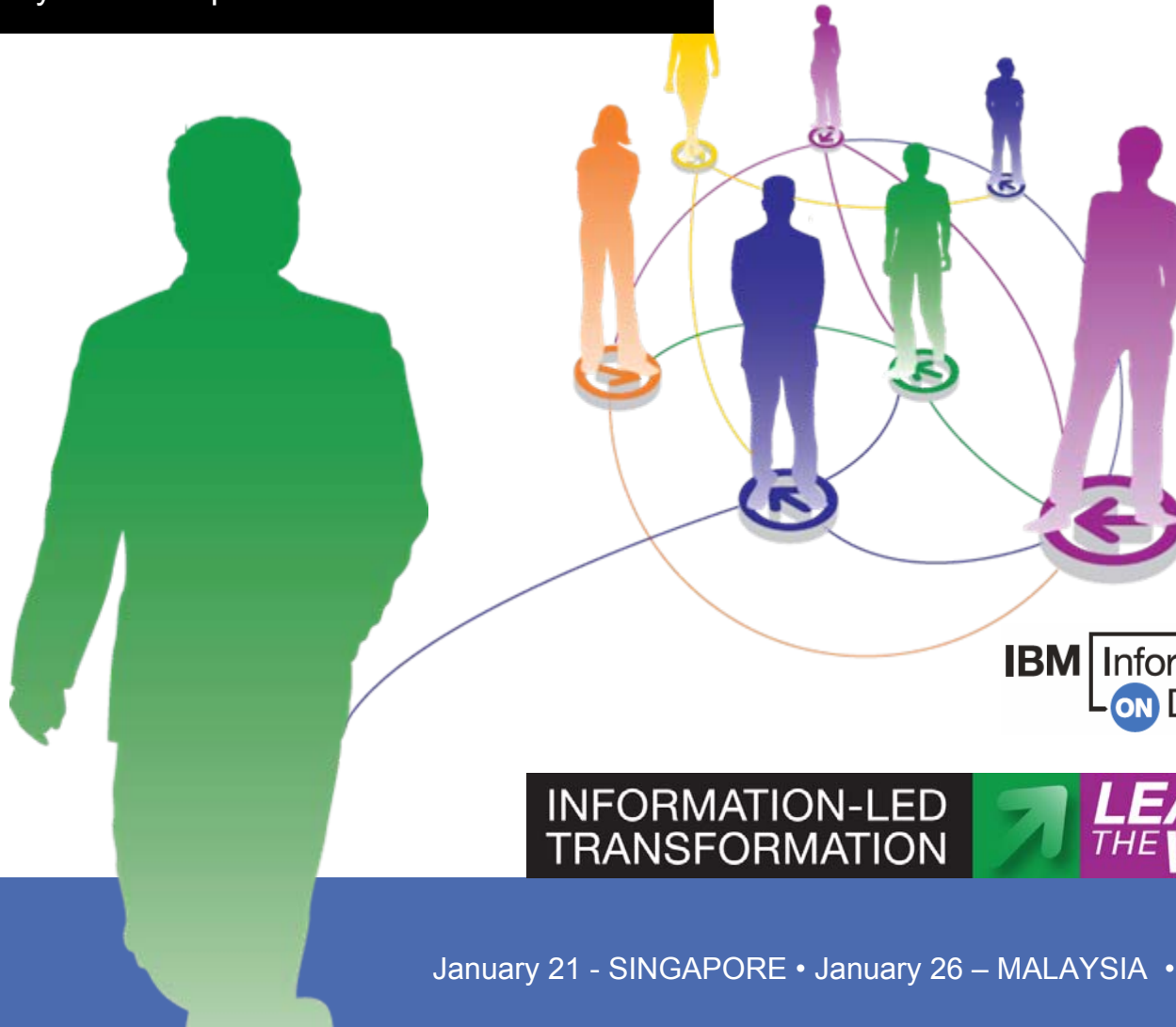


Be fast, Be right

Thrive in the new Economic environment

Douglas Irwin, ASEAN Banking Solutions Professional
Business Analytics and Optimization



IBM Information
ON Demand 2010

INFORMATION-LED
TRANSFORMATION



IBM

IBM

January 21 - SINGAPORE • January 26 - MALAYSIA • January 28 - THAILAND

Financial Services firms tell us that they are focusing on five key areas

- **Capital and liquidity**
- **Cost (and Complexity)**
- **Risk (and Transparency)**
- **M&A – and D(ivestiture)**
- **Customers**

While we understand the immediate problems, let's take a bit a higher level view for the moment



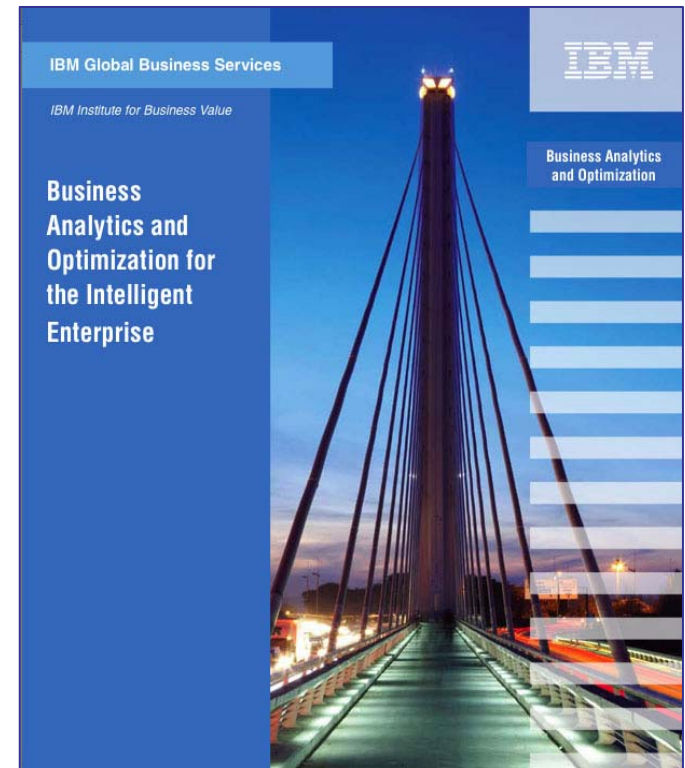
Longer term focus



In this environment, survival is top priority

What's happening?

- Business leaders regard their experience and intuition as inadequate tools for optimizing their enterprises
- Enterprises are making important decisions without access to the right information
- New analytics applied in businesses can close gaps and create new advantage
- It's not too late to start



IBM report surveyed of 225 business leaders worldwide

The management dilemma

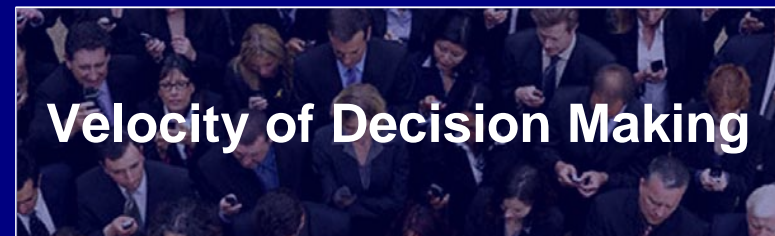
By 2010, the codified information base of the world is expected to double every 11 hours



Today, 80% of new data growth is unstructured content, generated largely by email, with increasing contribution by documents, images, and video and audio



Executives are being called upon to make more and faster decisions. Today, 70% of executives believe that poor decision making has degraded their companies' performance



The growing velocity of the volume, variety, and granularity of information is driving new, unprecedented complexity

Today, the processing power of the web is about equivalent to **one human brain**. By 2040, it will exceed the total processing power of **all of humanity**

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

80% of new data growth is **unstructured content**

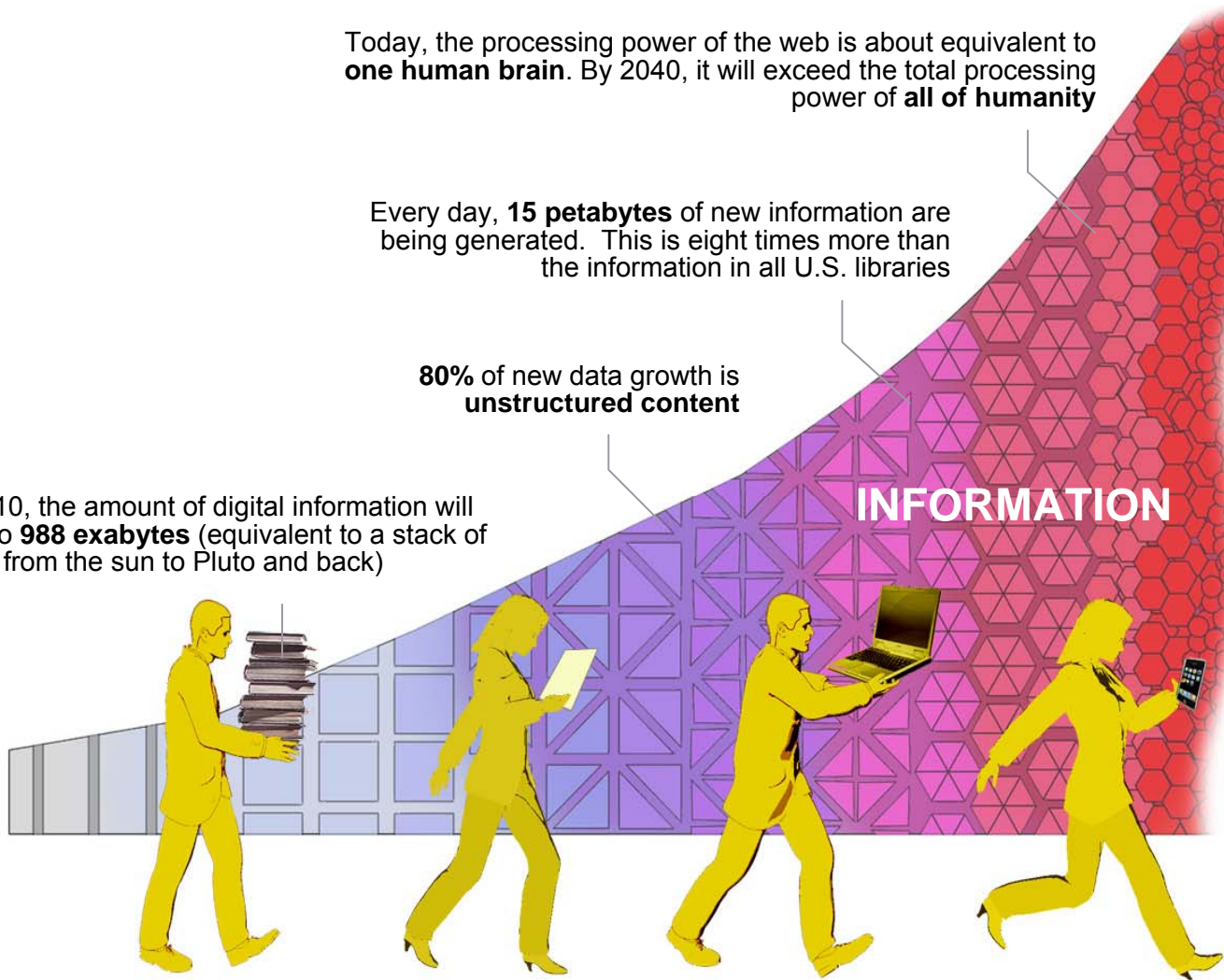
By 2010, the amount of digital information will grow to **988 exabytes** (equivalent to a stack of books from the sun to Pluto and back)

INFORMATION

Issues are getting harder to solve

Timelines are compressed beyond ability to respond

Enterprises that adapt will survive to prosper, and those that don't will be wash away



Why change and why now?

The information environment is at a tipping point

Traditional transactional and human-authored enterprise data is rapidly growing

Unstructured data is growing at geometric and exponential progressions, and most of it is not used in analytics

The unblinking eyes of instruments and sensors is producing tireless streams of new data

To survive, business leaders must act

People at all levels need better information and executives need to make decisions more quickly

Decisions need to be made based on a new set of facts based on the entirety and richness of the information base

Mental bandwidth needs to be reallocated towards harder and more pressing decisions

Today's enterprise has not kept up and cannot keep up

Decision making is based on instinct, subjective information, and often the wrong facts

Existing tools cannot access or analyze the growing data effectively and aren't positioned to handle the data deluge

Huge amounts of data are ignored, mismanaged, or under-utilized

We are approaching a “do or die” moment: enterprises that act on the opportunity will survive to prosper, and those that don't will be lost

But if change is a necessity, why is it so difficult to accomplish across the information management landscape?

Some issues have simply been by-products of the maturing business intelligence marketplace:

- **Growth** – Customer Analytics are evolving away from cross-sell - type thinking to one of organic growth and retention.
- **Event Fabric** - More than a rules engine, banks are looking for integrated active architectures that enable near real-time filtering of events that trigger, or even anticipate marketing, customer service, and transaction responses.
- **Redefining ODS** – Banks need to view their operational data stores as a strategic asset rather than passive storage of historical data.
- **Buy vs. Build** – Despite a lot of historical resistance to buy components versus build it yourself, most firms now consider their buy alternatives as advantageous.

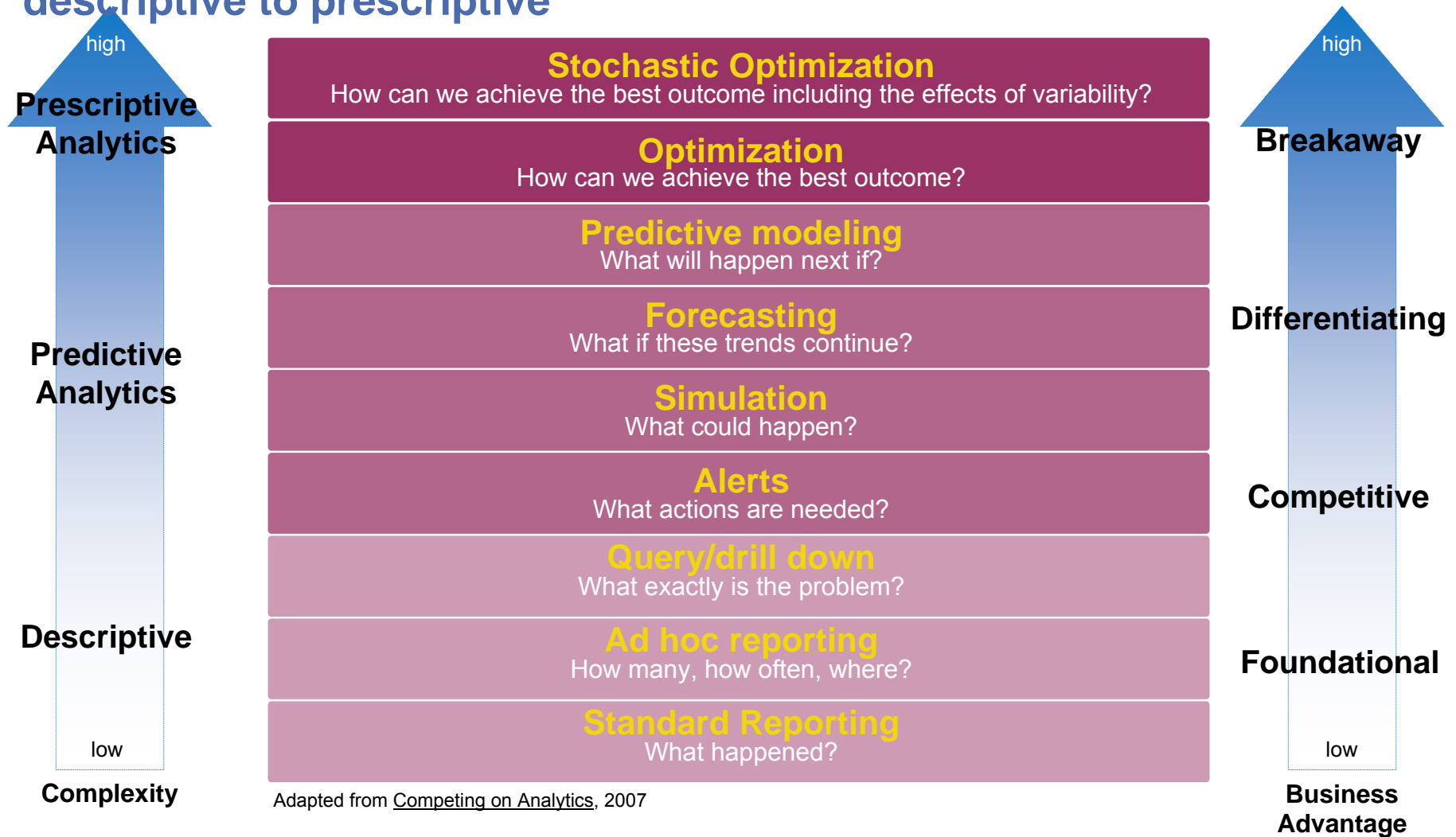
Getting more from existing information architectures means facing certain emerging realities.

Other issues we brought on ourselves:

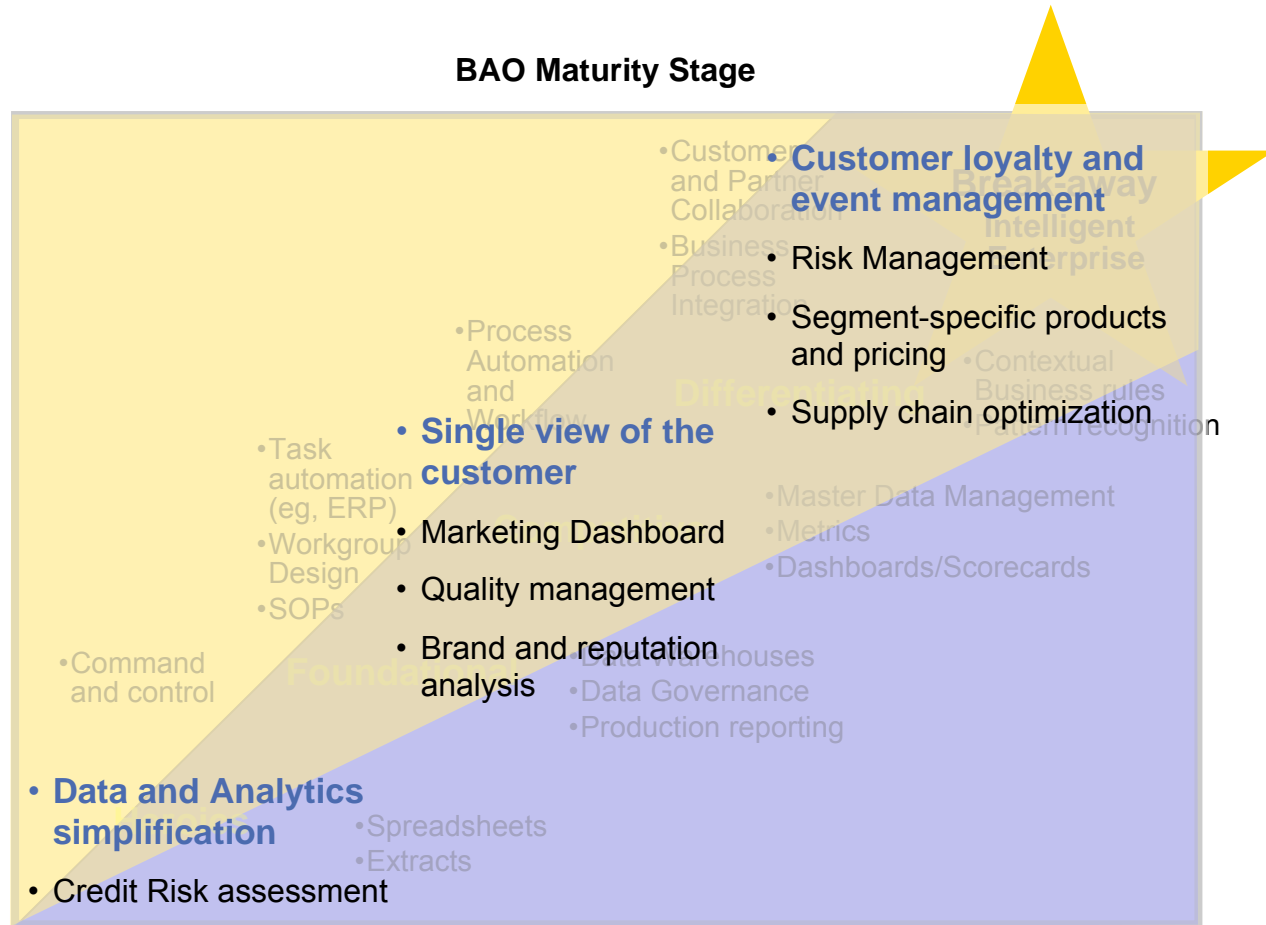
- **Data Governance** - The problem of multiple data owners without an enterprise metadata, data quality initiative, or business intelligence architecture.
- **Reversing Sub-Optimization** – for years, we’ve developed BI environments “in spite of” underperforming tools.
- **Managing “Chartjunk”** – Experience should have taught us by now that needless data absolutely diminishes the value of BI analytics.
- **Selective Refurbishment** - Many banks have done nothing in the last 2 - 3 years to upgrade their infrastructures.

Where are the opportunities for breakaway improvement?

To deliver breakaway performance, increasing the organization's level of analytical sophistication is needed – moving from descriptive to prescriptive



Intelligent Enterprise integrates information into business decisions and operations at increasing levels of sophistication



Business Optimization

How the business applies information to achieve it's goals

- Policies
- Biz Processes

Business Analytics

How the business manages information and learns from it

Business Analytics and Optimization: What's required and What IBM's Delivering

→ Insight on our clients and industry

- **4,000+** professionals in GBS BAO Practice

→ Foundational information software platform

- **\$10B** investment in information management

→ Mathematical and analytic skills of IBM Research

- **10 years** of Research investment in services
- **300** Research mathematicians

→ High performance systems and hosting

- **9 consecutive years** of leading the supercomputer list

→ Market-validating client experiences:

- Research and consulting first-of-a-kind projects – thousands of engagements
- Center for Business Optimization – creating scalable assets with Research

Analytics Solution Centers

New York, Washington D.C., London,
Tokyo, Beijing, Berlin

Where are the opportunities for breakaway improvement?

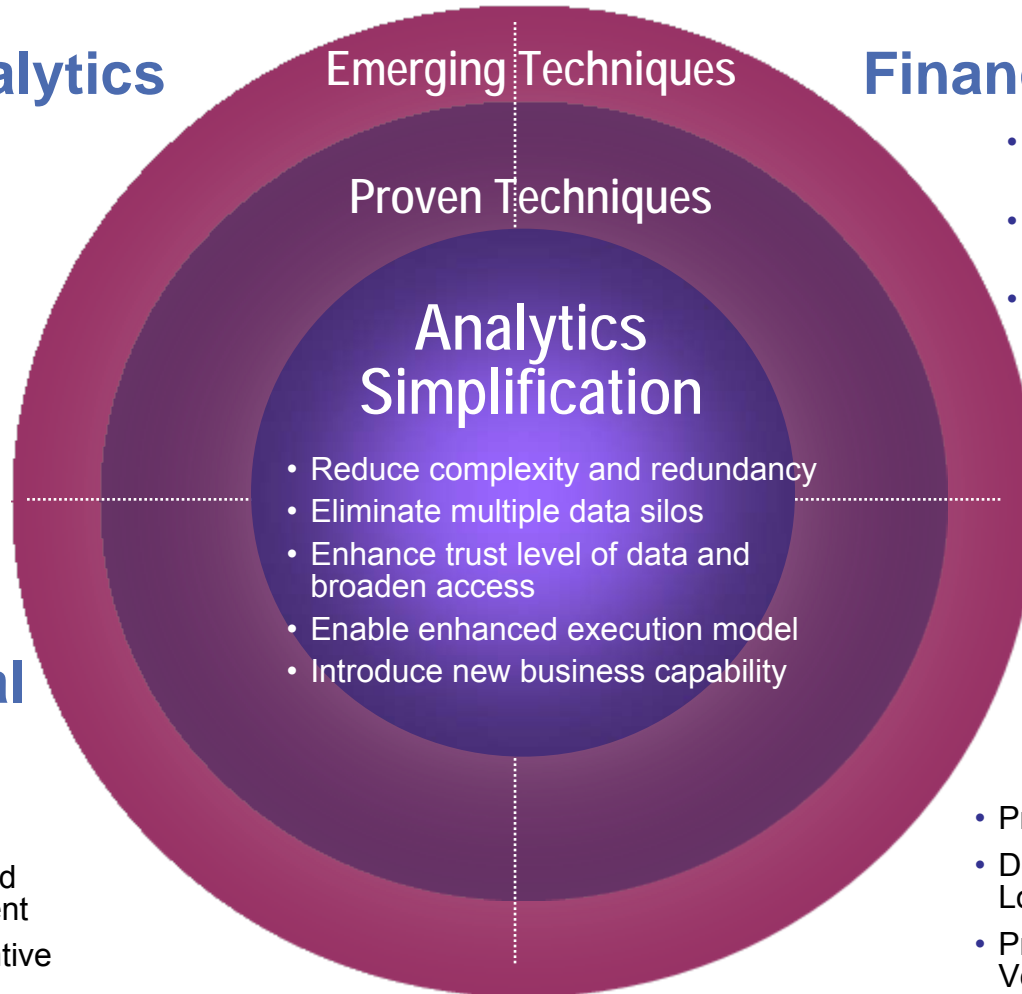
Simplification approaches deliver the funding for four advanced analytics capabilities domains

Customer Analytics

- Customer Segmentation and Profiling
- Customer Experience Measurement
- Channel and Cost to Serve Efficiency Optimization
- Cross Channel Real Time Offer Modeling and Next best Offer

Human Capital Analytics

- Workforce Scheduling
- Attrition Forecasting and Succession Management
- Performance and Incentive management
- Role Value Modeling



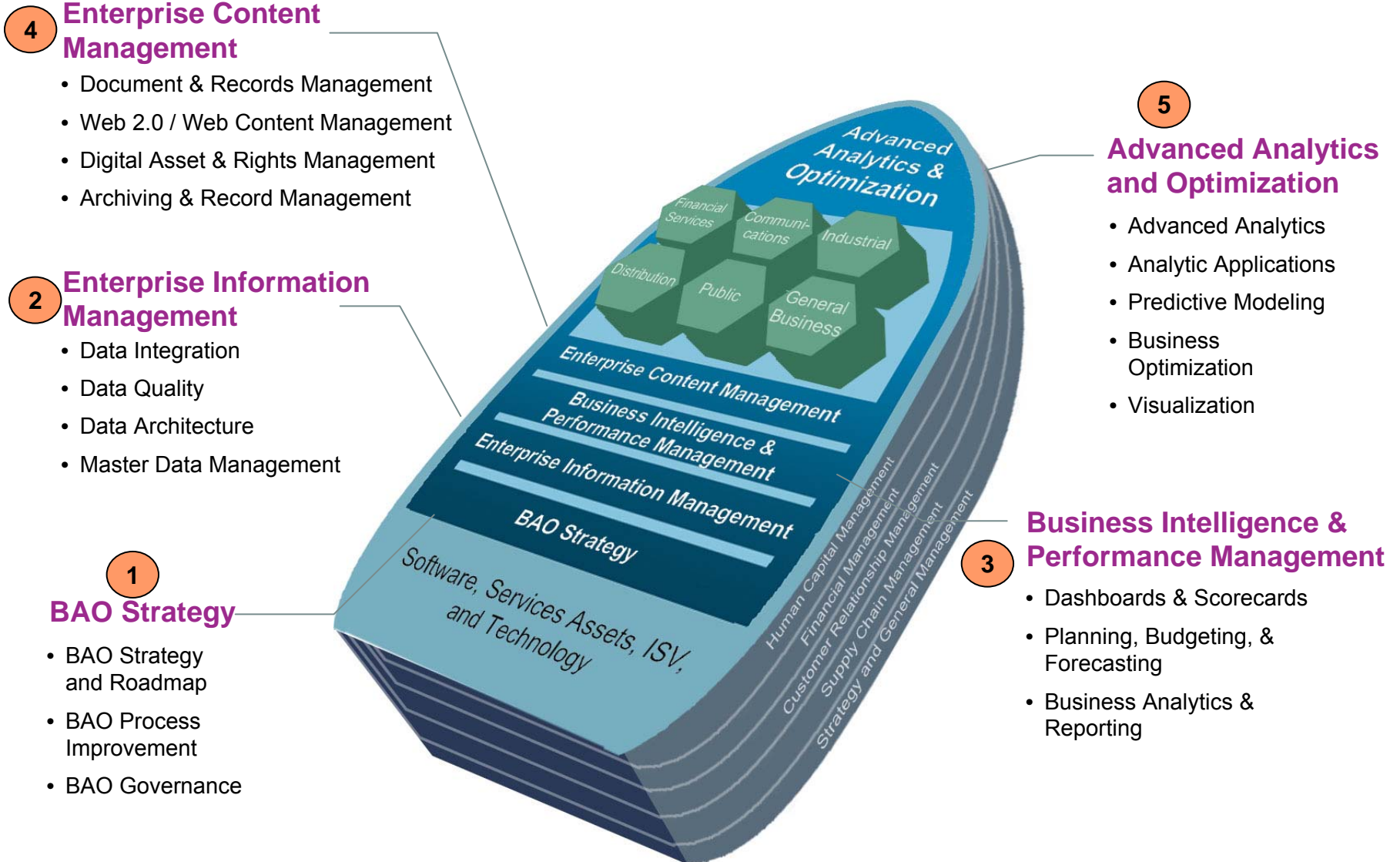
Financial Analytics

- Budget, Plan and Forecast Management
- Risk Cockpit for Management and Compliance
- Performance Measurement and Management
- CFO Dashboard

Supply Chain / Operations Analytics

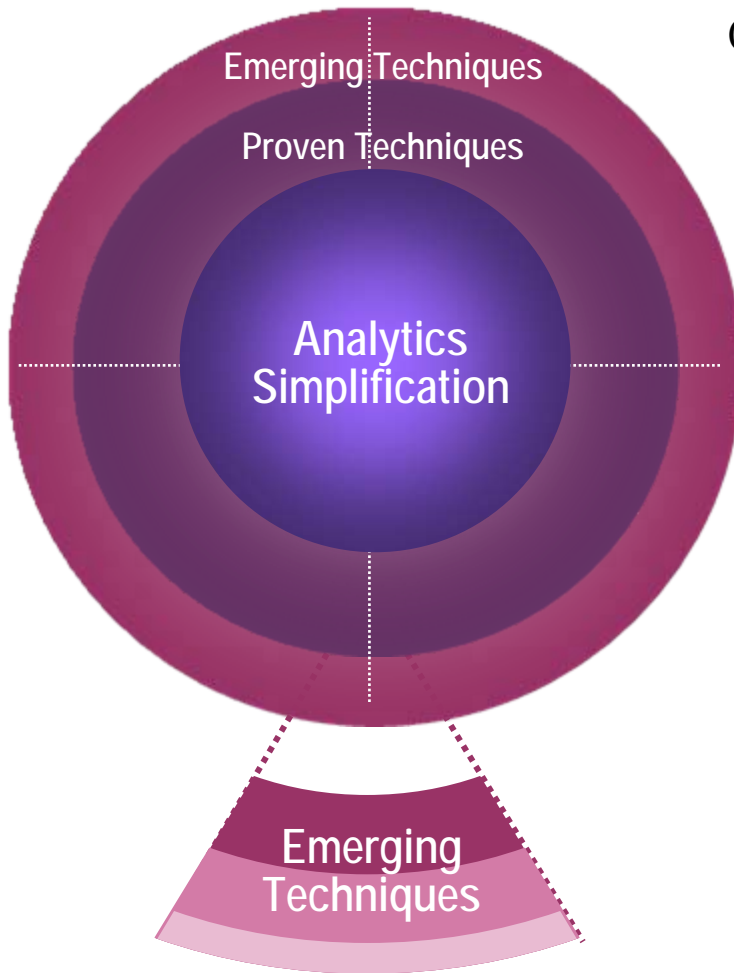
- Product Lifecycle Management
- Demand Management and Logistics
- Procurement and Vendor/Supplier Management
- Cost of Operations Models/ Sourcing

Business Analytics & Optimization: Core Capability Offerings



Where are the opportunities for breakaway improvement?

IBM Research is pushing the capabilities envelope with emerging techniques



Emerging Techniques span three areas of Research evolution

Commercialized

- Corporate Brand & Reputation Analysis (COBRA)
- Marketing Event Optimization (MEO)
- Loyalty Identification Focused Targeting (LIFT)
- Sales force optimization
- Enterprise forecasting
- Dynamic Inventory Optimization Solution (DIOS)
- Workforce analytics (SWOPS)

Advanced

- Next Best Action (NBA)
- Social Network Analytics (SNA)
- Text/Semantic Analytics (Sentinel)
- Supply Chain Sustainability Management
- ARTEMIS: Online Analytics for Healthcare
- Situational Awareness for Enhancing Safer Transportation
- Visibility enabled analytics
- Condition based monitoring & maintenance

First of a kind

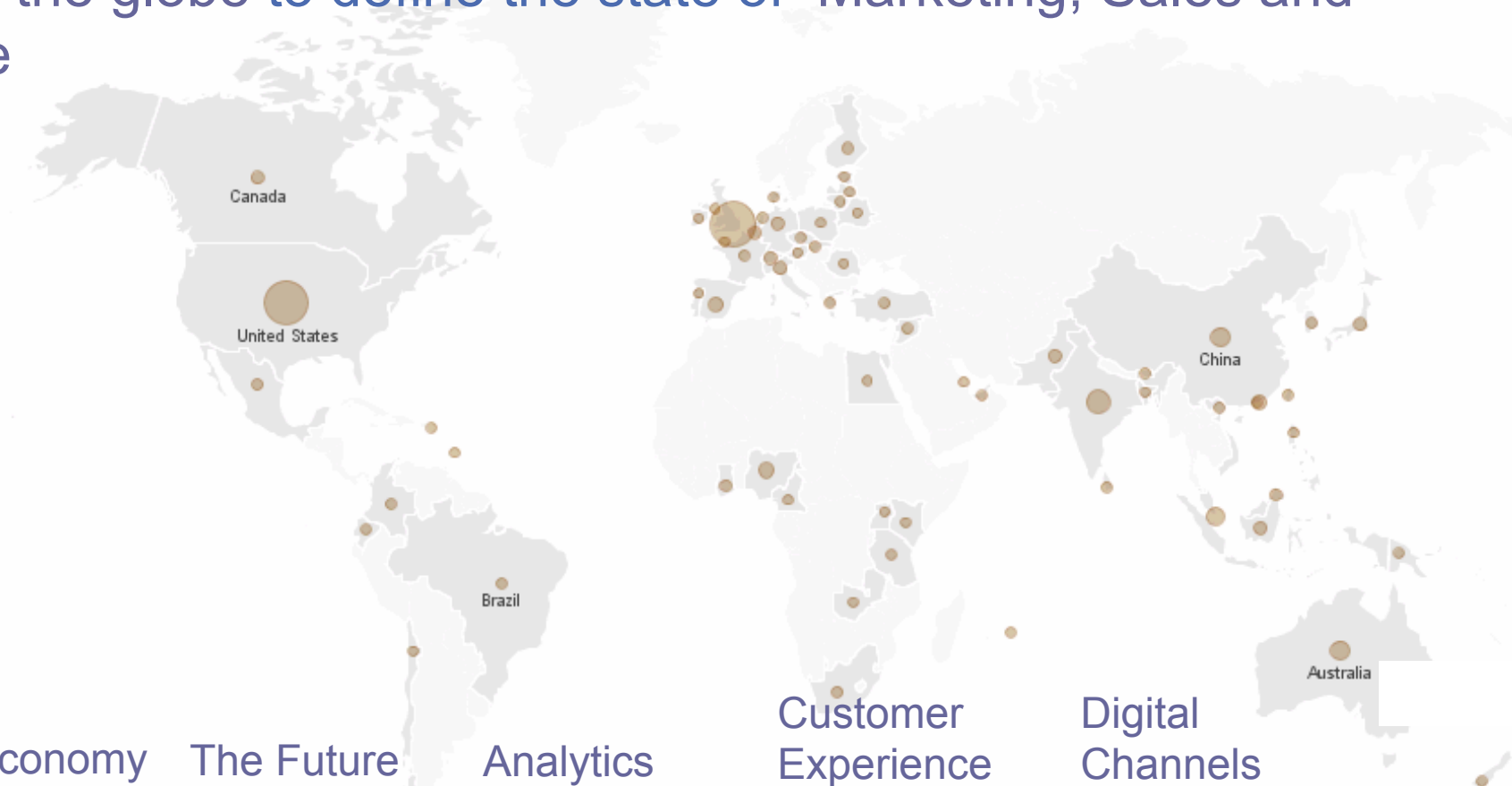
- Advanced Pricing Analytics (iPAT)
- Information Risk and Compliance Management
- Demand Driven Business Analytics
- Platform for Spatio-Temporal Analysis and Reasoning
- Analytics for Enhanced Agility to Support E2E Distribution Operations

Summary of Cross-Industry BAO Offers

BAO Domains

Customer Analytics	Finance Analytics	Supply Chain / Operations Analytics	Core BAO
<ul style="list-style-type: none"> C1. Corporate Brand Recognition and Analysis (COBRA) C2. Customer Data Integration C3. Customer Portfolio Optimization C4. Event Based Marketing C5. Marketing Event Optimization (MEO) C6. Sales Force Optimization C7. Social Network Analytics C8. Loyalty Optimization C9. Real-time Analytics Matching Platform (RAMP) C10. Pricing Optimization C11. Advanced Customer Insight Play 	<ul style="list-style-type: none"> F1. Enterprise Performance Management F2. Fraud and Abuse Management System (FAMS) F3. Tax Audit Compliance System (TACS) F4. Integrated Planning F5. Financial Integrated Risk Management (FIRM – Risk Cockpit) F6. Enterprise Forecasting 	<ul style="list-style-type: none"> O1. PLI Global Location Strategies O2. Supply Chain Optimization O3. Supply Chain Risk Management O4. Supply Chain Visibility and Event Monitoring O5. Dynamic Inventory Optimization Solution (DIOS) O6. Production Design and Operations Scheduling (PDOS) O7. Workforce Analytics O8. Sales and Operations Planning O9. IBM Green Sigma™ 	<ul style="list-style-type: none"> B1. Master Data Management B2. Data Governance B3. Industry-based Data Integration Models “Stone Soup” B4. Smarter Application Development & Maintenance (ADM)

In April 2009, IBM studied 472 CRM Executives in 66 countries around the globe to define the state of Marketing, Sales and Service



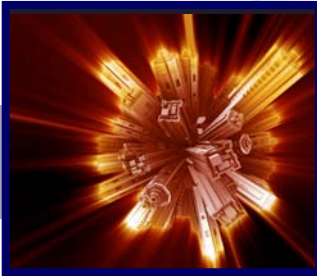
The Economy

The Future

Analytics

Customer Experience

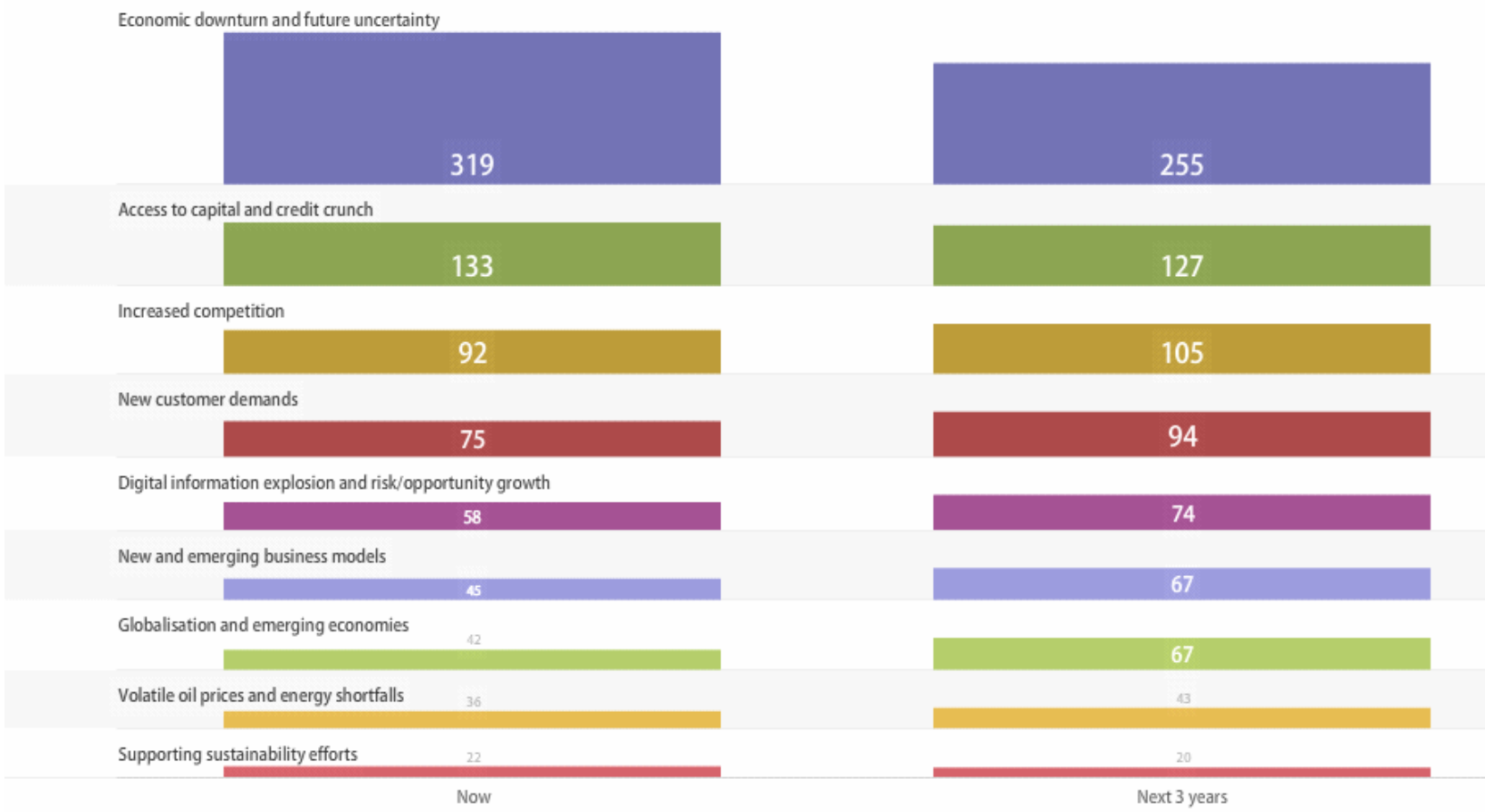
Digital Channels



We asked them what their concerns were for now and the next three years

The Concerns for today are...

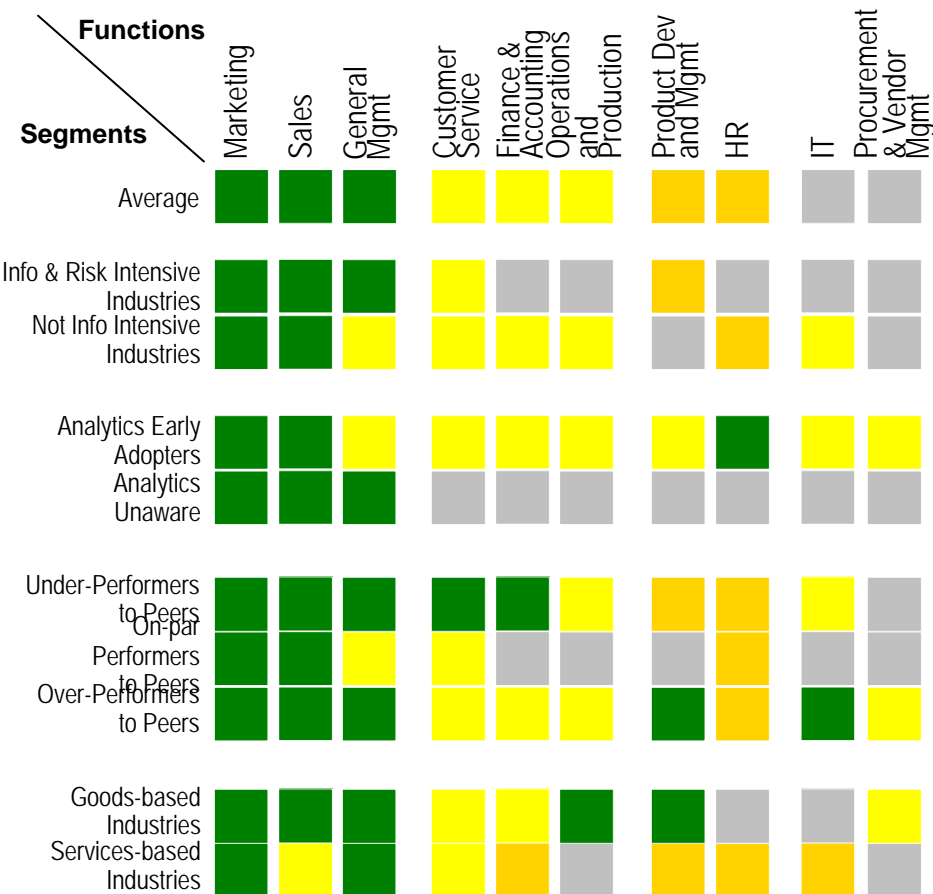
also the Concerns for tomorrow



EIU/IBM 2009 IBV CRM Executive Study, n= 472 QA: Q2. Which of the following global market forces are having the greatest impact on your business right now? Please select the top two. N=472

Functional BAO priorities vary by industry, analytics capabilities, performance relative to peers and value proposition

Survey of Business Leaders



BAO Benefit-Gap Investment Matrix

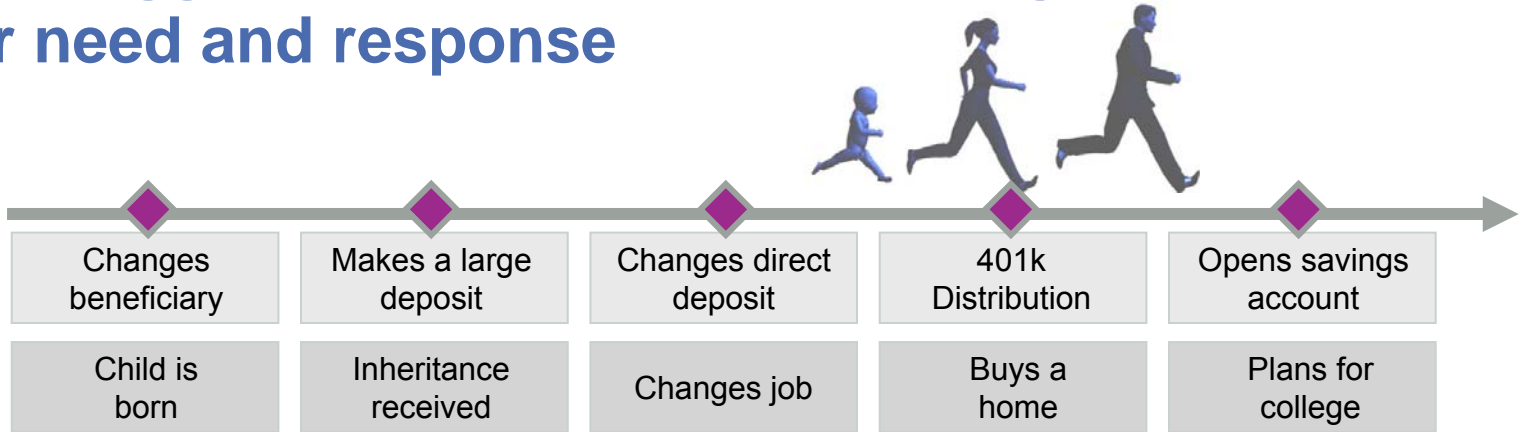


Event Based Marketing drives communications based on behavioral triggers and patterns, optimizing efforts around customer need and response

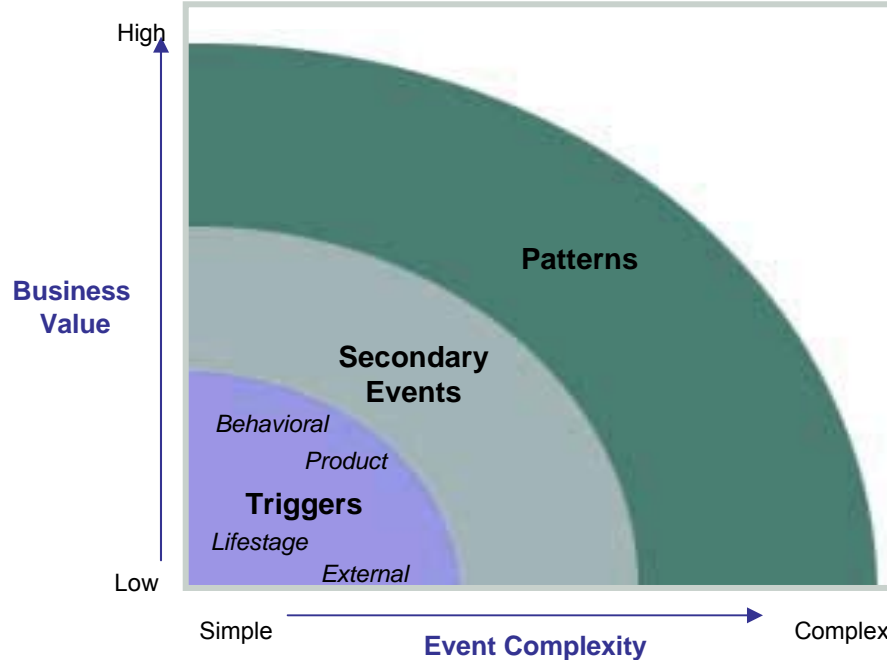
Sample events

Commercial event

Lifestage event



Events can vary by sophistication



Triggers

- Simplistic transactional changes involving the update of a single field

\$50K deposit

Secondary Events

- Triggers coupled with additional rules to determine significance to the individual

Significant Deposit. Deposit is 2 * average

Patterns

- Combinations of multiple triggers and secondary events occurring in sequence over a period of time

Change in employment.
\$50K was redundancy. Salary stopped. Regular payment received from new employer 4 weeks later

Each customer type has distinctive and diverse needs regarding products, services and relationships

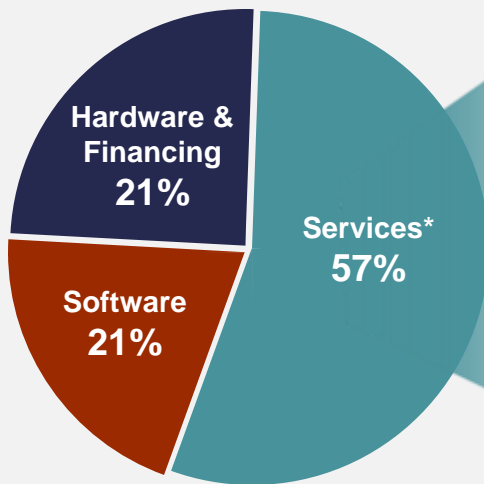
Cluster	support-seeking individualists	product optimizers	uninterested minimalists	price-sensitive analyzers	relationship-oriented traditionalists
Percentage of total	20.3%	26.7%	8.2%	17.6%	27.1%
Key theme	"I want competent help for my personal needs"	"I want a great product"	"I want to be left alone"	"I want the best bargain"	"I want somebody I can trust"
What do they seek from and see in financial services?	<ul style="list-style-type: none"> → rely on external expertise to find out what they need → trust in people, not in the institution → want transparent, uncomplicated, personalized products and services and are willing to shop around for them 	<ul style="list-style-type: none"> → want to have their special needs met → are willing to pay both in price and privacy to receive convenience and quality → need a strong institution behind the product 	<ul style="list-style-type: none"> → require as little contact as possible → need services to be low-priced, quick and transparent 	<ul style="list-style-type: none"> → know what they need → seek information, not advice → shop for the best value for their money → are willing to buy standardized products 	<ul style="list-style-type: none"> → rely on external expertise to find out what they need → want transparent and uncomplicated services → want to know they are covered well, preferably from one source → value solidarity
T ³ Success Factors	Trust Transparency	Trust Technology	Transparency Technology	Transparency Technology	Trust Transparency

Source: own survey data, n=2400, T3, European Financial Svc

IBM is more than Hardware and Software

IBM Global Business Services, is the world's largest consulting company with over 35,000 consultants in 170 countries and 17 industries

IBM Business Unit Revenue



* Includes Global Technology Services

Business Analytics & Optimisation

Strategy & Change

Customer Relationship Management

Supply Chain Management

Financial Management

Human Capital Management

SAP

Oracle

Application Innovation Services

Application Management Services



Financial Services



Public & Healthcare



Distribution



Industrial



Communication

IBM's investments in BAO related solutions and products

- Expanding Capabilities Organically & via Acquisitions

Optimised Business Performance

			
Redpill 2009	SPSS 2009	BI & Performance Management 2008	Business Rules & Optimisation 2008

Trusted Information

						
Identity Resolution 2005	Enterprise Data Integration 2005	Customer Data Integration 2005	Name Recognition 2006	Metadata Management 2006	Dynamic Data Integration 2007	Data Discovery 2009

Integrated Data & Content Management

			
Search & Content Management 2005	Business Process & Content Management 2007	Enterprise Data Management 2007	Real-time, In-Memory Data Management 2008

and others...

Thank you

