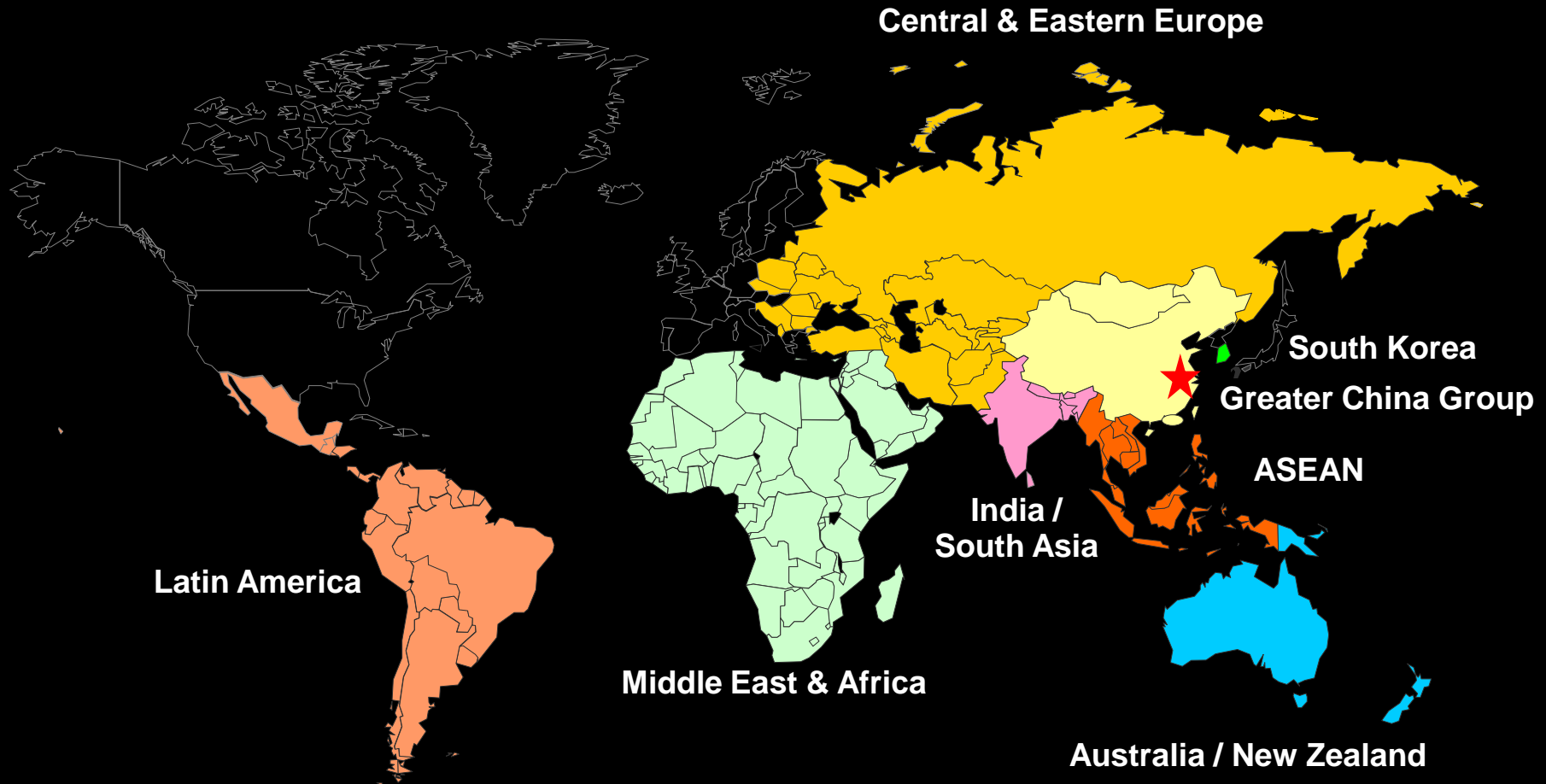# 16th Americas Conference on Information Systems

Welcome to the Decade of Smart

Bruno Di Leo
General Manager, IBM Growth Markets

IBM

IBM in Growth Markets: over 140 countries

Central & Eastern Europe

South Korea
Greater China Group

ASEAN

India /
South Asia

Latin America

Middle East & Africa

Australia / New Zealand

IBM

We are experiencing the reality of global integration

The World is Connected
Economically
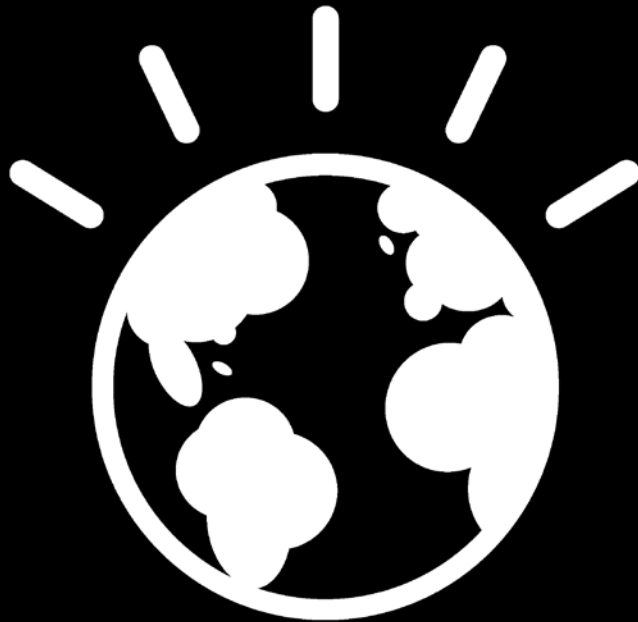**Socially**
Technically

A Series of Shocks
Climate change
Energy geopolitics
Global supply chains
Financial crisis

Evolving Trends
Changing demographics
Empowered citizens
Impact of technology

3

IBM

Why Smarter Planet?
Because something meaningful is happening.

The world is
SMALLER.

The world is
FLATTER.

The world is about to get a whole lot
SMARTER.

IBM

…because intelligence is being infused into the way the world works.

Our world is becoming

INSTRUMENTED

Our world is becoming

INTERCONNECTED

Virtually all things, processes and ways of working are becoming

INTELLIGENT

IBM

We now have the ability to measure, sense and monitor the condition of almost everything.

30 billion

In 2010, 30 billion RFID tags will be embedded into our world and across entire ecosystems.

1 billion

In 2010, there will be more than 1 billion camera phones in existence.

85%

Nearly 85% of new automobiles will contain event data recorders in 2010.

Instrumented   Interconnected   Intelligent

Instrumented

IBM

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

2 billion

There will be an estimated 2 billion people on the internet by 2011.

5 billion

There are an estimated 5 billion mobile phone subscribers worldwide.

1 trillion

Soon, there will be 1 trillion connected devices in the world, constituting an "internet of things."

Instrumented   Interconnected   Intelligent

Interconnected

IBM

We can respond to changes quickly and accurately, and predict and optimize for future events.

15 petabytes

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

1 petaflop

Scientists are working to prevent influenza pandemics by modeling the viruses with a supercomputer that can operate at one petaflop, or one quadrillion operations per second.

1 square kilometer

New analytics enable high-resolution weather forecasts for areas as fine as 1 to 2 square kilometers.
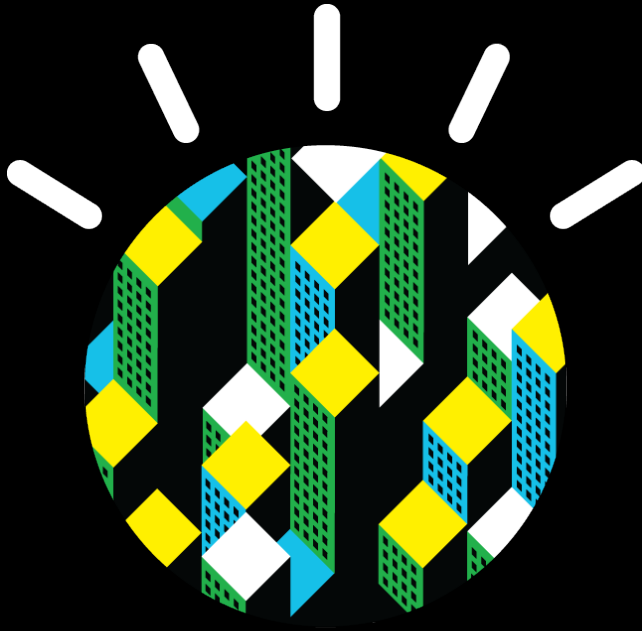
Instrumented   Interconnected   Intelligent

Intelligent

Building a Smarter Planet

The key precondition for

REAL CHANGE

now exists.

A period of discontinuity is a period of

OPPORTUNITY
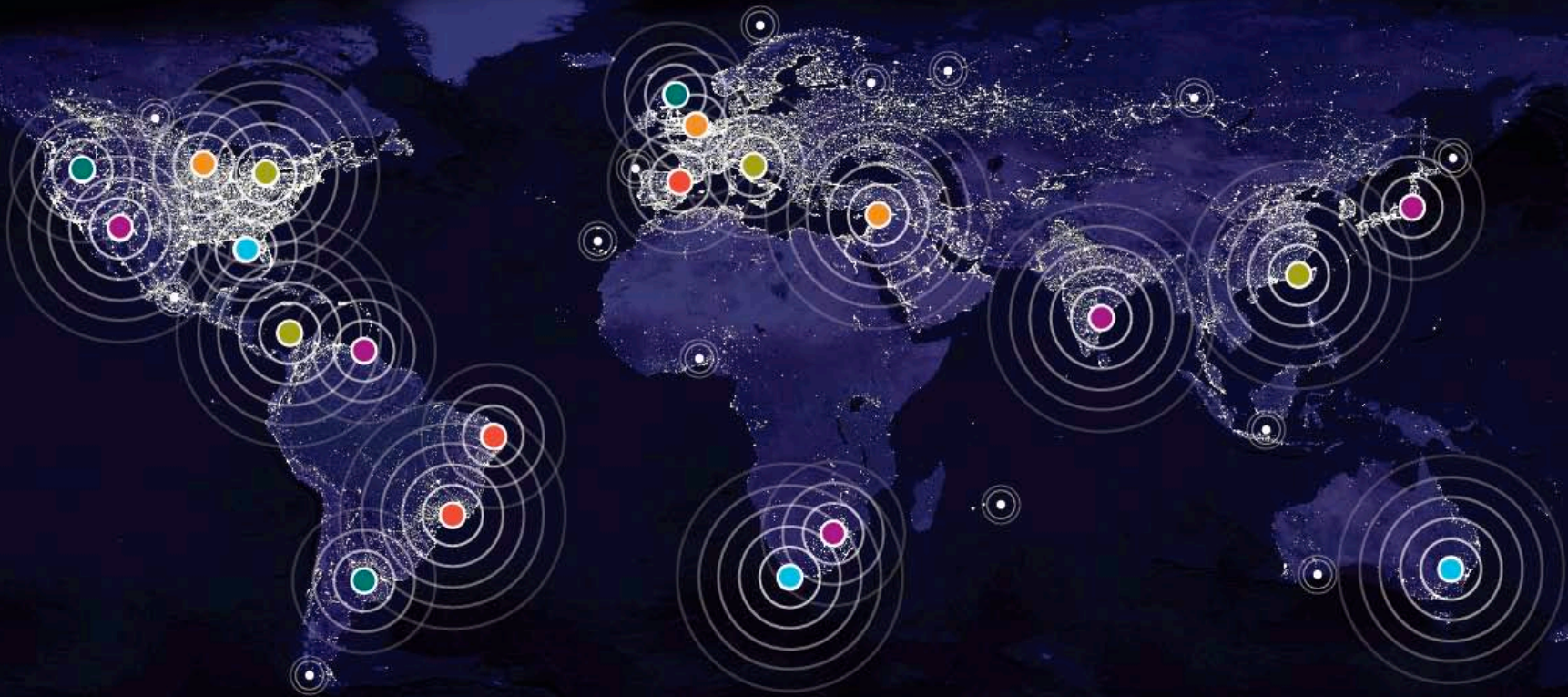
for those with courage and vision.

There will be

WINNERS,

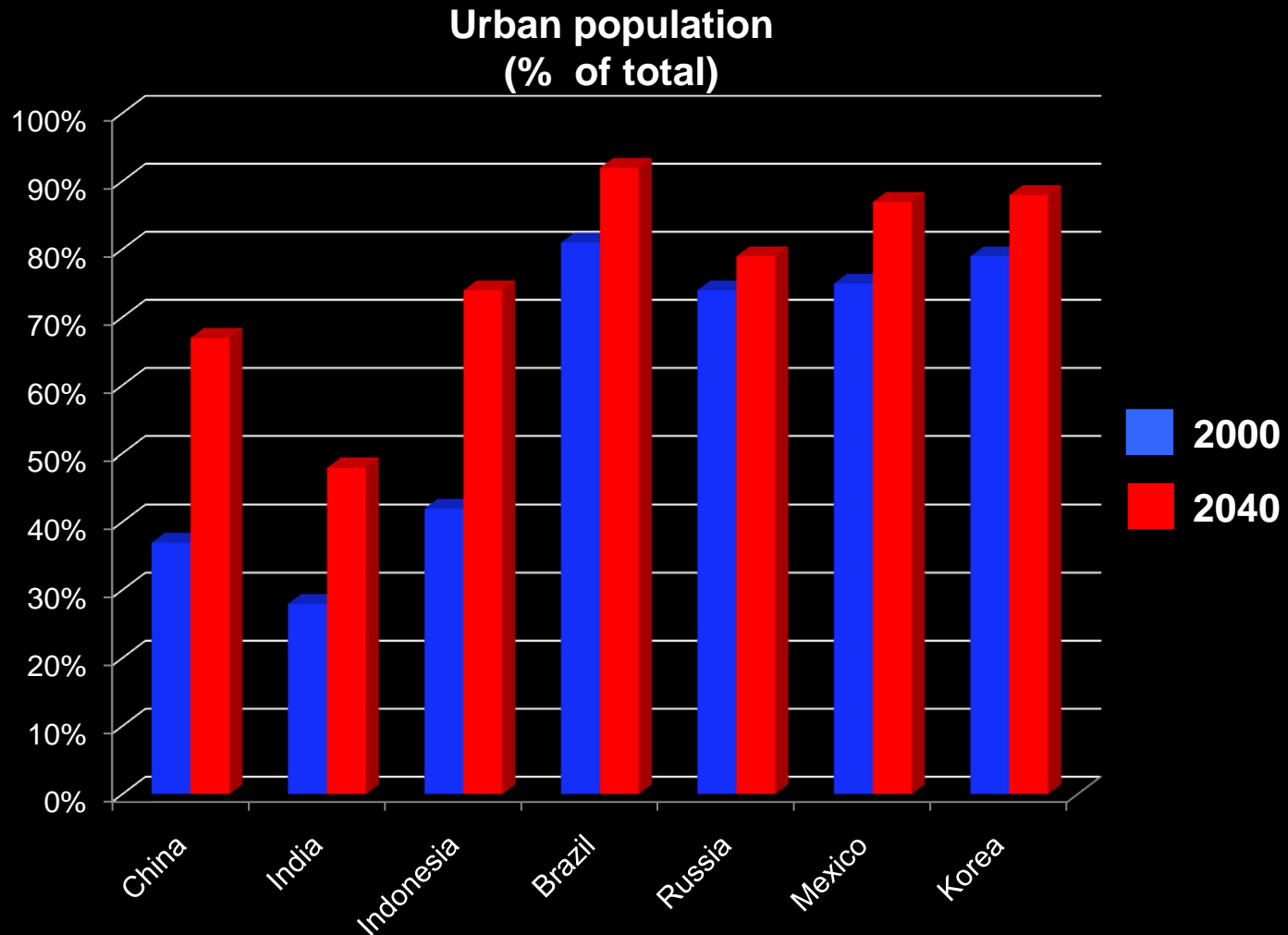and there will be losers.

A planet of cities

In 2007, for the first time, the majority of the world's population – 3.3 billion people – lived in cities. By 2050, city dwellers will make up 70% of Earth's total population, 6.4 billion people.

What draws us to cities?
OPPORTUNITY

IBM

Urbanization is a key driver for investments

Urban population
(% of total)

Source: UN, HSBC

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Time to act for smarter cities

Cities – more than states, provinces or nations – serve as crucibles for the success or failure of our planet.
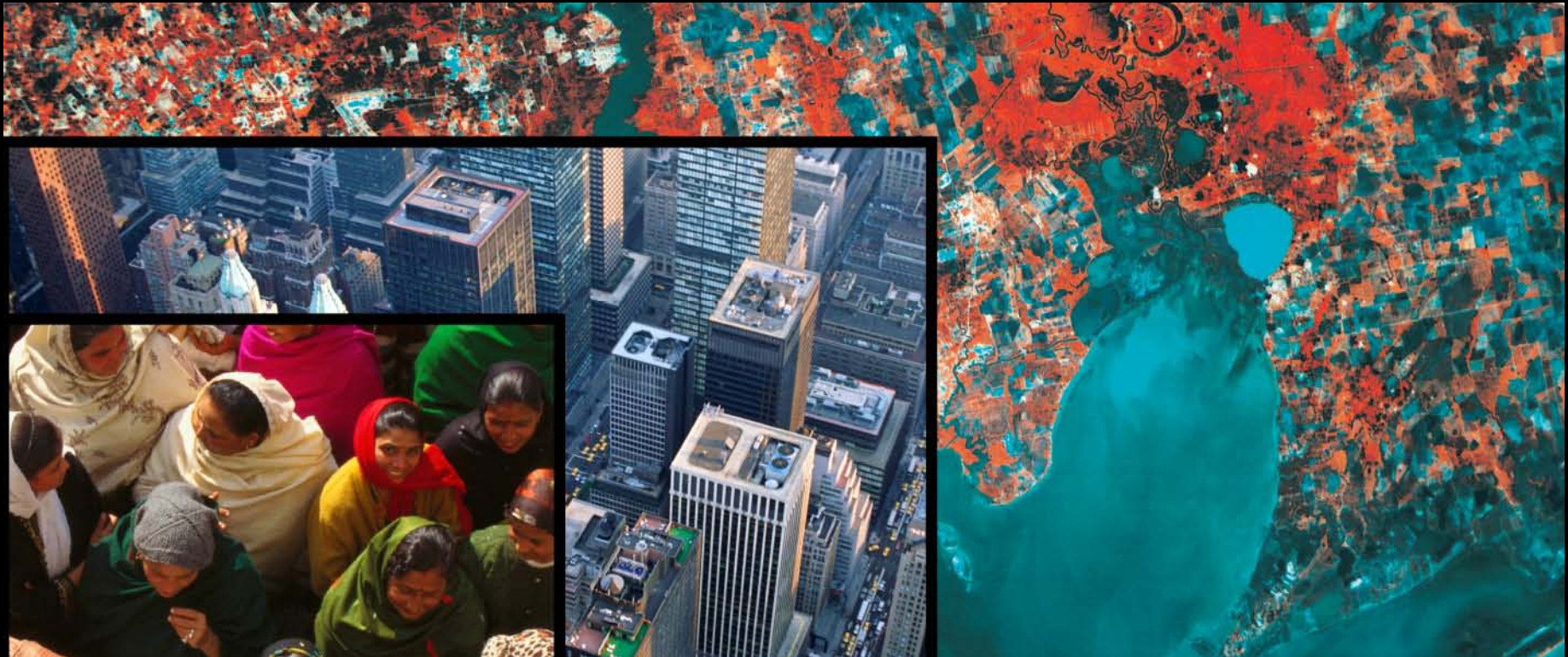
The need for progress is clear

U$ 170 B Kilowatt-hours wasted each year by consumers due to insufficient power usage information.

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

U$ 3,7B lost hours

U$ 2,3B billion gallons of gas

Annual impact of congested roadways in the U.S. alone.

U$ 40B Annual consumer product and retail sales lost due to supply chain inefficiencies
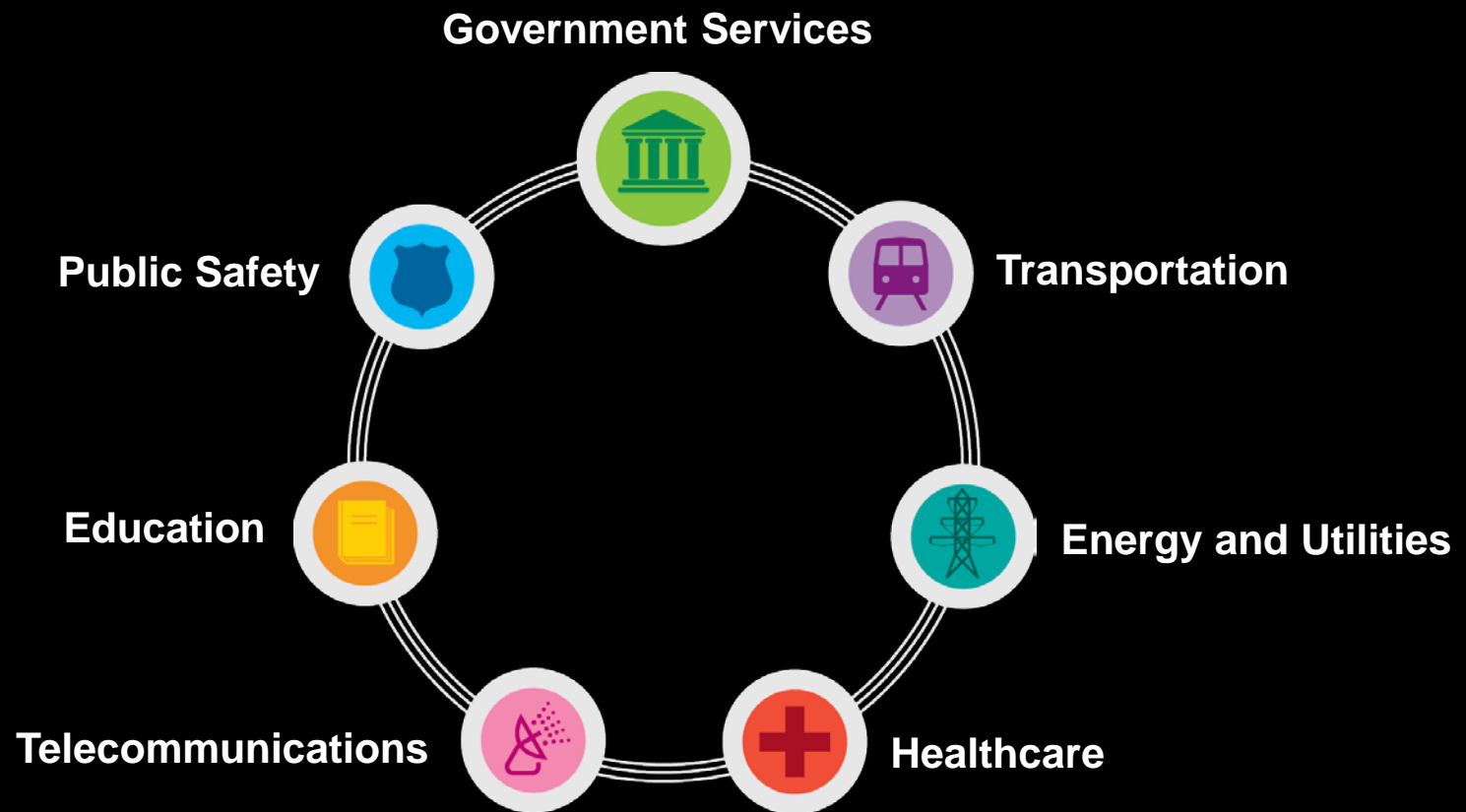

U$ 4T Average daily volume in the world's currency markets

The city – a microcosm of challenge and opportunity

System of systems where man-made and natural interact

Government Services

Transportation

Energy and Utilities

Healthcare

Telecommunications

Education

Public Safety

IBM

Smarter public safety
US

Smarter food
UK

Memphis (TN) Police department
- Reduces serious crime **31%**
- Evaluates incident patterns in the city
- Forecasts criminal 'hot spots' to proactively allocate resources and deploy personnel

Allied Mills, manufacturer of food ingredients

- reduces corrective and emergency maintenance from **39% to 9%**
- proactively determines when and where equipment may break down.

Smarter energy
US

Smarter energy
Denmark

Covanta energy company

- **+400%** preventive & proactive maintenance
- Record 91.6% average 'energy-to home' availability
- -10% total downtime
- -22% unscheduled downtime

DONG Energy

- 20-25% reduced outage minutes
- 33% less fault search time
- 90% estimated capital savings

Smarter transportation
Stockholm

Smarter farming
US

Stockholm intelligent toll charge system

- 20% less traffic,
- 40% lower emissions
- +40,000 users of the public transport

Sun World

- 20% reduced fuel use by matching equipment to farming job & conditions
- 8% increase farm labor efficiency
- 8.5% decreased water usage

SMARTER LOS OLIVOS, PERU

IBM is helping the municipality of Los Olivos in Lima to connect public schools, police stations, hospitals, universities, fire departments, and healthcare centers.

Automates citizen service delivery to 60K homes.

Monitors traffic lights, security cameras, water meters and electrical to detect problems and take action.

Centralizes decision making, cuts costs.

IBM

Intelligence is being infused into the way the world works.

Our world is becoming
INSTRUMENTED

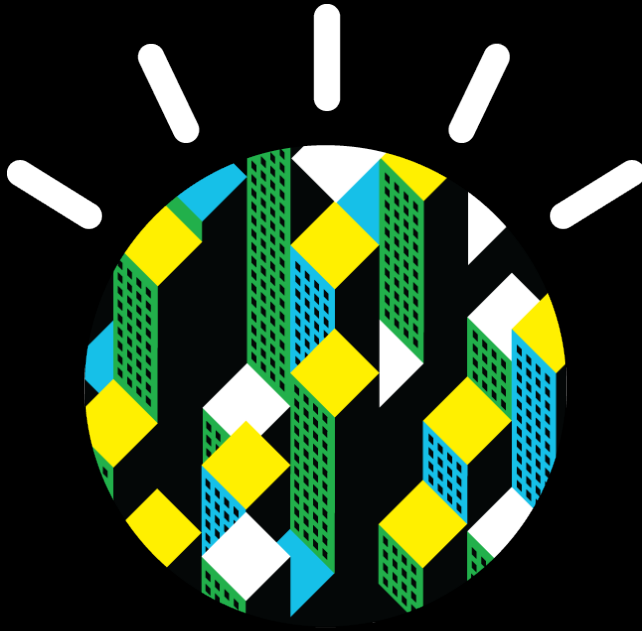Our world is becoming
INTERCONNECTED

Virtually all things, processes and
ways of working are becoming
INTELLIGENT

Building a Smarter Planet is about Leadership

The key precondition for

REAL CHANGE

now exists.

A period of discontinuity is a period of

OPPORTUNITY

for those with courage and vision.

There will be

WINNERS,

and there will be losers.

Leadership in a Smarter Planet

IBM

2010 CEO Study: Today's complexity foreshadows an even more complex future

60% of CEOs are experiencing high level of complexity

79% of CEOs expect more complexity over next 5 years

ONLY 49% feel prepared for expected complexity

Source: 2010 CEO Study. Q7

Essentials for the next generation leaders

 Global collaborators

 Shaped like a T

 Factual-based decision-makers

 Build the Intelligent Enterprise

Essentials for the next generation leaders
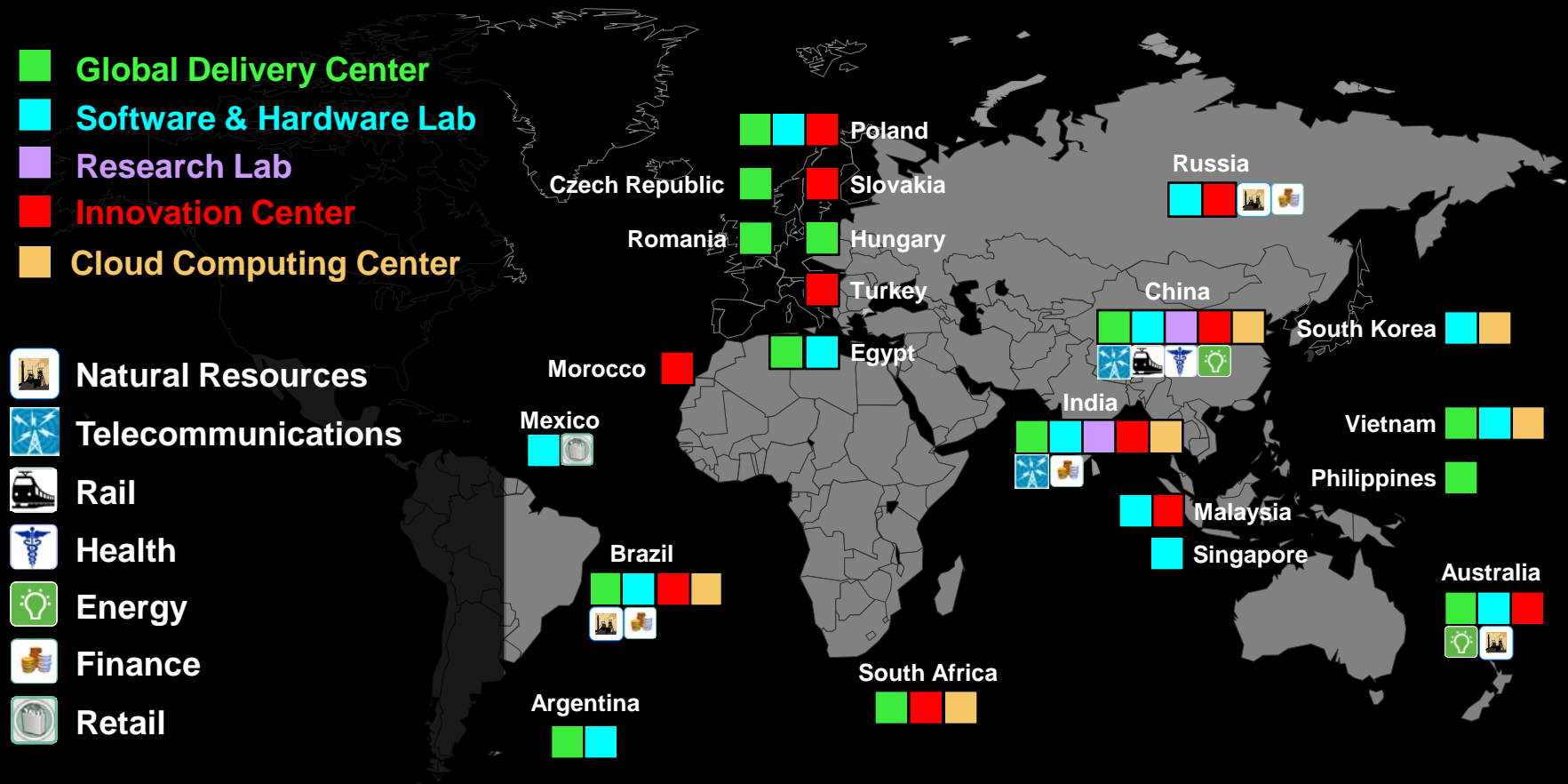
Global collaborators

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Build the Intelligent Enterprise

Collaboration at IBM

The Globally Integrated Enterprise

Global Delivery Center
Software & Hardware Lab
Research Lab
Innovation Center
Cloud Computing Center

Natural Resources
Telecommunications
Rail
Health
Energy
Finance
Retail

Poland
Czech Republic
Romania
Morocco
Mexico
Brazil
Argentina
Slovakia
Hungary
Turkey
Egypt
South Africa
Russia
China
India
Malaysia
Singapore
South Korea
Vietnam
Philippines
Australia

Essentials for the next generation leaders
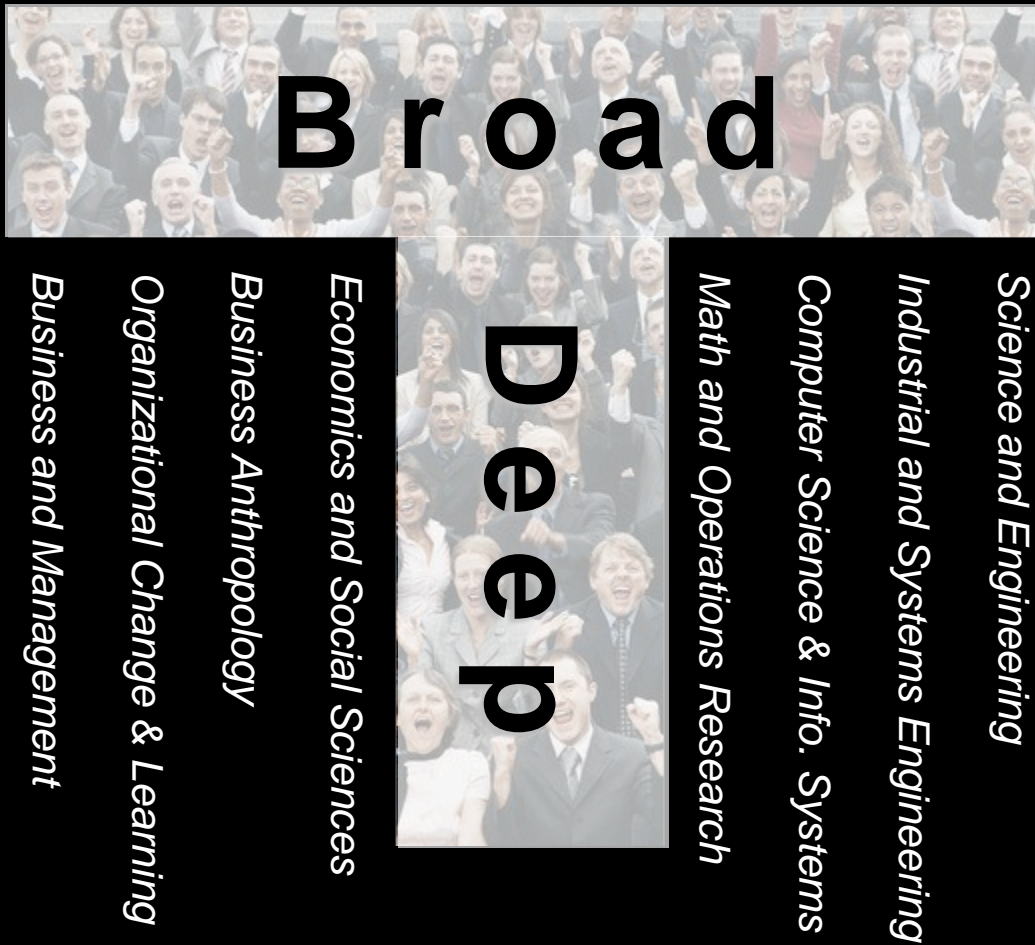
Global collaborators

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Factual-based decision-makers

Build the Intelligent Enterprise

Smarter Planet leaders are interdisciplinary

www.ibm.com/university/ssme

Service Science, Management and Engineering

Tags for this space: engineering, management, science, service, service_science, ssme

| Introduction | Learn | Teach | Collaborate | Events | Skills | Smarter Planet |

Articles

- Environmental News Network: Intelligent Design? Utilities Embrace An Efficiency Evolution
- EnergyBiz: Intelligent Enterprises and Intelligent Grids Require Intelligent Communications
- Mongomery Research: The Emergence of the Intelligent Utility: A New View of Service Delivery
- Carbon Disclosure Project: Making Advances in Carbon Management Best practice from the Carbon Information Leaders A Joint CDP and IBM Study
- Supply & Demand Chain: Mastering Carbon Management Balancing tradeoffs to optimize supply chain efficiencies
- pe Power & Energy: Intelligent utilities: the time is here for the next step

Transportation

- RITA: RITA – Research and Innovative Technology Administration Focus areas and initiatives Communities, documents, articles on ITS
- ITSA: Intelligent Transportation Society of America; Private and public members including universities
- ITS: University of Washington
- IEEE ITS Society
- MIT: ITS program
- ITS Institute: University of Minnesota
- Library of Congress: ITS Quick Study
- ITS Lab: at Portland State University
- Turner-Fairbank Highway Research Center

Energy & Grid / Carbon

- NASA
- Carbon Management Council
- Berkeley Lab Earth Sciences Division
- Urban and Regional Carbon Management
- Ohio Agricultural Research and Development Center, Carbon management and Sequestration Center
- Lawrence Livermore Lab
- US Dept of Energy: Carbon Sequestration Focus Areas Carbon management Science
- MIT Energy Initiative, Carbon Management
- University of East Anglia, MBA in Carbon Management

SSME Foundational Skills

- **Communications across disciplines**
- **Service design**
- **Service management**
- **Service system modeling**
- **Service strategy through understanding value co-creation**
- **Service lifecycles to ensure quality**
- **Service supply and demand management**
- **Business project management**

- **Creative and critical thinking, analysis and synthesis.**
- **Business best practices**
- **Leadership, collaboration, and teaming.**
- **Business case development and analysis**
- **New service offerings.**
- **Organizational change management**
- **Knowledge of marketing and sales**

Essentials for the next generation leaders

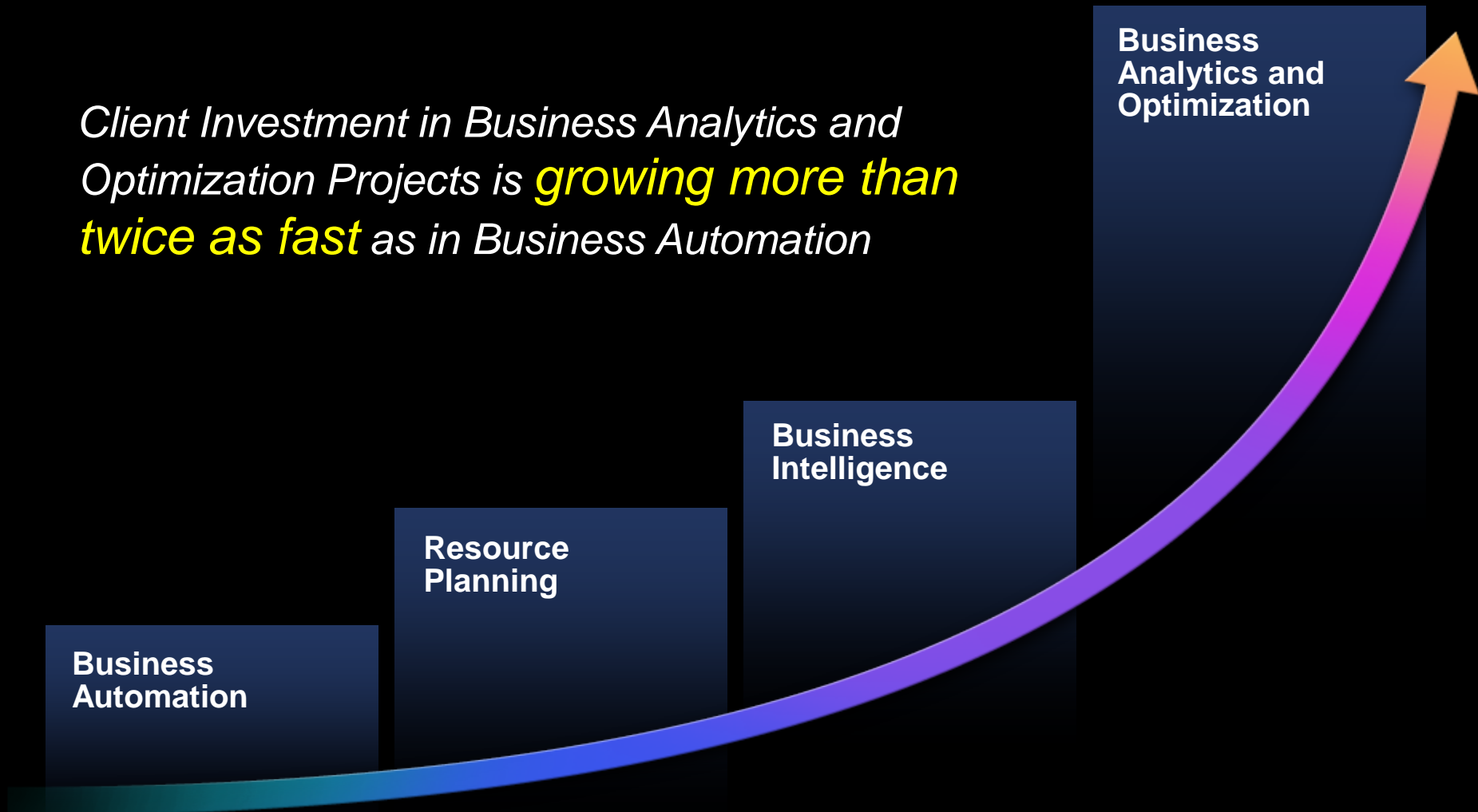**Global collaborators**

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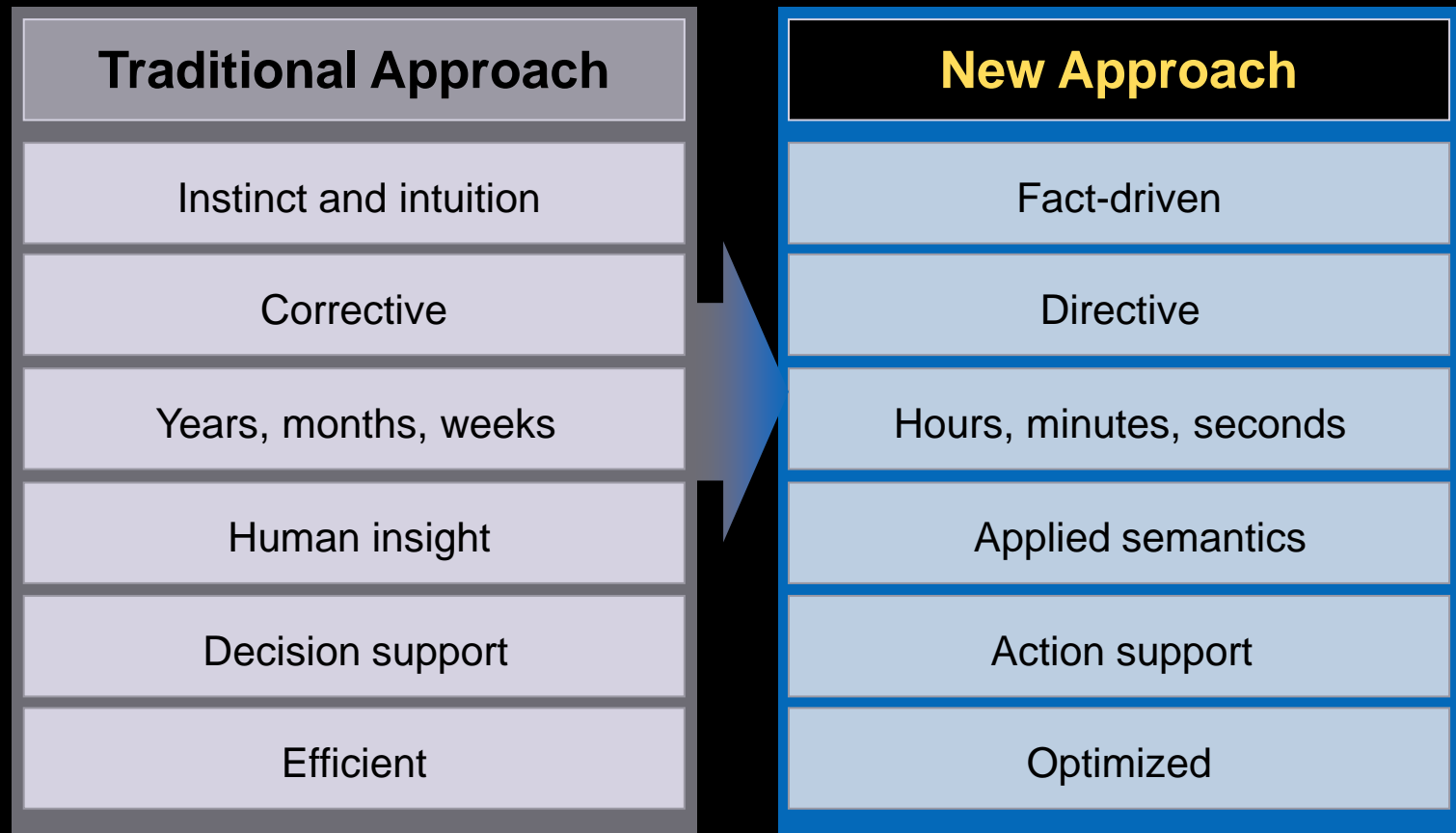
Factual-based decision-makers

Build the Intelligent Enterprise

Business Analytics and Optimization

Client Investment in Business Analytics and Optimization Projects is growing more than twice as fast as in Business Automation

Business Analytics and Optimization

Business Intelligence

Resource Planning

Business Automation

IBM

Organizations need ways to improve speed to insight and speed to impact

Traditional Approach	New Approach
Instinct and intuition	Fact-driven
Corrective	Directive
Years, months, weeks	Hours, minutes, seconds
Human insight	Applied semantics
Decision support	Action support
Efficient	Optimized

Essentials for the next generation leaders

 Global collaborators
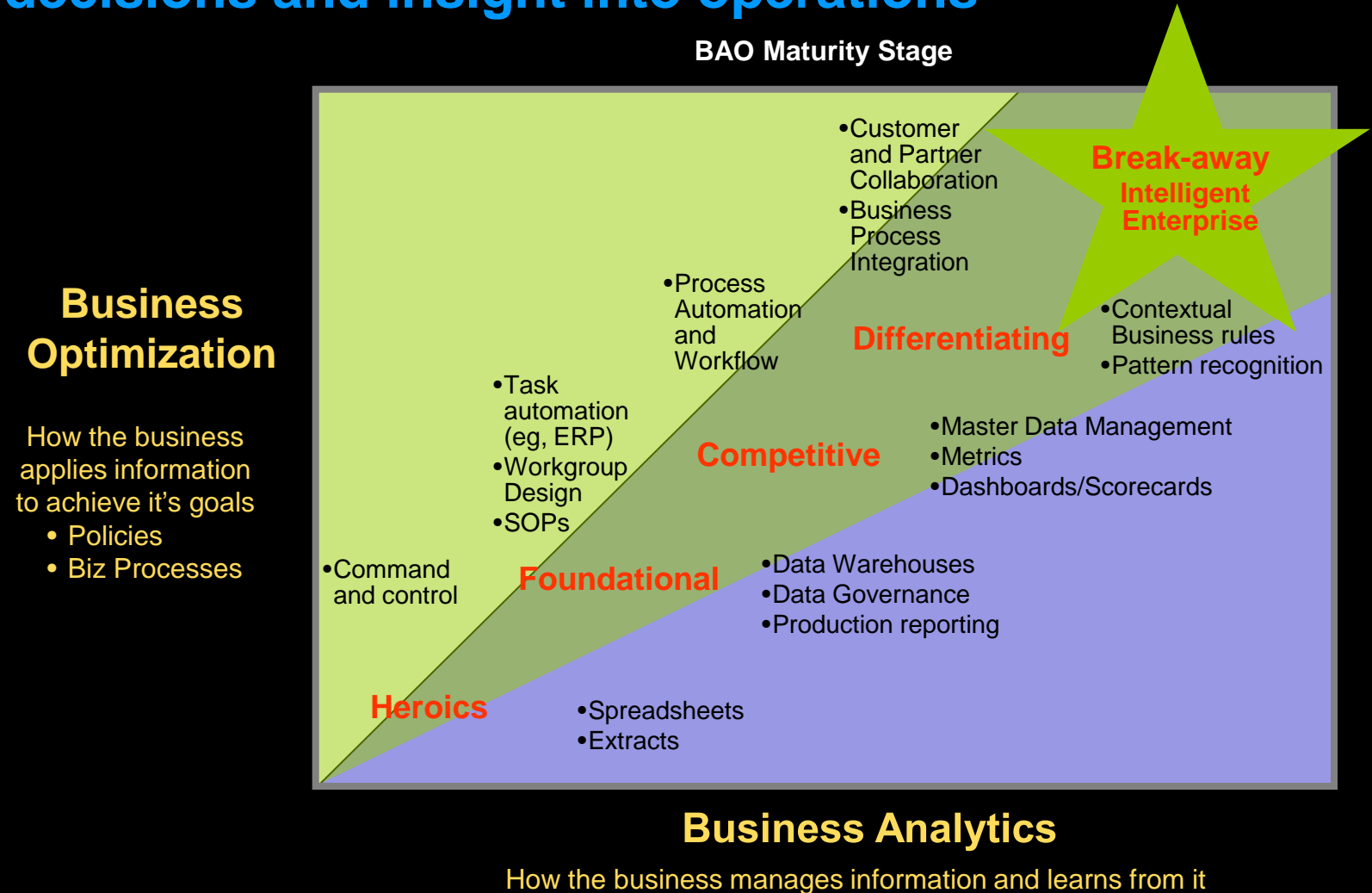
 Shaped like a T

 Factual-based decision-makers

 Build the Intelligent Enterprise

IBM

Intelligent Enterprises integrate data into business decisions and insight into operations

BAO Maturity Stage

Business Optimization

How the business applies information to achieve it's goals
- Policies
- Biz Processes

Break-away
Intelligent Enterprise

- •Customer and Partner Collaboration
- •Business Process Integration

- •Process Automation and Workflow

Differentiating

- •Contextual Business rules
- •Pattern recognition

- •Task automation (eg, ERP)
- •Workgroup Design
- •SOPs

Competitive

- •Master Data Management
- •Metrics
- •Dashboards/Scorecards

- •Command and control

Foundational

- •Data Warehouses
- •Data Governance
- •Production reporting

Heroics

- •Spreadsheets
- •Extracts

Business Analytics

How the business manages information and learns from it

34

Essentials for the next generation leaders

 Global collaborators

 Shaped like a T
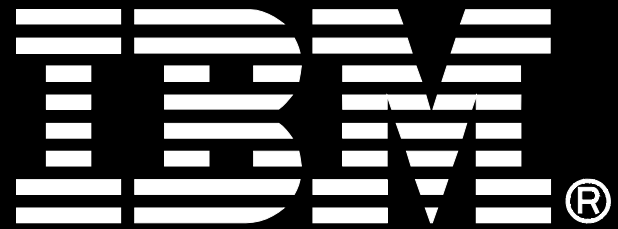
 Factual-based decision-makers

 Build the Intelligent Enterprise

The Decade of Smart

- Smarter Planet: *Instrumented, Interconnected, Intelligent*

- Cities: *System of systems, key for success*

- Innovators who manage complexity and leverage intelligence will emerge as winners

- Leaders must collaborate and integrate globally,

- Leaders must be T-shaped and build an intelligent enterprise

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