An Effective Convergence of Analytics and Geography

Gain Competitive Advantage Using Smarter Analytics

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Insurance Leader IBM Business Analytics EMEA
Agenda

1. **What** is Smarter Analytics?

2. **Why** is Smarter Analytics Important today?

3. **How** has Smarter Analytics helped companies?

4. **How** can you and your team learn more?
Smarter Analytics …

- helps organisations achieve business outcomes through the adoption and use of analytics

- Location is a key component of Smarter Analytics
Market Forces are Driving Change

Economy – Everyone is worried

Globalisation

Self service – Web customer vs self service

Customer Experience – Reputation, value, trust

Cloud – is connecting everywhere

Social – is connecting everyone

Mobile – is connecting everywhere
Welcome to the New World of Analytics

Demand to turn data into information

The shift of power to the consumer

Pressure to do more with less
The Growth of Data requires new ways to manage information

<table>
<thead>
<tr>
<th><strong>Volume</strong></th>
<th><strong>Velocity</strong></th>
<th><strong>Variety</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>12 terabytes of Tweets create daily</td>
<td>5 million trade events per second</td>
<td>100’s video feeds from surveillance cameras</td>
</tr>
<tr>
<td>Analyze product sentiment</td>
<td>Identify potential fraud</td>
<td>Monitor events of interest</td>
</tr>
<tr>
<td>350 billion meter readings per annum</td>
<td>500 million call detail records per day</td>
<td>80% data growth are images, video, documents…</td>
</tr>
<tr>
<td>Predict power consumption</td>
<td>Reduce customer churn</td>
<td>Improve customer satisfaction</td>
</tr>
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</table>
Widespread use of analytics is creating a new, competitive advantage

Analytically sophisticated organizations are 260% more likely to be top performers than analytic beginners.

Organizations achieving competitive advantage with analytics are 2.2x more likely to be substantially outperform their industry peers.

Source: The New Intelligent Enterprise, a joint MIT Sloan Management Review and IBM Institute of Business Value analytics research partnership.
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Line of Business buyers want capabilities and integrated solutions to capitalize on today’s information-centric and insight-driven world.

Operations Analyst
Marketing Manager
Benefits Officer
Call Centre Manager

...enabling them to answer three main business questions:

What is happening?
Why?
What should we do about it?
Analytics Turns Insight into Action ...

All Information
- Social Media, Emails, Chats
- Transactions
- Data Warehouses
- Documents
- Sensors
- Video
  - Location
  - Etc.

All People
- All Departments
- Experts and non-Experts
- Executives and Employees
- Partners and Customers

All Perspectives
- Past – Historical, aggregated
- Present – Real-time
- Future – Predictive

...at the Point of Impact

All Decisions
- Major and minor
- Strategic and tactical
- Routine and exceptions
- Manual and automated
Smarter Analytics is a holistic approach that turns information into insight and insight into business outcomes.

**Align**: your organization around information

**Anticipate**: see, predict and shape business outcomes

**Act**: with confidence at the point of impact to optimize outcomes

**Transform**: through analytics for breakaway results

**Learn**: from solutions that get smarter with every outcome

**Transform → Align → Anticipate → Act → Learn**
Smarter Analytics focuses across key industries and solution areas

Banking
Create a customer focused enterprise
- Customer Profitability
- Marketing Optimization
Enterprise risk optimization
- Compliance
- Financial & Operational Risk Analytics
- Payments analytics
- Operations Optimization
Increase flexibility & streamline operations

Insurance
Create a customer focused enterprise
- Customer Profitability
- Customer Retention & Growth
Enterprise risk optimization
- Compliance
- Financial & Operational Risk Analytics

Government
Improve citizen services
- Citizen Services Analytics
Manage resources effectively
- Operational Analytics
- Budget & Financial

Retail
Deliver a smarter shopping experience
- Market Basket Analysis
- Sentiment Analysis
Build smarter operations

Telecom
Deliver smarter services that generate new revenue
- Churn Prediction
- Network Analytics
Build smarter networks

Industrial
Improve production efficiency
Predictive maintenance
Supply chain metrics
Optimise global operations

Smarter Analytics
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Improve citizen services
- Citizen Services Analytics
Manage resources effectively
- Operational Analytics
- Budget & Financial

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Improve production efficiency
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Smarter Analytics focuses across key industries and solution areas
Energy & Utility
Smarter analytics presents a huge new opportunity— if they can harness it

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<th>Volume</th>
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<td>4 petabytes</td>
<td>500 million</td>
<td>80% data growth</td>
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</table>

- **Volume**: Weather modeling data for optimizing siting of wind turbines
- **Velocity**: Meter readings per day in a typical smart meter project
- **Variety**: From instrumented smart grid, weather forecasts, documents...

**Analyze weather data to place a wind turbine to improve its performance while extending its useful life**

**Ingest 3,000 times more meter readings to better understand and manage the electric distribution grid**

**Analyze all types of asset performance information to optimize maintenance activities and extend useful life of the assets**
Smarter Analytics for Energy and Utilities

Industry Imperative

Transform Customer Operations

Where We’ve Done It

Reduced energy consumption by an anticipated 20%; control costs using real time monitoring

Improve Generation Performance

Decreased production costs by 1-2% resulting in a savings of €50,000 - €100,000 per day

Transform the Utility Network

Reduced frequency and duration of power outages
## Governments

Smarter analytics presents a huge new opportunity – if they can harness it

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<th>Volume</th>
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<tr>
<td>30 million networked sensors worldwide</td>
<td>12 terabytes of Tweets created daily</td>
<td>80% data growth are images, video, documents…</td>
</tr>
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</table>

- **Monitor traffic in real-time to enable traffic pattern management and asset optimization**
- **Monitor social media to help identify potential terrorist activities and correlate individuals to events**
- **Perform real-time multimodal surveillance and situational analysis to help predict and prevent crime**

80% data growth are images, video, documents…
Smarter Analytics for Government

Industry Imperative

> Improve Citizen Services

Where We’ve Done It

- Reduced over $11M in fraud and waste

Manage resources more effectively

- Saved 48 days in year one by integrating tax billing / payment and GL applications

Improve Public Safety

- 30% reduction in serious crime and 15% reduction in violent crime
# Insurers

Smarter analytics presents a huge new opportunity for – if they can harness it

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<th>Volume</th>
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<tbody>
<tr>
<td>3 petabytes</td>
<td>40 million</td>
<td>&gt;1 petabyte</td>
</tr>
</tbody>
</table>

- **Volume**
  - 3 petabytes climate data stored

- **Velocity**
  - 40 million US consumers shopped online for new policies

- **Variety**
  - >1 petabyte stored customer data and correspondence

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- Analyze historical climate data to predict weather patterns to improve rate setting and loss ratios
- Identify new revenue opportunities and offer bundled product offerings through cross sell / up sell opportunities
- Monitor all types of customer interaction information to improve customer retention and target new marketing campaigns
Smarter Analytics for Insurance

Industry Imperative

Create a customer-focused enterprise

Optimize enterprise risk management

Increase flexibility and streamline operations

Where We’ve Done It

Reduced campaign costs by 30%; increased long-term customer profitability by 20%

Saved over US$2.5 million in payouts to fraudulent customers and nearly US$5 million in total repudiations

403% ROI from reduced claims payments; doubled accuracy of fraudulent claim identification
The Roadmap to Success

IBM Research with MIT Management Research shows the urgency to act on analytics and tells about the paths organizations are taking to transformation

Research findings

Competitive advantage being created by analytics is widening

Competitive analytics requires mastery of three key competencies

There are two paths to analytic sophistication

Organisations grow competitive advantage through mastery of three analytic competencies

**Analytic Competencies**

- **Manage the data**
  - Information management
    - Solid information foundation
    - Standardized data management practices
    - Insights accessible and available

- **Understand the data**
  - Analytic skills and tools
    - Skills developed as a core discipline
    - Enabled by a robust set of tools and solutions
    - Delivers actionable insights embedded in processes

- **Act on the data**
  - Data-oriented culture
    - Fact-driven leadership
    - Analytics used as a strategic asset
    - Strategy and operations guided by insights
Paths to transformation

We examined what happens between Beginners and Transformed -- the space between the two end-point benchmarks.

Path through the middle
Organizations take either a data-centric enterprise path or an analytics-centric functional path to move towards Transformed.
Specialized organizations face greater hurdles ahead as most view organizational challenges as more difficult to resolve than technology.

Respondents who rate these challenges as extremely difficult to resolve:

- Organizational challenges: 44%
- Technology challenges: 24%

1.8x more difficult
Collaborative organizations need resist the urge to perfect the data, and invest in developing analytic capabilities.

<table>
<thead>
<tr>
<th>Key characteristics respondents said would increase confidence in data used for decisions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>More timely data</td>
<td>31%</td>
</tr>
<tr>
<td>More relevant data</td>
<td>31%</td>
</tr>
<tr>
<td>Better data collection</td>
<td>24%</td>
</tr>
<tr>
<td>Better traceability of data</td>
<td>22%</td>
</tr>
<tr>
<td>More precise data</td>
<td>21%</td>
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</table>

Respondents were able to select up to three choices from a longer list of options. These are the top five answers.
Three steps to transformation

1. Assess your analytic sophistication

2. Focus on improving your analytic competencies

   Establish a strong information foundation
   Develop a robust set of analysis skills and tools
   Create a culture that takes action on analytics

3. Tie approach together with an information agenda
## Review your Analytic Sophistication

<table>
<thead>
<tr>
<th>Information management</th>
<th>Analytic skills and tools</th>
<th>Data-oriented culture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transformed</strong></td>
<td><strong>Robust set of tools and talents</strong></td>
<td><strong>Analytics-driven organization</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Integrated, simplified information platform</strong></td>
<td><strong>Driven by enterprisewide focus</strong></td>
</tr>
<tr>
<td><strong>Experienced</strong></td>
<td><strong>Scorecards, dashboards, GIS</strong></td>
<td><strong>Driven by line-of-business metrics</strong></td>
</tr>
<tr>
<td><strong>Collaborative</strong></td>
<td><strong>LOB-centric data management</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Specialized</strong></td>
<td><strong>Analytic tools and skills</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Beginners</strong></td>
<td><strong>Spreadsheets, maps and standardized reports</strong></td>
<td><strong>Analytics are not integral to strategy</strong></td>
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<td></td>
<td><strong>Ad hoc data management</strong></td>
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Next steps

Learn more about IBM Smarter Analytics: [www.ibm.com/Analytics](http://www.ibm.com/Analytics)

Download the IBM MIT 2011 Analytics review

Contact me directly for more information
Tony Boobier
boobier@uk.ibm.com
Appendix
Paths to transformation

We examined what happens between Beginners and Transformed -- the space between the two end-point benchmarks.

Path through the middle

- Beginners
- Experienced
- Transformed
Experienced organizations take either a data-centric enterprise path or an analytics-centric functional path to move towards Transformed.

Paths to transformation

- Collaborative path
- Data-oriented culture
- Specialized path
- Aspirational
- Transformed

- Analytic skills and tools proficiency
  - Low
  - High

- Governance approach
  - Enterprise driven
  - Line-of-business driven

- Information management proficiency
  - Low
  - High

The two paths have contrasting strengths and weakness

Collaborative path

Information management [ ★★★]
- Collaborative efforts are underway to integrate enterprise data
- Moving towards enterprise-level information governance

Analytic skills and tools [ ★]
- Primarily uses scorecards and dashboards to make insights readily accessible and available
- Lacking predictive skills

Data-oriented culture [ ★★★]
- Uses analytics to guide future strategies and day-to-day operations
- Leaders open to new ideas

Specialized path

Information management [ ★]
- Lines of business make independent decisions about analytics strategy, investments and standards
- Data integration is less of a priority

Analytic skills and tools [ ★★★]
- Predictive analytics supported by strong skills and tools within business units
- Scenarios and prototypes used to analyze impacts of decisions

Data-oriented culture [ ★★★]
- Uses analytics to improve operational and financial metrics
- Struggles to find executive support

Level of competency: ★★★ Strong ★★ Moderate ★ Weak
Specialized organizations face greater hurdles ahead as most view organizational challenges as more difficult to resolve than technology challenges. Respondents who rate these challenges as extremely difficult to resolve:

- Organizational challenges: 44%
- Technology challenges: 24%

Organizational challenges are 1.8 times more difficult than technology challenges.
Collaborative organizations need resist the urge to perfect the data, and invest in developing predictive analytic capabilities.

Key characteristics respondents said would increase confidence in data used for decisions:

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Three steps to transformation

1. Assess your analytic sophistication

2. Focus on improving your analytic competencies
   - Establish a strong information foundation
   - Develop a robust set of analysis skills and tools
   - Create a culture that takes action on analytics

3. Tie approach together with an information agenda
Assess your analytic sophistication

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<th>Information management</th>
<th>Analytic skills and tools</th>
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<tr>
<td></td>
<td>underway</td>
<td>GIS</td>
<td>business metrics</td>
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<td>Robust set of tools and</td>
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</tr>
<tr>
<td></td>
<td>information platform</td>
<td>talents</td>
<td>organization</td>
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Step 2a: Focus on improving your analytic competency levels

### Information management competency

<table>
<thead>
<tr>
<th>Establish a strong information foundation</th>
<th>Challenging questions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1. Effective information governance</strong></td>
<td>What do you need to do to have everyone in your organization agree on the definition of key data such as “customer” or “on-time delivery”?</td>
</tr>
<tr>
<td><strong>2. Standardized data quality</strong></td>
<td>How can you make sure everyone trusts the data used to drive insights and decisions?</td>
</tr>
<tr>
<td><strong>3. Integrated, simplified information</strong></td>
<td>What can you do to improve the consistency and accuracy of your information across the organization?</td>
</tr>
<tr>
<td><strong>4. Accessible and available</strong></td>
<td>What steps are you taking to ensure employees have to timely access to the information they need?</td>
</tr>
</tbody>
</table>
Step 2b: Focus on improving your analytic competency levels

Analytic skills and tools competency

Develop a robust set of analysis skills and tools

1. Skills nurtured as a core discipline
   How effective is your organization at attracting and developing the analytic skills it needs?

2. Champions seed expertise
   What incentives are in place for analytic talent to mentor others?

3. Robust tools to analyze, visualize
   How prepared is your organization to integrate emerging analytical tools?

4. Centralized expertise partnered with local analysts
   How can you improve the partnership between employees who excel at analytics, and those who understand the business implications?

### Step 2c: Focus on improving your analytic competency levels

#### Data-oriented culture competency

**Create a culture that takes action on analytics**

<table>
<thead>
<tr>
<th>Guiding strategy and operations</th>
<th>How can the leadership team better promote the use of analytics in decision making?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open to new ideas</td>
<td>How willing is your organization to adopt new ideas, founded on advanced analytics, which challenge a current strategic approach or tactic?</td>
</tr>
<tr>
<td>Fact-driven decisions</td>
<td>Are your key executives visibly using facts to underpin their decisions?</td>
</tr>
<tr>
<td>Insights shared broadly</td>
<td>Are the same insights about customers – including interaction history and organizational value -- shared with everyone who interacts with them?</td>
</tr>
</tbody>
</table>
Step 3: Tie it together with an information agenda

The Information Agenda

- Analytics-driven strategy and objectives to enable business priorities
- Effective information governance structure, tools and processes
- Business-value based approach to define information-intensive projects aligned with the strategy
- A flexible and scalable information management foundation that leverages existing information assets
Together, these create the roadmap to transformation

1. Assess your analytic sophistication

2. Focus on improving your analytic competencies
   - Establish a strong information foundation
   - Develop a robust set of analysis skills and tools
   - Create a culture that takes action on analytics

3. Tie approach together with an information agenda