IBM BUSINESS REALITY SUMMIT
Building strategies for a smarter business

IBM

Smarter Planet: Dynamic Infrastructure

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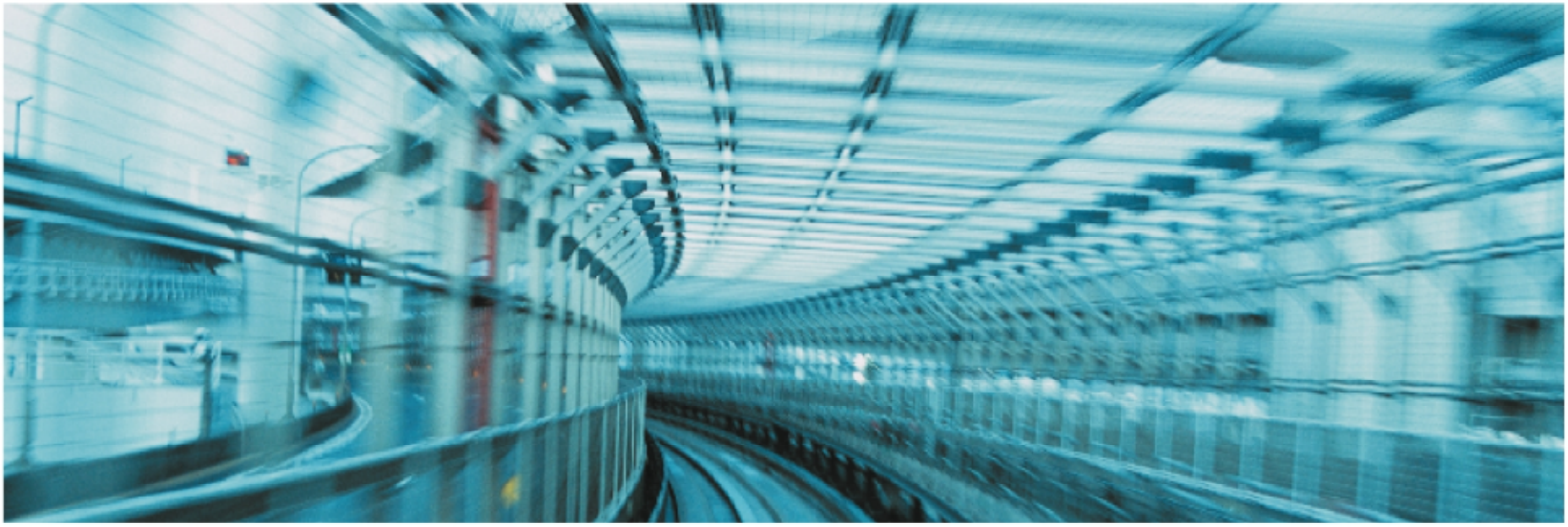


Let's build a smarter planet.

Smarter Energy Use

Your washing machine will bid for electricity. And your neighbor's solar cells might provide it.

Smarter Energy Generation

Energy saving solar technology will be built into asphalt, paint and windows

Smarter Supply Chains

Innovative tracking systems help shippers manage supply chains, improve utilisation and security

Smarter Collaboration

Working together regionally and sharing will be prerequisites for successful government transformation

Smarter Water

Smarter ways to manage water supplies … analytics and research on the behavior of watersheds and impact of human activities…

Smarter Food Tracking

A food tracking solution uses RFID to track and trace meat and poultry from the farm, through the supply chain, to supermarket shelves.

Something meaningful is happening…

*"Every human being, company, organization, city, nation, natural system and man-made system is becoming **interconnected, instrumented and intelligent.** This is leading to new savings and efficiency—but perhaps as important, new possibilities for progress."*

The world is flatter.

The world is smaller.

The world is getting smarter.

Because it can.

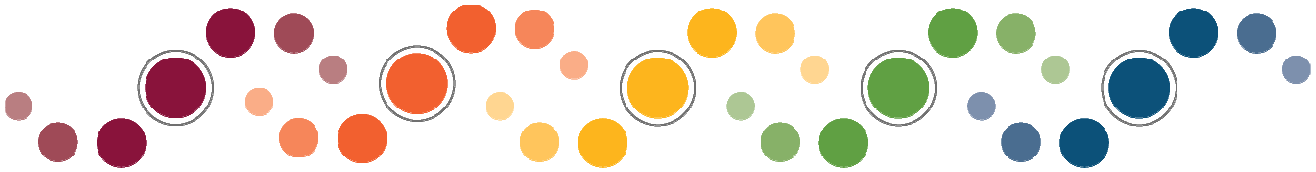
Because it must.

Because we want it to.

The collective wisdom of CEOs: The Enterprise of the Future

- Organizations are bombarded by change, and many are struggling to keep up
- CEOs view increasingly demanding customers not as a threat, but as an opportunity to differentiate
- Nearly all CEOs are adapting their business models—two-thirds are implementing extensive innovations
- CEOs are moving aggressively toward global business designs, deeply changing capabilities and partnering more extensively
- Financial outperformers are making bolder plays

Core Traits of the Enterprise of the Future



1 **Hungry for change**

2 **Innovative beyond customer imagination**

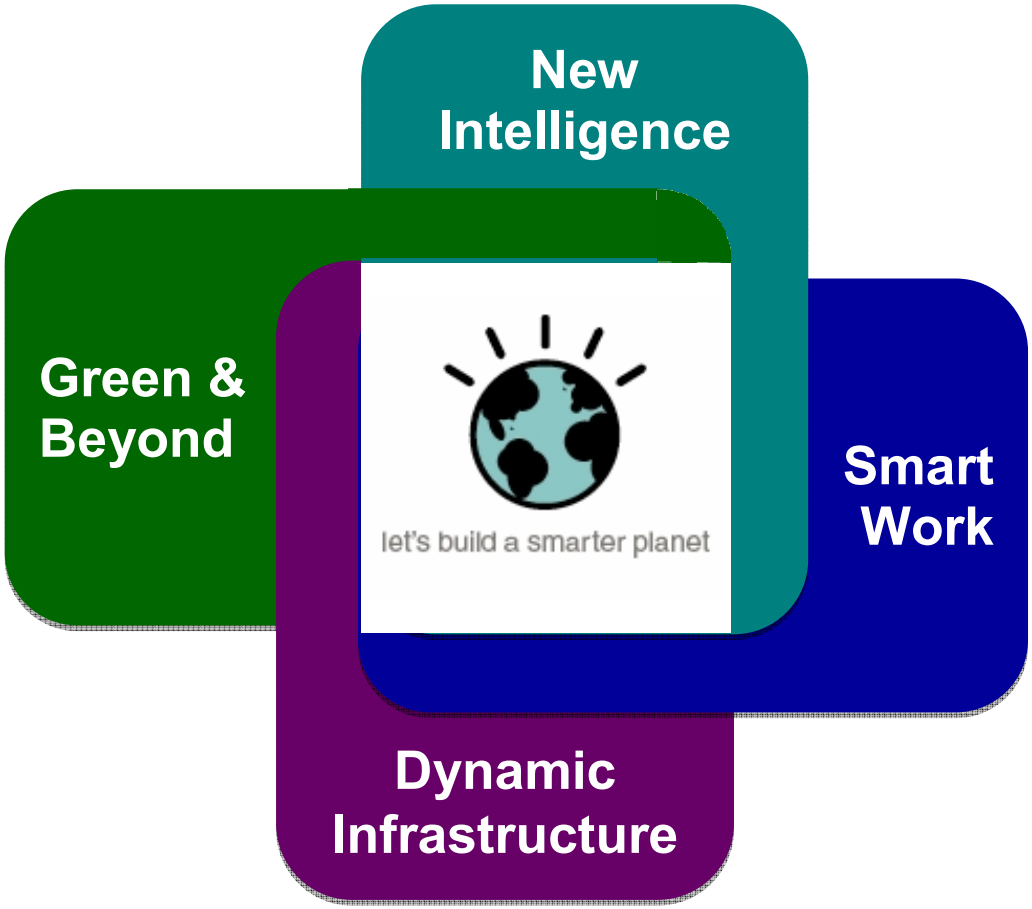
3 **Globally integrated**

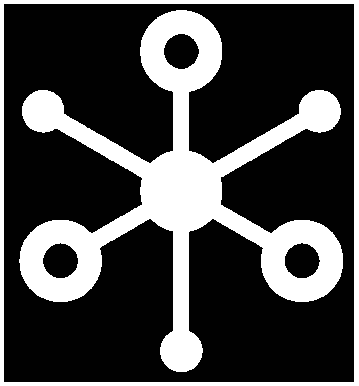
4 **Disruptive by nature**

5 **Genuine, not just generous**

CEOs can now assess how ready they are for becoming the Enterprise of the Future.

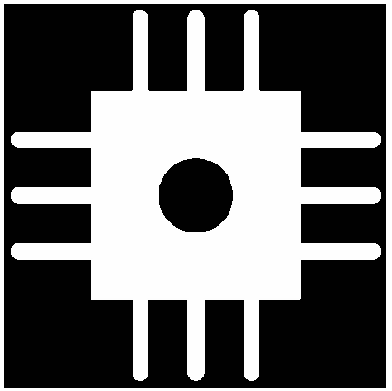
Unique opportunities and challenges in each theme





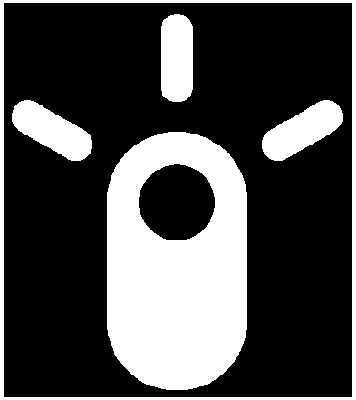
INTERCONNECTED

People, systems and objects can communicate and interact with each other in entirely new ways.



INSTRUMENTED

We now have the ability to measure, sense and see the exact condition of everything.



INTELLIGENT

We can respond to changes quickly, accurately and securely, and get better results by predicting and optimizing for future events.

Infrastructure that brings together business and IT to create new possibilities.

Mobility Infrastructure

+

Facilities Infrastructure

+

Production Infrastructure

+

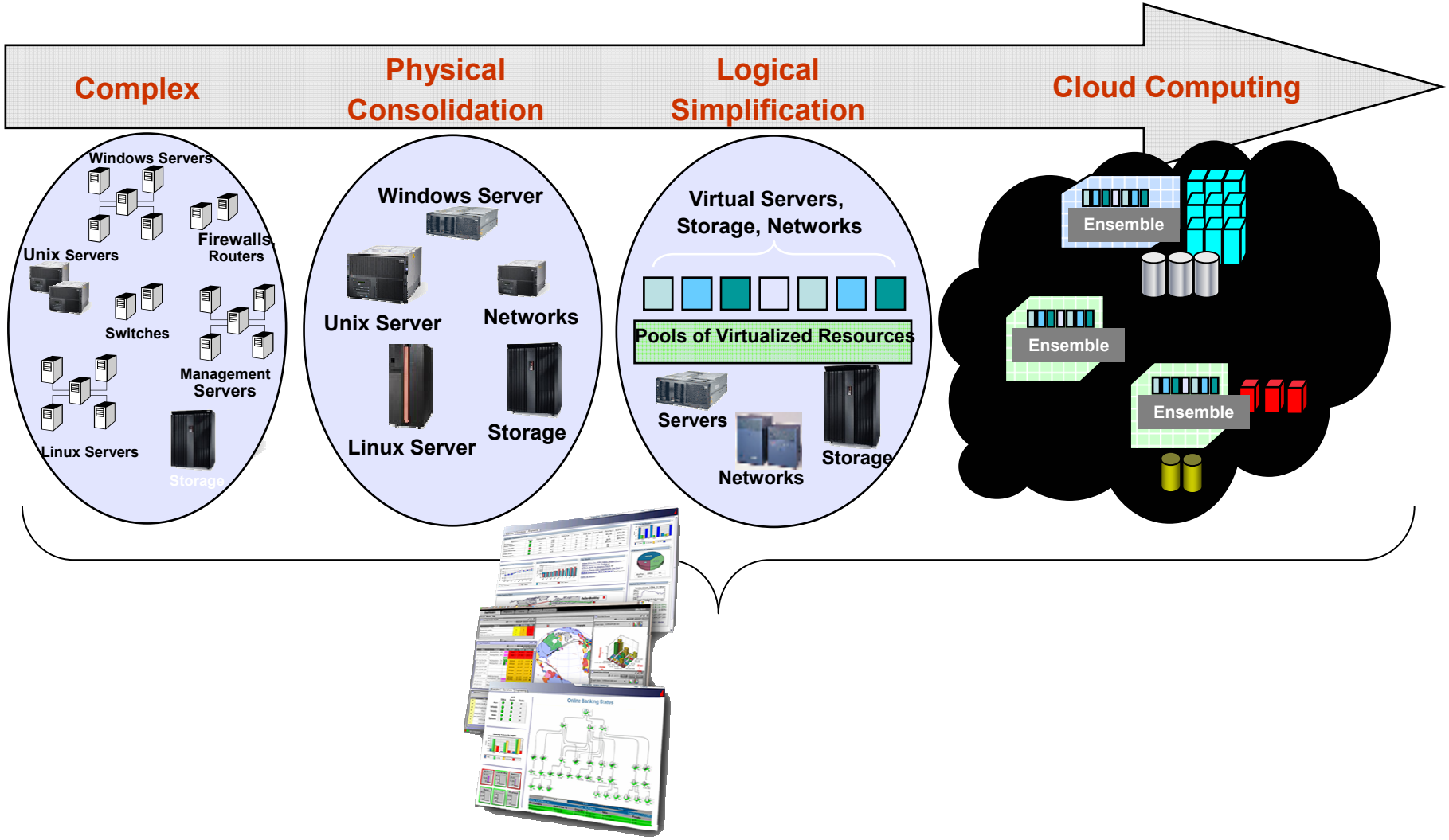
Technology Infrastructure

+

Communications Infrastructure

We need a *dynamic* infrastructure.

Datacenter Evolution



Reduce cost, improve service, and manage risk

Rising Cost Pressures

Business and IT assets are underutilized and difficult to manage; operational cost and complexity are reaching unsustainable and uncompetitive levels.

Higher Service Expectations

Increasingly savvy customers demand continuous service availability and high-quality experience across an expanding range of assets, applications, and services

New Risks and Threats

Unprecedented security, resiliency, and compliance challenges are created by the accelerating pace of business change and the proliferation of operating, IT, and "smart" assets that comprise the underlying infrastructure.

Emerging Technologies

Smarter and more adaptive technologies, such as cloud computing, virtualization, and Web 2.0, must be harnessed effectively to drive business innovation, efficiency, and responsiveness.

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Dynamic Infrastructure: Addressing today's challenges *and* tomorrow's opportunities.

IMPROVE SERVICE

Not only ensuring high availability and quality of existing services, but also meeting customer expectations for real-time, dynamic access to innovative *new* services.

REDUCE COST

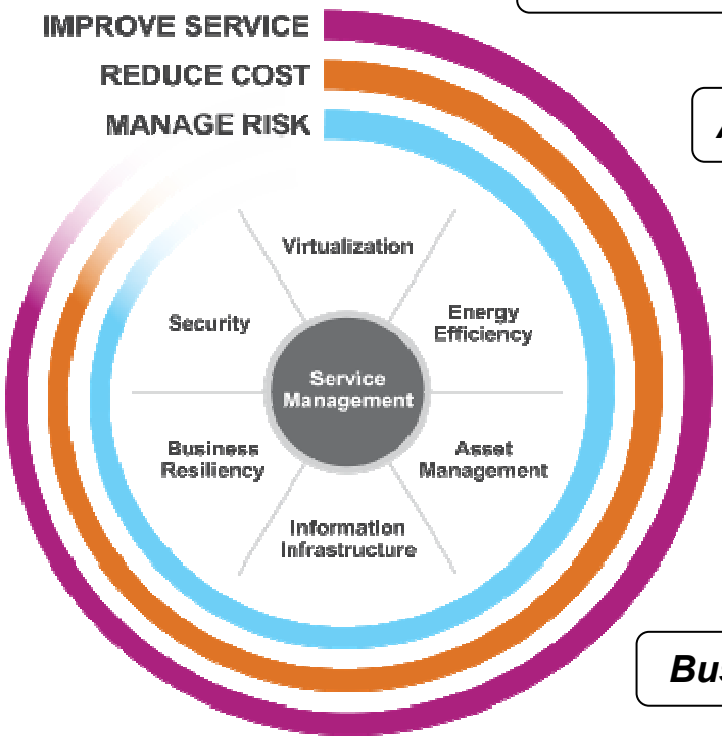
Not just containing operational cost and complexity, but achieving *breakthrough* productivity gains through virtualization, optimization, energy stewardship, and flexible sourcing.

Dynamic Infrastructure

MANAGE RISK

Not only addressing today's security, resiliency, and compliance challenges, but also preparing for the new risks posed by an even more *connected* and *collaborative* world.

Building a dynamic infrastructure.



Service Management

Provide visibility, control and automation across all the business and IT assets to deliver higher value services.

Asset Management

Maximizing the value of critical business and IT assets over their lifecycle with industry tailored asset management solutions.

Virtualization

Leadership virtualization and consolidation solutions that reduce cost, improve asset utilization, and speed provisioning of new services.

Energy Efficiency

Address energy, environment, and sustainability challenges and opportunities across your business and IT infrastructure.

Business Resiliency

Maintaining continuous business and IT operations while rapidly adapting and responding to risks and opportunities.

Security

End to end industry customized governance, risk management and compliance solutions.

Information Infrastructure

Helping businesses achieve information compliance, availability, retention, and security objectives.

IBM offerings and capabilities.

IBM SERVICE MANAGEMENT OFFERINGS

- Business service management.
- Event management (systems, network and energy).
- Request-driven provisioning and scheduling.
- Integrated service delivery and process automation.
- Service request management.
- Solutions for cloud computing.
- SOA performance management.
- IT governance.
- Continuous data protection and automated archiving.
- Security of applications, data, and processes.
- End-to-end asset management.
- IT financial management with chargeback and billing.

IBM ASSET MANAGEMENT OFFERINGS

Enterprise Asset Management

- Industry Specific Solutions: Nuclear Power, Utilities, Life Sciences, Oil & Gas, & Transportation.

IT Asset Management

- Service request management.
- License Compliance Manager.

Functional Extensions:

- Service Providers, Spatial Asset Management, Linear Asset Manager, Mobile Work Manager, Navigator, Calibration.

IBM VIRTUALIZATION OFFERINGS

- Virtualized Servers and Storage.
- Server Consolidation Efficiency Studies.
- Server and Storage Virtualization solutions.
- Virtualization Management Solutions.
- Virtualization and Consolidation Services.
- Application Infrastructure Virtualization.
- Client Virtualization Solutions.
- Network Optimization Solutions
- Implementation Services.
- Financing and IT asset disposal Services.
- Strategy & Planning Services.

IBM offerings and capabilities.

IBM ENERGY EFFICIENCY OFFERINGS

- Energy Efficient Servers and Storage.
- Implementation services.
- Energy management solutions.
- Server and Storage Virtualization solutions.
- Server, storage, network and end-user virtualization and consolidation services.
- Data center strategy services.
- Data center design and build services.
- Energy Efficiency assessments.
- Financing and IT asset disposal services.

IBM RESILIENCY OFFERINGS

- 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.
- Resiliency workshops.
- Availability assessments.
- Proactive managed maintenance services.
- Virtualization solutions for improved resilience.
- Service management solutions for improved resilience.

IBM SECURITY OFFERINGS

- Identity & access management.
- Trusted identity offerings.
- Data and Information security offerings.
- Application security offerings.
- Policy management/enforcement solutions.
- Network, Server and Endpoint security offerings.
- Security compliance and risk management offerings.
- Self-encrypting storage and key management solutions.
- Security assessment, planning and implementation services.
- Managed security services.
- Education and training offerings.

IBM offerings & capabilities.

IBM GLOBAL FINANCING OFFERINGS

Hardware Financing
- With facilitated mid-lease technology upgrade and end-of lease options.

Software and Services Financing
- Turning up-front costs into affordable monthly payments, control expenses and match cash flow to business benefits.
- Conserve cash for other strategic initiatives.

IBM Project Financing
- A customized, all inclusive financial package for services, infrastructure solutions and business transformation projects.

Asset Recovery Solutions
- For asset disposal (recycling) and disk data overwrite services.

Customer Center
- An IT asset management tool.

IBM Certified Used Equipment

IBM CLOUD COMPUTING OFFERINGS

Cloud Consulting
- Business Consulting for Cloud Computing
- Infrastructure Consulting Services for Cloud Computing
  - Strategy & Planning
- IT optimization services
- Security and Resiliency Consulting

Cloud Implementation
- Service Management for Cloud Computing
- IBM design & implementation for test environments
- High Performance On Demand Services (HiPODS)
- Virtual Infrastructure Access
- Self-enablement portal
- Scale out File Services
- IBM security solutions for cloud computing

Cloud Delivered
- LotusLive
- Lotus Collaboration
- Smart Business Platform (EC2)
- Computing On Demand
- IBM Information Protection Services
  - Remote data protection service
  - Managed data protection for desktops and laptops (Tivoli SaaS)

Dynamic Infrastructure – Virtualization

Smart is: *Leadership virtualization and consolidation solutions that reduce cost, improve asset utilization, and speed provisioning of new services.*

Reduce operating costs.

- Consolidate via virtualization to fewer systems.
- Simplify management of the infrastructure.
- Recapture floor space through consolidation.

Improve service responsiveness.

- Improve system, network and application performance.
- Process more information in real-time to make better business decisions.
- Bring new services online quickly.

Manage availability in a 24/7 world.

- Increase availability and improve resiliency.
- Manage and secure data without affecting its availability.

Dynamically adapt to the peaks of the business.

- Dynamically deliver resources where needed most.
- Make data available from anywhere, anytime.

Dynamic Infrastructure – Information Infrastructure

Smart is: *Deploying a resilient, secure Information Infrastructure to protect, manage and gain insight from information.*

Consolidated, easy to audit solutions for Information *Compliance.*

- Maintain accurate, reliable, and complete information.
- Manage compliance as an organization-wide process.
- Reduce risk and cost of litigation and audit deficiency.

Always on Information *Availability.*

- Provide continuous access to information.
- Meet service level commitments by design.
- Reduce disruptions, planned and unplanned.

Policy-based Information *Retention.*

- Retain and manage business information efficiently.
- Reduce business and legal risk by purging expired data.
- Migrate data non-disruptively during business hours.

Building Information *Security* into the infrastructure.

- Ensure the security of confidential data.
- Provide secure, policy-based access to information.
- Audit and report security breaches as required.

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Dynamic Infrastructure – Asset Management

Smart is: *Maximizing the value of critical business and IT assets over their lifecycle with industry tailored asset management solutions.*

IT Asset Management

Track and manage the lifecycle of IT assets.

- Manage security policy compliance.
- Track hardware and software deployment.
- Manage audit, lease and software compliance exposures.
- Combine inventory, maintenance, contacting processes.

Consolidated Asset Management

Manage the lifecycle of all critical assets.

- Address all types of assets: Production, Delivery, Transportation, Facilities, Infrastructure and IT.
- Enforce best practices across the enterprise.
- Ensure safe and reliable operations.

Converged Assets

Leverage operational assets with embedded IT.

- Physical devices are becoming IP enabled - smart meter.
- Embedded IT improves asset performance.
- Enable remote monitoring and automation.

Deep Industry Functionality

Meeting the needs of asset intensive industries.

- Industry specific solutions for Nuclear Power, Utilities, Transportation, Life Sciences, and Oil & Gas.
- Supporting infrastructure with Spatial and Linear Asset Management.

Dynamic Infrastructure – Energy Efficiency

Smart is: *Addressing energy, environment, and sustainability challenges and opportunities across your business and IT infrastructure.*

IT Efficiency

Reduce energy costs.

- Implement more energy efficient servers and storage.
- Increase IT utilization and efficiency.
- Improve service with increased flexibility and resilience.

Energy Management

Measure and control energy usage.

- Understand energy consumption.
- Produce reports to demonstrate energy savings over time.
- Put policies in place to manage and control energy use.

Data Center Facilities

Reduce capital and operational costs.

- Extend the life of existing data centers.
- Rationalize data center infrastructure across the company.
- Design flexibility into my new data center infrastructure.

Environmental Leadership

Establish green strategy.

- Comply with emerging stricter controls over energy consumption, greenhouse gases, and disposal of hazardous substances.
- Align IT with corporate sustainability initiatives to drive brand value.

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Dynamic Infrastructure – Business Resiliency

Smart is: *Maintaining continuous business and IT operations while rapidly adapting and responding to risks and opportunities.*

Manage risk with end to end resiliency

Adopt a business-driven strategic approach to business resilience.

- Minimize impact of potentially disruptive events by determining the right resilience strategy - by business process.
- Respond more effectively to unforeseen events.
- Deploy resilience for services, operations and people.
- Assess business uptime needs against resiliency requirements.

Reduce cost through proactive incident response

Reduce operational costs associated with outages.

- Maintain business operations and services.
- Implement failover work areas for your most critical asset – your people.
- Avoid fines associated with compliance requirements or service level agreements.

Ensure resilient service delivery

Effectively manage risk for key business services in a 24/7 world.

- Meet operational needs to address resilience requirements.
- Protect business and IT assets to improve availability and recoverability.
- Deploy automation for failovers and incident response.
- Use monitoring to ensure demand is satisfied during demand spikes.

Respond with speed and agility

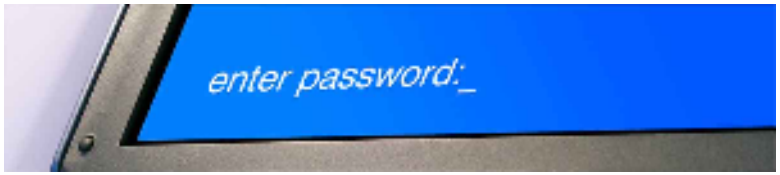
Gain real-time control over risk posture and exposures.

- Ensure risk posture meets policies and regulations.
- Derive insight via dashboards, alerts and reporting.
- Utilize mixed sources for resilience; in-house, outtask, outsource, managed services.
- Regularly test recovery plans.

Dynamic Infrastructure – Security

Smart is: *End to end industry customized governance, risk management and compliance solutions.*

Provide end-to-end risk management
Adopt a business-driven strategic approach to security.



- Prioritize security risks by criticality to key business processes.
- Enable business change via a foundation of flexible controls.
- Meet operational needs to address compliance requirements.

Reduce the cost of security
Meet changing business needs.

- Leverage smart security solutions to lower overall cost
- Explore a mix of in-house and managed solutions
- Embed security into projects and infrastructure to enhance effectiveness.

Ensure secure service delivery
Effectively manage risk for key business services.

- Meet operational needs to address security requirements.
- Protect business and IT assets to improve confidentiality, integrity and availability.
- Build in automation to respond to market needs, reduce cost and compliance fatigue.

Respond with speed and agility
Gain control over risk posture and incident response.

- Ensure risk posture meets policies and regulations.
- Improve incident response processes.
- Derive insight via dashboards, alerts and reporting.

Dynamic Infrastructure – Cloud Computing

Smart is: *Access and deliver resources, services, and information quickly and easily, anywhere and anytime.*

Infrastructure Efficiency

Pay for what you need, only when you need it.

- Access computing resources as they are needed.
- Increase IT availability and improve efficiency.
- Track usage to effectively allocate resource accounting.

Respond quickly

Deploy services rapidly in response to needs.

- Get resources quickly to optimize the opportunity.
- Access from any device, anywhere, anytime.
- Infrastructure, platform, application, and processes.

Manage risks effectively

Effectively meet resiliency and security requirements.

- Effective resiliency and security to ensure control.
- Enhance the user experience with integrity.
- Protect business assets while optimizing delivery.

Cloud Computing Leadership

Establish a flexible sourcing strategy.

- Implement a strategic plan that leverages flexible sourcing to optimize a dynamic infrastructure.
- Ensure that the IT and business infrastructure is ready to enhance strategic initiatives, not inhibit.

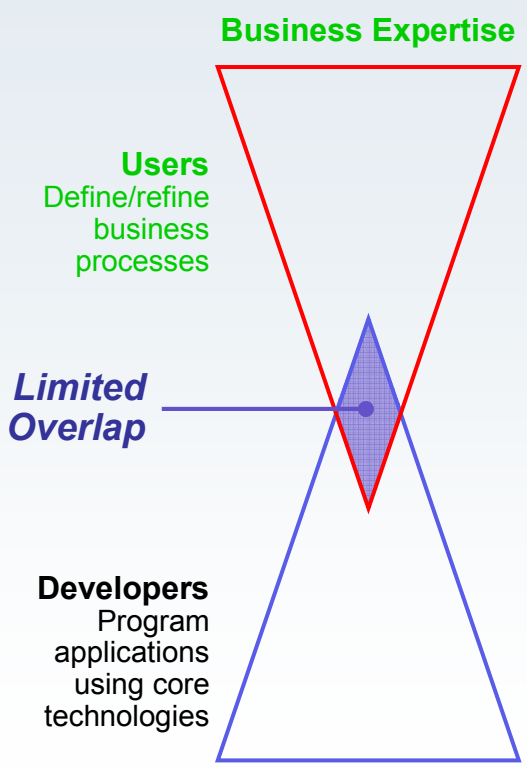
CIO Strategies for Repair & Prepare

CIO Strategies for Managing in an Uncertain Environment

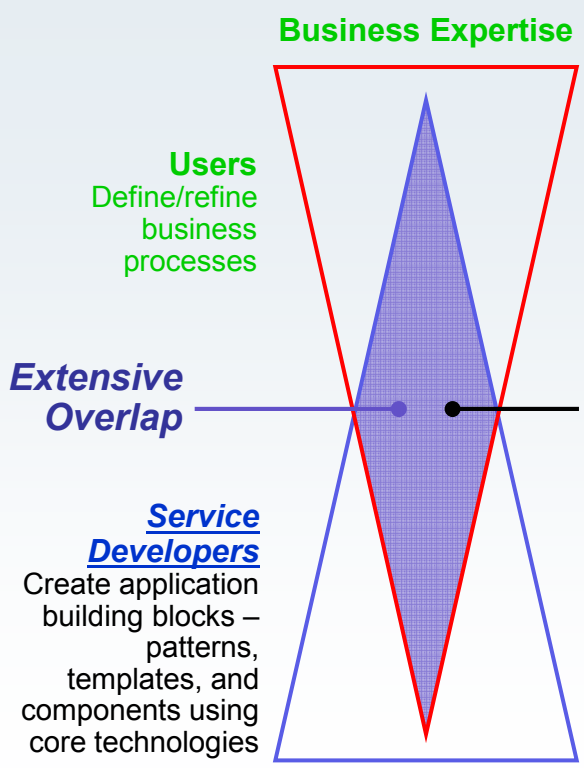
- Cutting IT operating expense
- Deferring or reducing capital expenditures
- Seeking productivity increases from their existing infrastructure
- Postponing hiring of additional IT staff
- Revisiting existing service contracts
- Postponing the launch of new initiatives
- Postponing long-term projects in favor of near-term ROI

Enhanced Business/IT Relationships and New Roles

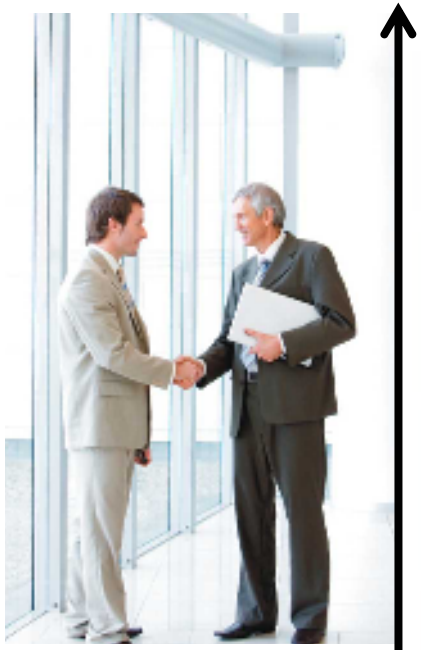
Traditional



Service-Oriented



Provider Relationship Model



Benefit
as IT Value Driver

High

Enabler — **Provider researches, recommends and implements technology to enable quantum leap in business capability**

Partner — **Provider works with others to develop a service and provide resources/skills necessary to support the service**

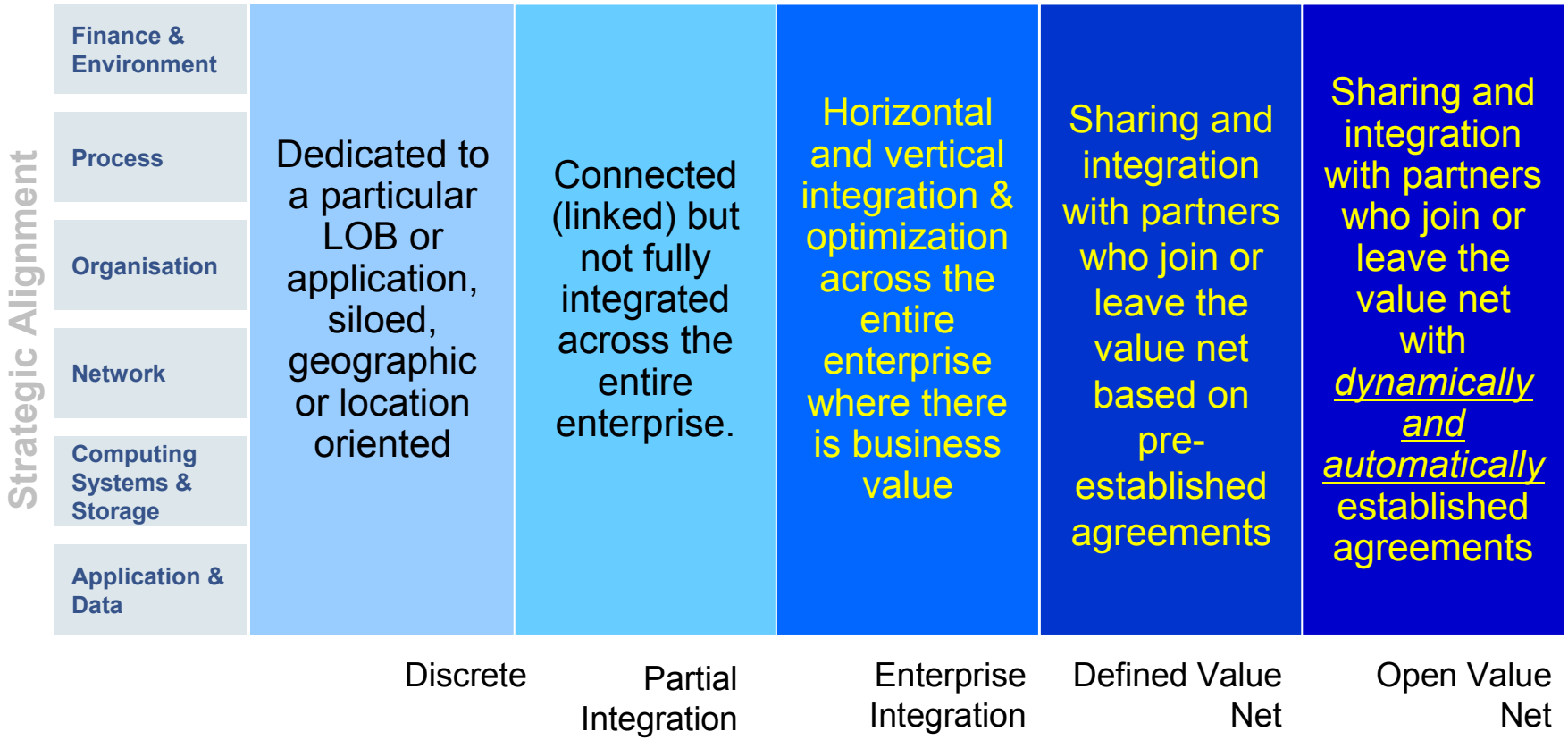
Utility — **Provider of a quality service at a cost equal to or lower than the competition**

Commodity — **Provider of an adequate service at a cost lower than the competition**

High

Cost
as IT Value Driver

The Dynamic Infrastructure IT Model



How to get started?

What does IBM have to offer?

Assess potential benefits.

- Proven tools, assessments and workshops by key initiatives to measure business impact.

Collaborate to build the right blueprint for success.

- Deep business architecture, strategy and change and data center strategy expertise.
- Open standards based approach with a supporting ecosystem of partners.
- Experience from thousands of client engagements.
- Structured architecture approach based on industry best practices.
- Award-winning implementation blueprints and patterns.
- Experiences from our own transformation.
- The broadest systems, storage, software and services portfolio in the industry to find the right fit for your business.
- Access to capital to help create a funding and IT asset disposal strategy.
- Unparalleled research organization and extensive patent leadership.

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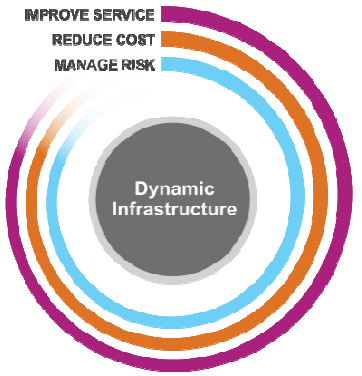
IBM offers... Entry Assessments & Workshops



Dynamic Infrastructure, Improved Services Cost Reduction Risk Management

DI Innovation workshop for IT Strategy Planning.

(no-charge to customer.. 2 day w/s for qualified Customers)

Various Solutions Offerings

Understand the dynamic infrastructure vision but need to know its applicability to your business	**Need to automate IT processes, manage business services, manage SOA environments or converge business and IT asset management**	**Need to reduce costs caused by server sprawl, escalating storage costs, inefficient application infrastructure or rising power and cooling expenses**	**Need to manage risks through a more resilient and secure infrastructure**

Thank You