“Big Data in Marketing: Where Do We Go From Here?”

Presentation for CDW CMOjo
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“The problem with putting two and two together is that sometimes you get four, and sometimes you get twenty-two”

-Dashiell Hammett

San Francisco, 1928
"There is a growing disconnect between our increasingly nonlinear world and the linear mindsets, practices and institutions that we deploy in our work."

John Hagel, co-chairman, Deloitte Center for the Edge

"My business and its IT organization are being engulfed by a torrent of digital opportunities. We cannot respond in a timely fashion, and this threatens the success of the business and the credibility of the organization."

"The organization has the right skills and capabilities in place to meet upcoming data challenges."

51% Agree

42% Disagree
The World of Data Is Opening ...
The World of Data Opens

- Media Metrics
- Consumer Data
- Trade Data
- Data Management Platforms
- Attribution Modeling
- Trackers & Matchers
- Location Data
- CRM/Loyalty
- Social Analytics
- Attitudinal
- Sentiment Analysis
- Personal
- Anonymous
- Behavioral
- Ephemeral

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Innovation Axes: Better, Faster, Cheaper

Data

Experience Targeting

Multichannel Ads | Social | Website | Apps

More conversions, better branding

Better

• Segmentation
• Personalization
• Omnichannel

Faster

• Automation, RTB
• Ad tech
• Media ops

Unlimited agility

Real-time Marketing

Programmatic media audience optimization

Cost-effective

• MVT
• Predictive

Transparent accountability

Attribution & Earned Media

Experimental controls Causal | Predictive | Prescriptive
Convergence of Data & Design

DATA

DESIGN TARGET

Person
Persona
All Users

Historical Real-Time Predictive
Emerging Analytics Linkages

Analysis

Descriptive

What Happened?

Diagnostic

Why Did It Happen?

Predictive

What Is Likely to Happen?

Prescriptive

What Should I Do About It?

Structured

Hybrid

Content

Information
Different Levels of Human Collaboration

- **Analytics**
  - Descriptive: What happened?
  - Diagnostic: Why did it happen?
  - Predictive: What will happen?
  - Prescriptive: What should I do?

- **Human Input**
  - Decision Support
  - Decision Automation

- **Action**

- **Feedback loop**
What Happens Now?

Big Data

- **Technology Trigger**: Mass media hype begins
- **Peak of Inflated Expectations**: Early adopters investigate
  - First-generation products, high price, lots of customization needed
  - Startup companies, first round of venture capital funding
- **Trough of Disillusionment**: Activity beyond early adopters
  - Supplier proliferation
  - Negative press begins
  - Second/third rounds of venture capital funding
- **Slope of Enlightenment**: Less than 5 percent of the potential audience has adopted fully
  - Supplier consolidation and failures
- **Plateau of Productivity**: High-growth adoption phase starts: 20% to 30% of the potential audience has adopted the innovation
  - Methodologies and best practices developing
  - Third-generation products, out of the box, product suites

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Hype Cycle for Digital Marketing 2013

Figure 1. Hype Cycle for Digital Marketing, 2013

Communication problem, not technology problem

Really Useful
Questions Are Getting Better

“Marketing”
vs. “Technology”
vs. “Jay Z”

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Advertising Leads Digital Marketing in Consumption of Data

What digital marketing areas use the analytics data that your organization produces?

- Advertising: 79%
- Social: 74%
- Email and messaging: 69%
- E-commerce: 62%
- Search: 55%
- Mobile: 53%
- Content: 50%

n=101 who indicate that digital marketers are major consumers of marketing analytics.

- Analytics #1 planned invest
- 1/3 adults don't use social media
- Target / personal

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What Can Data Do? An Example . . .

Behind the scenes there is a massive connectivity and data universe dedicated to getting you to see just the right banner ad . . .

Programmatic Advertising Ecosystem

0.00 Seconds

- User clicks → publisher site server starts to load page → comes to ad unit
- Publisher queries ad server → Ad Exchange
- Ad Exchange sends request to multiple DSPs
- AdEx forwards XML file with user and site profile data and restrictions
- DSP adds DMP & third-party data and cross-matches advertiser targets
- DSP algorithmically optimizes bidding
- DSP responds to Ad Exchange with bids
- Ad Exchange runs Vickrey auction and picks second-price winner
- Ad Exchange shoots price and ad to publisher's ad server
- Ad server tells browser which creative and size to run
- Browser loads ad, fires ad server pixel and tells DSP impression was served

0.36 Seconds

- User ignores ad 99.03% of the time
Power Shifts from Supply to Demand

- Deflation of media value
- Channel conflict & yield management
- Data leakage & complexity
- Blind marketing & commoditization
- Brand safety & metrics lag
- Intermediary fees

“Remarketing is the killer app for display” – Turn (3X response, 2.5X price)

“We got 2X better response from buying ‘intender’ segments – but it wasn’t worth the premium”

Typical RTB Transaction

- Agency Fee: $0.09
- Data enrichment: $0.10
- Arbitrage: $0.12
- SSP/Network/Exchange: $0.25
- Net Rev: $0.35
- In Target; Under Cap: 65%

Source: Gartner, 2013; Audience Science
Three Phases of Experience Targeting

### Look-alike Example: Finding New Customers

- **First-party data**
  - CRM
  - Sales Analytics
- **Data Management Platform**
  - Statistical correlation
- **Third-party data**
  - Data Providers

#### Retargeting
- 50% retargets
- AdRoll

#### Look-alike Targeting
- CRM, LTV
- Best customers
- → DMP profiles

#### Interest Graph Targeting
- 2013 equivalent of 80 pts of social data generated for every person on earth (500B)
- FB Open Graph
- Amazon + FB Connect
- → reco engine
- → psychographic
- BMD

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39% Use Some Advanced Techniques

Q05. Which statement best represents how your organization uses digital marketing metrics?

- **Real-time insight**
  - We use predictive analytics, allowing real-time calculations to trigger events 21%
  - We use statistical models to simulate scenarios and make predictions about the future 18%

- **Predictive**
  - We analyze historical data to understand patterns and performance, and make inferences about the future 48%

- **Retrospective & Descriptive**
  - We report the metrics but there is little action taken as a result 14%

n=192
**Most Marketers Still Study the Obvious**

Q01. What digital marketing activities does your organization track and measure?

<table>
<thead>
<tr>
<th>Digital Marketing Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate website activity</td>
<td>71%</td>
</tr>
<tr>
<td>Online Display Ads</td>
<td>70%</td>
</tr>
<tr>
<td>Social Marketing</td>
<td>70%</td>
</tr>
<tr>
<td>Email Marketing</td>
<td>66%</td>
</tr>
<tr>
<td>Customer Metrics</td>
<td>63%</td>
</tr>
<tr>
<td>Search Engine Advertising (paid)</td>
<td>60%</td>
</tr>
<tr>
<td>Mobile Marketing</td>
<td>59%</td>
</tr>
<tr>
<td>Search Engine Optimization (organic)</td>
<td>56%</td>
</tr>
<tr>
<td>eCommerce</td>
<td>54%</td>
</tr>
<tr>
<td>Content Marketing</td>
<td>48%</td>
</tr>
<tr>
<td>Funnel/Pipeline Metrics</td>
<td>38%</td>
</tr>
</tbody>
</table>

Multiple responses allowed

n=192
Higher Analytics Spend → Higher Returns

[SHOWING MEAN %]

- % Revenue allocated to Marketing Budget 2012
  - Embryonic: 7%
  - Intermediate: 13%
  - Progressive: 9%
  
  N = 226

- % Marketing Budget allocated to Marketing Analytics
  - Embryonic: 14%
  - Intermediate: 17%
  - Progressive: 35%
  
  N = 197
  Base excludes Don't Know

- % Marketing analytics Budget spent on digital marketing analytics
  - Embryonic: 15%
  - Intermediate: 16%
  - Progressive: 34%
  
  N = 191
  Base excludes Don't Know

Significant differences
Progressive Companies Use More External Data

How much of the marketing data your company analyzes comes from the following sources? [SHOWING MEAN %]

- Data from channel or agency partners:
  - Embryonic (n=55): 21%
  - Intermediate (n=101): 26%
  - Progressive (n=60): 26%

- Data acquired or purchased:
  - Embryonic (n=55): 13%
  - Intermediate (n=101): 18%
  - Progressive (n=60): 22%

- Organization-owned data:
  - Embryonic (n=55): 66%
  - Intermediate (n=101): 56%
  - Progressive (n=60): 52%

Increasing:
- 42% of all resps. shared or bought data
- 21% of marketing orgs. have non-IT data center

Significant differences

Base excludes Don’t Know
Marketing Technology Is . . . Cluttered
Two Frameworks

<table>
<thead>
<tr>
<th>Chiefmartec</th>
<th>Luma Ad Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiences</strong></td>
<td><strong>Sales &amp; Marketing</strong></td>
</tr>
<tr>
<td>- Email personalization</td>
<td>- Email optimization &amp; service, IMM, all social</td>
</tr>
<tr>
<td>- Site personalization (Certona, Monetate)</td>
<td>- Data vendors, DMPs</td>
</tr>
<tr>
<td>- SEO</td>
<td>- Visualization/BI (GoodData, Tableau)</td>
</tr>
<tr>
<td>- Testing</td>
<td><strong>Website Personalization &amp; Optimization</strong></td>
</tr>
<tr>
<td></td>
<td>- Personalization, recommendation, SEO, Testing, LP Opt.</td>
</tr>
<tr>
<td><strong>Operations</strong></td>
<td><strong>E-Commerce</strong></td>
</tr>
<tr>
<td>- Data vendors</td>
<td>- Storefront (elasticpath, shopify), payments, m-commerce</td>
</tr>
<tr>
<td>- Marketing analytics</td>
<td><strong>Website Creation &amp; Management</strong></td>
</tr>
<tr>
<td>- Dashboards</td>
<td>- Online video players, DAM</td>
</tr>
<tr>
<td>- Web analytics</td>
<td>- Web analytics, tag management, CMS</td>
</tr>
<tr>
<td>- BI, DAM</td>
<td><strong>Infrastructure</strong></td>
</tr>
</tbody>
</table>

**Middleware (DMP, CDP, Tag Mngmt.)**
- E-commerce, website
- Marketing automation, CRM
Digital Marketing Neighborhoods

MOBILITY

AD OPS

SEARCH

UX

MOBILE

AD TECH

CREATIVE

DATA OPS

WEB OPS

SOCIAL

ANALYTICS

EMERGING TECH

AD OPS

DATA OPS

UX

MARKETING OPS

UX = user experience;

RT = real time;
Digital Marketing Transit Map

- AD OPS
  - Video Ad Networks
  - Programmatic Media
  - Search Retargeting
  - In-Game Ads
  - Video Ad Mgmt.
  - Addressable TV
- Design
  - Mobile App & Content Svs
  - SEO Tools
  - Attribution
  - QR Codes
- Creative
  - User Groups
  - Experience Targeting
  - Mobile Messaging & Commerce
  - Product Design
- Social Ops
  - Social Mktg. Mgmt.
  - Social Commerce
  - Advocacy
- Search
  - Search Engines
  - Geo Targeting
  - RT Data
- Web Ops
  - Web Content Mgmt.
  - Web Analytics
  - A/B Testing
- Mobile
  - Mobile App Marketplace
  - Mobile Analytics
  - Mobile Advertising
- Data Ops
  - Data Warehouses
  - Media Metrics
  - Customer Analytics
- Strategy
  - Idea Mgmt.
  - Campaign Mgmt.
  - Media Agencies
- Commerce
  - Online Video Publishing
  - Online Retailers
  - Social Apps
  - Social TV
- Analytics
  - Predictive Campaign Analytics
  - Real-Time Decisioning
  - Census and Panel Data
- Emerging Tech
  - Emotion Detection
  - Microsensors
- Mobile Media & Targeting
  - Mobile App & Content Svs
  - Mobile Analytics
  - Mobile Advertising

Connections to CMO, Connection to IT, IT Service Providers, Marketing Service Providers, Aggregated Mktg. Mgmt., Agile Mktg. PM, Management Consultants, Lead Mktg. Mgmt., Mktg. Mgmt., Data Warehouses, Crowdsourcing, Media Metrics, Customer Analytics

Product Station, Vendor Station, Offline Connection

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Recap

- Big Data → distress
- Bringing innovation: better, faster, cheaper
- Emergence of automated individual marketing
- Big Data at the peak of inflated expectations
- Most marketers stuck in the obvious
- Rise of the digital marketing “hub”
Thank You

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Roles and Responsibilities:

• Covers data-driven marketing and marketing analytics
• Focuses on the use of data to improve marketing strategy, customer acquisition and retention
• Helps clients develop and deliver actionable insights based on the analysis of campaign, site and social information

• Previously V.P. and Director of Strategy and Analytics at DigitasLBi and other agencies
• Specialized in developing, measuring and optimizing digital and social marketing strategies
• Clients included General Motors, H&R Block, Delta Air Lines and American Express
• Focus areas: website and digital marketing analytics and the optimization of display and social campaigns
• Wrote “House of Lies,” which was the basis for a Showtime series of the same name