

Uncover what is possible on a Smarter Planet

An Introduction to IBM's Smarter Planet Initiative

Objective:

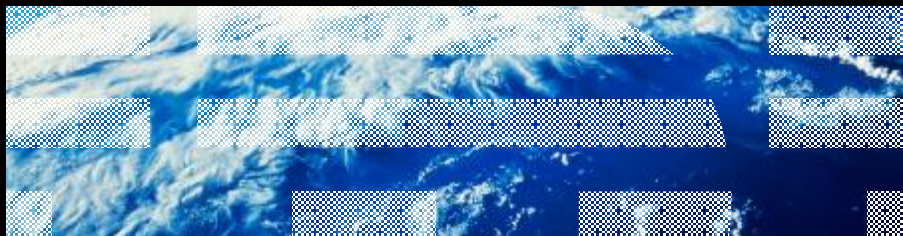
Provide an overview on IBM's **Smarter Planet** initiative

Agenda:

- § What are the drivers
- § References and solutions
- Ø New Intelligence
- Ø Smart Work
- Ø Green & Beyond
- Ø Dynamic Infrastructure



Let's Build A Smarter Planet



Global market forces are impacting us all

- § Access to capital and credit crunch
- § Economic downturn and future uncertainty
- § Volatile oil prices and energy shortfalls
- § Information explosion and risk/opportunity growth
- § Globalization and emerging economies
- § New customer demands and business models



The economy isn't the only force shaping the competitive landscape ...

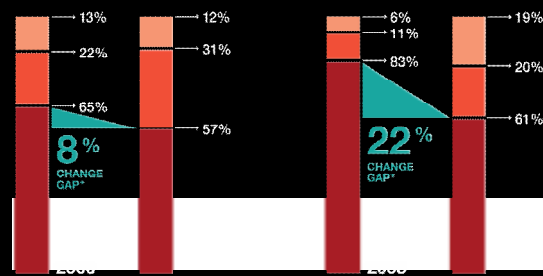
The way the world works is changing—and leaders must lead through the unknown.

8 in 10

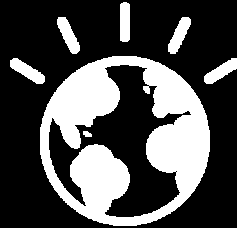
CEOs anticipate turbulent change and bold moves.

3x

Increase in the gap between leaders' need for change and their ability to manage it.



A mandate for change is a mandate for smart.



Our world is becoming

INSTRUMENTED



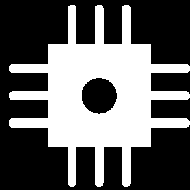
Our world is becoming

INTERCONNECTED



Virtually all things, processes and ways
of working are becoming

INTELLIGENT

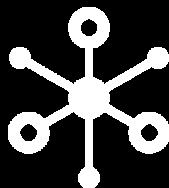


INSTRUMENTED

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.



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.



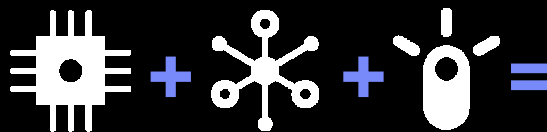
INTELLIGENT

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.



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

For us to make sense of this new world, we must consider four critical questions

“Data is exploding and it’s in silos”

I Need Insight

How can we take advantage of the wealth of information available in real time from a multitude of sources to make more intelligent choices?

New Intelligence

“New business & process demands”

I Need to Work Smart

How can we work smarter supported by flexible and dynamic processes modeled for the new way people buy, live & work?

Smart Work

“My infrastructure is inflexible and costly”

I need to respond quickly

How do we create an infrastructure that drives down cost, is intelligent and secure, and is just as dynamic as today’s business climate ?

Dynamic Infrastructure

“Our resources are limited”

I Need Efficiency

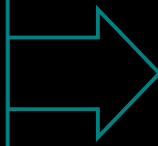
How do we drive greater efficiencies, compete more effectively, and respond more quickly by taking action now on energy, the environment, and sustainability?

Green & Beyond

Enterprise data is projected to explode at 57 percent CAGR through 2010.

Managers spend 2 hours a day searching for information – 50 percent of what they find is useless and 42 percent of them accidentally use the wrong data weekly.

How can we take advantage of the wealth of information available in real time from a multitude of sources to make more intelligent choices?



New Intelligence



New Intelligence:

A smarter planet gives organizations the vision to see without being there.



Nationwide Insurance: Used virtualization to streamline IT processes, achieving 85-90% server utilization and an anticipated \$15 million cost savings over three years.



German supermarket: Uses smart RFID labels to manage inventory with real-time sales data, improving product availability and enhancing the consumer experience.



IBM Deep Thunder: Leverages computing power, visualization and data analytics to generate high-resolution weather forecasts for areas as fine as 1 to 2 square kilometers.



FOAK: Ingesting and correlating events from heterogeneous sources to improve service.



Top Solutions for New Intelligence

Information Management

- § Information on Demand
- § Information Agenda
- § Information Infrastructure

Predictive Capability

- § Business Intelligence
- § Business Event Processing
- § Analytics Solutions
- § Telelogic and Cognos

Engaging the Value Chain

- § Industry Specific Assets (IA, MRO, Telelogic)
- § CRM, SCM and HR Transformation
- § Sensor and Actuator
- § Information Integration

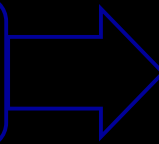
Business Optimization

- § Business Optimization Solutions
- § Business Process Management
- § Smart SOA
- § Information On Demand, Information Agenda
- § Information Infrastructure SW and Services

98 percent of CEOs plan business model changes.

Gap between CEOs who expect change and those who have the ability to handle change has widened sharply – nearly 3X.

How do we make our organization just as dynamic as today's business climate?



Smart Work

Smart Work:

A smarter planet puts organizations in position to be first and be right.



Canadian airlines: Use passenger information to predict the number of no-shows for each flight, so they can strategically overbook while minimizing the risk of bumping passengers.



British Airways: Uses mobile device check-in and other self-service technologies to help facilitate a trouble-free travel experience and save the airline \$3.50 per passenger.²



Max Bahr: A Dynamic Inventory Optimization Solution enables the retailer to meet demand for any of 40,000 products in more than 80 outlets with low replenishment and storage costs—boosting customer service ratings to 99%.



IBM Research Zurich Lab: Uses visualization software to render a 3D model of each patient, allowing doctors to interact with data that improves patient care.²

Top Solutions for Smart Work

<p>Agile Business Model</p>	<ul style="list-style-type: none"> § Industry business solutions and Industry frameworks § Business Model Innovation services (CBMSOMA) § SOA strategy services § Smart SOA INSight series
<p>Connected Customers</p>	<ul style="list-style-type: none"> § Lotus Collaboration software and services § RFID, sensors, actuators, consulting services § Smart SOA and SOA solution services § Web 2.0 products and service § Consulting services for CRM and SCM § Collaborative Software Development § WebSphere Commerce
<p>Dynamic Business Processes</p>	<ul style="list-style-type: none"> § BPM Suite and consulting services § WebSphere Business Events § Component Business Modeling services – (KAIs) § Enterprise Architecture products and services

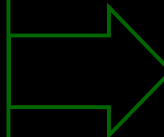
80 percent of CEOs view sustainability as impacting brand value.

82 percent expect climate change regulation within 5 years.

Information technology energy use is growing 12X overall demand; data centers alone consumed 180 billion kWh in 2007, and this usage will double in the next 2 to 4 years.

A typical carrot has traveled 1,600 miles, a potato 1,200 miles, a chuck roast 600 miles.

How do we drive greater efficiencies, compete more effectively, and respond more quickly by taking action now on energy, the environment, and sustainability.



Green & Beyond



Green and Beyond:

A smarter planet empowers organizations to do more, using less.



On Line do Brasil: Used energy-efficient servers to expand its data center operations while cutting management time by 30%. The company expects a full return on investment in as few as three months.



Natural England: Implemented an evidence-based carbon measurement and management system to help achieve a 50% reduction in carbon emissions by 2010.



Energie Baden-Württemberg: Offers residential customers smart appliances and meters that enable them to adjust electricity consumption based on price—reducing waste and easing peak loads.



Centrinet: Created an environmentally-conscious data center solution and hosting service that has helped reduce electricity usage by approximately 60%.



Top Solutions for Green and Beyond

Finding the Value in Green

- §Data Center Assessment and Design Services
- §Green IT
- §Software for a Greener World

Smart Systems

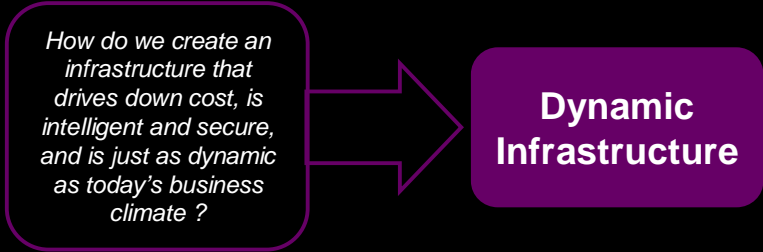
- §Intelligent Utility Network and Metering
- §Intelligent Transportation
- §Consumer Driven Supply Chain
- §Intelligent Oilfields, Manufacturing Productivity

Societal Shifts and Corporate Social Responsibility

- §CSR and Sustainability
- §Carbon Management
- §Reputation Management Services
- §Ethical Supply Chain Monitoring

While 83% of CEOs expect substantial change within their enterprises, only 61% feel confident in their ability to manage change.

This “change gap” challenges CIOs to transform highly distributed, fragmented, labor-intensive infrastructures that have data, assets, applications and hardware resources operating in silos.



Dynamic Infrastructure:

A smarter planet enables organizations to solve the problem before the problem.



British banks: Utilize real-time data analytics of complex financial models to help understand and manage their exposure to risk.



Yansha: Dynamic supply chain management and enterprise resource planning cut order lead time from 2.5 days to 4.5 hours and improved order acknowledgement from 80% to 99%.¹



River and Estuary Observatory Network: Will create the first technology-based real-time environmental monitoring and forecasting network to guide better policy, management and education for the Hudson River and estuaries worldwide.



IBM Fire Program Analysis: Uses unique mathematical algorithms to determine where wildfires will likely occur, and helps optimize government funds and resources for battling those fires.



Top Solutions for Dynamic Infrastructure

Reduce Cost

- § Cloud Computing
- § Virtualization
- § Energy Efficiency

Improve Service

- § Information Infrastructure
- § Service Management
- § Asset Management
- § Security Management

Manage Risk

- § Business Resiliency
- § Express Mid-Market Offerings
- § Strategic Outsourcing



Changes in the economic environment will bring disruption and transformation on a global scale.

DISRUPTIVE

- § Unprecedented constraints on access to credit and capital.
- § Falling demand and increased price sensitivity.
- § Disruptions in supply chains, partner and customer arrangements.

TRANSFORMATIVE

- § Restructuring of industries:
Firms fail and are sold off overnight.
- § New regulatory regimes.
- § Stress on global inter-dependencies

Urgency for real change provides an impetus to harness new opportunities.



We've only just begun to uncover what is possible on a smarter planet.

The world will continue to become smaller, flatter and smarter. We are moving into the age of the globally integrated and intelligent economy, society and planet.

The question is, what will we do with it?