



Smarter Analytics Live 2013

Turning information and insight into actionable business outcomes.

Analytics in the Cloud

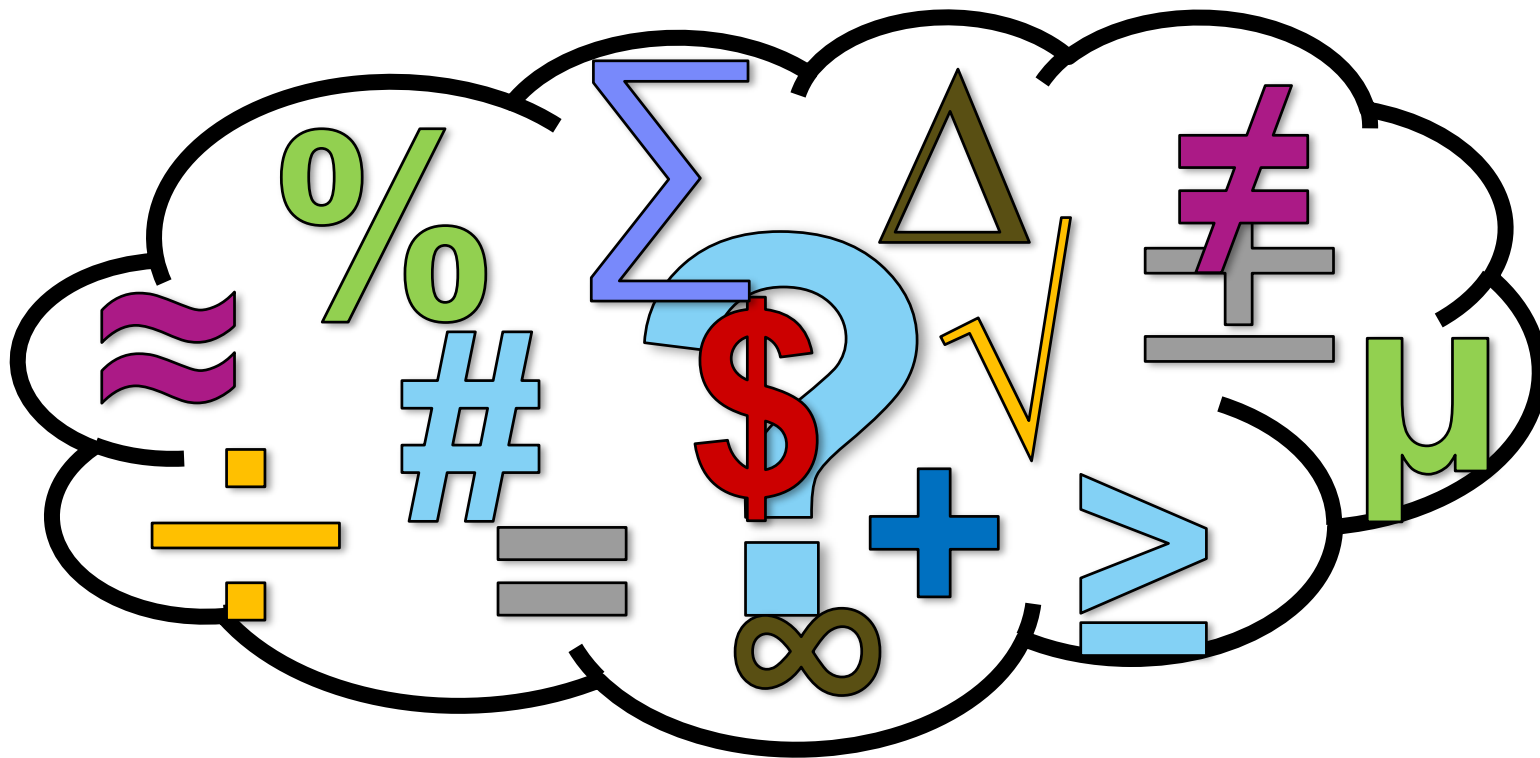
Karen Hardie – Senior Technical Sales Consultant

October 2013

twitter #SALive2013 @ibmbaanz

SmarterAnalytics





What is the Cloud?

- Also known as Cloud Computing
- It is an approach, not a technology
- Provides computing resources via the internet
- Incorporates Software as a Service (SaaS)



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SmarterAnalytics

Challenges with Adopting Technology



Cost

- Software licenses
- Servers and hosting
- Maintenance
- Services



Dependence on IT

- Budgeting/approval
- Resourcing
- Integration with IT/data infrastructure

Challenges with Adopting Technology



Cost

- Licenses
- Servers and hosting
- Maintenance
- Services

No up-front investment



Dependencies

- Training/approval
- Resourcing
- Integration with IT/data infrastructure

Minimal IT involvement


Challenges with Adopting Analytics



No up-front investment

Cost

- Licenses
- Servers and hosting
- Maintenance
- Services



Minimal IT involvement

Dependencies

- Getting approval
- Resourcing
- Integration with IT/data infrastructure



Need for Analytical Expertise

- Hiring
- Training



Time to value

- Need all these in place before starting work
- Complete analysis and deploy results

Challenges with Adopting Analytics



Cost

- Licenses
- Servers and hosting
- Maintenance
- Services



Dependencies

- Getting approval
- Resourcing
- Integration with IT/data infrastructure



Need for Analytics Expertise

- Hiring
- Training



Time to Value

- Getting use in place
- Starting work
- Complete analysis and deploy results

No up-front investment

Minimal IT involvement

No analytical skills required

Minimizes time to value



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Analytic Answers

A portfolio of subscription-based, cloud-hosted solutions that deliver actionable predictive/prescriptive information directly to the line of business

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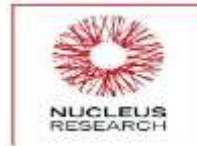
Smarter**Analytics**



Our Clients Realise Huge Value from Predictive Analytics



- ROI: 629%
- Payback: 2 months
- Average annual benefit: \$6,559,000



Nucleus found that for every dollar a company spends on analytics, it gets back **\$10.66.**



- Crime rate reduction of 35%
- Annual ROI: 1301%
- Annual benefit \$1.3 million
- Payback in 1.5 months



- Contributed to 27% rise in unique website visitors
- Provides real-time insights during rugby games
- Boosts fan experience at home or in stadium



Israel Electric Co

- Reduced costs by up to 20%
- Fuel savings USD 75,000 per turbine pa
- Increased warning time of failure to 30 hours from 30 minutes



- 600% ROI through more efficiently allocated marketing resources
- 3.1% increase in marketing response rate
- 20% reduction in mailing costs and 17% reduction in printing costs

IBM Analytic Answers - Available Today

Prioritized Collections



Increase successful receivables collections rate ...

Which of my overdue debtors are likely to pay? How much can I recover from them, and which treatment will be most effective for each?

Donor Contribution Growth



Maximise donor generosity ...

What is the likelihood that my current donors or constituents will pledge a donation, how much are they likely to contribute, and what is the best approach to maximize their generosity?

Student Retention



Sustain student enrollment levels ...

Which of our students are at risk of disengaging? How should we intervene to get them back on track and avoid the possibility of their dropping out?

IBM Analytic Answers - Available Today

Insurance Renewals



Retain policyholders ...

Which of my insurance policy holders are unlikely to renew next month? How could I persuade each one to stay loyal?

Purchase Analysis & Offer Targeting



Increase customer spend ...

Which products do my customers tend to buy together? Can I leverage that knowledge to create combination offers and promotions that increase basket size and revenue per customer visit?

Telco Churn



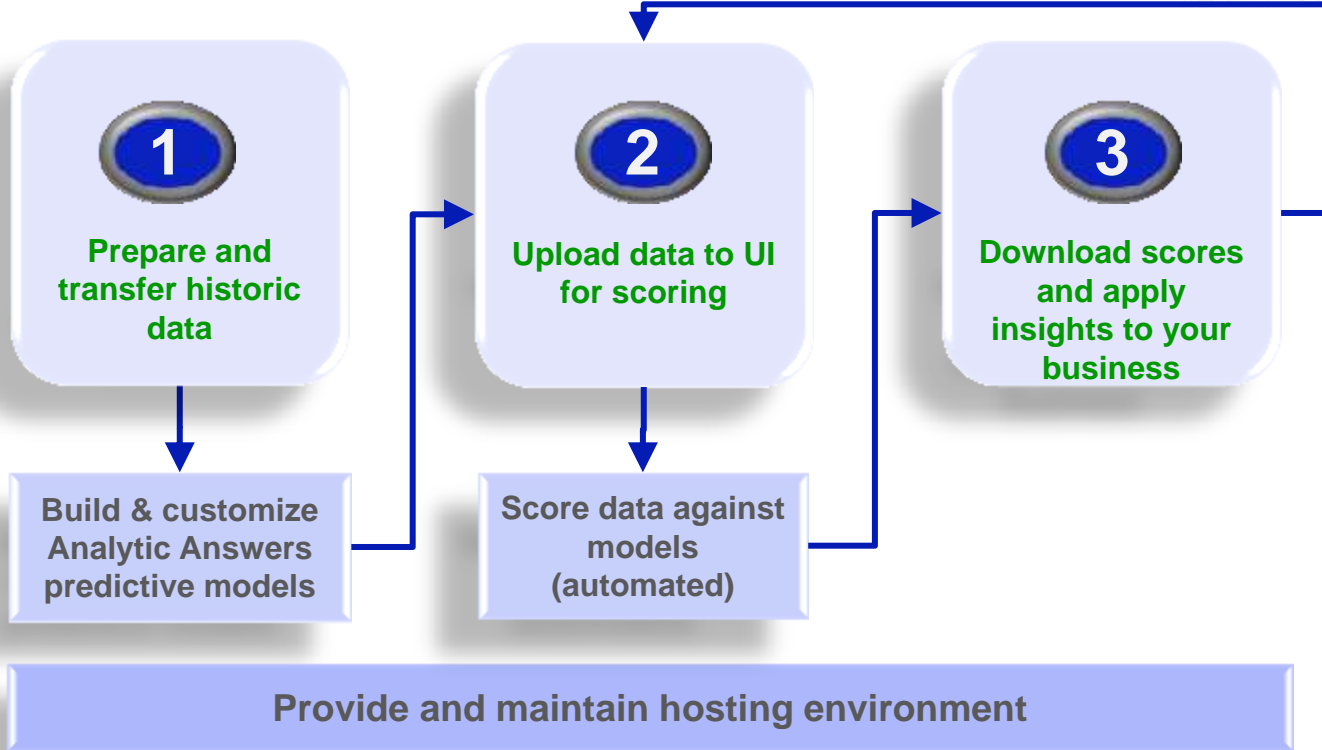
Increase customer retention ...

Which of my customers are likely to defect to another carrier in the coming months? What is the right program or incentive I could extend that would keep them loyal?

Analytic Answers in three simple steps

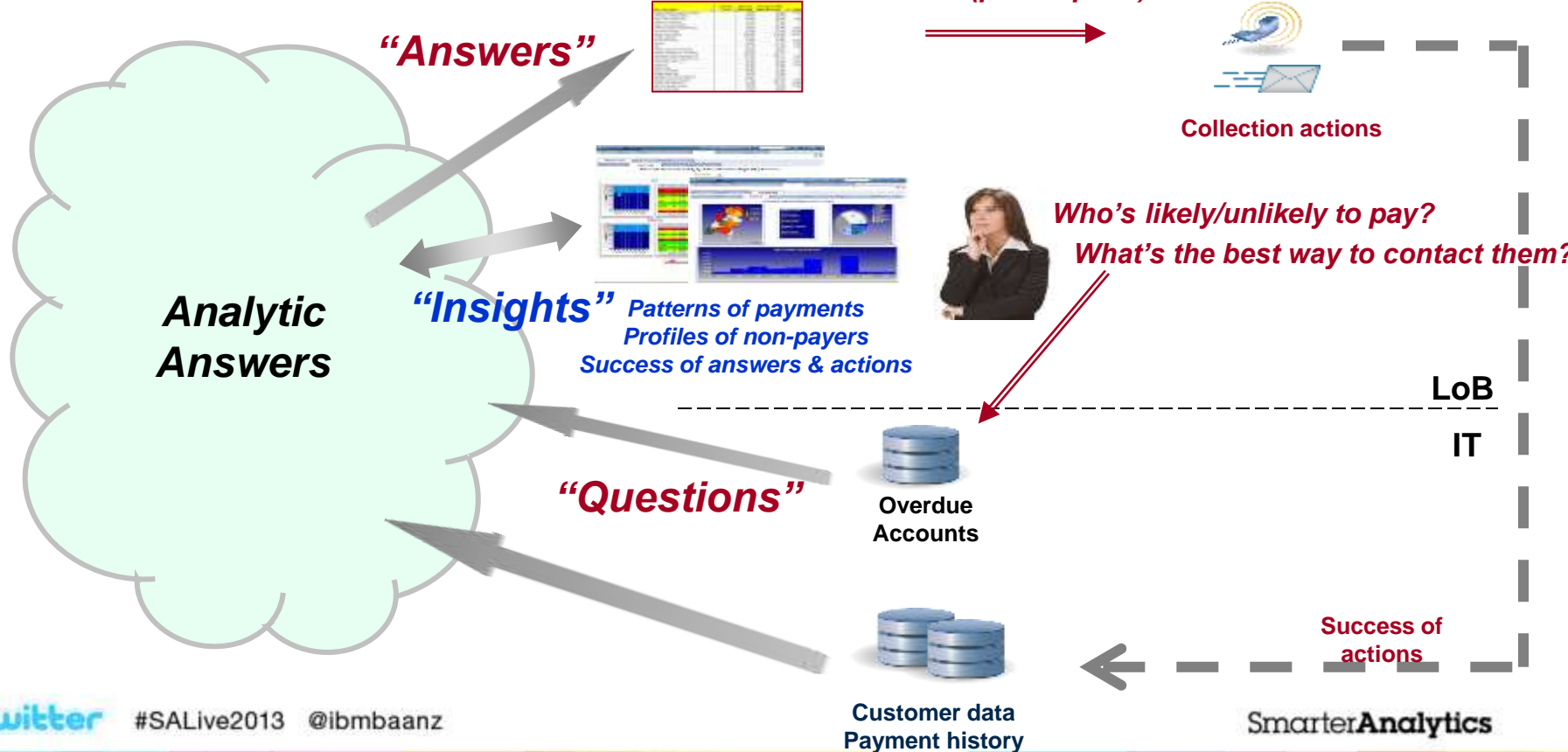


Subscriber

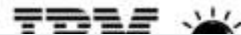


Analytic Answers Example: Prioritised Collections

*Likelihood of payment for each customer (predictive)
Recommended action for each (prescriptive)*



Prioritized Collection example



DebtCurrent.csv - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

A1 AccountID

	A	B	C	D	E	F	G	H	I
1	AccountID	Acc Age	DebtValue	RepaymentProfile	HadDishonouredPayment	PaymentMethod	ProductType	ProductCode	PrimaryContactChannel
2	ID003	4.870913	835.204419	Regular	F	Cheque or Cash Payment	C	C2	Phone
3	ID004	9.023449	631.919888	Regular	F	Standing Order Plan	C	C1	Phone
4	ID007	6.552271	198.703759	LumpSumOverpayer	F	Debit Card Payment	D	D4	Mail
5	ID0011	8.519854	205.62692	RegularOverpayer	F	Debit Card Payment	D	D2	Mail
6	ID0012	5.409104	389.86751	Regular	F	Direct Debit Plan	D	D4	Phone
7	ID0013	6.560631	327.442832	LumpSumOverpayer	F	Credit Card Payment	D	D3	Mail
8	ID0015	8.038609	342.399315	Regular	F	Standing Order Plan	V	V2	Mail
9	ID0016	5.322939	730.319554	Regular	F	Credit Card Payment	C	C2	Mail
10	ID0019	11.026814	467.089341	Struggler	F	Cheque or Cash Payment	D	D1	Mail
11	ID0022	8.045062	343.767956	Regular	F	Credit Card Payment	D	D7	Mail
12	ID0024	12.219815	707.858348	Regular	F	Credit Card Payment	D	D3	Mail
13	ID0027	9.831348	628.159563	Regular	F	Credit Card Payment	D	D6	Mail
14	ID0028	6.885244	136.983624	Regular	F	Direct Debit Plan	D	D6	Phone
15	ID0031	5.613471	511.096423	Struggler	F	Credit Card Payment	D	D7	Email
16	ID0032	7.857441	462.862728	Regular	F	Direct Debit Plan	D	D5	Phone
17	ID0035	7.184732	521.595929	Struggler	F	Credit Card Payment	D	D1	Mail
18	ID0036	6.922837	1212.270027	Regular	F	Credit Card Payment	D	D6	Phone
19	ID0037	9.723995	775.738296	Regular	F	Credit Card Payment	D	D7	Phone
20	ID0039	4.639222	940.727498	Regular	F	Credit Card Payment	D	D4	Mail
21	ID0043	4.469205	565.679444	Struggler	F	Credit Card Payment	D	D7	Mail
22	ID0046	8.366911	182.408922	Regular	F	Credit Card Payment	D	D2	Mail
23	ID0048	9.096619	316.416059	Regular	F	Credit Card Payment	V	V3	

Column: A

Login to Analytics Answers



IBM Analytic Answers +

IBM Analytic Answers MBI telecom (MBI AR) Logout | Help IBM

Home My Questions

Dashboard

Current Month

Total Questions: 3
Total Records: 24928
Maximum Records: 1000000
Overage Records: 0

History

Total Questions: 3
Total Records: 24928

My Answer Services

My Answer Services

1-1 of 1 items



Prioritized Collections(3 Questions, 24928 Records)

Enables prioritized debt collection by predicting, for each outstanding debt, the probability of payment, the amount that can be recovered, and the most effective collection approach.

[Detail](#)

Create a new query and upload data



Connecting... +

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Home

My Questions

My Questions

New Question

Refresh

1 - 3 of 3 items 10

Question No.	Answer Service
11030	Prioritized Collections
11029	Prioritized Collections
11028	Prioritized Collections

New Question

Select answer service

Prioritized Collections

Select data source file

DebtCurrent.csv

Browse

Upload progress



OK

Cancel

Answers are returned



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Home My Questions

My Questions

New Question Refresh

1 - 4 of 4 items 10 | 25 | 50 | All

Question No.	Answer Service	Status	Submitted By	Submitted Time	Records	Answer	Insight
11032	Prioritized Collections	Completed	MBI AR	10/12/12 5:41 AM	8958		
11030	Prioritized Collections	Completed	MBI AR	10/12/12 2:40 AM	7012		
11029	Prioritized Collections	Completed	MBI AR	10/12/12 2:28 AM	8958		
11028	Prioritized Collections	Completed	MBI AR	10/12/12 2:26 AM	8958		

Answers are at the individual level

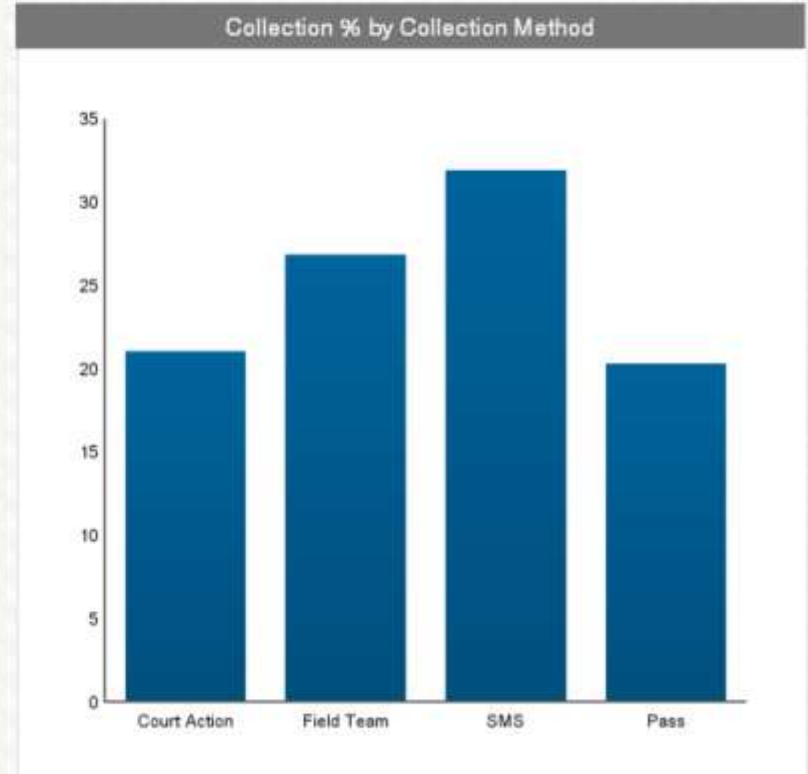


Debt_Analysis.cdd*

MBI telecom

AccountID
ID00854
ID003736
ID0015648
ID0017438
ID0013942
ID0014547
ID0017001
ID007529
ID00786
ID001284
ID003669
ID0014884
ID009257
ID0014140
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ID0012367
ID008106
ID007425
ID0017702
ID007502
ID008878
ID00451
ID004360
ID009233
ID005759

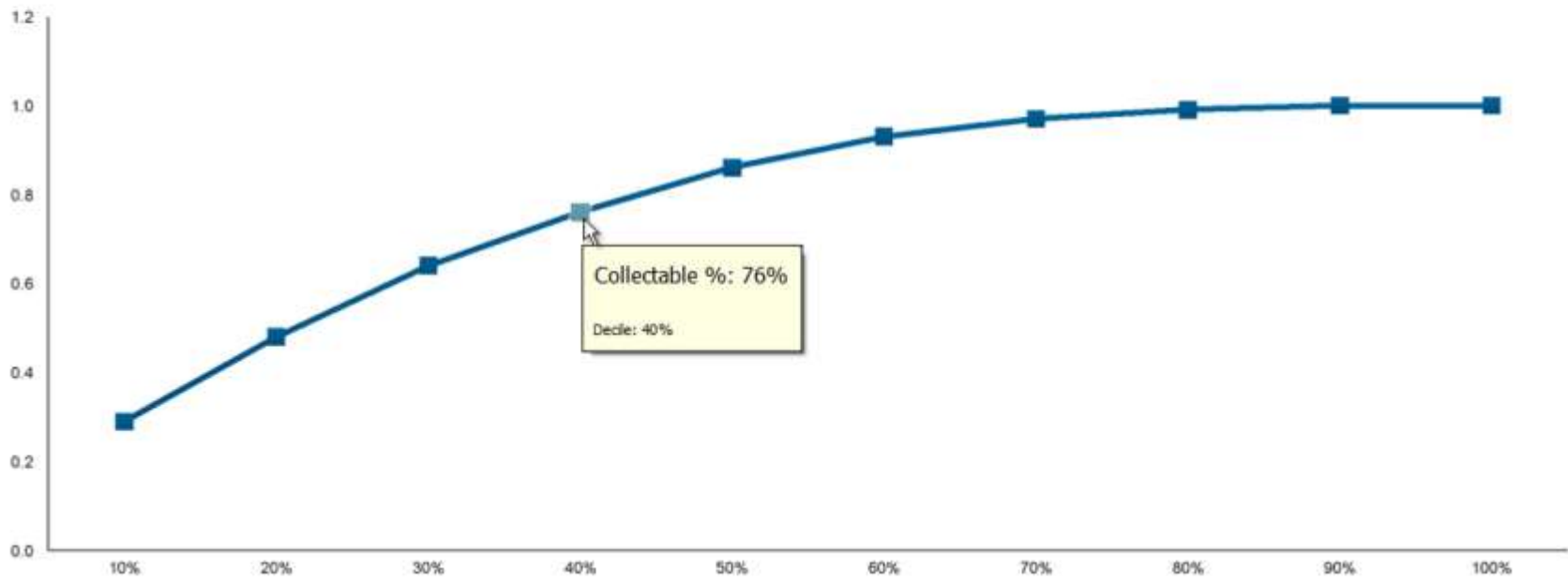
	Recoverable Amount	Collection Probability	Best Method
ID00854	\$1,132.57	99.6%	Court Action
ID003736	\$1,090.64	99.6%	Court Action
ID0015648	\$1,057.83	99.6%	Court Action
ID0017438	\$1,055.53	99.6%	Court Action
ID0013942	\$1,051.40	92.5%	Field Team
ID0014547	\$1,005.96	97.1%	Court Action
ID0017001	\$1,001.21	89.8%	Field Team
ID007529	\$1,000.39	99.6%	Court Action
ID00786	\$977.88	99.6%	Court Action
ID001284	\$953.40	99.6%	Court Action
ID003669	\$938.99	99.6%	Court Action
ID0014884	\$923.15	92.5%	Field Team
ID009257	\$920.65	99.6%	Court Action
ID0014140	\$907.93	99.6%	Court Action
ID008168	\$903.69	99.6%	Court Action
ID0012367	\$893.31	99.6%	Court Action
ID008106	\$879.94	96.8%	Court Action
ID007425	\$877.28	99.6%	Court Action
ID0017702	\$865.35	99.6%	Court Action
ID007502	\$850.99	72.8%	SMS
ID008878	\$840.46	99.6%	Court Action



Quantify results



Collection Graph by Decile



A tax administration agency in South Asia increases revenue collection by using advanced analytics to reduce fraud and waste.

100%

of tax returns processed quickly and accurately

99%

faster identification of potential tax evaders

400 million

returns processed annually



Business Challenge: A tax administration agency in South Asia needed a central tax management system to rapidly and accurately process tax returns submitted by employers and other entities that collect income taxes for the government. It also needed better insight into tax defaulters' behaviors and characteristics.

The Smarter Solution: Using embedded business logic, the solution dynamically determines which returns require in-depth investigation for fraud by trained specialists. Advanced analytics help the agency segment and profile defaulters; predict which groups present the highest risk; and develop actionable, targeted compliance strategies.

*Tax officers **know within seconds of processing returns** which employers and other entities **paid fewer taxes to the government than they collected** and, in each case, whether the discrepancy could be due to a **simple error or tax evasion**.*

Hamilton County Department of Education increases its graduation rate by helping teachers and counselors focus on at-risk students



>10% increase

in graduation rate by identifying at-risk students

>10% improvement

in standardized test scores for math and reading

25 hours saved

for staff for each report generated

Business Challenge: To increase its high school graduation rate, Hamilton County sought to intervene with at-risk students early enough to prevent them from dropping out. A reliance on manual reporting, with 76 schools generating 10 reports each, prevented educators from extracting performance insights and passing them to frontline educators who could make a difference.

The Smarter Solution: Hamilton County's education department deployed an analytics and reporting solution that joins all student data into a single repository that is updated daily and creates personalized, predictive risk profiles—whether, for example, a student is “at risk” or “fragile”—that give educators and counselors an effective roadmap for helping students make the most of their lives.

“Infusing our educational practices and policies with real insights ... has enabled an improvement in our ability to promote what’s best for students....”

—Dr. Kirk Kelly, director of accountability and testing



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Social Media Analytics

Go beyond social media “listening” by transforming massive volumes of social media data into business insights

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Smarter**Analytics**



571 new websites are created every minute of the day

**VOLUME OF BUSINESS DATA
WORLDWIDE *DOUBLES EVERY*
1.2 YEARS**

**EVERY DAY, WE CREATE
2.5 QUINTILLION BYTES
OF DATA**

Brands and organisations on Facebook receive 34,722 Likes **EVERY MINUTE**

Data production will be 44 times greater in 2020 than it was in 2009

Twitter sees 12 Terabytes of Tweets *EVERY DAY*

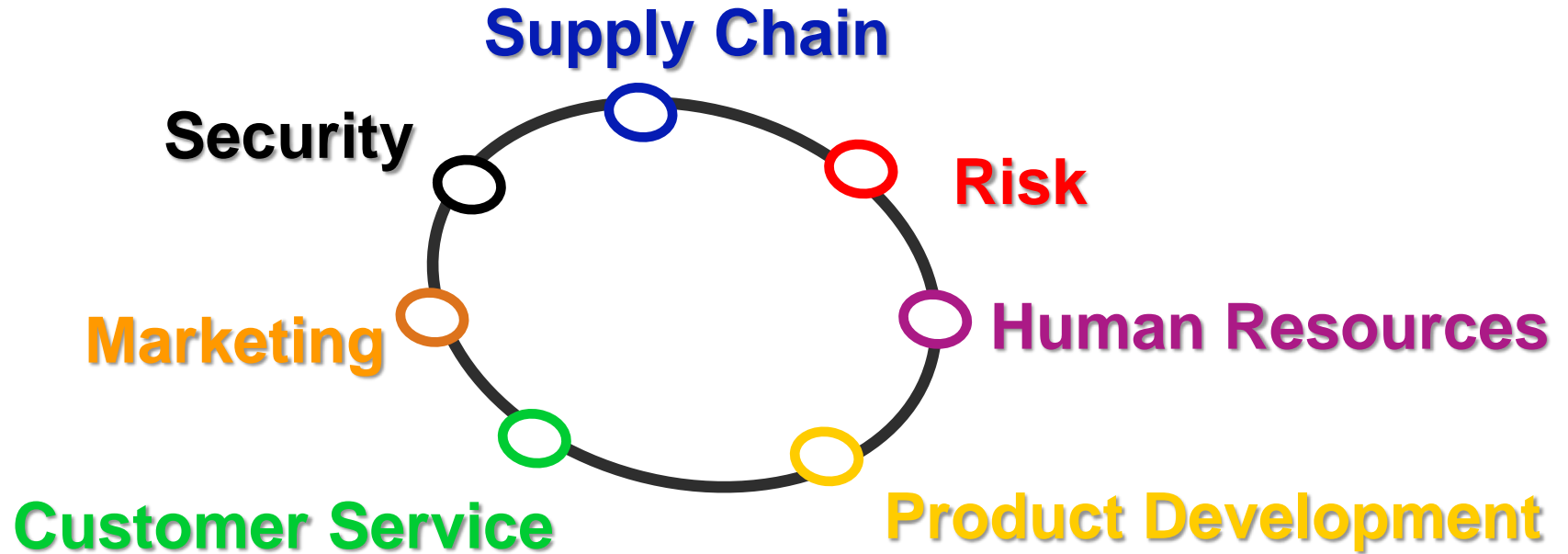
BY 2020, BUSINESS TRANSACTIONS ON THE INTERNET - B2B AND B2C WILL REACH 450 BILLION PER DAY

IBM Social Media Analytics

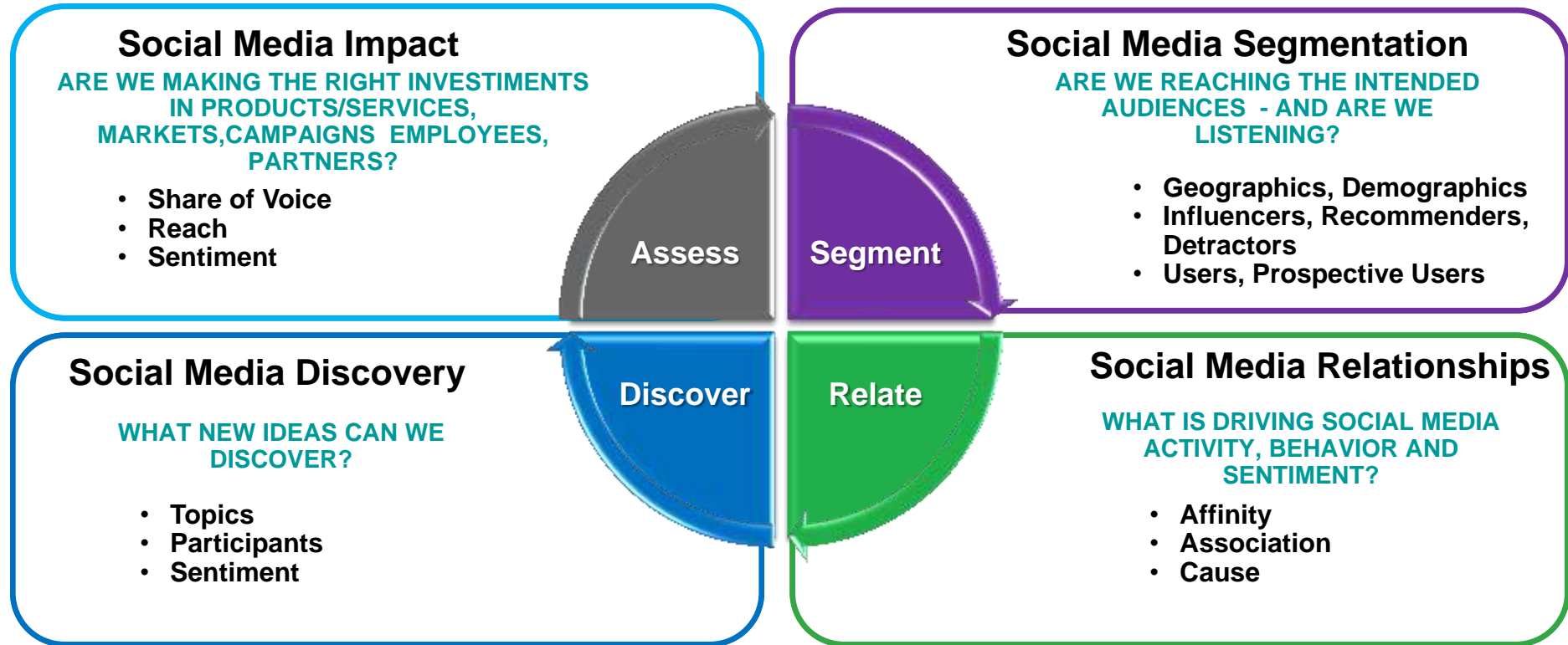
- Analyse social media channels “on the fly” (eg blogs, discussions forums, Twitter, Facebook, LinkedIn...)
- Determine affinity to multiple analytic dimensions
- Provide related topics above and beyond your search
- Seamlessly integrated with Cognos BI



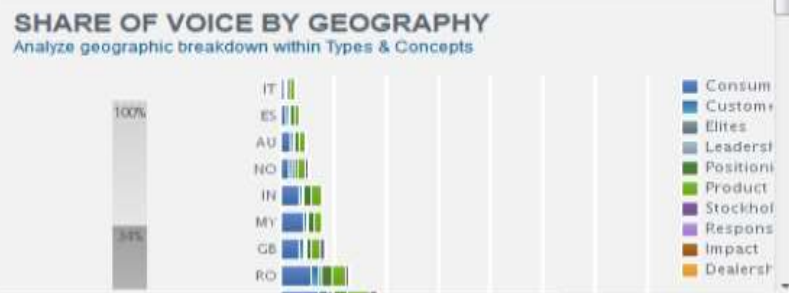
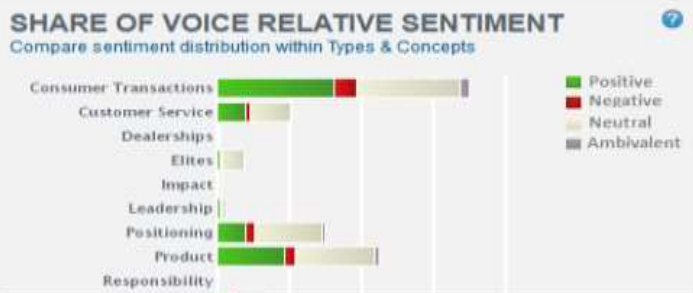
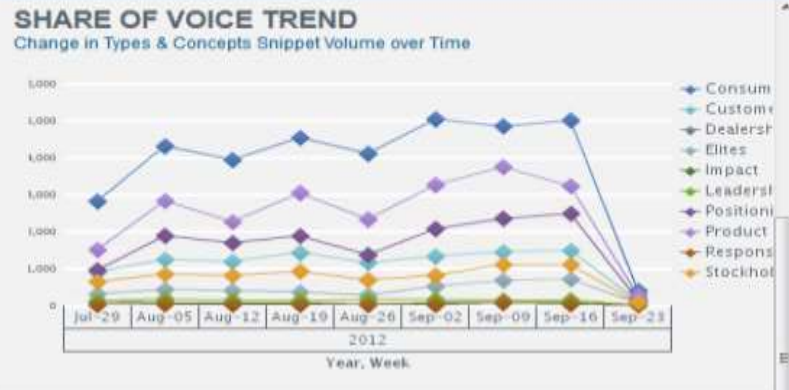
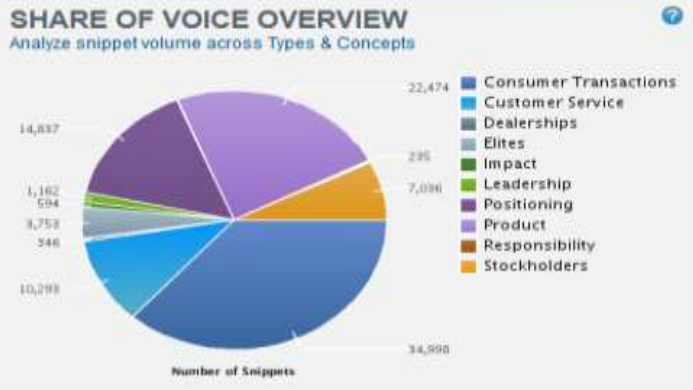
Social Media Analytics Targets Business Issues



Social Media Analytics is NOT Just About Listening...



- Social Media Impact
- Share of Voice
- Hotwords
- Reach
- Sentiment
- Segmentation
- Demographics
- Behavior
- Top Influencers
- Influence Categories
- Discovery
- Evolving Topics



- Social Media Impact
- Share of Voice
- Hotwords
- Reach
- Sentiment
- Segmentation
- Demographics
- Behavior
- Top Influencers
- Influence Categories
- Discovery
- Evolving Topics

GENDER OVERVIEW

Compare number of authors by gender

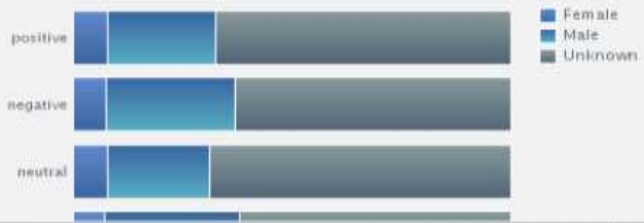


Select Demographic Attribute:

- Gender
- Gender
- Married
- Has Children

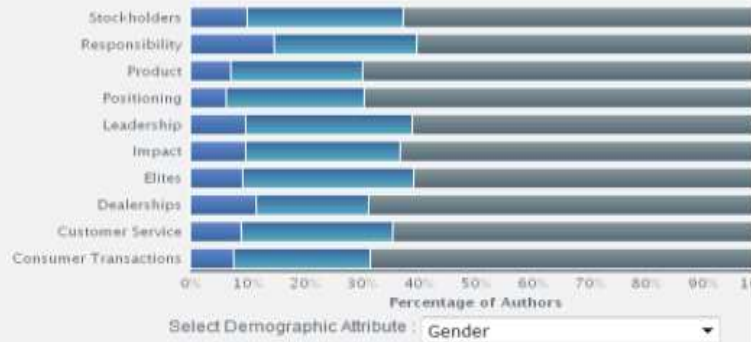
GENDER RELATIVE SENTIMENT

Compare sentiment distribution across authors by gender



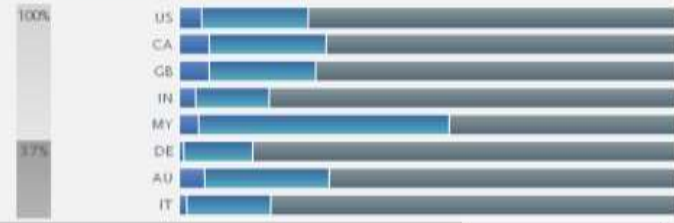
SHARE OF VOICE BY GENDER

Compare author distribution by gender within types and concepts



GENDER BY GEOGRAPHY

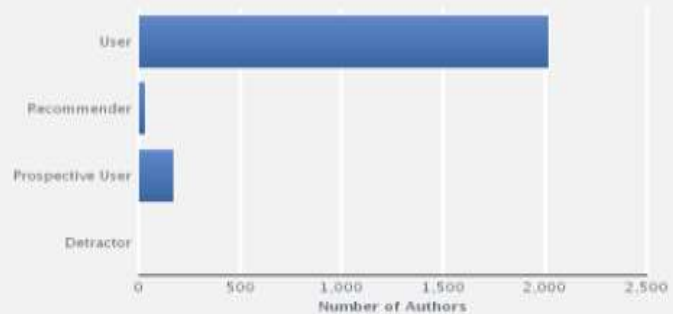
Compare author distribution by gender across geographies



- Social Media Impact
- Share of Voice
- Hotwords
- Reach
- Sentiment
- Segmentation
- Demographics
- Behavior**
- Top Influencers
- Influence Categories
- Discovery
- Evolving Topics

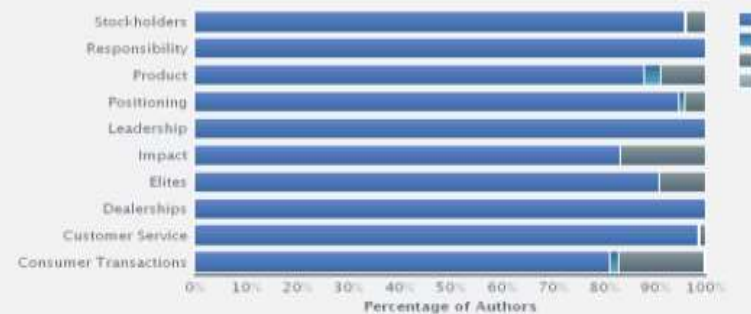
AUTHOR BEHAVIOR OVERVIEW

Compare number of authors in each behavior category



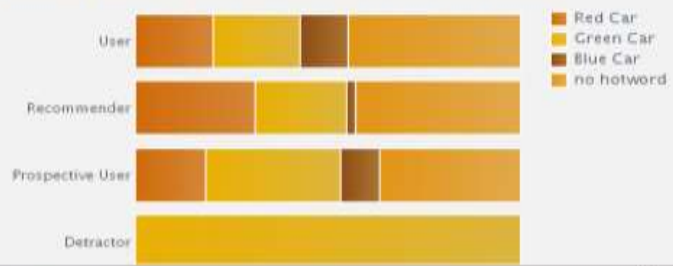
SHARE OF VOICE BY AUTHOR BEHAVIOR

Understand how author behavior categories contribute content to selected Types & Concepts



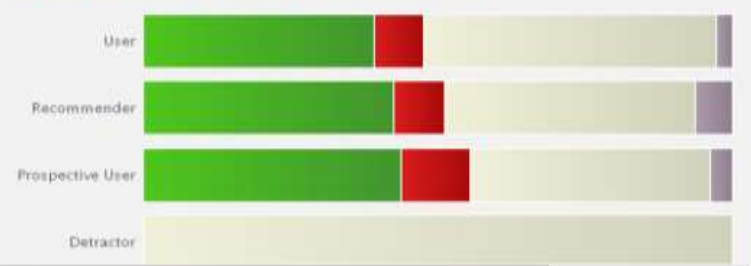
HOTWORDS BY AUTHOR BEHAVIOR

Understand which Hotwords are mentioned by each author behavior



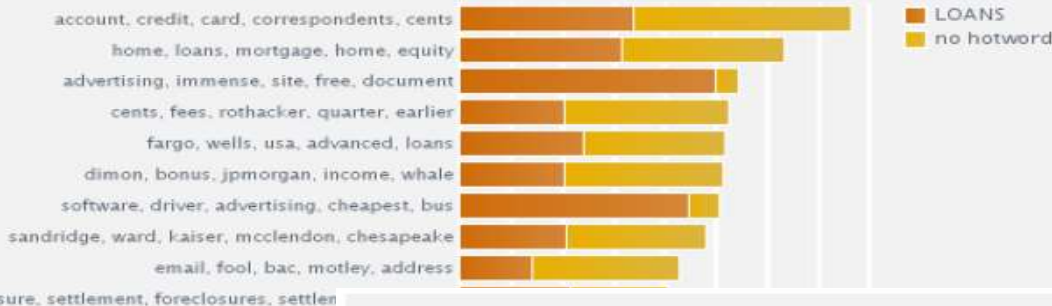
AUTHOR BEHAVIOR RELATIVE SENTIMENT

Compare author sentiment in each author behavior category



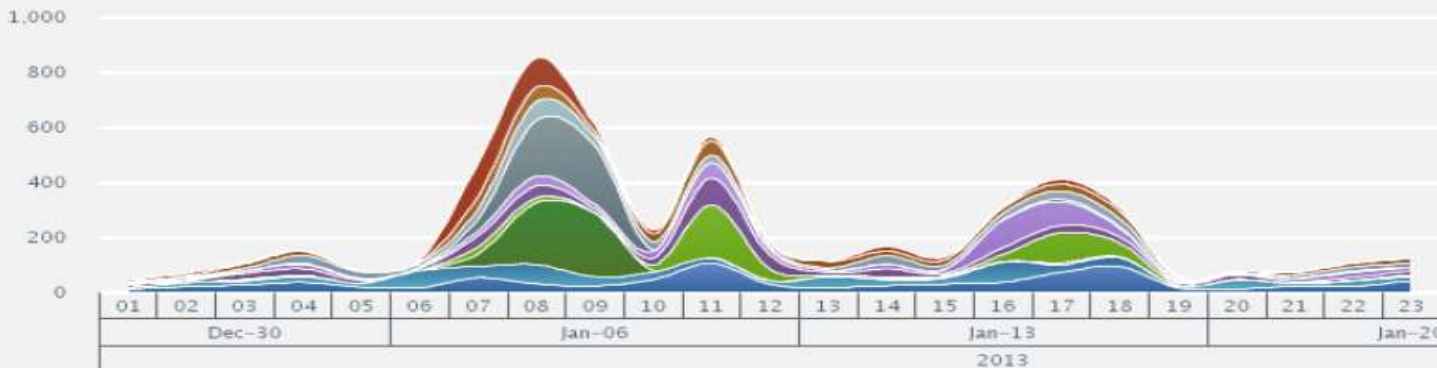
EVOLVING TOPICS BY HOTWORDS

Analyze hotwords within evolving topics



EVOLVING TOPICS TREND

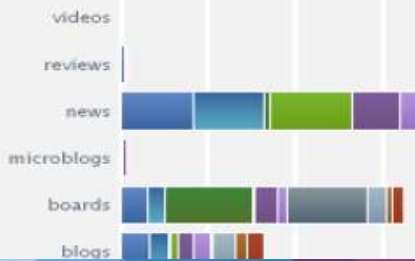
Analyze topics weight over time



Time scale: Day

EVOLVING TOPICS REAC

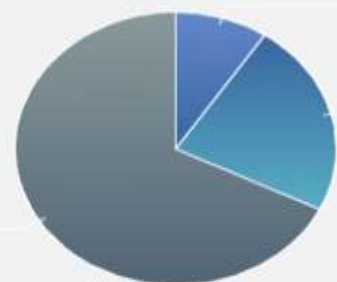
Compare evolving topics weights by source



Product Warranty - Social Media Workspace

GENDER OVERVIEW

Compare number of authors by gender



3,788 Female 3,788
9,288 Male 9,288
27,369 Unknown 27,369

Number of Authors

Select Demographic Attribute: **Gender**

Search

Sentiment tab



Sort



Positive or Neg...



Relative Sentim...



Sentiment by Geography - Modified: Oct 5 2012 2:17:53 PM

Sentiment by G...

Sentiment Distri...



Sentiment Reac...



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Data Collection

- *Subscription-based, cloud-hosted solution that allows you to quickly author and manage online, phone and face-to-face data collection projects with minimal investment upfront.*

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Smarter**Analytics**



IBM SPSS Data Collection Overview



IBM SPSS Data Collection

- Delivers an accurate view of customer attitudes and opinions
- Combines a robust market research survey tool with enterprise-level multichannel customer feedback management capabilities

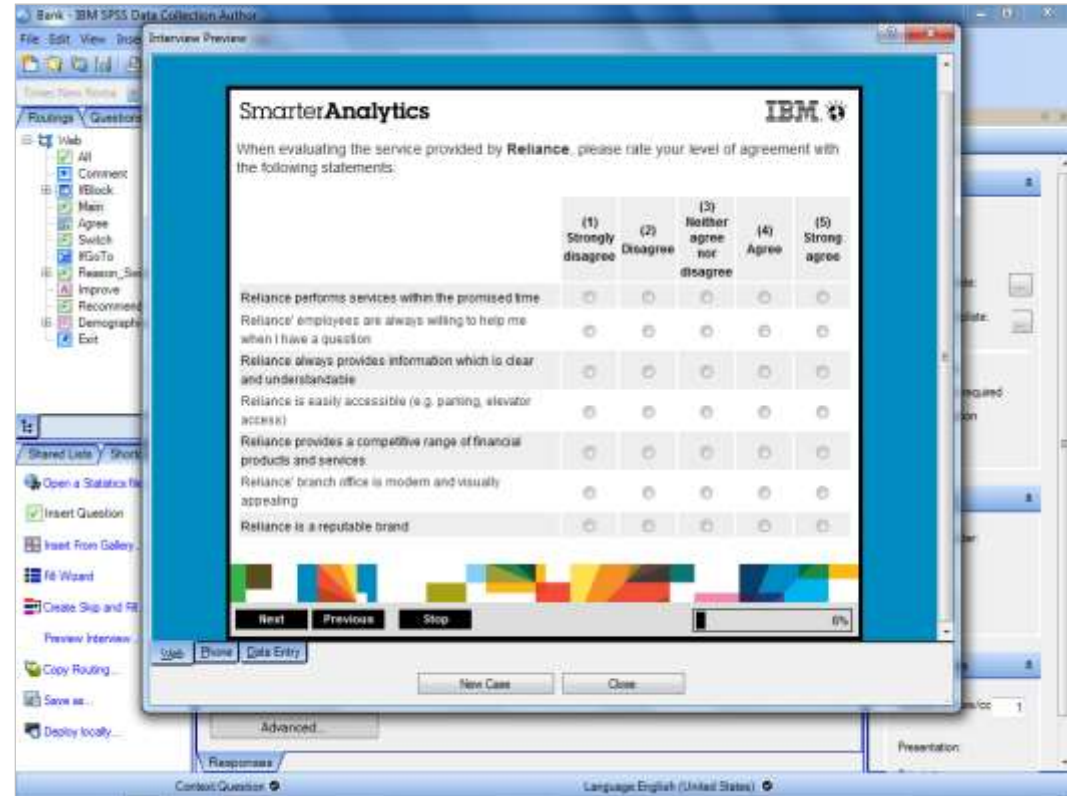


Authoring

Streamline the process of creating surveys



- SPSS Data Collection Author, with its intuitive GUI and intelligent wizards, makes it easy to design simple or complex surveys
- Includes capabilities to help you:
 - Gain a guided approach to survey excellence at every step of the process
 - Use a methodology to suit all surveys and deployment channels
 - Collaborate and share efficiencies across your enterprise





Survey Management

Control access to projects and activities



- Centralize the management of surveys and data with tools for all stages of the research lifecycle
- Increase efficiency and staff utilization, and automate processes
- Control the entire survey process – from design and interviewing through to analysis and reporting

IBM® SPSS® Data Collection Interviewer Server Administration

User: DfPAdmin
Site: SRE

My Projects

- System
- Satisfaction

Data Collection Activities

Project Id: SATISFACTION
Project Name: Satisfaction
Project Description:

Select an activity below to work on

Design

- [Author](#): Create or modify your survey (Windows forms client)
- [Build](#): Create or modify your survey
- [View Survey Link](#): Preview and test the survey

Manage

- [Launch](#): Go live with the survey
- [Promote Project](#): Launch project to alternate site
- [Participants](#): Upload database information about your survey participants
- [Participant Rules](#): Script how participants access your survey
- [Email](#): Invite participants to take your survey
- [Phone Success](#): Manage telephone-based interviewing
- [Review Interviews](#): Review data collection interviews
- [Files](#): Share files with your colleagues

Data Collection

- [Phone Participants](#): Telephone respondents to participate in a survey
- [Export Data](#): Download the latest survey data to your desktop

Reports

- [Survey Results](#): View summary results of your survey
- [Status](#): View how many participants have completed this survey
- [Phone](#): View information on telephone-based interviewing
- [Survey Tabulation](#): Powerful analysis and tabulation
- [Survey Reports](#): Powerful analysis and tabulation (Windows forms client)
- [Activation History](#): View summary history of your activations

Done

Internet 100%

A police department in the UK uses sophisticated analytics to understand public perception, driving new kinds of police programs.

400%

boost in public confidence

EU20,000

savings in first two weeks after implementation

90,000

surveys collected and analyzed



Business Challenge: With public perception a growing concern, the police department needed a more efficient, accurate and sophisticated way to analyze the data collected from surveys, to be distributed to 90,000 households.

The Smarter Solution: The police department uses powerful analytics to measure public perception of crime rates and law enforcement. Collecting data from multiple sources, the solution uncovers patterns in public sentiment and identifies crimes that trigger the strongest concerns—providing valuable insights into when, where and why crimes occur as well as how to prioritize initiatives.

“Not only did we benefit from a massive reduction in person time for this project, saving approximately EU20,000 in two weeks, but these results are now being referenced by other divisions as contributions to ‘efficiency savings’ required by the government.”

-- Chief superintendent of operations (retired)

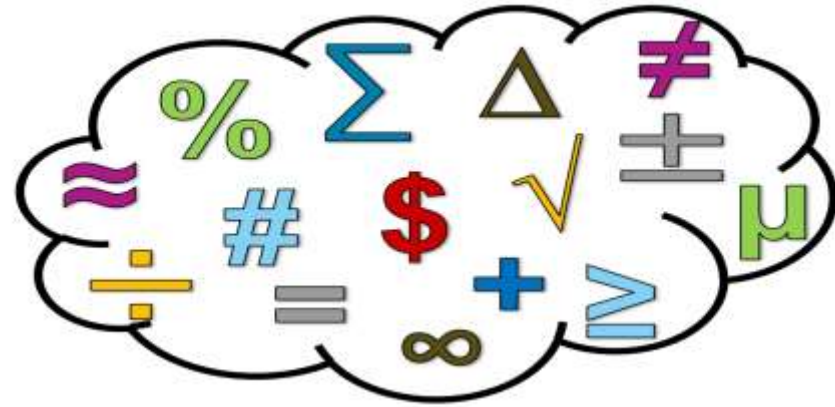
Analytics in the Cloud

Analytic Answers

- Benefit of Predictive Analytics
- Applications focused on
 - Insurance Renewals
 - Purchase Analysis & Offer Targeting
 - Student Retention
 - Prioritized Collections
 - Donor Contribution Growth
 - Telco Churn

Social Media Analytics

- Capitalise on the increase in Social Media
- Provides the ability to
 - Assess the impact in social media
 - Segment social audiences
 - Discover new ideas
 - Understand relationships and drivers



Data Collection

- Capture information in a timely fashion :
 - In the appropriate mode web, phone, in person
 - In the appropriate language
 - Author once, deploy to many
 - Instant access to data



What's Up Next

Please join us for networking and afternoon tea in the Gallery located outside the Keynote room



Q&A