# **Building a Smarter Planet:** Deploying innovative supply chain visibility solutions Martin Wildberger, Vice President, Sensor Solutions, IBM

## Something meaningful is happening...

# The world is flatter.

The world is smaller.



Because it can.

Because it must.

Because we want it to.

... The world is getting smarter.

## Global market forces are impacting us all

New Customer Demands

**Excess of** 



#### **Emerging Markets Global Competition**

Access to Capital & Credit Crunch

Volatile Energy Costs

## Smarter planet ....

# Our world is becoming INSTRUMENTED

# Our world is becoming INTERCONNECTED

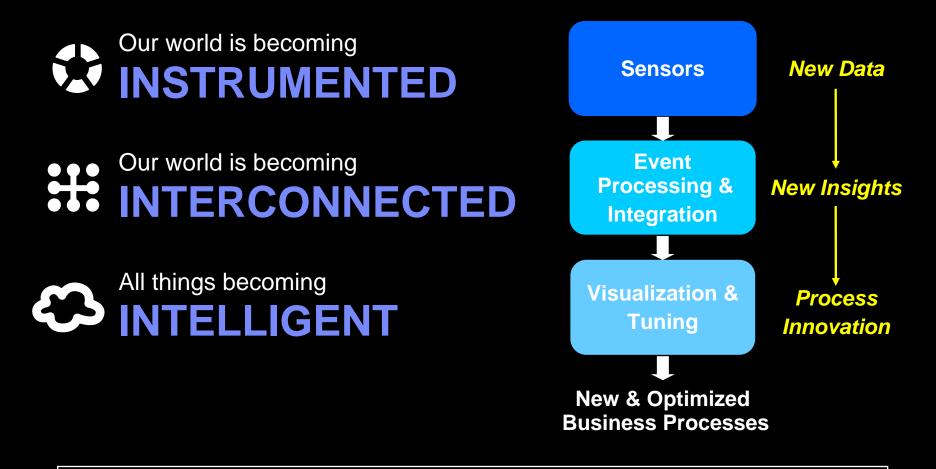
All things becoming

"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.

#### Agile businesses will embrace the reality and the possibilities



Leaders today are benefiting from new sensor data when combined with IBM's business process management, event processing & business optimization capabilities

## The need and opportunity for progress is clear

## Food Supply Chain: recipe for disaster

76 million cases of food-born illnesses occur annually in the U.S. alone. 60% of produce and 75% of seafood in the U.S. is imported; 1% is inspected before it arrives on your table.

## Congested Roadways: wasting fuel, time and causing pollution

The U.S. alone spends \$78 billion in the form of 4.2 billion lost hours and 2.9 billion gallons of wasted gas...not to mention the impact on air quality.

#### Counterfeit Drugs: endangering health

10% of the drugs on the WW market are counterfeit – from everyday headache remedies to specialty prescriptions; are you and your family safe?

## Conventional Buildings: no friend to the environment

By 2025, buildings will use more energy than any other category of "consumer." Today, in the U.S. they represent 70% of energy use and 38% of greenhouse gas emissions.

#### Inefficient Healthcare: link to poverty

Personal expenditures on healthcare push 100 million people below the poverty line each year.

## Worldwide Water demand increasing: supply is inadequate and unsafe

Today 1 in 5 people lacks safe drinking water and 50% of the world's population does not have adequate sanitation

#### Smarter planet opportunities are extremely broad....













smarter safer pharmaceuticals

smarter solutions for retail

smarter supply chains

smarter food

smarter manufacturing

smarter industrial operations



smarter data center



smarter

healthcare



smarter transportation



smarter traffic

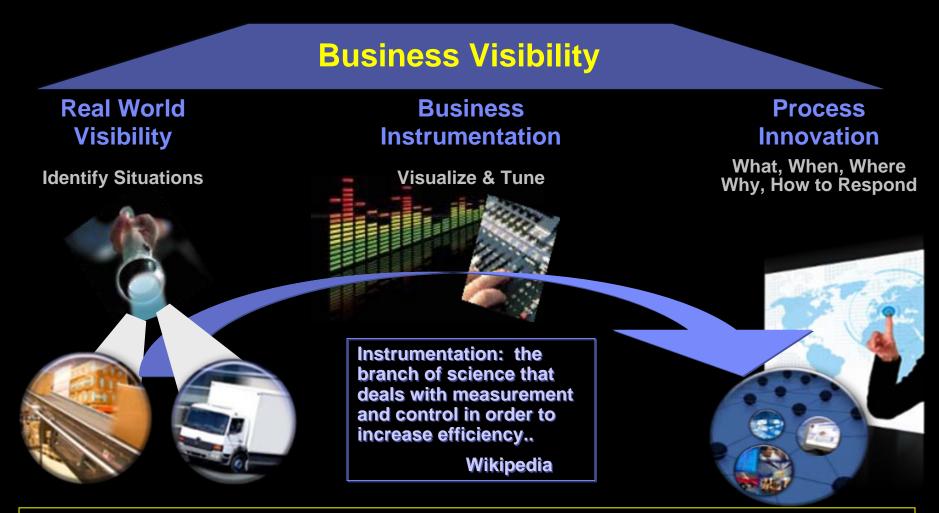




smarter cities

smarter water management

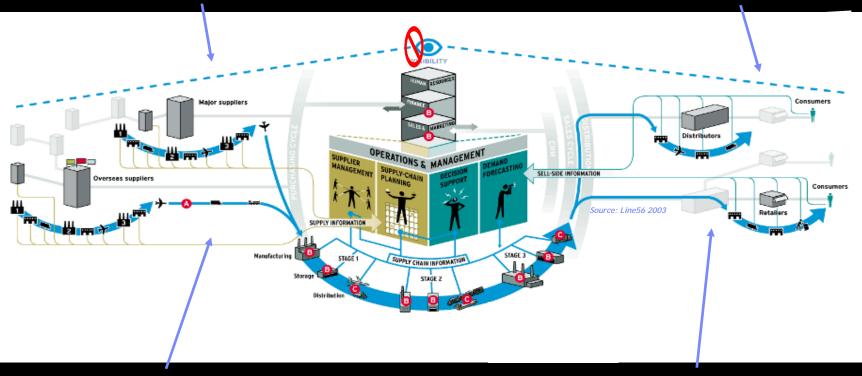
#### Visibility, with instrumentation, drives proactive response



A smarter planet enables the Line of Business to sense & respond to opportunities and risks

## Business visibility improves the supply chain

Lack of visibility into supplier inventory leads to stock outs, late/expedited shipments, quality issues, etc. Constant reactionary state results in missed opportunities, poor resource utilization, and competitive disadvantage



Supply chain delays lengthen the production cycle and increase work in process inventory

Lack of timely, accurate view of inventory and "freshness" leads to stock outs, excess/expired inventory, poor customer satisfaction, etc.

## Building a smarter planet ...

imagine the possibilities ... smarter is...



#### **Smarter manufacturing**

An opportunity to increase business visibility -- by knowing real-time about inventory changes in the supply chain.

An opportunity to improve operations -by knowing where in-process components are on the factory floor.

An opportunity to reduce loss and improve utilization -- by tracking returnable containers with expensive parts.

An opportunity for improved efficiencies -in locating quickly and managing large inventory of vehicles in a yard.



**Airbus:** In a strategic move, RFID is being utilized to automate the tracking of aircraft segments while improving supply chain visibility and reducing costs.



**Honda Italia:** Implemented RFID component tracking solution to improve production efficiency and quality.

## Building a smarter planet ...

imagine the possibilities ... smarter is...



# Smarter distribution and retail supply chain

An opportunity to streamline the entire supply chain -- with real-time visualization of inventory changes.

An opportunity to reduce costs -- by increasing asset utilization of reusable assets and containers.

An opportunity build brand loyalty and increase sales -- by leveraging item level tracking.

An opportunity to optimize product inventory and reduce shrinkage -- with end-to-end supply chain visibility.



**Container Centralen:** Tracks containers carrying plants from grower to retailer to ensure quality and reduce operating costs.



**Carrefour:** Focus on providing visibility to the end-to-end retail supply chain from supplier manufacturing to point of sales.

# Building a smarter planet ...

imagine the possibilities ... smarter is...



Smarter food

An opportunity to know for sure that your food will be fresh and safe -- and where it came from.



#### **Smarter safer pharmaceuticals**

An opportunity to protect patient safety and company brand -- by ensuring products in the supply chain are authentic.

An opportunity for a more efficient supply chain – with serialization, track and trace of pharmaceutical drugs.

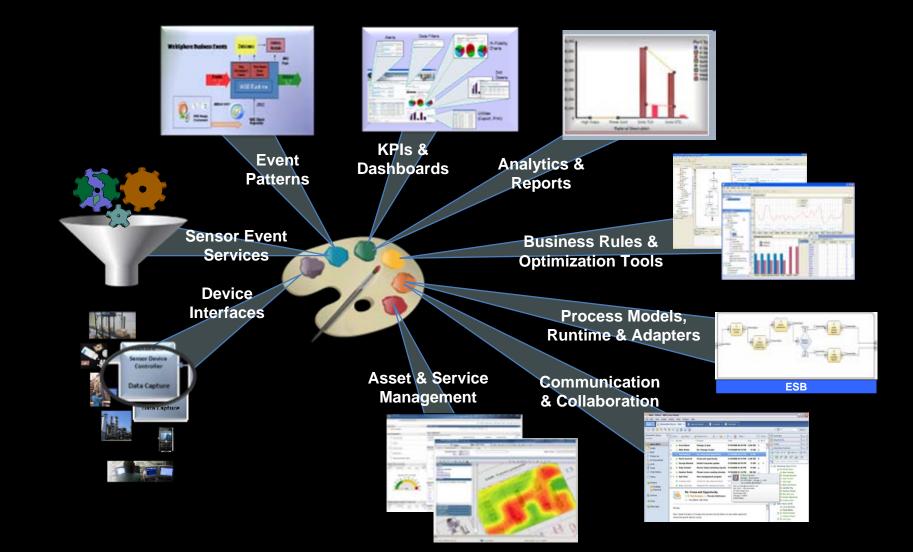


Matiq: Employs RFID tags to trace meat and poultry from the farm to store shelves to ensure safety and freshness and provide more transparency to consumers.



**Bayer:** Provide serialization information to a central Turkish Ministry of Health database to fulfill compliance requirements, and ensure authenticity of products at point of sale.

#### The Smarter Planet Supply Chain Platform: Solutions built from a palette of capabilities that leverage new data, derive new insights and orchestrate the best response



# Business visibility enables the "new intelligence" of a central nervous system

#### Visualization

Understand insights in context, focus on deviations from expectations and enable collaboration on exceptional business decisions



#### Business Event Processing

Identify the relevant and actionable insights that enable proactive smarter business decisions to respond to real world situations, risks and opportunities

#### **Business Process Management**

Choreograph the business processes used to react, respond and proactively exploit real world visibility

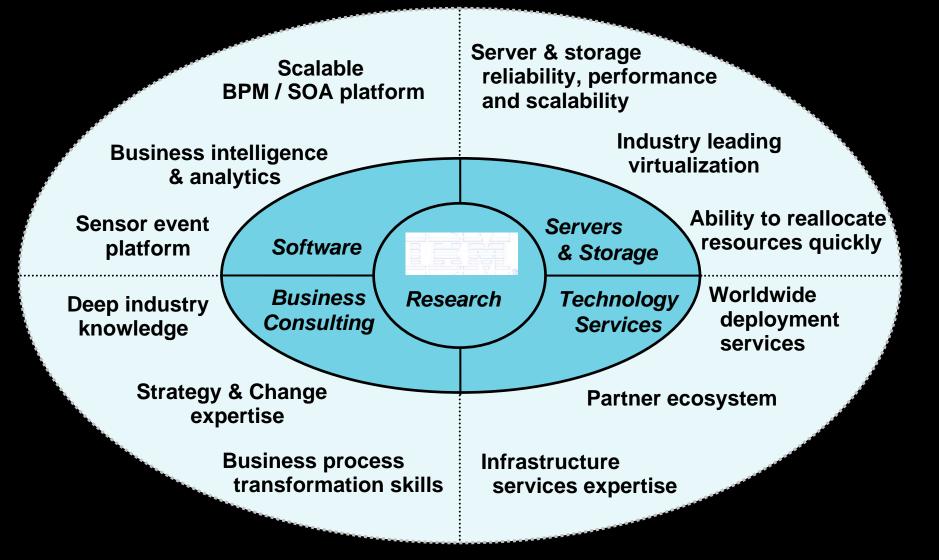
#### Business Rules Management

Adapt and respond dynamically, automating processbased decisions with business rule management

#### Optimization

Produce the best possible action plans & schedules, enhancing abilities to explore alternatives, understand trade-offs, and respond to changes in business operations

### Smarter planet – leveraging the strengths of IBM



## We've only just begun to uncover what's possible

The world will continue to become smaller, flatter...smarter

In the age of the globally integrated economy, society and planet we have an opportunity to think and act in new ways.



The question is, what will we do?

### Innovation takes Courage



"If I'd asked my customers what they wanted,

they'd have said a faster horse. "

– Henry Ford