



## Stichting NIOC en de NIOC kennisbank

Stichting NIOC ([www.nioc.nl](http://www.nioc.nl)) stelt zich conform zijn statuten tot doel: het realiseren van congressen over informatica onderwijs en voorts al hetgeen met een en ander rechtstreeks of zijdelings verband houdt of daartoe bevorderlijk kan zijn, alles in de ruimste zin des woords.

De stichting NIOC neemt de archivering van de resultaten van de congressen voor zijn rekening. De website [www.nioc.nl](http://www.nioc.nl) ontsluit onder "Eerdere congressen" de gearchiveerde websites van eerdere congressen. De vele afzonderlijke congresbijdragen zijn opgenomen in een kennisbank die via dezelfde website onder "NIOC kennisbank" ontsloten wordt.

Op dit moment bevat de NIOC kennisbank alle bijdragen, incl. die van het laatste congres (NIOC2025, gehouden op donderdag 27 maart 2025 jl. en georganiseerd door Hogeschool Windesheim). Bij elkaar zo'n 1500 bijdragen!

We roepen je op, na het lezen van het document dat door jou is gedownload, de auteur(s) feedback te geven. Dit kan door je te registreren als gebruiker van de NIOC kennisbank. Na registratie krijg je bericht hoe in te loggen op de NIOC kennisbank.

Het eerstvolgende NIOC vindt plaats in 2027 en wordt dan georganiseerd door HAN University of Applied Sciences. Zodra daarover meer informatie beschikbaar is, is deze hier te vinden.

Wil je op de hoogte blijven van de ontwikkeling rond Stichting NIOC en de NIOC kennisbank, schrijf je dan in op de nieuwsbrief via

[www.nioc.nl/nioc-kennisbank/aanmelden-nieuwsbrief](http://www.nioc.nl/nioc-kennisbank/aanmelden-nieuwsbrief)

Reacties over de NIOC kennisbank en de inhoud daarvan kun je richten aan de beheerder:

R. Smedinga [kennisbank@nioc.nl](mailto:kennisbank@nioc.nl).

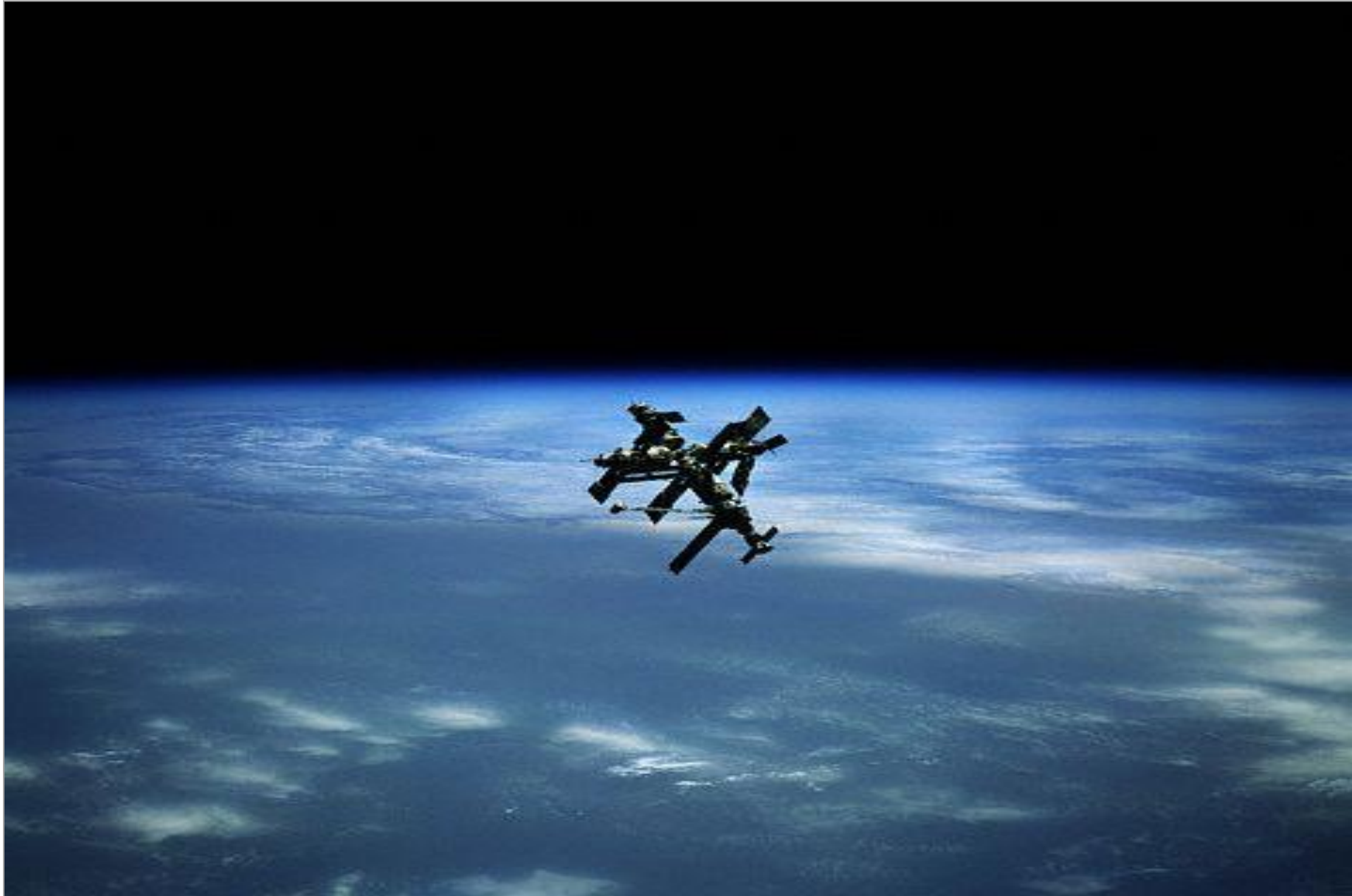
Vermeld bij reacties jouw naam en telefoonnummer voor nader contact.



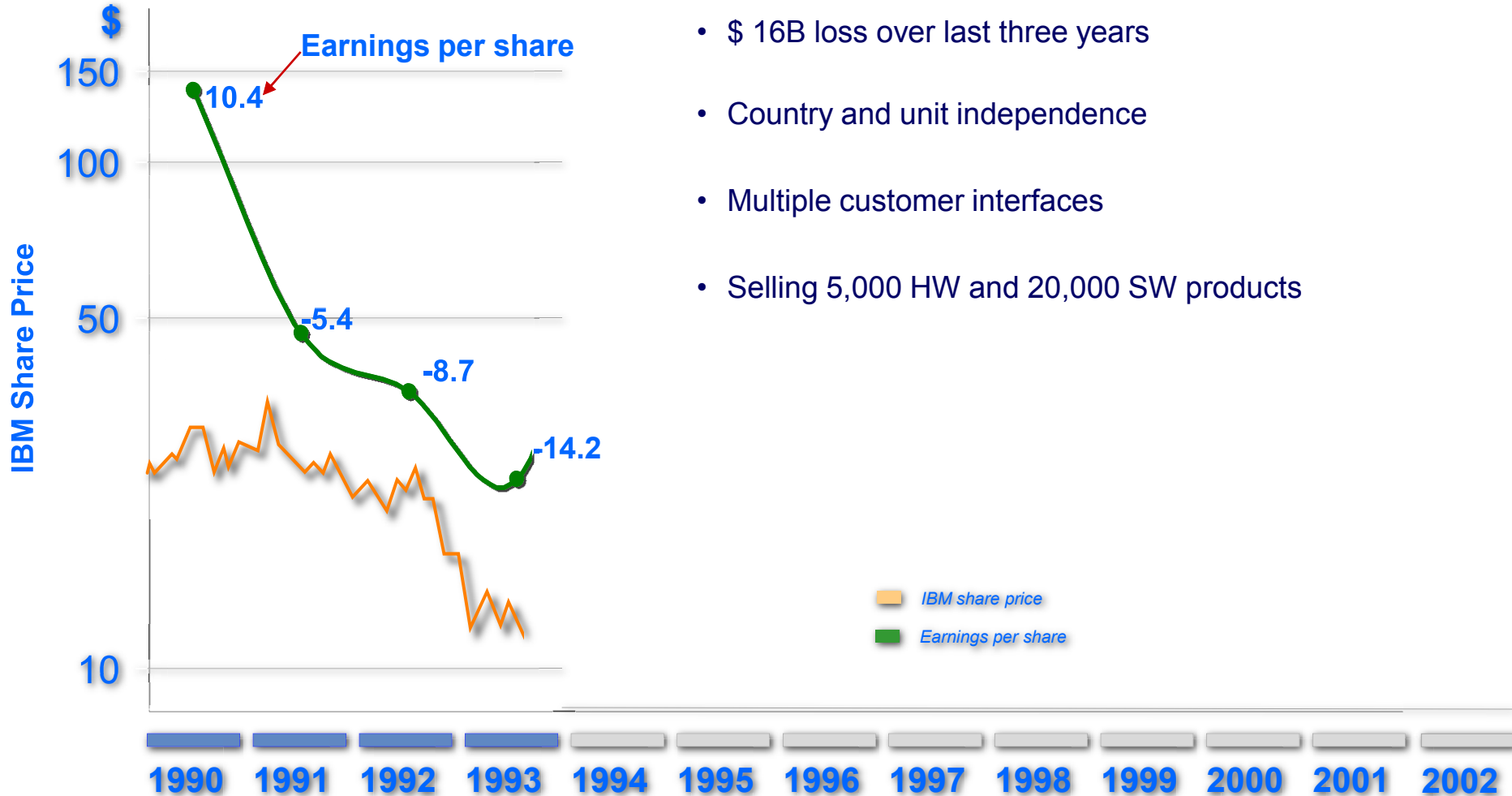
# Global Services trends, Past, Present and Future

**Kees Donker** (Executive for Government , Innovation and Technology , IBM Benelux /// Kees51 B.V.)  
April the 5th 2013





# The financial markets agreed – the case for transformation was clear



- \$ 16B loss over last three years
- Country and unit independence
- Multiple customer interfaces
- Selling 5,000 HW and 20,000 SW products

# IBM's Transformation: An Ongoing Journey

## Focus Areas

- Keeping company together & stabilizing business
- Bringing massive decentralization under control (e.g., 128 CIOs to 1; 70 ad agencies to 1)
- From country to global brand P&L statements
- Move to integrated solutions
- Dramatic growth in services

**"I think the greatest challenge facing the company is ... to adapt our strategy, structure and culture to a world of constant change. I can't promise this journey will be easy or fast... the steps we will take will not be pussyfooting but bold strides."** -- Lou Gerstner, 1993

1993 1995 1997 1999 2001 2003 2005 2007 2009

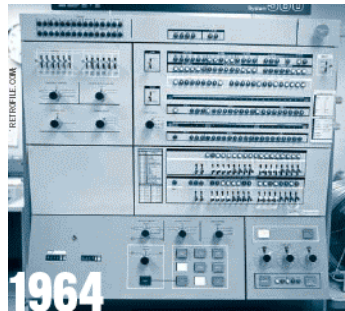
## Phase One

Gerstner era ('93 thru 2002)





IBM has a long history of renewing itself in response to shifts markets, technology, customers and competitors



### IBM's Revolutionary History

Accounting  
Machines

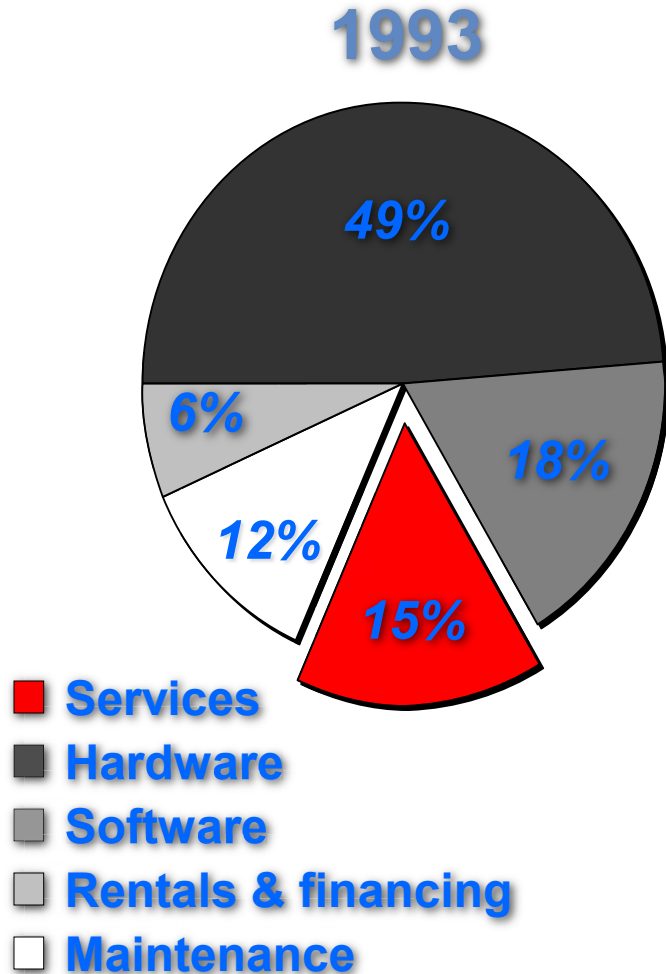
The First  
Mainframe

Personal  
Computers

**Services  
Transformation**

On-Demand  
Solutions &  
Delivery

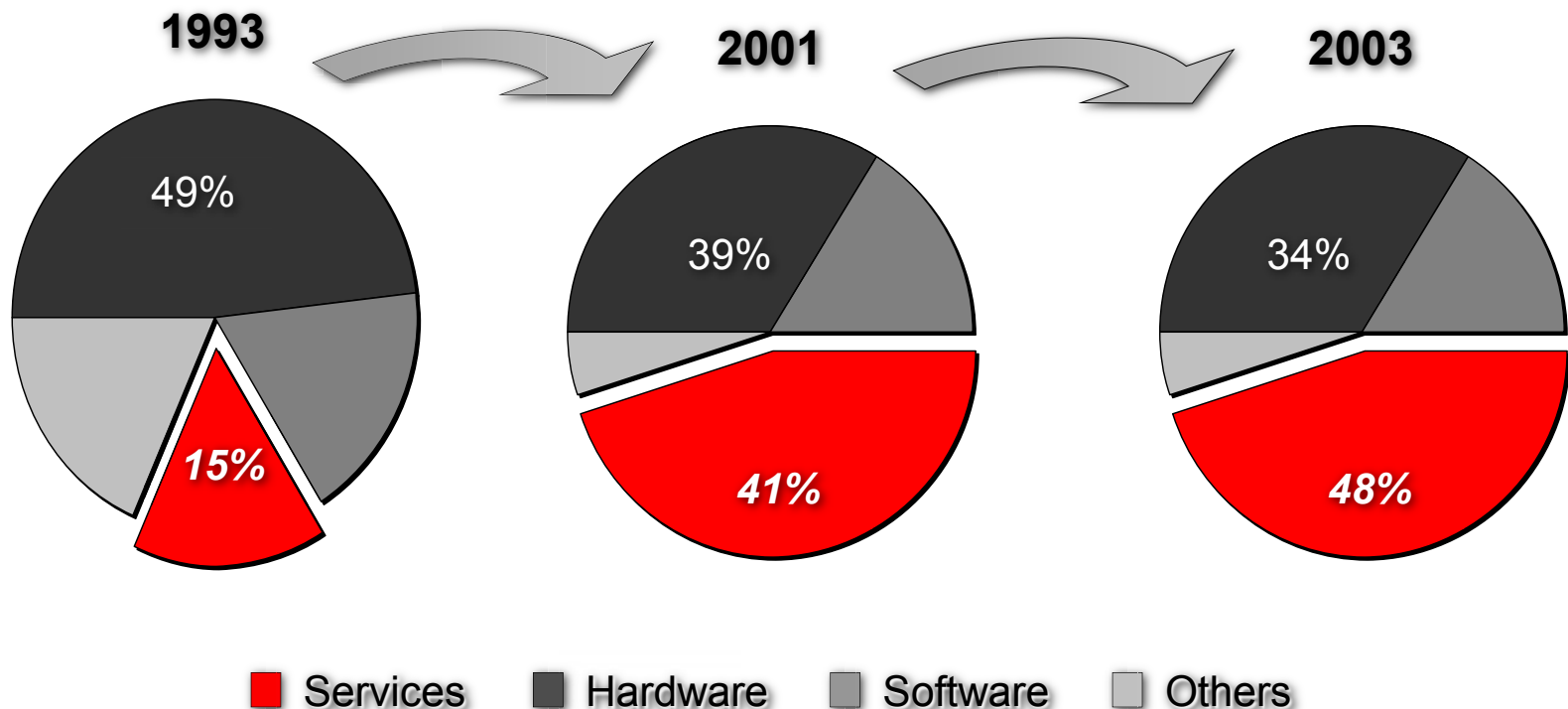
Market trends indicated that the future of the computer industry needed to move beyond hardware and software



### *Drives of Services Transformation*

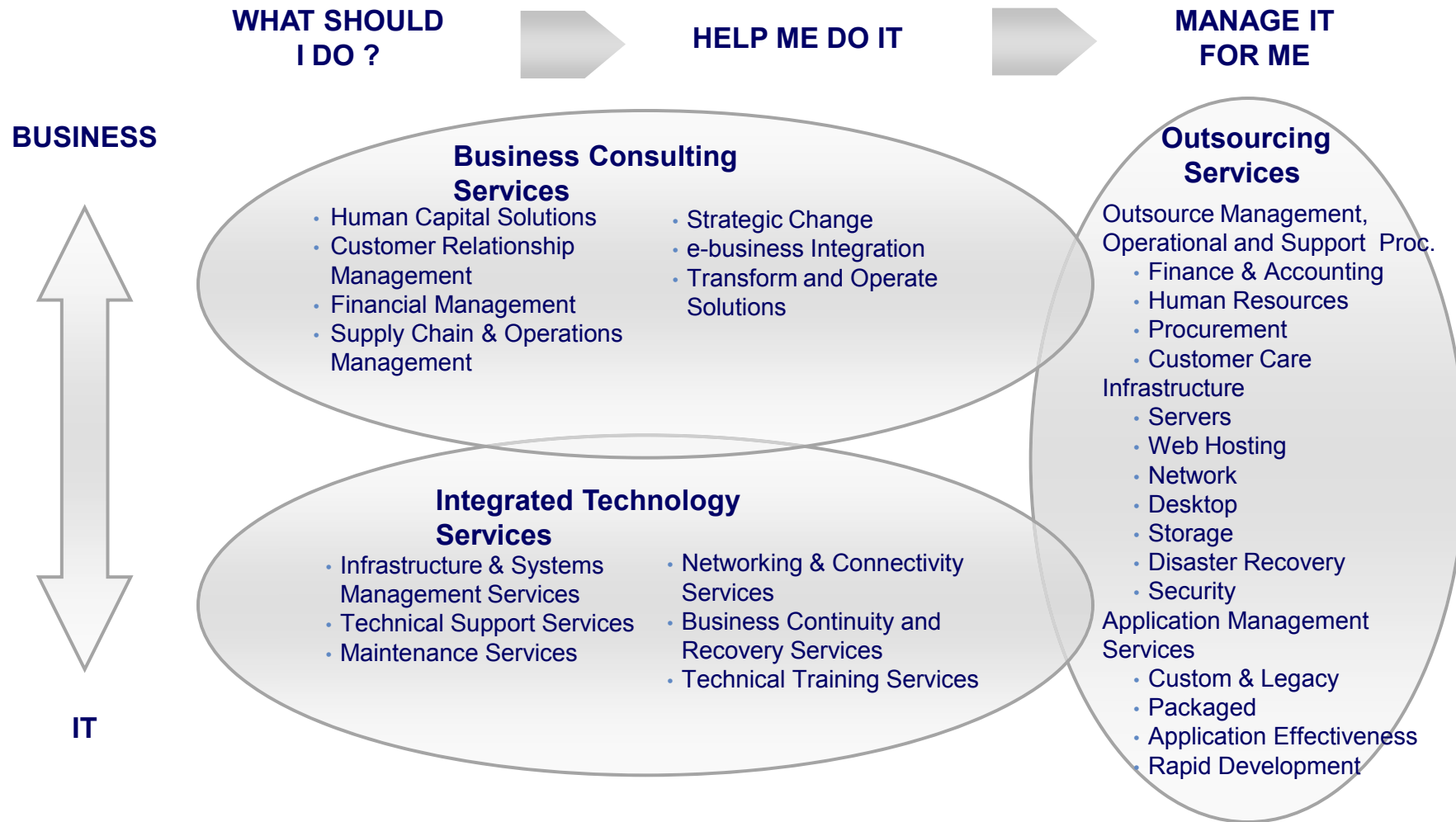
- **Erosion of margins in core markets**
- **Hardware and related services became commodity with strong competition**
- **Most IBM services was for free – but strong core capabilities existed**
- **Trend to large and complex business solutions**
- **Customer Demand for Integrators – Tired of Unique, Stand-alone Technologies**

IBM Global Services grew 22% annually for 10 years to become the largest business within IBM

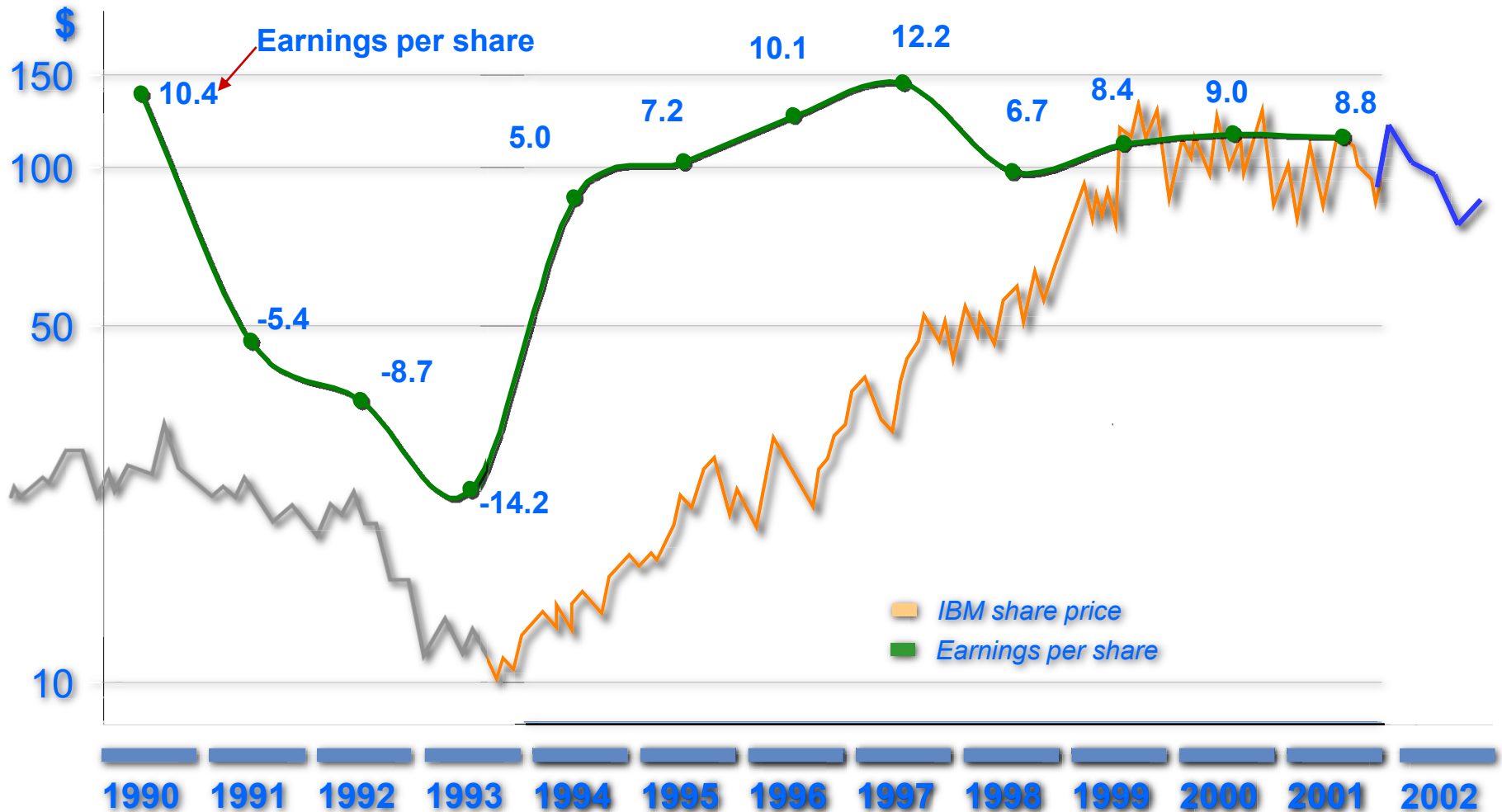




Global Services has built a portfolio of end-to-end services in response to the market demand

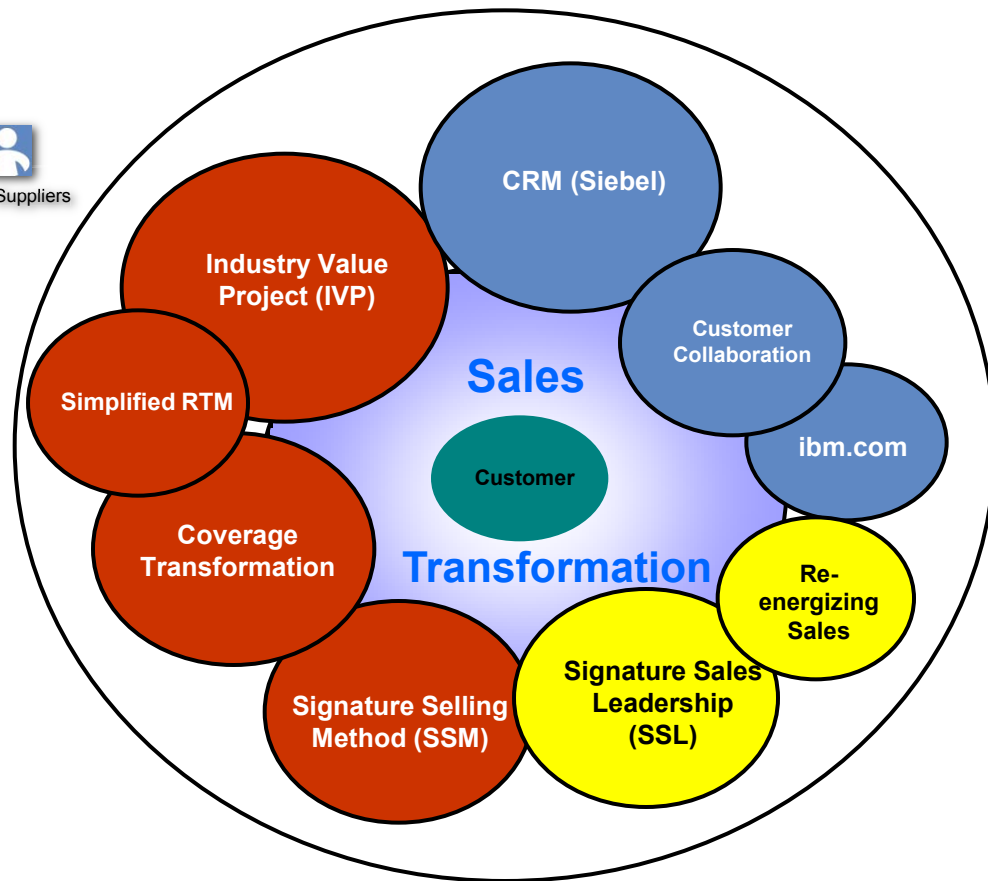
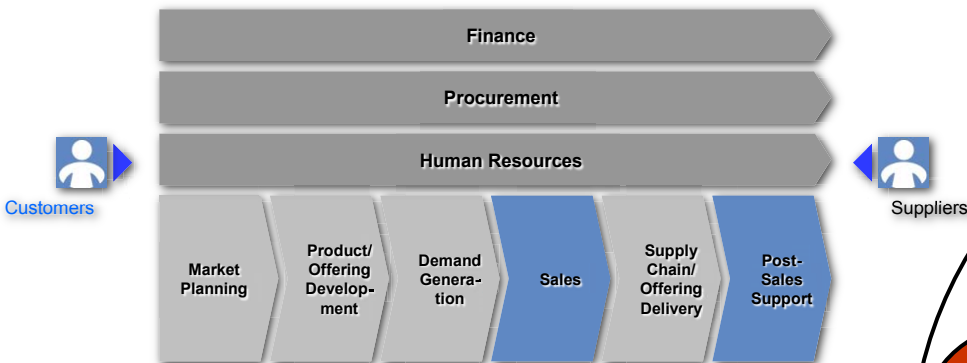


# The transformation activities have paid off



A Customer Centric Sales Transformation Initiative was launched that contained a portfolio of activities

### Value Chain Transformation model



# The IBM transformation provides insight into the key success factors of building a solutions business

*"I have worked in services companies and product companies. I will state unequivocally that services businesses are much more difficult to manage...the skills required in managing services processes are very different ...the business model is different. The economics are entirely different.*

*This is the kind of capability you simply can't acquire. The bet you're really making is on your own commitment to invest both the years and capital, then build the experience and discipline it takes to succeed"*

**-Louis V. Gerstner,**  
**"Who Says Elephants Can't Dance"**



Commit for long run to business and cultural change  
– Services unprofitable for years, divisional boundaries need to be overcome



Invest in people and processes to support them  
– Services depend on knowledge and active community



Align resources closely to customer demands  
– Build skills and solutions that are customer specific



Stick to core strengths and stay focused on strategy  
– Avoid distractions and understand brand permission

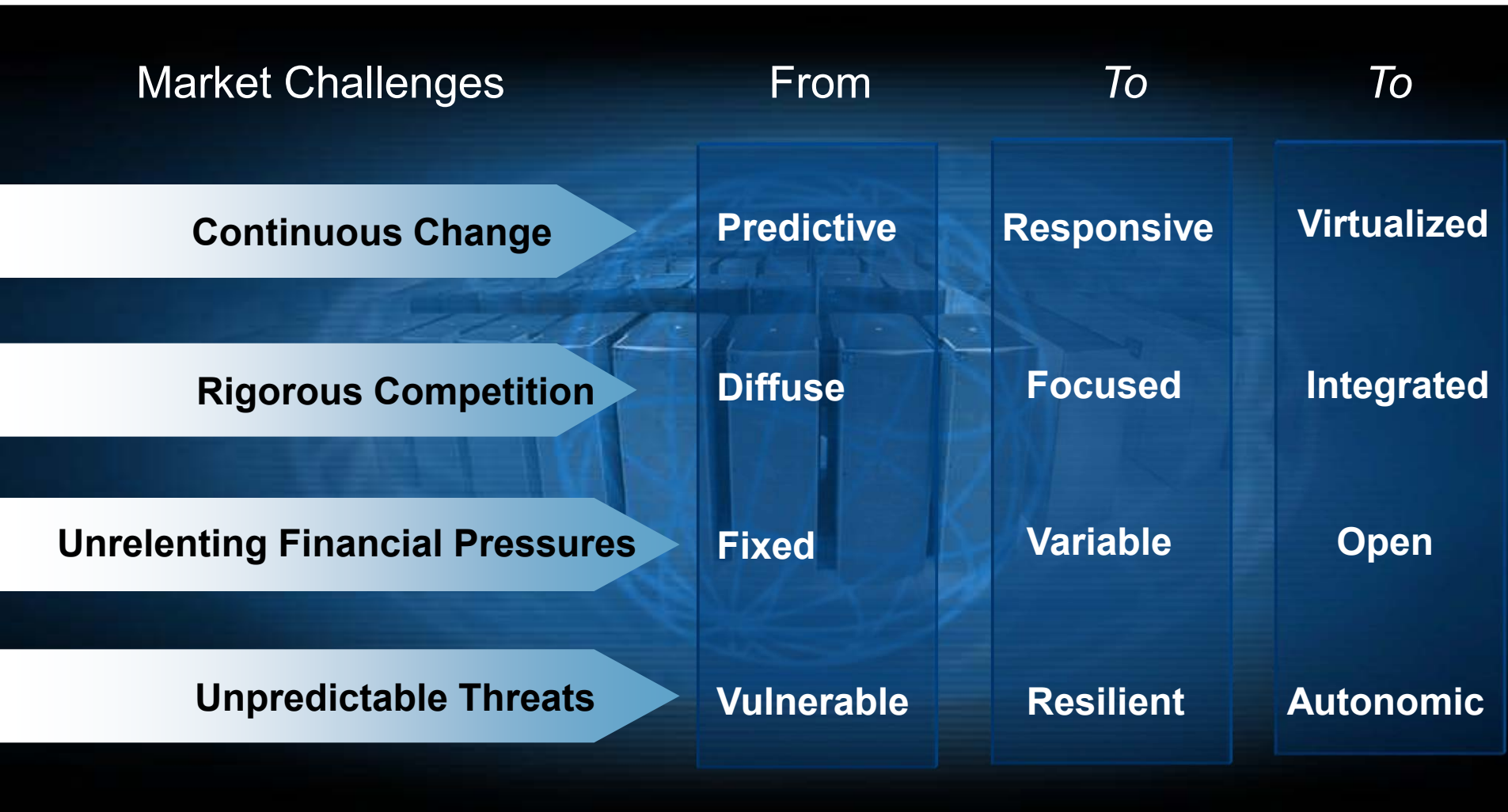


Build and leverage multiple value chains  
– Alliances and co-opetition become a way of life



Adapt, anticipate – be quick to innovate  
– Continuously review, refocus and regenerate portfolio

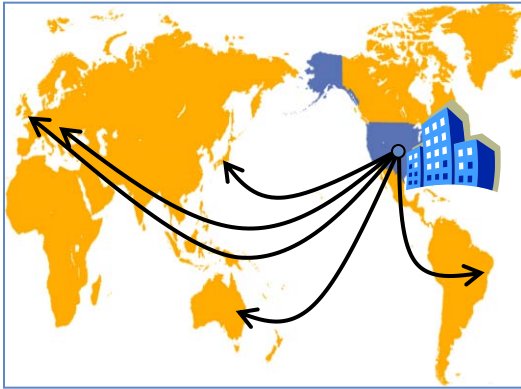
Traditional models are no match for current realities:  
Business and IT architectures need to evolve





# A Globally Integrated World asks for a Globally Integrated Enterprise

## International



**HQ in one country  
Sell in many  
Export/Import**

## Multinational



**Replicate operations  
in many countries  
(HQ, R&D, Manu, etc.)**

## Globally Integrated



**Draw on global skills  
and global delivery.  
Tasks performed in  
one location for  
customers in many  
Countries**

**C19th**



**C20th**



**C21st**

# IBM's Transformation: An Ongoing Journey

"The crisis in our financial markets has jolted us awake to the realities and dangers of highly complex global systems. But in truth, the first decade of the 21st century has been a series of wake-up calls with a single subject: the reality of global integration." - Sam Palmisano, Nov. 6, 2008

Focus Areas

- Shift to high-value solutions
- Move to Values-based culture
- Lowering center of gravity for decision-making
- Becoming premier globally integrated enterprise
- Maintain focus and execute in a radically shifting market
- A Smarter Planet

1993 1995 1997 1999 2001 2003 2005 2007 2009



1992



2004



2003



2007

2009

Phase Two  
Palmisano era  
(‘03 thru  
present)



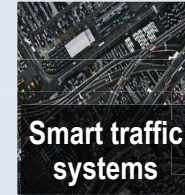
# IBM Strategy and Values



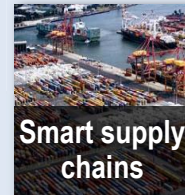
## ... Building a Smarter Planet



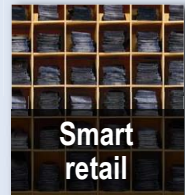
Our world is becoming **INSTRUMENTED.**



Our world is becoming **INTERCONNECTED.**



All things are becoming **INTELLIGENT.**



IBMers Value

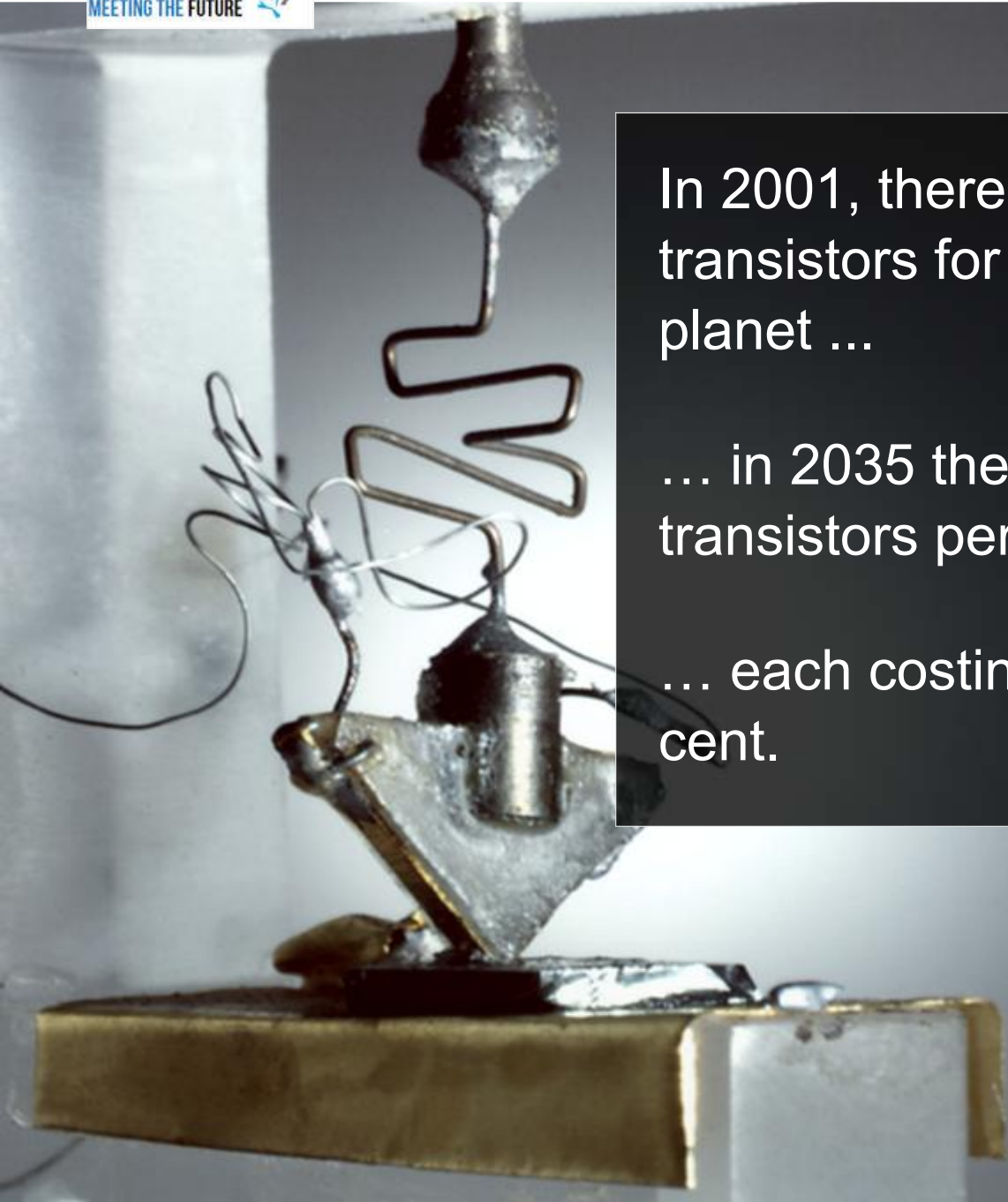


Dedication to every client's success.

Innovation that matters—for our company and for the world.

Trust and personal responsibility in all relationships.





In 2001, there were 60 million transistors for every human on the planet ...

... in 2035 there will be 100 billion transistors per human...

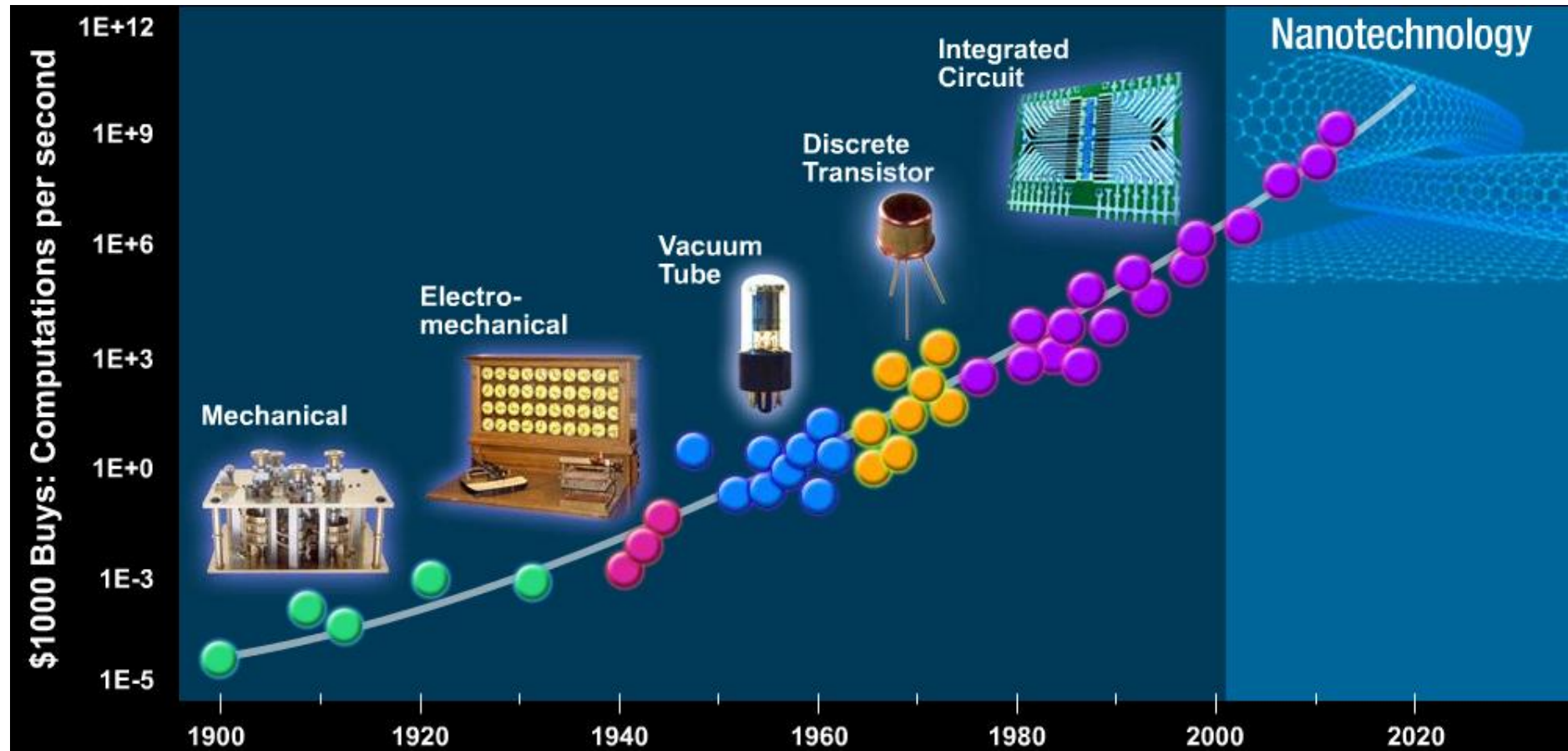
... each costing 1/10 millionth of a cent.

# Examples of big data explosions

- Google receives per day 10 years speakrecognition questions
- 400 million tweets per day
- More than 2000 cameras along the Dutch motorways , on Manhattan only there are 20.000 cameras along the streets and avenues
- 3.2 billion likes per day
- 1 billion users of Facebook
- 4 billion movies watched by 800 million users of the internet
- The amount of medical information is doubling every 5 years
- 60 hours of video actions every minute
- 1,85 million security cameras in Great Britain
- 300 million fotos uploaded
- In 2020 24 billion devices will be connected with the internet.

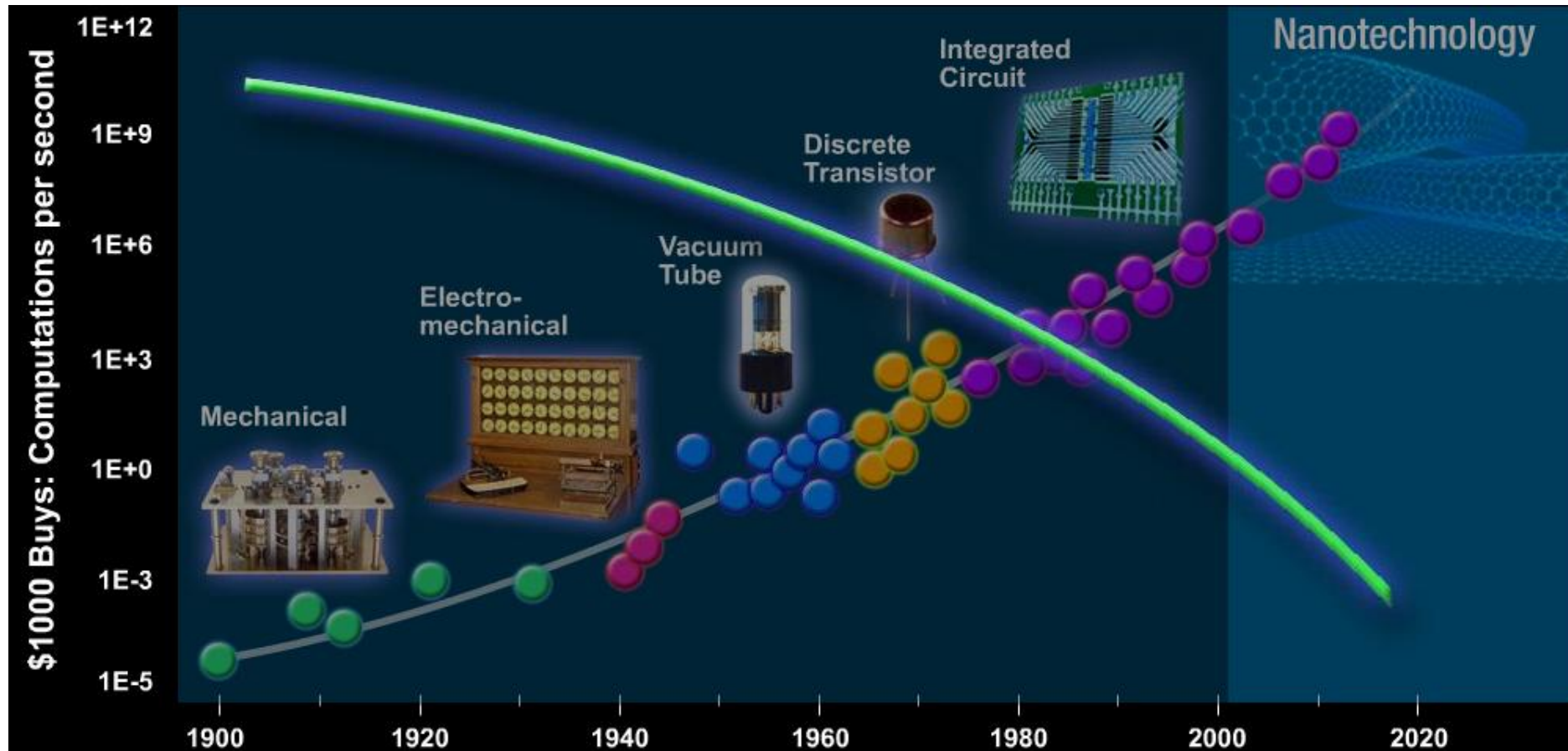


# Accelerating Advances in Technology



Source: Kurzweil 1999 – Moravec 1998

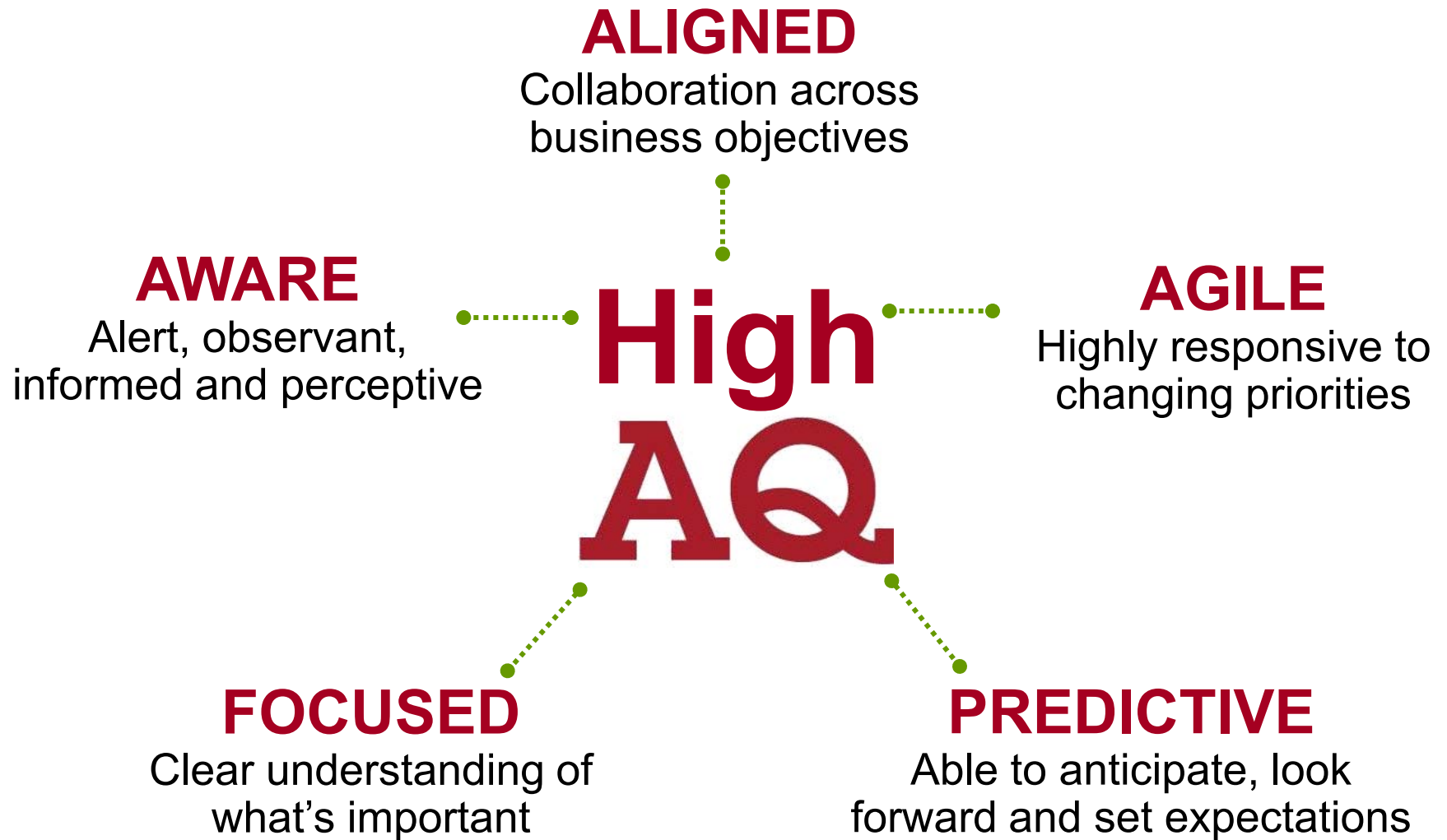
# Accelerating Advances in Technology *Driving Costs Steadily Downward*



Source: Kurzweil 1999 – Moravec 1998

$$\text{AQ} = \text{Analytics Quotient}$$
$$= \frac{\text{Realized}}{\text{Potential}}$$

The more you infuse analytics into your business, the higher your AQ and the better you and your business will perform



# Elementary, My Dear Watson

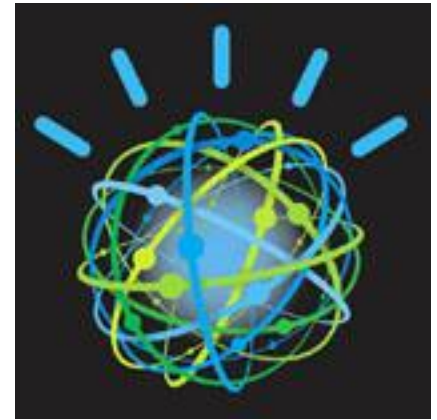


Can we design a computing system that rivals a human's ability to answer questions posed in natural language, interpreting meaning and context and retrieving, analyzing and understanding vast amounts of information in real-time?



## What is Watson?

- A computing system named after our founder Thomas J. Watson.
- Rivals a human's ability to answer questions posed in natural language with speed, accuracy and confidence.
- Leverages the power of IBM Content Analytics to perform lexical analysis as part of natural language processing.
- Harnesses a cluster of IBM's commercially-available POWER7 system optimized to process thousands of simultaneous tasks at rapid speeds.
- Incorporates a number of IBM exclusive technologies for the specialized demands of processing an enormous number of concurrent tasks and data while analyzing information in real time.
- **This is not search**, where a query retrieves a list of links to potential answers based on popularity and page ranking.



***Watson's ability to understand the meaning and context of human language, and rapidly process information to find precise answers to complex questions, holds enormous potential to transform how computers can help people accomplish tasks in business and their personal lives.***

**We need a different kind of education and a better use of IT to keep , increase and continue success in our beautiful world**



**Do one brave thing today ... then run like hell !**

**Thank you for your attention**

# BACK – UP



# Imagine If You Had All the Answers You Need to Win

IBM Business Analytics and Optimization Solutions Can Ensure That You Do!

## Used by Watson



### IBM Content Analytics

Natural Language Processing and content analysis leveraging UIMA



### InfoSphere BigInsights

"Big Data" analysis (Hadoop)



### IBM Power Systems

Thousands of parallel processes



### Workload Optimized Systems

Integrated, Optimized by Workload such as the Smart Analytics System



## Related Innovations

### InfoSphere Warehouse DB2, Informix, Netezza

Aggregating and storing data and content



### InfoSphere Streams

Massively parallel analysis



### Business Analytics

BI, Predictive Analytics and more



### ECM Solutions

IBM eDiscovery Analyzer  
IBM Classification Module  
IBM OmniFind Enterprise Search



### IBM Global Business Services

Research, expertise and analytical assets



# Big Data Example: The 360 Multi-Channel Customer Sentiment Analysis

## Business Processes



Events and Alerts

## Big Data Platform

Internet Scale Analytics

Streaming Analytics

Website Logs  
Social Media

Call  
Detail  
Reports  
(CDRs)



Master Data  
Management



Campaign  
Management



Cognos Consumer  
Insight



Web Traffic  
and Social  
Media Insight

Information  
Integration

Data  
Warehouse

Call Behavior  
and Experience  
Insight



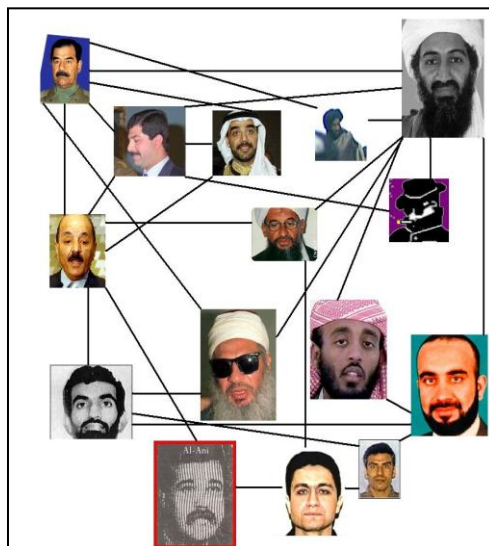
## Summary

- Our customer are outperforming and have a high “AQ”
- They are advancing their journey by upping their:
  - Decision-making savvy
  - Readiness and capacity to leverage analytics across critical roles and processes
  - Mastery of information
- We are delivering a comprehensive, unified business analytics system that meets both the growing demands of the business user, while enabling Finance and IT to deliver the appropriate level of enterprise governance and control
- IBM Business Analytics empowers:
  - All People*
  - ...for All Decisions*
  - ...with Analytic Freedom*
- Only IBM can enable total solutions...*now and in the future*

What's Your  
**AQ?**



# There has been a change in the world



- President 2.0
  - Barak Obama becomes first African-American President of the United States after a campaign promising **Change**
- War 2.0
  - Al Qaeda is “Enemy #1” worldwide, representing a **Change** in the way wars are fought

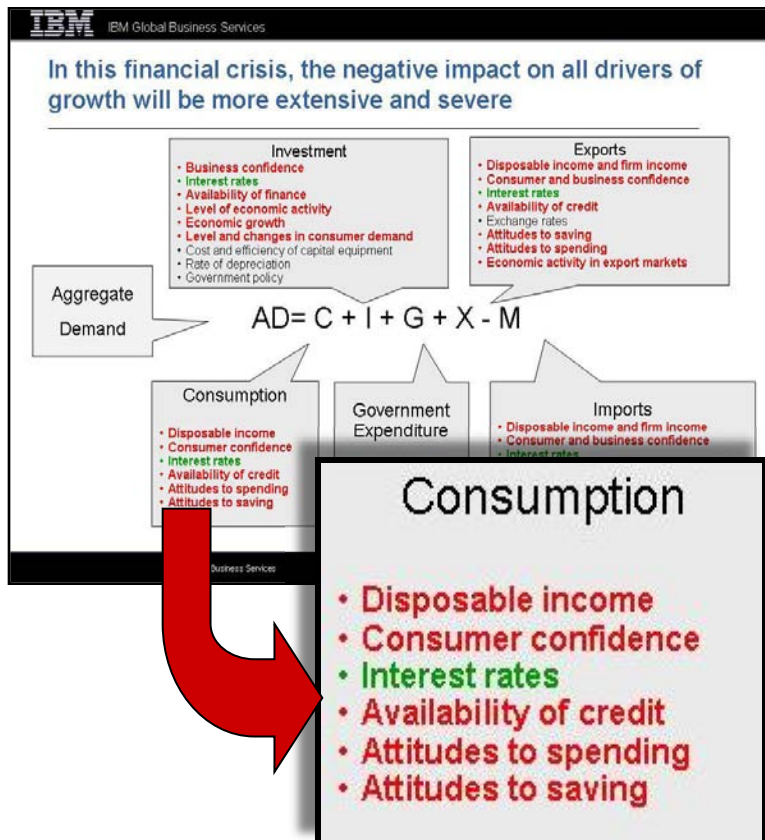
- Web 2.0
  - The internet goes through a **Change** and becomes a social network platform, connecting people like never before

**And now we are undergoing Economic Change . . .**

# These economic changes impact companies

## Economic Change

## Corporate Response

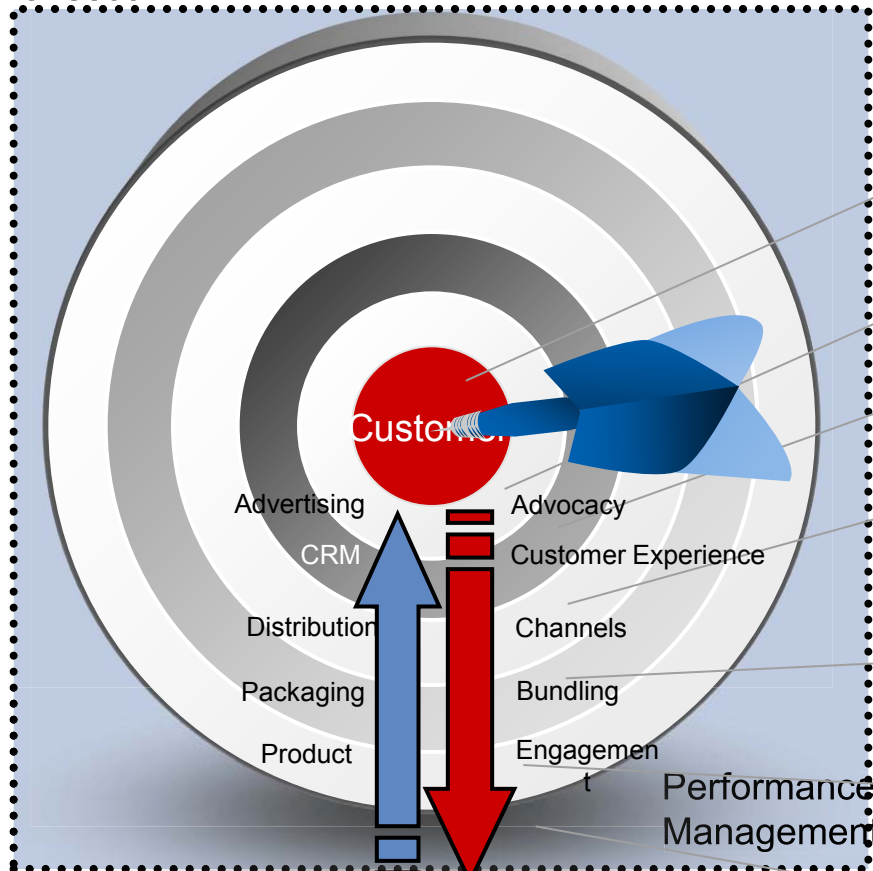


## Cost Takeout

- Shrink unprofitable segments
- Reduce marketing costs
- Reduce service costs
- Reduce labor and operating costs
- Reduce cost of sales
- Reduce R&D cost and risk
- Identify new cost takeout opportunities

# The Change from “You Sell” to Customer 2.0

The direction of marketing processes become two-way, opening up new opportunities for Cost Takeout



New marketing interacts with consumers to understand and meet their needs

## Customer Management Opportunities

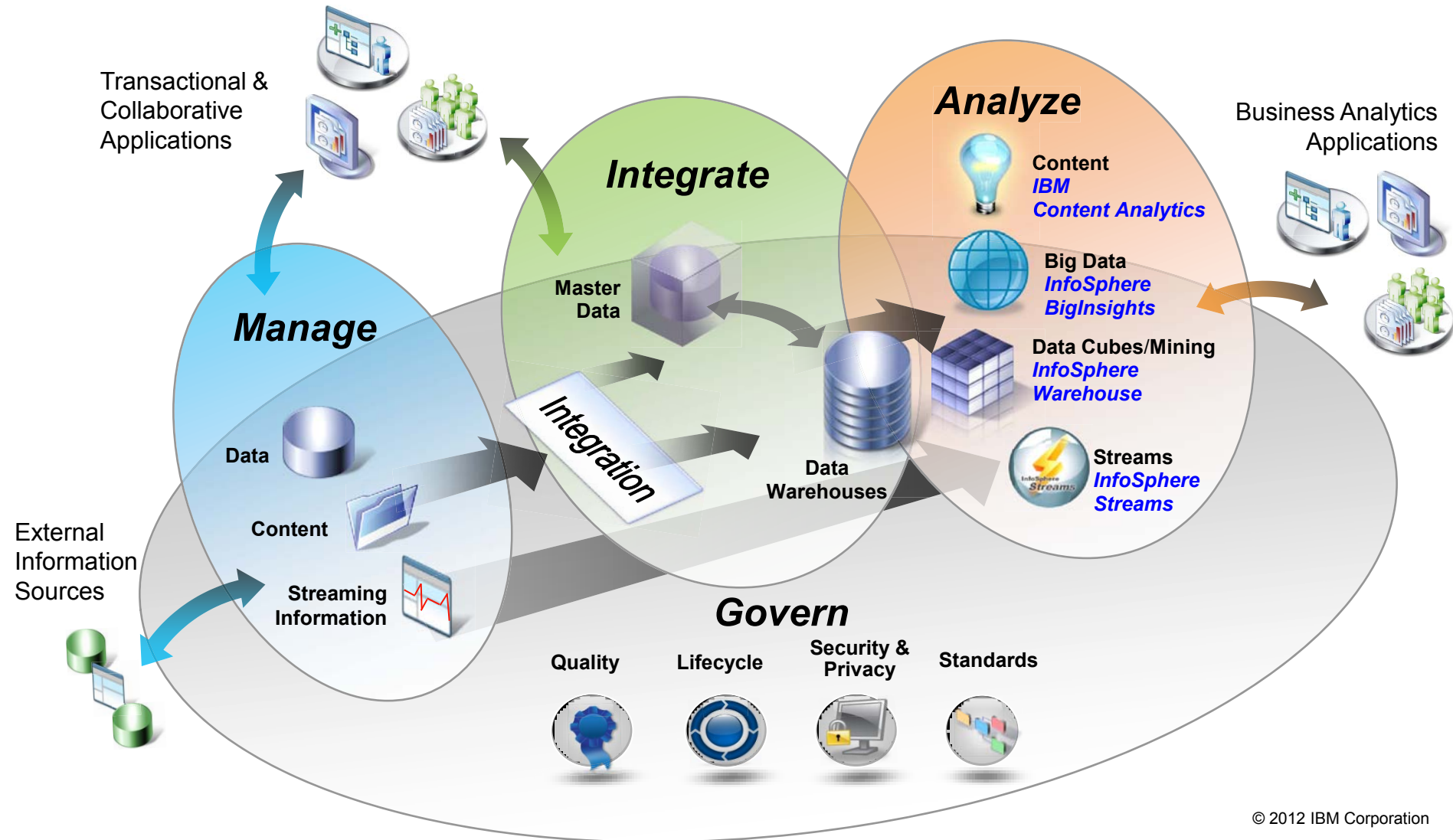


## Cost Takeout

- |  |   |
|--|---|
| Create improved customer insight that generates revenue  | ▶ Shrink unprofitable segments            |
| Harness word-of-mouth and rely less on advertising   | ▶ Reduce marketing costs                  |
| Streamline processes to improve customer service   | ▶ Reduce service costs                    |
| Determine good paths to migrate customers to reduced cost channels while improving the customer experience | ▶ Reduce labor and operating costs        |
| Increase sales productivity and provide value to customers by bundling products and services               | ▶ Reduce cost of sales                    |
| Engage customers through digital channels and communities  | ▶ Reduce R&D cost and risk                |
| Monitor the right metrics to spot potential issues   | ▶ Identify new cost takeout opportunities |



# Delivering trusted information for smarter business analytics



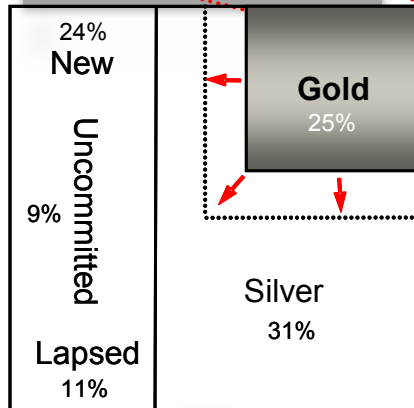


# Next Best Action Decisioning Flow

## Value Tiers

Micro-Cluster:1	Micro-Cluster:3
Micro-Cluster:2	Micro-Cluster:N

Existing customer classification



## Clustering & Segmentation

## Priors

"Remember Me"  
How has the customer engaged in the past?

Existing infrastructure we leverage

Analytics we customize

## Posteriors

"Relevant Action"  
Highest probability action bet accounting for Priors and current Conditions.

## Complex Event Processing

## Conditional

"Recognize Me"  
How is the customer interacting right now?



Event processing tools we bring

## Bayesian Network

## Decisions we model

## Decision Trade-off

(ActionEngine)

Actions, messages, offers are pieced together based on Posterior bet

Objects we bring

## Action Repository

(Activities or Actions)  
Exact 'action' is aligned with appropriate assets (creative, copy, scripting, 'hot button', etc.)

Knowledge database we codify

## API

API's we develop

Call Center



Internet



Mobile



## Channel or Device Execution

*Watson represents the ability to gain meaningful insights from massive amounts of data, confidently make decisions, and make sense of structured and unstructured data (such as natural language). Beyond Jeopardy!, the technology behind Watson can be adapted to solve problems and drive progress across many industries:*

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## **Healthcare:**

Growing volumes of structured text, including medical records containing non-standard data formats, are untapped. Physicians are battling information overload, which can contribute to inaccurate or incomplete diagnoses. There is a growing demand to integrate information and apply analytics to improve healthcare quality and reduce costs.

## **Technical Support and Contact Centers:**

Contact center representatives and tech support providers are overwhelmed with content. The ability to automatically analyze disparate sources of natural language content would help technicians identify the best information to assist users most efficiently and effectively.

## **Enterprise Knowledge Management:**

Governments and businesses worldwide manage huge amounts of internal and external data. It is difficult to provide key information where and when needed for decision-making. Technology can help manage this complexity by handling vast quantities of natural language content to provide for and even anticipate a user's information needs.

# Getting Started: Lay the foundation for tactically increasing sales pipeline

## Call to Action:

*Engage with your clients and prospects to educate them on Watson, and the possibilities Watson's capabilities present for their businesses*

*Set the agenda with clients about the need for workload optimized systems, ECM, analytics, "Big Data" management and how applying these technologies can transform businesses*

*Work with your sales leaders to invite clients and prospects to participate in Jeopardy! Watch Events, and visit IBM Labs, and Briefing Centers*

## Resources:



*Educate yourself and your clients with video, articles*



*Download papers to use with clients as door-openers and leave-behinds*



*Watch Watson play on Jeopardy! with your clients*

- [YouTube Videos](#)
- [Watson Overview Package](#)
- [Watson External Site](#)

- [Solution Briefs](#) (2 pgs each)
  - Watson and BAO
  - Watson and Workload Optimized Systems
  - Watson and Industry Transformation

- [High Impact Collateral](#)

- [Invite clients](#) to a Jeopardy! viewing party in designated cities
- [Event in a Box-](#) to organize your own viewing event

# THE END