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May/2009

Handling Economic Uncertainty

While moving forward to a Smarter Planet

Agenda

Smarter Planet

Economic Crisis

Dynamic Infrastructure

The world is smaller and flatter.

The need for progress is clear.

170 billion

Kilowatt-hours wasted each year by consumers due to insufficient power usage information.

The opportunity for progress is clear.

10%

REDUCTION IN ENERGY COSTS

Utility networks: Pacific Northwest National Laboratory
In the Smart Grid project, consumers decreased their overall

peak load on the grid by 15% when offered the opportunity to save an average of 10% on their electricity bills.[1]

The need for progress is clear.

3.7 billion lost hours
2.3 billion gallons of gas

Annual impact of congested roadways
in the U.S. alone.[1]

The opportunity for progress is clear.

20%
LESS TRAFFIC

Traffic system: Stockholm, Sweden
The city cut traffic by 20%, lowered emissions by 12% and reported 40,000 additional daily users of public transportation.[1]

The need for progress is clear.

100 million

People worldwide pushed below the poverty line by personal healthcare expenditures.[1]

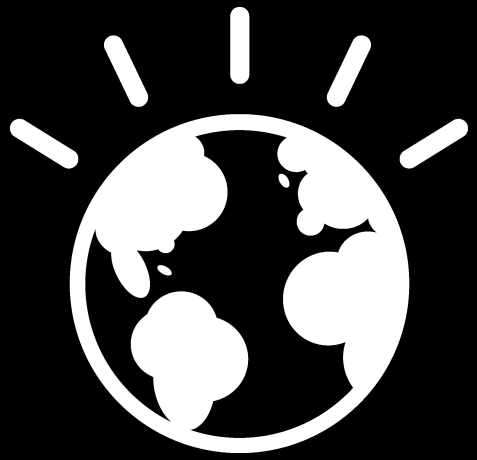
The opportunity for progress is clear.

$30 million in cost savings

Smarter healthcare: University Pittsburgh Medical Center

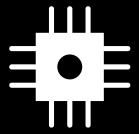
This renowned academic medical center projects a $30 million reduction in capital and operating cost reductions over eight years, enabling it to meet an ambitious clinical agenda

A mandate for change is a mandate for smart.



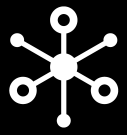
The world is about to get
a whole lot smarter.

Something meaningful is happening.



Our world is becoming

INSTRUMENTED

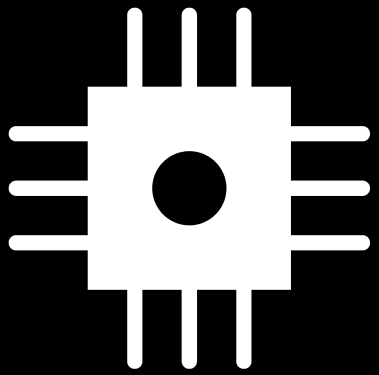


Our world is becoming

INTERCONNECTED

Virtually all things, processes and ways of working are becoming

INTELLIGENT



INSTRUMENTED

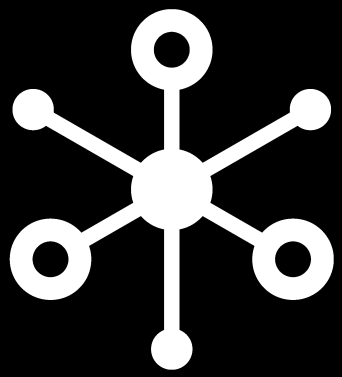
We now have the ability to measure, sense and see the exact condition of everything.

Today, there are 1 billion transistors for each person on the planet.[1]

By 2010, 30 billion RFID tags will be embedded into our world and across entire ecosystems.[1]

Everything will become instrumented: supply chains, healthcare networks, cities and even natural systems like rivers.

[1] Sam Palmisano speech, November 12, 2008



INTERCONNECTED

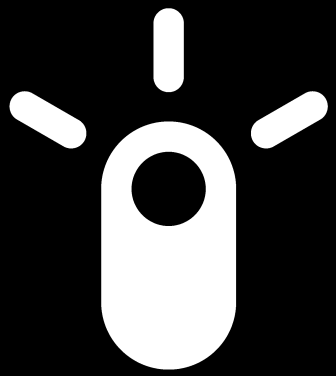
People, systems and objects can communicate and interact with each other in entirely new ways.

The internet of people is 1 billion strong. Almost one third of the world's population will be on the web by 2011.[1]

There will be nearly 4 billion mobile phone subscribers worldwide by the end of 2008.[1]

The Internet of things—cars, appliances, cameras, roadways, pipeline, pharmaceuticals and even livestock—is headed to 1 trillion.

[1] Sam Palmisano speech, November 12, 2008



INTELLIGENT

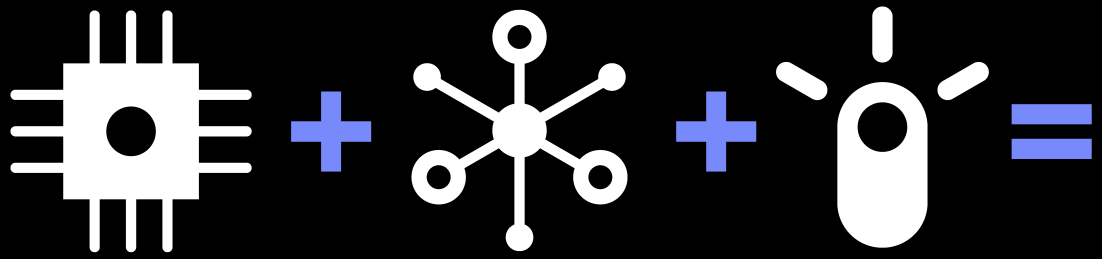
We can respond to changes quickly and accurately, and get better results by predicting and optimizing for future events.

Every day, 15 petabytes of new information are being generated. This is 8x more than the information in all U.S. libraries.[1]

An average company with 1,000 employees spends $5.3 million a year to find information stored on its servers.[1]

New computing models manage the massive amounts of data generated by the proliferation of end-user devices, sensors, and actuators. Combined with advanced analytics, these technologies are making us smarter.

[1] New Intelligence White Paper from ThinkForward website



An opportunity to think and act in new ways—
economically, socially and technically.

At the same time the world is becoming more globally integrated, we are navigating uncertain economic conditions

- Frozen credit markets and limited access to capital
- Energy shortfalls and erratic commodity prices
- Information explosion and risk/opportunity growth
- Slowing superpowers and emerging economies
- New customer demands and business models

The current economic climate is creating budget challenges and the need to cut costs.

Companies must realize near term cost reductions while continuing to drive structural change

Short Term Cost Reductions

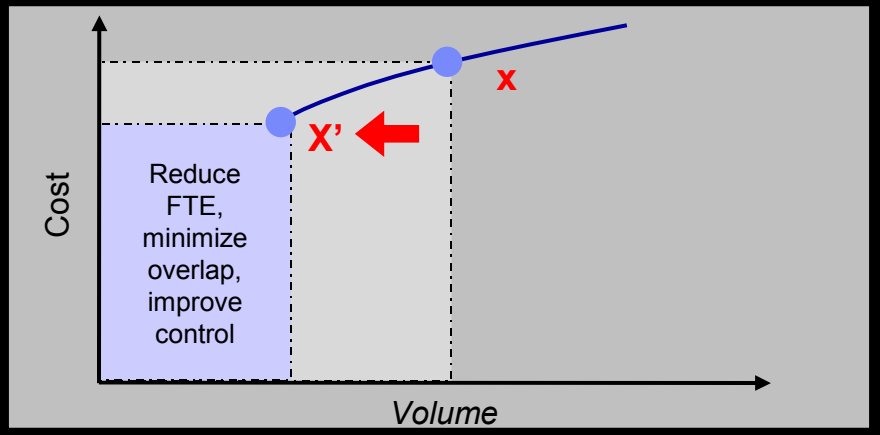
- Hiring freeze
- New IT project budget freeze
- Termination of sub-contracting agreements
- Voluntary departure plans
- Early retirement

Structural Cost Reductions

- Relocation of resources/applications
- Central vs. decentralized IT governance
- Strategic alignment & prioritization
- Maintenance/process outsourcing
- Process optimization

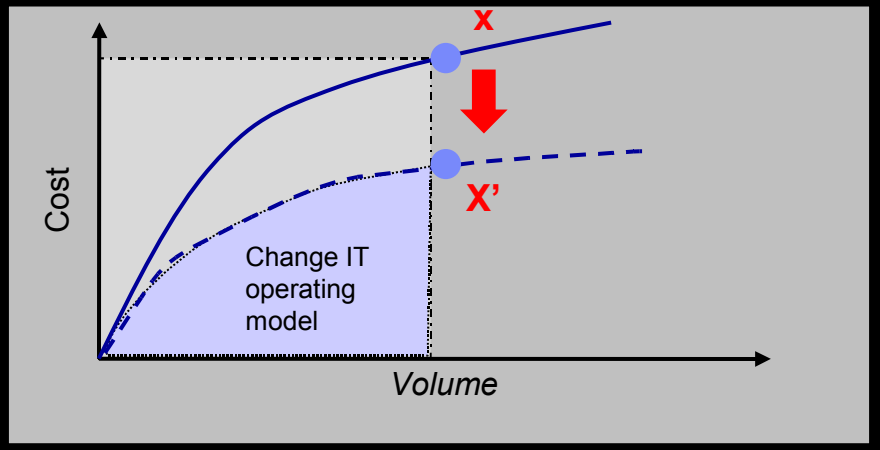
Type 1 Rationalization

"Reduce Capacity"

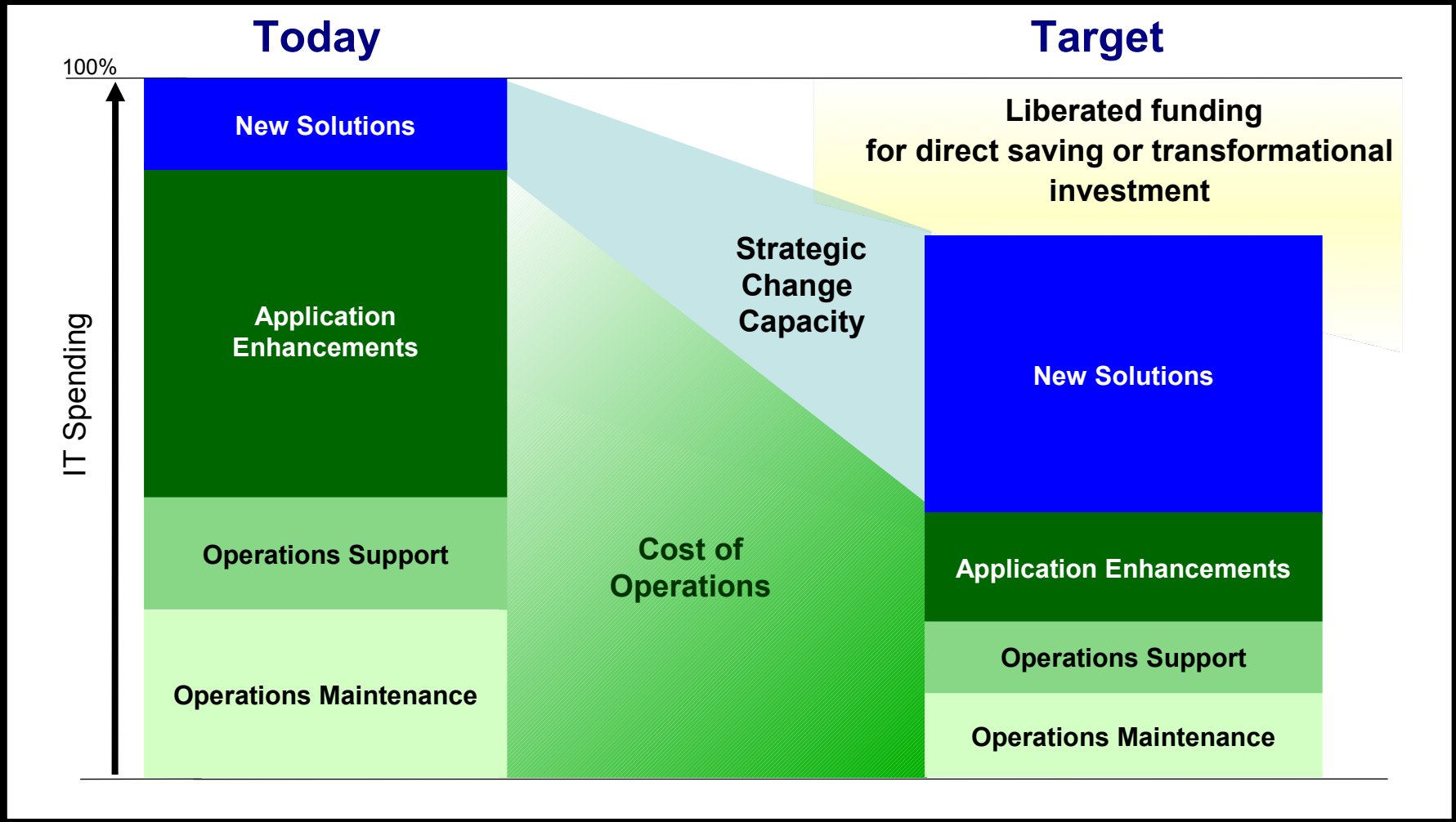


Type 2 Structural Change

"Transform Fixed into Variable Costs"



Reducing current costs can provide an important source of funding for new initiatives

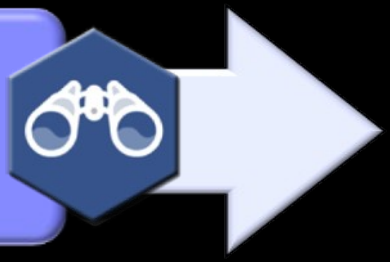


Top Service Offerings that helps to cut cost and increase productivity of existing infrastructure with a ROI < 18 month

Cut costs

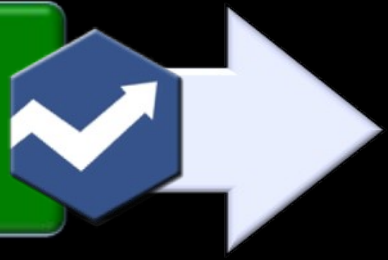
- IT Optimization Strategy & Planning
- Data Center Energy Efficiency Assessment
- Converged Communication – IP Telephony
- Video Communication – Telepresence
- Virtual Infrastructure Access Services

Get more from existing infrastructure



- Network Infrastructure Optimization
- Server Consolidation & Virtualization
- Storage Optimization & Integration
- Information Protection Services

Improve productivity



- Remote Managed Infrastructure Services
- Managed Security Services
- Service Management Strategy & Planning
  - IT Executive Workshop
- Service Management Implementation
  - IT Lifecycle Management & governance

It’s time to start thinking differently about infrastructure.

In this smarter but economically challenged world, we need our infrastructure to propel us forward, not hold us back.

Infrastructure that is

- **Intelligent**
- **Interconnected**
- **Instrumented**

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.

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.

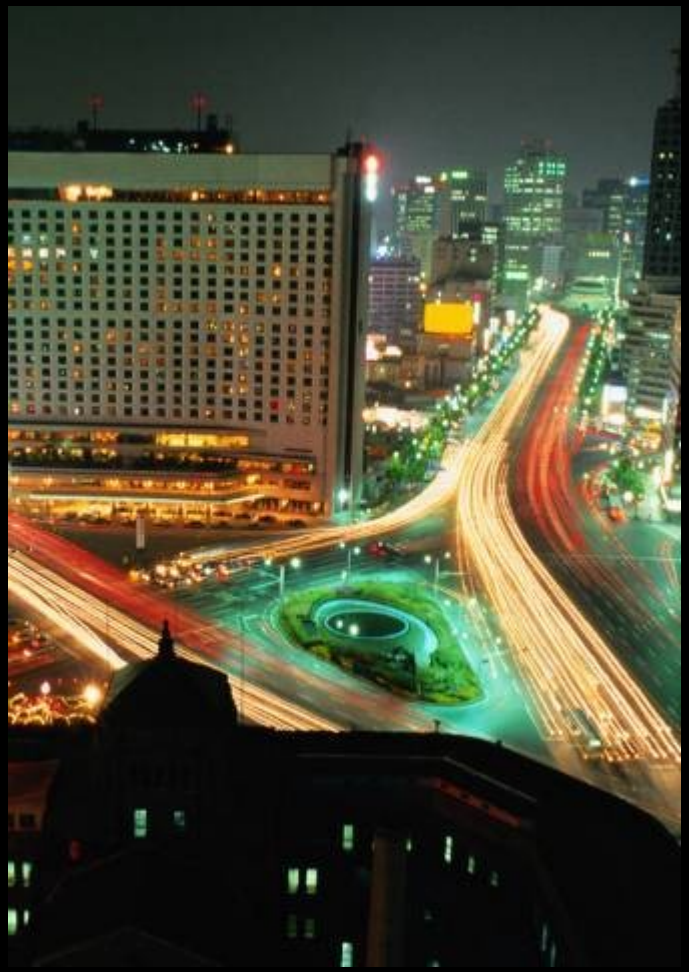
REDUCE COST

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.



Dynamic Infrastructure…

Enables visibility, control, and automation across all business and IT assets.

Transforms assets into higher value services.

Is highly optimized to achieve more with less.

Addresses the information challenge.

Leverages flexible sourcing like clouds.

Manages and mitigates risks.

…delivers superior business and IT services with agility and speed

How do we build a more dynamic infrastructure?

Address today's operational challenges to free up resources for new investments.

Converge business *and* IT infrastructure to work in concert, achieving breakthrough productivity and greater business value.

Utilize alternative sourcing approaches, like cloud computing, to deliver new services with agility and speed.

How to get started?

Assess potential benefits.

Collaborate to build the right blueprint for success.

What does IBM have to offer?

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

- 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.

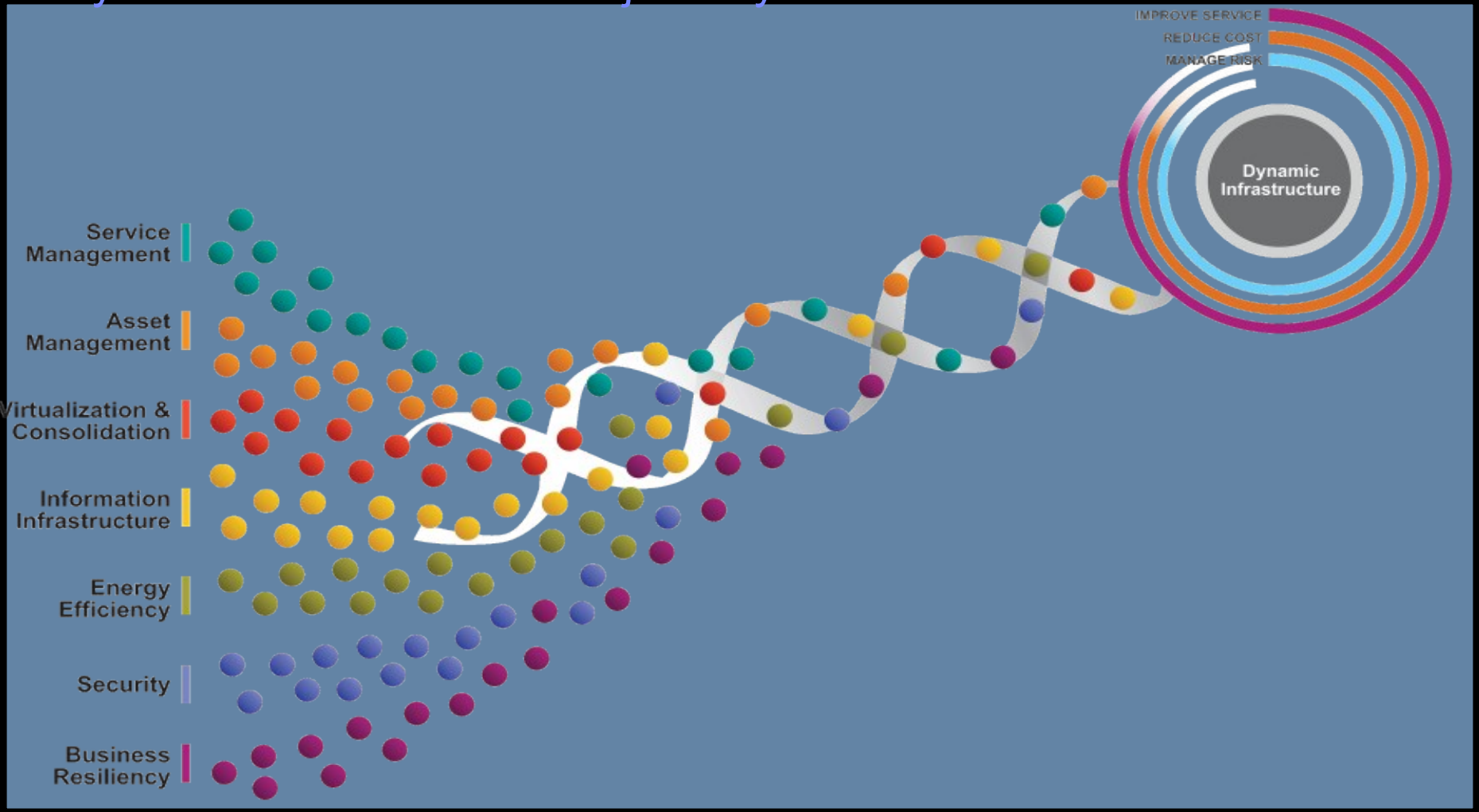
Collaborate with our experts.

- **Skills & Expertise**
- Business domain expertise across all industries.
- Span the spectrum from ideation to implementation.
- Over 3,500 Security & Privacy professionals globally.
- Over 4,500 skilled System z services experts.
- Over 5,000 ITIL-certified consultants in 30 countries.
- Over 20,000 SOA trained professionals.
- Over 93,000 application professionals.
- 5000+ network professionals in over 65 countries.
- Closely linked to IBM Research & cross disciplinary expertise through IBM Academy of Technology.

- **IBM Worldwide Client Centers**
- Executive Briefing Centers and WW Design Centers
- Proof of Concept and Benchmark Centers.
- IBM and Business Partner Innovation Centers.
- Industry Solution and Cloud Computing Centers.

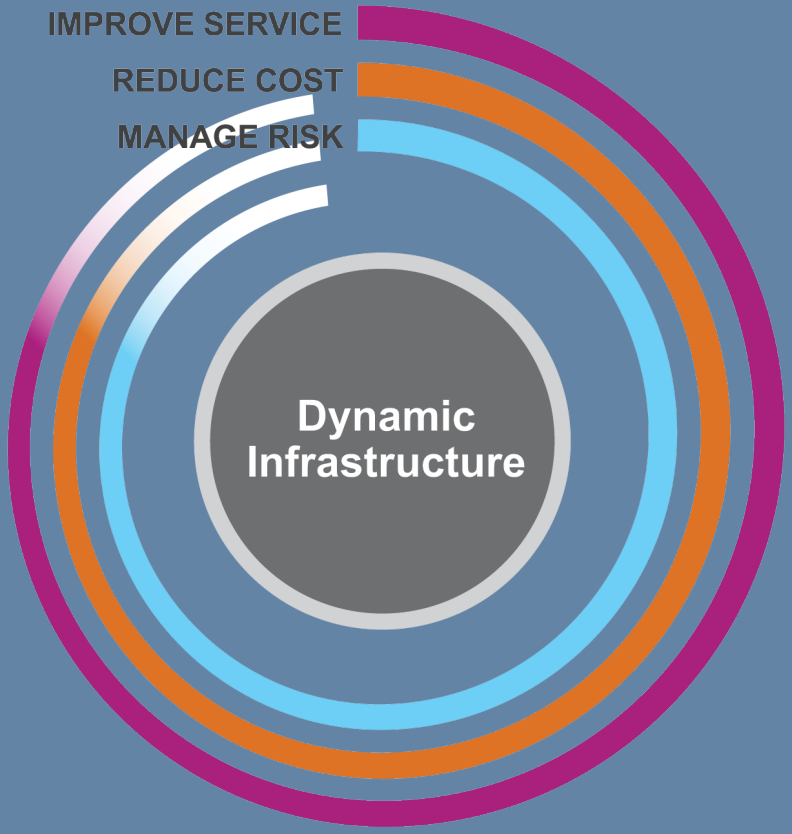
- **Extensive access to online resources**
- IBM White Papers & IBM Redbooks.
- Technical papers, Blueprints and patterns to accelerate transformation.

A dynamic infrastructure is a journey…



…these interrelated initiatives can provide the DNA needed to thrive in a smarter planet.

Start your transformation journey today.



www.ibm.com/dynamicinfrastructure