IBM Software

Building a Smarter Planet

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Steve Mills
Senior VP & Group Executive
IBM Software
The World is Changing

Environmental Concerns

Complexity

Globalization

Security

Energy Supply and Conservation

Information Explosion
The Reality of Living in a Globally Integrated World

6x Increase in global water usage since the 1900s, twice the rate of human population growth

$40 billion Annual consumer product and retail sales lost in United States due to supply chain inefficiencies

$11.5 billion Worth of produce is wasted in India because of outdated post-harvest infrastructure

22% of total port volume in North America is empty containers

85% Idle computer capacity

40% to 70% The losses of electrical energy due to inefficiency - around the world

70¢ per $1 Spent on IT maintenance

$100 billion Lost annually in the US due to healthcare fraud

$78B lost
3.7B lost hrs
2.3B gallons of gas

Annual impact of congested roadways

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Building a Smarter Planet

Thinking and acting in new ways to make our systems more efficient, productive and responsive

New Intelligence
“Data is exploding and it’s in silos”
I Need Insight

Green and Beyond
“Our resources are limited”
I Need Efficiency

Smart Work
“New business and process demands”
I Need to Work Smart

Dynamic Infrastructure
“My infrastructure is inflexible and costly”
I Need to Respond Quickly

I Need Insight
I Need Efficiency
I Need to Work Smart
I Need to Respond Quickly

Building a Smarter Planet
By 2010, 30 billion RFID tags will be embedded into our world and across entire ecosystems

An estimated 2 billion people will be on the Web by 2011 .... and a trillion connected objects – cars, appliances, camera, roadways, pipelines – comprising the “Internet of Things”

Every day, 15 petabytes of new information are being generated. This is 8x more than the information in all U.S. libraries
What Does It Mean to Be Smarter?

- Data collection
- Data Integration
- Comparison of historical data, with newly collected data
- Data modeling and analytics to create insights from data to feed decision support and actions

Leading businesses today are benefiting from new sensor data when combined with IBM’s business process management, event processing and business optimization capabilities.
Innovative Solutions for a Smarter Planet

Smarter Roads
Smarter Oil & Gas
Smarter Food
Smarter Healthcare
Smarter Utilities
Smarter Retail

Smarter Telco
Smarter Supply Chains
Smarter Public Safety
Smarter Money
Smarter Transportation
Smarter Cities
Smarter Products
Building a Smarter Planet ..... 

**Smarter Manufacturing**

**AIRBUS:** Implemented an integrated, end-to-end solution using RFID and automatic identification (AutoID) technologies across all business processes of their supply chain enabling 100% automation of data entry resulting in 75% reduction in physical handling of parts, which saves on labor.

**Smarter Energy Grid**

**DONG Energy:** Installed remote monitoring and control devices to gain an unprecedented level of information about the current state of the grid, lessening outage times by a potential 25 - 50% and up to 90% capital savings.

**Smarter Financial Services**

**TDBank Financial Group:** Deployed first-of-a-kind stream computing solution capable of consuming, analyzing and acting on real-time market data while maintaining sub-millisecond response times even under extreme data loads.

**Smarter Public Safety**

**New York Police Department:** By integrating its siloed crime data systems, NYPD gets a more holistic view of information enabling it to redeploy resources in response to crime patterns and trends helping to resolve crimes and apprehend criminals more quickly.
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Dong Energy teamed with IBM to implement an Intelligent Utility Network, installing remote monitoring and control devices that give the company an unprecedented amount of information about the current state of the grid.

Solution Components
- WebSphere RFID Premises Server
- WebSphere Process Server
- WebSphere Business Integration Adapter for SAP
- WebSphere Business Monitor
- Tivoli Monitoring
- Tivoli Composite Application Manager
- Rational ClearCase
- IBM Sensor and Actuator Solutions
- IBM Software Group Lab Services
- IBM Global Business Services
- IBM Business Partner OATSystems

AIRBUS: The solution combines automatic identification (AutoID) technologies, which include RFID technologies, with IBM middleware:

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NYPD: Worked with IBM to develop a FOAK system capable of analyzing data streams at the ultra-low latencies required to capture market opportunities ahead of the competition.

Solution Components
- InfoSphere Streams
- IBM Blue Gene Server

NYPD: Implemented Crime Information Warehouse providing single, easy-to-use point of access to data on virtually all crimes committed in NYC.

Solution Components
- WebSphere Application Server
- WebSphere MQ
- WebSphere Message Broker
- WebSphere Eclipse Platform
- Rational Software Architect
- IBM ILOG JRules Software
- IBM Global Business Services
- IBM Business Partner PowerSense

NYPD: Implemented Crime Information Warehouse providing single, easy-to-use point of access to data on virtually all crimes committed in NYC.

Solution Components
- WebSphere Application Server
- IBM DB2 Warehouse Edition
- Cognos 8 BI
- IBM DB2
- Tivoli Storage Management
- IBM Global Services
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**Smarter Healthcare**

**Duke Medicine:** The Duke Healthview portal, based on IBM’s Health Integration Framework (HIF), offers a single user interface for patients and physicians to access information from multiple applications and environments.

**Smarter Food**

**Matiq:** Employs RFID tags to trace meat and poultry from the farm, through the supply chain, to supermarket shelves to ensure safety and freshness and provide more transparency to consumers.

**Smarter Traffic Management**

**Stockholm, Sweden:** An intelligent toll system in the city center resulted in 20% less traffic, 40% lower emissions and 40,000 additional users of the public transportation system.
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Matiq: Implemented end-to-end infrastructure solution to track and trace poultry and meat products from the farm to supermarket shelves

Solution Components
- WebSphere RFID Premises Server
- InfoSphere Traceability Server
- IBM Sensor and Actuator Solutions
- IBM Global Technology Services
- IBM Business Partner Reva

Stockholm, Sweden: Engaged IBM to design, build and operate a fully automated road use charging solution employing advanced optical recognition and RFID technologies

Solution Components
- WebSphere Application Server
- DB2
- WebSphere Message Broker, WebSphere MQ
- WebSphere Portal
- IBM Global Business Services
IBM Software for a Smarter Planet

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2007 was the first year in which more than half the world -- 3.3 billion -- was living in cities.

By 2050, city dwellers are expected to make up 70% of the Earth’s total population -- 6.4 billion --

Every minute for the next 20 years, 30 Indians will leave rural India for urban India.

They will need 500 new cities.

Our Smarter Planet will be built from Smart Cities.
A “smart city” is an urban development that employs information technologies to sense, analyze, integrate and react intelligently to the activates of the City across utilities and city services, the environment, people, and local industry thereby creating a better place to live, work and run a business.
An opportunity to think and act in new ways — economically, socially and technically.

**A Smarter Planet**
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