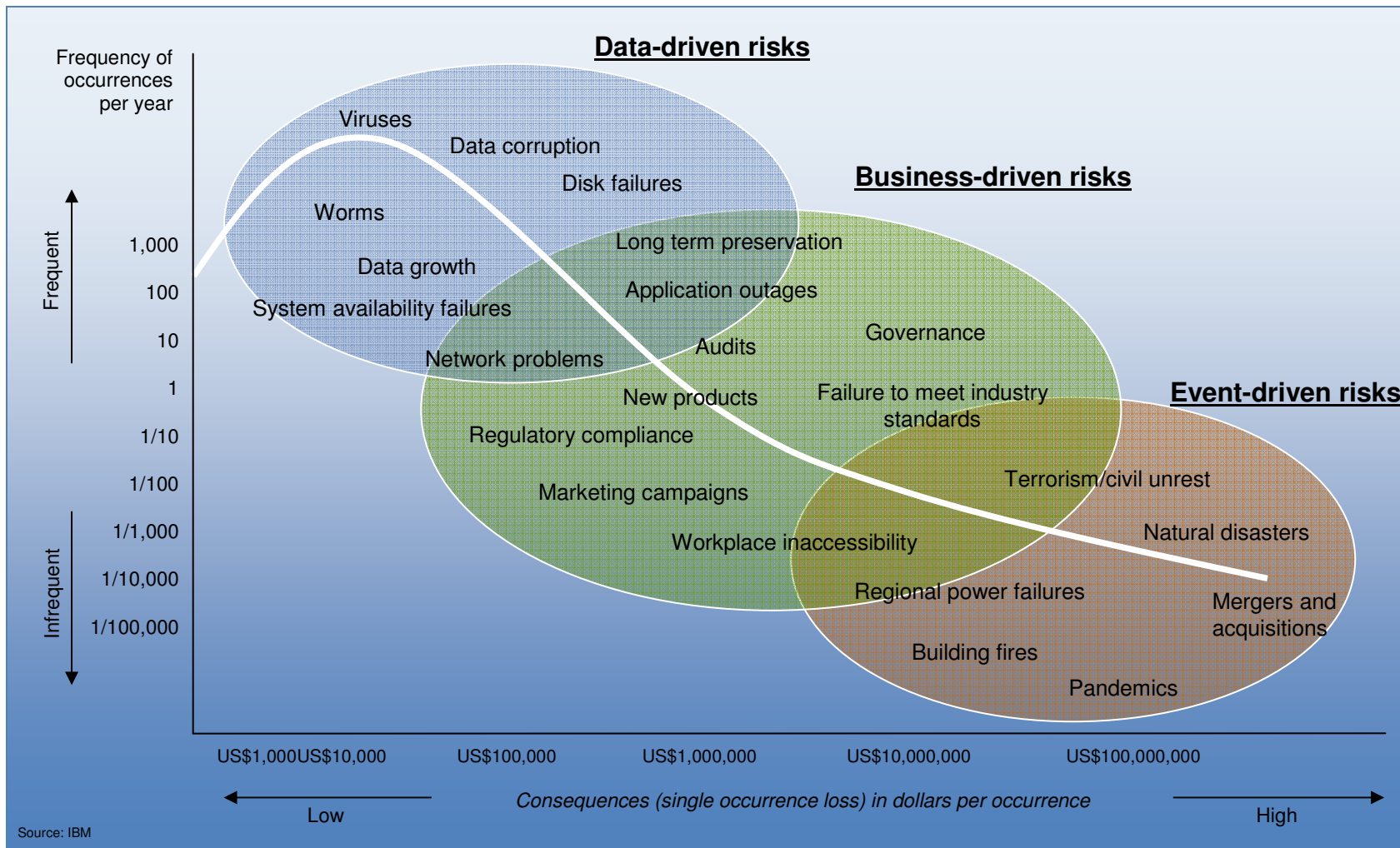
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Business Resiliency

Risks Classification and Business Impact

Low impact x high frequency == High impact x low frequency



Achieving Business Resiliency

Key Considerations. Holistic approach.



- **Business and Financial Justification**

- Identify business and regulatory requirements
- Identify all costs of internal solution vs current recovery solution costs and capabilities

- **Governance / Authority / Policies**

- Communication, Mission, Discipline

- **Solution Design**

- Functional Requirements
- Transition Plan & Processes
- Technological Considerations
- Process development & integration
- Test Plan

- **Maturity of Systems Management Disciplines**

- Problem, Change, Asset, Configuration, Incident

- **Security**

- Physical and Logical

- **Facilities**

- Location, Management, Security, Availability

- **Application**

- Data Protection, Backup, Restart, Synchronization

- **Program Execution**

- Reporting, Roles & Responsibilities, Public Relations, Business Integration, Plan Invocation



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ISM Company: Business Resiliency Implications



The screenshot shows a 3D city simulation interface with various icons representing different business operations. Five callout boxes highlight key business resiliency implications:

- Comply With Regulations**: Callout pointing to a building icon with a document and a dollar sign.
- Increase efficiency of internal staff**: Callout pointing to a building icon with a clock.
- Mitigate Risk & Protect Reputation**: Callout pointing to a building icon with a shield and a hand.
- Ensure Financial Performance**: Callout pointing to a building icon with a dollar sign.
- Maintain Business Operations even in the face of Disasters**: Callout pointing to a building icon with a hand holding a shield.

The interface also includes a top bar with "G2G3.COM", "IBM", "Game Page", "eBoard™", and a timer "14:00:00". A bottom panel displays a table of performance metrics and a list of queued items.

Round	1
Availability	100%
Impact	0%
Shipments	0 / 96
Max Rev	\$850,000
Actual Rev	\$0
Lost Rev	\$0

Time	Item	Count	Status
14:02	ICN001	1	Queued
14:04	IGB609	1	Queued
14:04	IBR711	2	Queued
14:04	IGB894	3	Queued
14:04	IBR269	4	Queued
14:03	DKY461	1	Queued
14:03	DMT362	2	Queued
14:03	DKY247	3	Queued
14:03	DMT289	4	Queued



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Where does Business Resilience fit in your overall plan for business?



Select the most appropriate answer

1. Business Resilience is not a focus area for our business
2. Our Business views Business Resilience as an I.T. responsibility and allocates basic resources for improvements
3. Our business has an initiative in place to improve our Business Resilience
4. Business Resilience is part of our corporate strategy

Which is your top IT priority from a Business Resiliency perspective?



Select the most appropriate answer

1. Our focus is on basic Disaster Recovery
2. Our focus is on Information protection and Continuous availability
3. We have a Business Resiliency initiative focused on ensuring our critical business applications can sustain a significant event
4. Business Resiliency is a major part of our IT Strategy



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Business resiliency offerings and capabilities from IBM



BUSINESS RESILIENCY OFFERINGS FROM IBM

- Resilient hardware—servers and storage
- Implementation and optimization services
- Resilience management solutions
- Disaster recovery and work area recovery solutions
- Data recovery and information protection services
- Business impact analysis studies
- Resilient Business Infrastructure workshops
- Availability assessments
- Proactive managed maintenance services
- Virtualization solutions for improved resilience
- Service management solutions for improved resilience

IBM LEADERSHIP

- Forty-year history of providing resilient availability and recovery solutions
- Thousands of successful IBM resiliency solutions deployed worldwide
- More than 154 global resiliency centers in 55 countries with thousands of qualified IBM and IBM Business Partner consultants worldwide
- IBM hardware and storage designed for business continuity and recoverability, availability and serviceability
- Record of recovering 100 percent of systems for clients that have declared a disaster
- More than 3,400 information protection clients with data under management exceeding 24 petabytes

IBM is helping our clients advance their business objectives through Resiliency Consulting



- **Description:** Offers a systematic approach to diagnose problems, prescribe prioritize actions, design solutions, implement the solutions cost effectively, and provide ongoing assistance to manage the action program.
- **Client need:** To keep the business running smoothly in the face of change, whether business events (acquisition), technology initiatives [shared services, data center consolidation, or service-oriented architecture (SOA)], or adverse events. This means reducing risk to effective operations from a range of threats to the business's people, IT, and infrastructure.
- **Benefits:**
 - Provides a **comprehensive** view of risks to your key business processes
 - **Diagnoses** potential root causes of failures
 - **Prioritizes** actions to reduce risk based on business value
 - **Prescribes** cost-effective actions to reduce risk and improve resilience

IBM is helping our clients advance their business objectives through Managed Resiliency



- **Description:** Helps clients by providing operational availability and integrity for their organization's critical processes functions and infrastructure, as required to make business decisions, measure performance, meet regulatory compliance mandates, and support governance.
- **Client need:** Improved resilience capability in the form of risk management, program governance, coordinated business and IT processes, procedures, communications, test management, and overall management that includes metrics to monitor the health and progress of the resiliency.
- **Benefits:**
 - Necessary **skills** are in place **to drive a more dynamic recovery program**
 - **Reduced dependency on critical resources** required to keep the business running
 - **Advanced metrics** to demonstrate recoverability at all times

IBM is helping our clients advance their business objectives through Recovery Services



- **Description:** Designed to allow businesses (IT and people) to get back up and running in the event of a major incident. IBM recovery centers are used for testing and disaster declaration. Dedicated support personnel are on hand to assist in the event of a crisis or disruption.
- **Client need:** Provide proven, out-of-region recovery capacity to protect against a local or regional outage in the event of a disruption to critical processing capabilities.
- **Benefits:**
 - Develop a **fully functional, off-site recovery capability** that provides business protection in the event of a local outage, regional outage, or **both (IT and work area)**
 - **Enable effective testing** of the recovery solution using a combined IBM and client staffing model for execution
 - Deliver a **cost-effective mechanism** to provide IBM and original equipment manufacturer (OEM) resources to cover multiple-platform recovery

IBM is helping our clients advance their business objectives through Data/Information Protection



- **Description:** Provides clients with a range of onsite, offsite, and hybrid data protection services.
- **Client need:** Improved operational efficiency, decreased recovery time objectives (RTOs), and increased recovery point objectives (RPOs) in response to evolving requirements for business continuity (BC) and disaster recovery (DR).
- **Benefits:**
 - **Shorten data recovery time** in the event of a disaster
 - **Reduce dependency** on tape backup and recovery technologies and processes
 - **Lower** long-term disaster recovery **costs**
 - Enable more **efficient use of internal IT staff**

Business Resiliency adoption



Manage risk with comprehensive resiliency

Adopt a business-driven strategic approach to resilience



- Start with a resilience assessment
- Leverage IBM's leading resilience expertise
- Implement the appropriate business continuity plan
- Implement an information protection solution to reduce costs, maximize efficiency and protect critical data

Reduce cost with proactive incident response

Reduce operational costs associated with outages



- Start with a business risk assessment to understand cost of risk exposures (including compliance)
- Leverage IBM's leading industry consultants to understand the specific regulatory requirements
- Understand resilience optimization solutions to improve responsiveness

Help ensure resilient service delivery

Effectively manage risk for key business services in a 24x7 world



- Start with a business impact analysis
- Determine where the current gaps are in continuity
- Determine where risk to data and inefficiencies lie
- Implement controls to address disaster recovery compliance requirements
- Review proactive maintenance policies

Respond with speed and agility

Gain real-time control over risk posture and exposures



- Determine where risk to data and inefficiencies lie
Implement the right resilience strategy for each business process
- Review sourcing options for flexible response to business needs
- Review management and monitoring solutions for proactive response

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Which best describes your current capability of remote site and equipment for Disaster Recovery (DR)?



Select the most appropriate answer

1. We do not have a documented DR plan, nor have we tested our preparedness
2. We have a DR plan in place, and have in-house skills to manage this, and have tested successfully, within the past 90 days
3. We have a DR plan in place, however that needs to be changed, implemented and tested, in line with new business/Regulatory requirements
4. We do recognize the need for a comprehensive solution to address our Disaster Recovery needs

Which best describes your current capability in Service Continuity and Availability?



Select the most appropriate answer

1. We are focused on ensuring our physical infrastructure is available
2. We are focused on availability and recovery of critical applications
3. We are focused on ensuring continuity and availability of agreed to services and agreed service levels
4. Business service continuity is implemented and integrated with service level and IT finance.

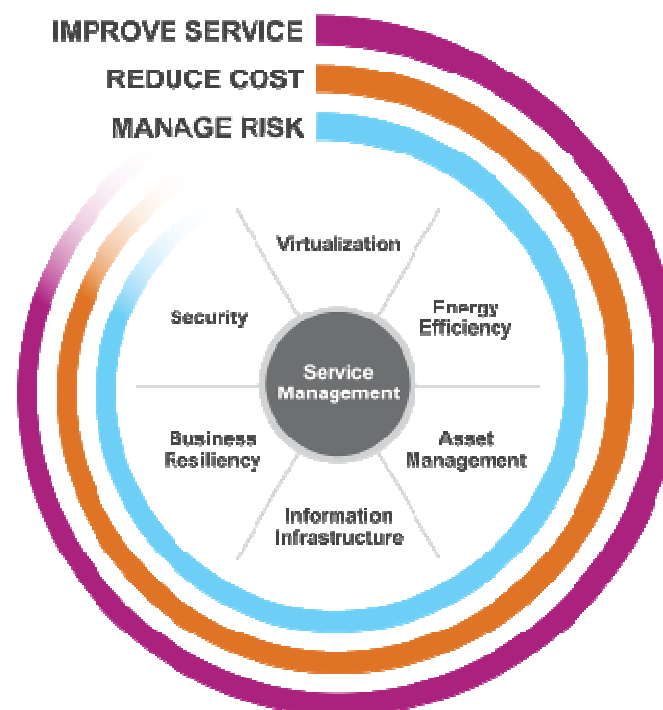
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Client results



Banco Galicia

Met a recovery time objective of less than 72 hours and a recovery point objective of up to 24 hours for critical data and applications

The added level of backup support improved the bank's ability to comply with Central Bank regulations—an improvement that will also help the bank grow.

Kroger

Eliminated the potential for lost tapes with a remote data protection that stores and updates system images

The company was able to ensure that current production levels of its key business platform operating systems would be available for a recovery exercise or an actual disaster.

ArvinMeritor

Contracted for an offsite, fully managed backup infrastructure to enable uninterrupted core operations even if the main data center and offices are down

In addition to providing a backup infrastructure and workplaces, IBM Business Resiliency specialists are ready to assist the company as it works to quickly recover data and applications.

Bank of Montreal

Became one of the first to adopt a new IBM timing technology that enabled sufficient distance between primary and backup facilities

The solution enables business restoration within two hours of a systems failure and is designed to enable a recovery point objective of zero via a backup center 100 kilometers away.