BIG DATA DRIVEN BUSINESS ANALYTICS: We are just getting started!

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The Promise of Big Data

MGI Report on Big Data (June 2011)

- Big data has now reached every sector. Modern economic activity simply couldn’t take place without it.
- Big data will underpin new waves of productivity:
  - US health care
    - $300 billion value per year
    - ~0.7 percent annual productivity growth
  - Europe public sector administration
    - €250 billion value per year
    - ~0.5 percent annual productivity growth
  - Global personal location data
    - $100 billion+ revenue for service providers
    - Up to $700 billion value to end users
  - US retail
    - 60+% increase in net margin possible
    - 0.5–1.0 percent annual productivity growth
  - Manufacturing
    - Up to 50 percent decrease in product development, assembly costs
    - Up to 7 percent reduction in working capital

- US alone faces a shortage of 140~190k people with deep analytical skills and 1.5 million managers and analysts.
“Our colleagues caught many people’s attention. Unfortunately, achieving the level of impact MGI foresaw has proved difficult.”

For most legacy companies, data-analytics success has been limited to a few tests or to narrow slices of the business. Very few have achieved “big impact through big data,” or impact at scale.

Three-quarters of analytics leaders from major companies quite committed to realizing the potential of big data and advanced analytics estimate that revenue or cost improvement achieved is less than 1%.

SOURCE: David Court, Getting big impact from big data, McKinsey Quarterly, January 2015
Reasons for Lack of (Big) Impact

- **Key Building Blocks:** Good Plan, Management Support, Address Cultural and Skill-building Challenges for the Front Line to embrace Change

- **Major Reasons for Failure:**
  - Front line managers lack understanding and confidence in analytics
  - Organizational processes unable to accommodate advancements in analytics and automation
  - Analytics efforts that lack focus and clear business justification
  - Not involving the end users
  - Lack of robustness in analytic solutions
  - Analytics and data science methods unable to deal with the complexities of the real-world
**Data Science**: Extracting knowledge and insights from data
- Can be applied to a number of domains including business

**Business Analytics**: Enabling effective decisions and business processes
- Benefits from data science
- Has a well-defined context
- Addresses or accounts for a number of other elements/nuances:
  - Behavioral aspects (decision makers, customers, ...)
  - Competing objectives and resources
  - Risks
  - Difficulty of execution

**Examples**: Emergency Departments, Retail Inventory Management

Data science has a lot to offer for driving business analytics. Particularly now, as many businesses want to become data driven!
## WHAT TANGIBLE BENEFITS DO YOU HOPE TO ACHIEVE THROUGH YOUR BIG DATA INITIATIVES?

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Improved customer experience</td>
<td>VALUE%</td>
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<tr>
<td>Better fact-based decision making</td>
<td>22</td>
</tr>
<tr>
<td>Increased sales</td>
<td>15</td>
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<tr>
<td>New product innovations</td>
<td>11</td>
</tr>
<tr>
<td>Reduced risk</td>
<td>11</td>
</tr>
<tr>
<td>Higher quality products &amp; services</td>
<td>10</td>
</tr>
<tr>
<td>More efficient operations</td>
<td>10</td>
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*Source: NEWVANTAGE PARTNERS, BIG DATA EXECUTIVE SURVEY 2012 & HBR.ORG*
## WHAT DATA DOMAINS ARE YOU MOST FOCUSED ON?

<table>
<thead>
<tr>
<th>Data Domain</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Customer transactions</td>
<td>56%</td>
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<tr>
<td>Customer/prospect data</td>
<td>49%</td>
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<tr>
<td>Market &amp; competitive data</td>
<td>49%</td>
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<tr>
<td>Service data</td>
<td>49%</td>
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<tr>
<td>Warranty &amp; fraud detection</td>
<td>49%</td>
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<tr>
<td>Channel data</td>
<td>44%</td>
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<td>Product data</td>
<td>34%</td>
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<tr>
<td>Industry specific data</td>
<td>24%</td>
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<tr>
<td>Supply chain data</td>
<td>12%</td>
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*Source: NEWVANTAGE Partners, Big Data Executive Survey 2012 & HBR.org*
GOALS:

1. Organizations need guidance, pilots, and proven return-on-investment (ROI) case studies.
   - Areas/topics of mutual interest to our business and industry collaborators
   - Pooled resources from industry, the hub, partner universities, and other funding organizations

2. Training and development of work force well versed with analytics and big data tools and technologies.
   - Effective workshops, short courses, and full academic programs ...

3. Data intermediaries
   - Information from multiple data sources, often from third parties.

Our spoke aims to assist businesses to help unlock the full potential of big data and the next wave of innovation and growth across the Midwest!
# SPOKE LEADERSHIP:

<table>
<thead>
<tr>
<th><strong>Prof. Ratna Babu Chinnam</strong></th>
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CURRENT LIST OF COLLABORATORS:

- Ford
- GM
- Domino's Pizza
- LOVEN SYSTEMS
- NSF's Midwest Big Data Hub
- IHS AUTOMOTIVE
- iHS
- 34.51°
- Quicken Loans
- Cleo
- John Deere
- URBAN SCIENCE
- IHS AUTOMOTIVE Driven by POLK
- Great American Insurance Group
- GE Aviation
- Macy's
- P&G
- Veriflow Systems
- AGRIBLE
- CITY of DETROIT
- Henry Ford Health System
- Licor Biosciences
- Kyyba
Big Data & Business Analytics Annual Symposium: 
Competing on Analytics

March 24-25, 2016
Wayne State University, Detroit, MI

http://bigdata.wayne.edu

- Learn from top practitioners from leading companies - Learn strategies for managing, analyzing, and leveraging data captured through sales, service, marketing, PD, manufacturing, and distribution functions in local and global settings.

- Who should attend - Great opportunity for business executives, consultants, managers, and decision makers in information technology, product development, manufacturing, operations, supply chain, marketing, and finance.

Symposium features will include:

- Tutorials on big data platforms and technologies
- Discussion from executives from a broad range of industries who will share insights & case studies
- Keynote addresses from experts who understand big data
- Panel discussions on overcoming barriers to competing on analytics
- Vendor showcase
- Networking opportunities
- Meet and recruit top talent
Thank you!

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