Customer-Centricity in a World of Data:

“Turning Big Data into a Big Opportunity”

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Big Data Primer:
What is it? Why should I care?
There are varying perceptions of “Big Data”…

- A greater scope of information: 18%
- New kinds of data and analysis: 16%
- Real-time information: 15%
- Data influx from new technologies: 13%
- Non-traditional forms of media: 13%
- Large volumes of data: 10%
- The latest buzzword: 8%
- Social media data: 7%

Our confusion over Big Data:
- “It’s about being smarter with your data?”
- “It means making faster decisions?”
- “It simply means more data?”
- It’s about cheaper storage technology?
- “It’s all about social media?”

“Analytics, the real world use case of Big Data”. IBM Institute of Business Value Study, October 2012
...but it’s really about the **characteristics** of the data.

**Volume**
- Data at scale
  - Terabytes to petabytes of data

**Variety**
- Data in many forms
  - Structured, unstructured, text, multimedia

**Velocity**
- Data in motion
  - Analysis of streaming data to enable decisions within fractions of a second

**Veracity**
- Data uncertainty
  - Managing the reliability and predictability of inherently imprecise data types

“Analytics, the real world use case of Big Data”. IBM Institute of Business Value Study, October 2012
Several trends are driving the importance of “Big Data”…

- The digitization of virtually “everything”
- Today’s advanced analytics technologies
- Industry focus on “Smarter” everything, especially customer-centricity

“Analytics, the real world use case of Big Data”. IBM Institute of Business Value Study, October 2012
Creating a new industry around “big data” analytics.

- Online Transactions
- Website Browser Logs
- Digital Application “Events”
- Free Text (Customer Call Records, Emails, Social)
- Sensor Data
- Geo-Spatial Data (Mobile Devices, Apps)
- RFID Scans, POS
- External Feeds
- Audio, Images, Video
- Real-Time Query & Reporting
- Data Mining, Fusion, & Sensemaking
- Resource Optimization
- Natural Language Processing
- Predictive Analytics (Consumer Behaviors)
- Machine Learning
- Stream Computing
- Image, Video Analytics

Data Science = Data _____

Visualization
Modeling
Mining
Integration
Conditioning

“The future belongs to the companies and people that turn data into products” --- O’Reilly Media
“Big Data”, Advanced Analytics enables new opportunities.

Big Data Analytics

- Single or federated view of each customer
- CRM data
- Social media conversations
- Products and services
- Unstructured data
- Demographics

Enterprise Data

Real-Time, Predictive, and Social Analytics

Real-Time, Predictive, and Social Analytics

Analytics Value Differentiators

<table>
<thead>
<tr>
<th>Acquire new customers</th>
<th>Retain best customers</th>
<th>Leverage loyal customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get current customers to upgrade</td>
<td>Improve customer service</td>
<td>Strengthen brand</td>
</tr>
<tr>
<td>Improve marketing effectiveness</td>
<td>Improve sales effectiveness</td>
<td>Increase shared services across BUs</td>
</tr>
<tr>
<td>Improve product differentiation</td>
<td>Reduce time to market</td>
<td>Develop new targeted businesses</td>
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Big Data in the Media Industry:
How might Big Data Analytics be relevant to me?
Disruptive forces are necessitating changes to revenue and industry models and driving the need for data and analytics.

**Impact of Technology**
Adoption of connected devices has reached the tipping point for most categories

**Time and Place Shifting**
Mobility shifts time and location for consumer engagement

**Amount of Data Exploding**
Demographic and channel segmentation no longer suffices, real-time consumer insights are essential to deliver compelling experiences

**Increased Consumer Power**
Patterns of behavior are changing - expectations for new services and offerings are evolving rapidly

**Revenue Model Uncertainty**
Traditional revenue sources from are declining as consumers move to online and mobile sources

**Emerging Markets Growing**
Connected Chinese consumer is leading the digital charge – world leader in wired, dial and mobile subscribers

"Our global audience will grow by 40 million by the end of this year, to 3.7 billion people – or roughly half of the world’s current population...Digital technology didn’t ‘disrupt’ our business – it transformed it. Digital didn’t weaken the power of television – it unleashed it."

– Anne Sweeney, President, Disney/ABC Television
M&E C-level Executives are focused on enabling better decision making through customer insight…

Areas of Technology Investment
Survey of M&E CMOs

- Social media: 87%
- Customer analytics: 83%

Dimension to focus on over the next 5 years
Survey of M&E CEOs

- Getting closer to customer: 80%
- Insight & intelligence: 80%

4 out of 5 M&E CIOs say Business Intelligence and Analytics is an important element for visionary plan

Activities to turn data into intelligence
Survey of M&E CIOs

- Client Analytics: 11% Low priority, 72% High priority, 17% Some priority

“You have to understand your content, your organization and your goals, and know how to evaluate the opportunity quickly. At the end of the day, it’s not about us; it’s about what we do for the consumer. Listen and pay attention.”

– Anne Sweeney, President, Disney/ABC Television

Source: 2010 IBM CEO Study Q13: “Which of the following dimensions will you focus on more to realize your strategy in the new economic environment over the next 5 years?”, n=1,523; 2011 IBM CIO Study, Q13: “Where will you focus IT to help your organization’s strategy over the next 3 to 5 years?”, Global sample, n=3,018; M&E, n<=109
...and we are seeing organizations start to articulate their analytics imperatives with a minority executing initiatives

**Key Imperatives**

1. Need to be more analytical in our decision making
2. Need to be more customer-centric
3. Need to understand how to ride the “big data wave”

**Big Data Activity**

<table>
<thead>
<tr>
<th>Have not begun big data activities</th>
<th>Planning big data activities</th>
<th>Pilot and implementation of big data activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>24%</td>
<td>47%</td>
<td>28%</td>
</tr>
</tbody>
</table>

**2012 Discussions (selection)**

- **Free (Ad-Based)**
  - Univision
  - Fox
  - NBC

- **Cable MSOs**
  - Bright House
  - Comcast
  - Cox
  - Time Warner Cable

- **Premium (Sub or Carriage Fee)**
  - HBO
  - Viacom
  - Turner

- **Information Providers**
  - Thomson Reuters

- **Studios**
  - Walt Disney

- **Publishers**
  - Wiley
  - Pearson

Source: 2012 IBM IBV Big Data Study: "Analytics: The real world use of Big Data"
The key success factor is the ability to continuously capture value from the interplay of your key assets...

**CONSUMERS**

*Audience* is the primary ‘product’ in ad-supported media and the primary ‘buyer’ in direct-to-consumer media.

**BUSINESS PARTNER**

*Advertisers* are still the main ‘fuel’ for many media companies. *Content Retailers* are driving demand for consumers.

**CONTENT**

*Content and Content Experiences* is the ‘currency’ that keeps the audience engaged.
...And in exchange refine your value proposition to them at each touch point and across your business functions.

**CONSUMERS**

- Improve relevance of content
- Tailor content and messages via audience feedback
- Forecast content demand
- Optimize content discovery
- Drive direct revenues
- Anticipate customer needs
- Improve editorial processes

**BUSINESS PARTNER**

- Find most valuable customers
- Predict behaviors
- Enable precision targeting
- Optimize media planning
- Adjust campaigns in real time

**ENGAGEMENT**

- Tailor touchpoints
- Maximize inventory utilization and affinity to products
An analytics framework is emerging with use cases applying to different functions within media organizations.

- **Opportunities**
  - Increase content value, forecast demand and drive engagement
  - Better targeting, customized messaging and increased ROI
  - Increase value of content and audiences to attract advertisers and increase CPMs
  - Optimize customer relationship to reduce attrition and increase cross-sell/up-sell

- **Use Cases**
  - Dynamic Semantic Publishing
  - Audience Churn
  - Real Time Ad Targeting
  - Subscriber Churn/Cust Svc Optimization
  - Digital Experience Enhancements
  - Ad Sales Optimization
  - Content Discovery/Optimization
  - Targeted Marketing
  - Editorial Content Discovery

- **360' Audience Profiling**
- **Audience Sentiment**
- **Multi-Platform Media Behavior**

**Use Cases**

- **CONTENT DEV.**
  - Increase content value, forecast demand and drive engagement

- **MARKETING**
  - Better targeting, customized messaging and increased ROI

- **AD SALES**
  - Increase value of content and audiences to attract advertisers and increase CPMs

- **CUSTOMER SVC**
  - Optimize customer relationship to reduce attrition and increase cross-sell/up-sell

- **Increase revenues**
- **Improve efficiencies**
<table>
<thead>
<tr>
<th>Use Case</th>
<th>Challenge</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>360° Audience Profiling</td>
<td>Provide a granular view of audience segment and relevant attributes, needs and behaviors</td>
<td>Integrate multiple sources of audience data (social, CRM, 3rd party --- life events, product affinity, etc) to build audience micro-segment profiles that more highly index attributes, product affinities, or purchase behaviors</td>
</tr>
<tr>
<td>Audience Sentiment</td>
<td>Leverage audience feedback to make decisions on the effectiveness of a wide variety of efforts</td>
<td>Ingest multiple sources of social data to build massive social audience profiles to understand what people think about content or services. It extracts buzz, sentiment, and behavioral intent across different audience micro segments. Solution can include ability to identify &quot;super-fans&quot; and/or &quot;influencers&quot; of word of mouth buzz in social and online networks.</td>
</tr>
<tr>
<td>Target Marketing</td>
<td>More precisely target consumer prospects who have a higher probability to sign-up a service or buy content.</td>
<td>Leverage consumer micro-segmentation profiles built from social, geo-location, and CRM/marketing data to create &quot;propensity scoring&quot; models that feed marketing campaign prospect lists.</td>
</tr>
<tr>
<td>Churn Optimization</td>
<td>Reduce CRM costs and/or churn of users to a customer subscribed service and/or content franchise audience. Target High value customers</td>
<td>Leverage customer call, behavioral, transactional, and social data to predict propensity to churn in order to take preventative action. A &quot;next best action&quot; model can provide specific recommendations to offer the customer. Solution can identify and target &quot;high value&quot; customers to support loyalty marketing programs.</td>
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<tr>
<td>Digital Experience Enhancement</td>
<td>Increase consumer value of digital experiences screen in order to drive</td>
<td>Leverage streaming and/or content analytics to integrate social, web</td>
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<tr>
<td></td>
<td>demand and deeper engagement</td>
<td>content, and 3rd party data feeds to enhance experiences.</td>
</tr>
<tr>
<td>Content Discovery, Personalization</td>
<td>Enable consumers to more easily find, discover, and consume the content they are most interested in.</td>
<td>Build consumer multi-dimensional attribute to drive a contextual oriented content recommendation system. It would enable a content management system to dynamically select and insert relevant online web page and video content.</td>
</tr>
<tr>
<td>Dynamic Semantic Publishing</td>
<td>Improve editorial scalability of digital media (i.e. ability to create more content with less manual effort by editorial staff)</td>
<td>Build a semantic content analytics system that automates the aggregation of interrelated content in order to publish 100s of content modules to expand the number of landing pages and increase ad inventory that can be monetized.</td>
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</table>
Publishers have the opportunity to drive audience demand and build a relationship with the consumer…

1. Identify, listen to, and understand your audiences
2. Create more precise targeted campaigns, enable loyalty marketing
3. Enable communities, optimize buzz
4. Leverage insights to support content (or experience) development
...by leveraging several potential analytics use cases.

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Potential Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audience Profiling</td>
<td>Build audience profiles extracting reader attributes and integrating from social data, marketing campaign, and 3rd party data (axciom, etc).</td>
</tr>
<tr>
<td>Audience Sentiment</td>
<td>Build social profiles to extract the level of buzz, sentiment (likes/dislikes), and behavioral intent (purchase, etc) around any book brand, franchise, or other relevant topic.</td>
</tr>
<tr>
<td>Influencer Identification</td>
<td>From social profiles, identify key influencers driving demand for a book, franchise, or particular category. Target these influencers or use profile attributes to identify additional prospects to target.</td>
</tr>
<tr>
<td>Demand Forecasting</td>
<td>Leverage historical transactions, marketing/advertising, and social profiles/sentiment to model audiences behavioral response to certain book attributes and/or marketing efforts. Use models to build demand forecasting scenarios to help make content development or marketing mix decisions.</td>
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Big Data Roadmap:
How can my organization get started?
There are four key phases to big data adoption…

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Percentage of total respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educate</td>
<td>Focused on knowledge gathering and market observations</td>
<td>24%</td>
</tr>
<tr>
<td>Explore</td>
<td>Developing strategy and roadmap based on business needs and challenges</td>
<td>47%</td>
</tr>
<tr>
<td>Engage</td>
<td>Piloting big data initiatives to validate value and requirements</td>
<td>22%</td>
</tr>
<tr>
<td>Execute</td>
<td>Deployed two or more big data initiatives, and continuing to apply advanced analytics</td>
<td>6%</td>
</tr>
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...with some key org challenges across each phase.

- Educate
  - Articulating a compelling business case
  - Understanding how to use big data
  - Management focus and support

- Explore
  - Data quality
  - Analytics skills

- Engage
  - Technical skills

- Execute

Options to address data, skills gap?

- Start with business-user oriented tools
- Provide “data discovery” tools to existing excel “power users”
- Hire “data scientist” to lead small, focused initiative
Identify customer-centric use cases, align your organization, understand available data, and focus on measurable outcomes.

How can I help ensure success?

1. Commit initial efforts to customer-centric outcomes
2. Develop an enterprise-wide big data blueprint
3. Start with existing data to achieve near-term results
4. Build analytics capabilities based on business priorities
5. Create a business case based on measurable outcomes.