



An IBM® SPSS® Event

The Predictive Analytics Agenda



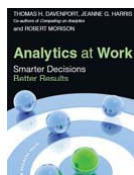
Predictive Analytics Overview

Scott Groenendal

Program Director - Predictive Analytics Market Management

August 2011

The Analytical Edge



"In the wake of some spectacularly bad, well-publicized business decisions—from the subprime mortgage meltdown to the near collapse of the auto industry—the time is ripe for a book about decisions based on rational, clear-headed analysis of dependable data."

by Thomas H. Davenport,
Jeanne G. Harris and Robert Morison

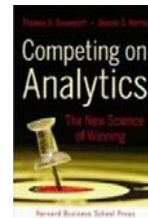
"Groundbreaking... Not only is it fun to read, it just may change the way you think."
—STEVEN G. LEVITT, coauthor of *Procrastinate*

WHY THINKING BY NUMBERS
IS THE NEW WAY TO BE SMART

SUPER CRUNCHERS

IAN AYRES

Ian Ayres, author of
"Super Crunchers"



Tom Davenport, author of
"Competing on Analytics"

Agenda

A Smarter Planet Vision

Predictive Analytics Defined

Interconnected Business Objectives

IBM SPSS Predictive Analytic Platform



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Smarter Planet



Smarter
Education



Smarter
Retail



Smarter
Telco



Smarter
Healthcare

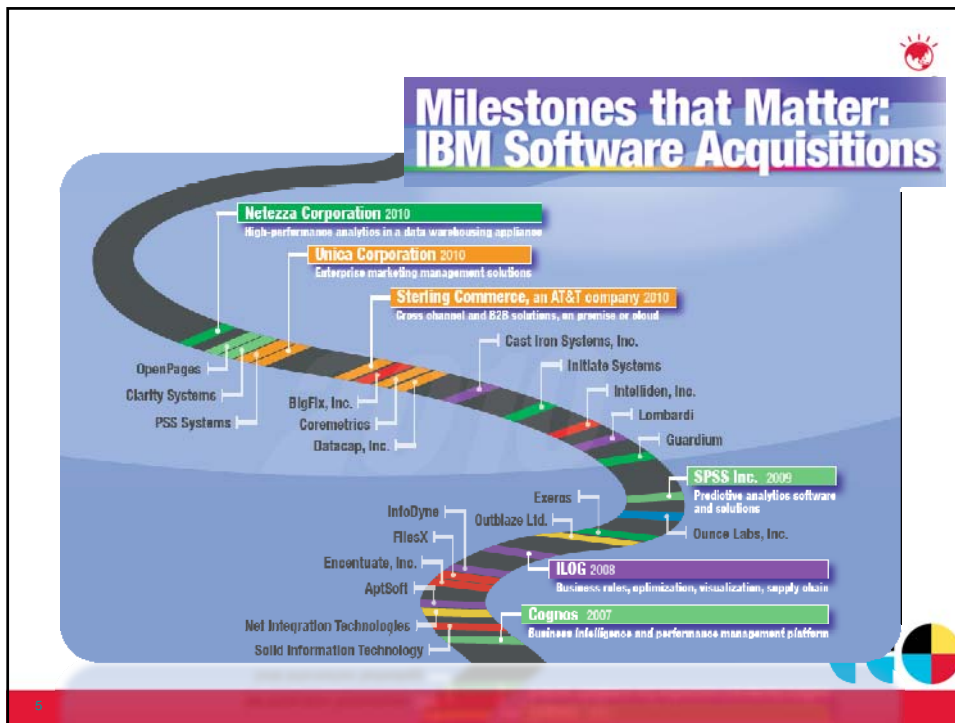


Smarter
Government



Smarter
Banking





Extent of the Investments

- Over **\$10B** in software investments in the past 5 years
- Over **\$6B** invested in Systems R&D
- Over **4,000** dedicated consultants
- **10 Years** research in Services
- **Largest** math department in private industry

“...Since 2006, IBM has deliberately and doggedly constructed an unparalleled portfolio... it’s difficult to see how any competitors will be able to compete anytime soon...”

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Our world is becoming
INSTRUMENTED



Our world is becoming
INTERCONNECTED



Virtually all things, processes
and ways of working are becoming
INTELLIGENT

... to help build a Smarter Planet



Slide 7

On a Smarter Planet, new business challenges and conditions have placed a renewed urgency on business analytics and optimization



Agenda

A Smarter Planet Vision

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How is it different?

**Predict &
Act**

Deploying Predictive Models

- Leverage current and historical data
- Make robust predictions on current and future cases
- Embed in business processes to transform decision making and drive better outcomes

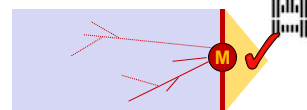
Predictive Analytics:

- Algorithms automatically discover significant patterns
- Deliver deep insights to improve strategic and operational decision making
- “Learn” from historical data – create *predictive models*

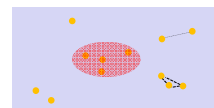
Traditional BI and Conventional Analysis:

- Insight, metrics, etc. up to this point in time
- User initiative to explore aggregate data

**Sense &
Respond**



“NOW”



“NOW”

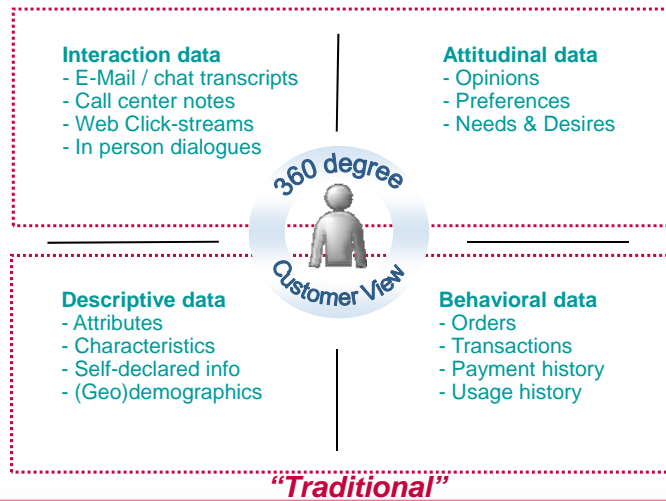


“NOW”



Data at the heart of Predictive Analytics

High-value, dynamic - source of competitive differentiation



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Social Media Data is a critical piece...

78%

of consumers trust peer recommendations

Source: August 25, 2009, "The Broad Reach Of Social Technologies" Forrester report



Stat Watch: 500 Billion

That's the number of impressions that consumers share with others online about products and services annually, say **Josh Bernoff** and **Ted Schadler**, Forrester Research analysts and the authors of *Empowered*. More than 60% of those impressions are shared on Facebook, and 16% of users generate 80% of messages and posts about products and services.



770

million people worldwide visited a social networking site.

Source: comScore, Social Networking Phenomenon

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Is Social Media a fad?



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What Does Predictive Analytics Do?



Predict - Future outcomes based upon historical information

- What product to cross-sell to a customer
- Where to staff police force based upon crime patterns
- What is the risk for issuing credit to a customer

Group - Creates natural forming clusters

- Customer segmentation
- Pricing clusters

Associate - Creates relationships between entities

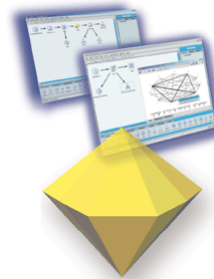
- What products do customers own together
- What medical treatments lead to improved recovery

Anomaly - Find instances that fall outside of "normal" behavior

- Anti-money laundering activity
- Insurance and Healthcare fraud

Forecast - Future results based upon historical inputs

- Demand forecasting for supply chain efficiencies
- Quarterly results for more effective financial planning



IDC - Independent Financial Impact Studies



“The median ROI for the projects that incorporated predictive technologies was 250%, compared with a median ROI of 89% for those projects that did not.”

Source: IDC, “Predictive Analytics and ROI: Lessons from IDC’s Financial Impact Study”



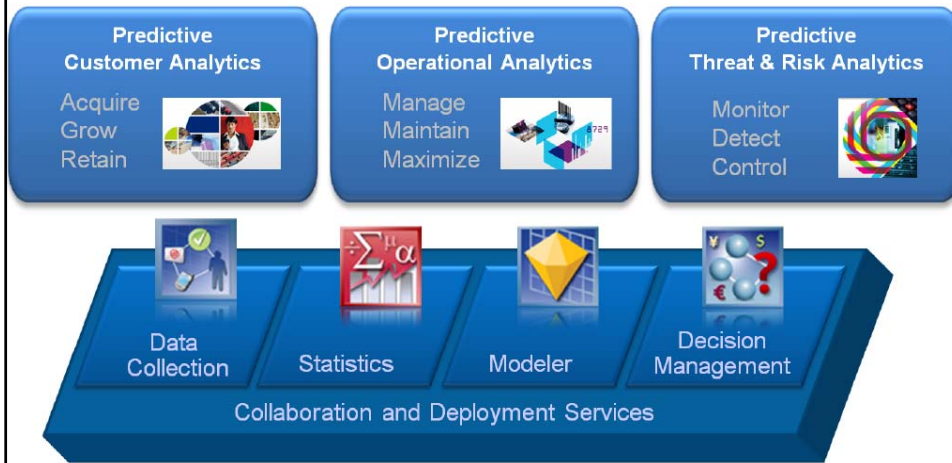
Agenda



A Smarter Planet Vision
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One Unified Predictive Analytics Platform Supports our Approach



And it's tightly interconnected to the rest of the IBM Stack

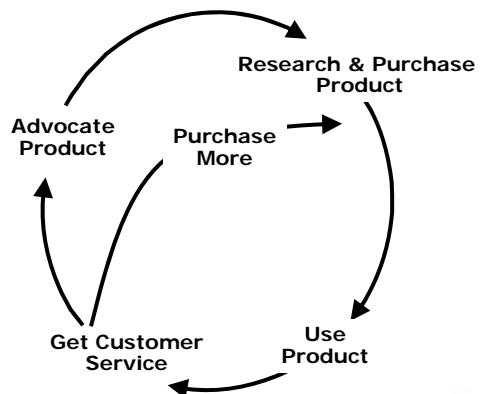


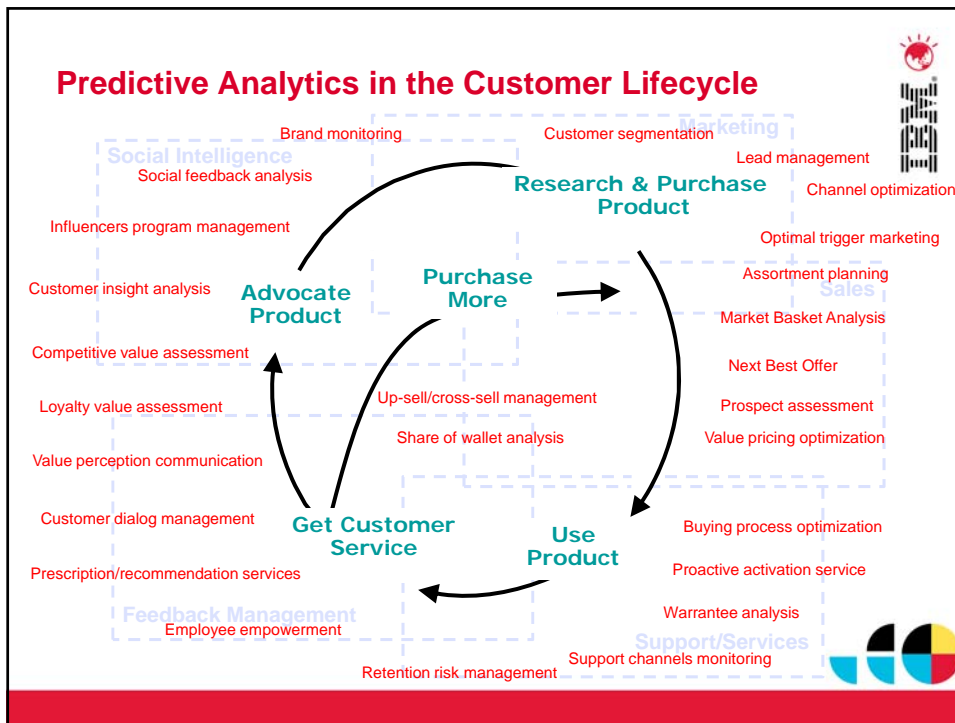
Predictive Customer Analytics



SPSS Can Help You Act Smarter By Helping You

- Acquire the ideal customers
- Grow the customer relationship
- Retain your most valuable customers





Building a smarter planet **IBM**

Leadership Series | Banking | North America

First Tennessee Bank

FIRST TENNESSEE
powering your dreams™

The Opportunity

The banking market is defined by increasing competitive intensity and strategic challenges, not the least of which is how to optimally focus marketing resources. Banks offer a more diverse portfolio of services than before, and they do so over a wider range of channels. While this trend has given banks more latitude to compete, it has made formulating and modulating marketing strategies, tactics and programs considerably more complex. To optimize how they invest in them, banks need to continually measure their effectiveness, learn what works and adapt over time.

Real Business Results

- 600% overall return on its investment through more efficiently allocated marketing resources
- 3.1% increase in marketing response rate through more accurate targeting of offers to high-value customer segments
- 20% reduction in mailing costs and 17% reduction in printing costs due to the ability to target the most attractive segment for specific offers

What Makes It Smarter

Leveraging predictive analytics, First Tennessee Bank is combining a granular understanding of the needs of customer segments with real P&L data to optimize its marketing spend, focusing on programs that deliver the highest ROI. First Tennessee's model relies on constantly updated customer account information, enabling it to detect changes in service consumption patterns and preferences. Blending customer segment profiles with profitability data enables First Tennessee to identify and target the most attractive segments. Its predictive analytics provides the basis to shift marketing resources from lower performing programs to those with the highest ROI.

Solution Components

- IBM SPSS® Modeler
- IBM SPSS Statistics
- IBM Cognos® Customer Analytics

"Our aim was to shift from the 'marketing-as-an expense' mindset to the idea that marketing is a true profit driver."
Dan Marks, Chief Marketing Officer

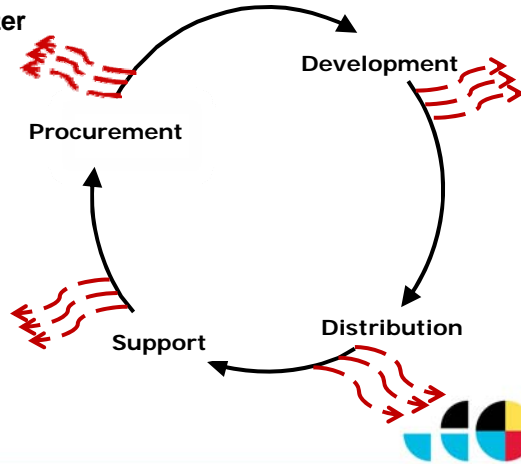
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Predictive Operational Analytics

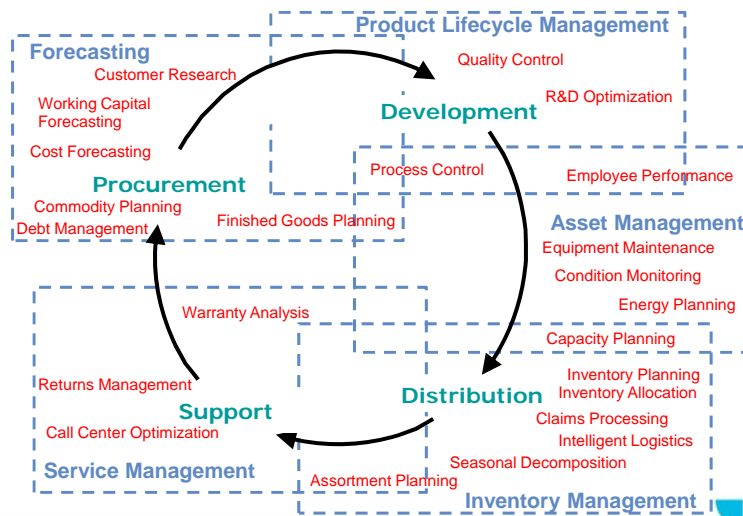


**SPSS Can Help You Act Smarter
By Helping You**

- Manage your operations
- Maintain your infrastructure
- Maximize capital efficiency



Predictive Analytics for Operational Excellence





Infinity Property & Casualty



The Opportunity

A few years ago, Infinity was at a strategic crossroads. In the wake of an initial public offering, strong growth and a series of successful mergers, the company had become one of the nation's leading "nonstandard" insurance providers, specializing in covering higher risk drivers. Now, with their eyes on long-term revenue growth amid intensifying competition, they were ready to make a push into the standard insurance segment.

Real Business Results

- 400% ROI with six months of implementation
- Increase of \$12 million in subrogation recoveries
- As much as 95% reduction in time required to refer questionable claims for investigation
- Increase in success rate in pursuing fraudulent claims from 50% to 88%
- Ability to keep 25% of claims within the company's first notice of loss area (up from 4%), enabling Infinity to sharply improve its Loss Adjustment Expenses (LAE) ratio

What Makes It Smarter

Infinity created a way to "score" claims like lenders score credit, to provide a more systematic, efficient and accurate way to pinpoint fraud. This breakthrough allowed the company to use the same intelligence to create a smarter claims processing workflow, which transformed the way Infinity's agents handle and route claims. When claim information is gathered, it is automatically fed into a scoring engine that drives the processing workflow, including referrals to fraud investigators. An integrated body of customer and claim information provides Infinity's agents with the means to make the right adjustment decisions. Infinity's ability to identify "express" claims as they are received speeds their resolution, improves customer satisfaction and lowers the cost of adjusting claims.

Solution Components

- IBM Cognos®
- IBM SPSS® Modeler
- IBM SPSS Decision Management
- IBM SPSS Collaboration and Deployment Services
- IBM SPSS Professional Services

"Whether it's fraud reduction, customer convenience or cost control, leveraging intelligence will be increasingly important to the way we differentiate ourselves in the future. We've shown our willingness to take some chances to make this happen and we have the results to show for it." Bill Dibble, SVP of Claims Operations.

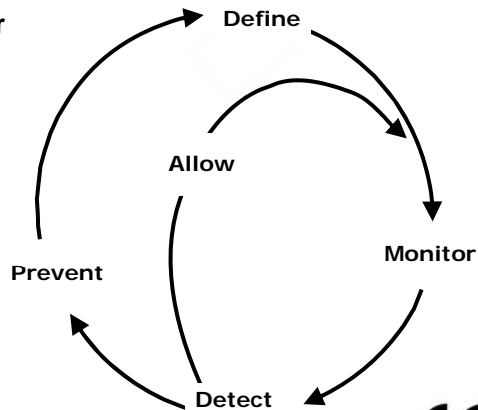
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Predictive Threat & Risk Analytics

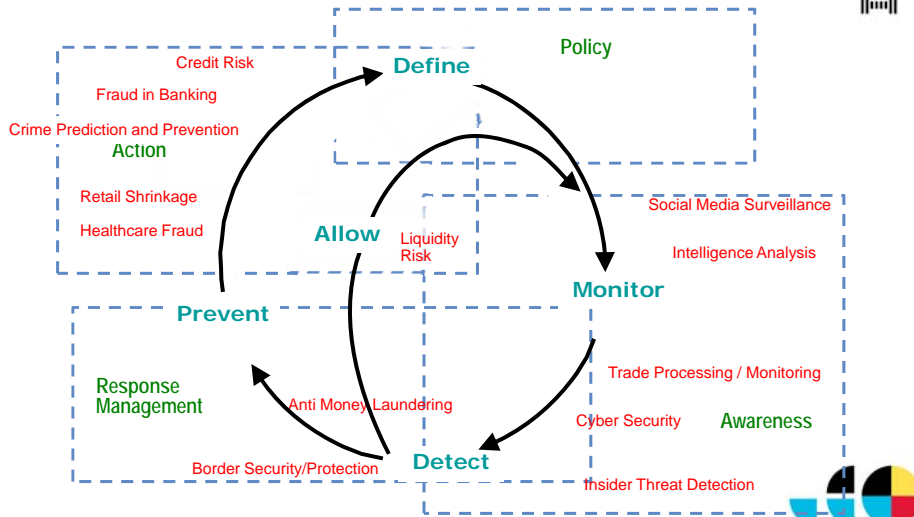


SPSS Can Help You Act Smarter By Helping You

- **Monitor** your environment
- **Detect** suspicious activity
- **Control** outcomes



Predictive Analytics for Threat & Risk Analytics



Building a smarter planet



Leadership Series | Government | North America

Memphis PD



The Opportunity

With the purpose of stimulating fresh ideas on how to reverse a rising tide of crime, key members of the department's Organized Crime Unit (OCU) sat down with the district attorney general and a professor of Criminology at the University of Memphis. The police department shared a scenario of rising crime, frozen (or even shrinking) budgets and a growing disenchantment among Memphis citizens—and was open to ideas. They saw the opportunity to put into practice the simple yet powerful principle that if you focus police resources intelligently by putting them in the right place, on the right day, at the right time, good things are going to happen.

What Makes It Smarter

By recognizing crime trends as they are happening, MPD's predictive enforcement tool gives precinct commanders the ability to change their tactics and redirect their patrol resources in a way that both thwarts crimes before they happen and catches more criminals in the act. Memphis PD's new solution, Blue CRUSH, relies on direct feeds from the MPD's records management system and numerous other reports and sources. Blue CRUSH integrates robust statistical modeling and analysis with GIS to provide MPD with highly actionable information. Granular tracking crime of crime patterns enables MPD to predict future crime hot spots and direct police resources there proactively.

Solution Components

- IBM SPSS® Statistics, ESRI ArcGIS
- Business Partner: ESRI

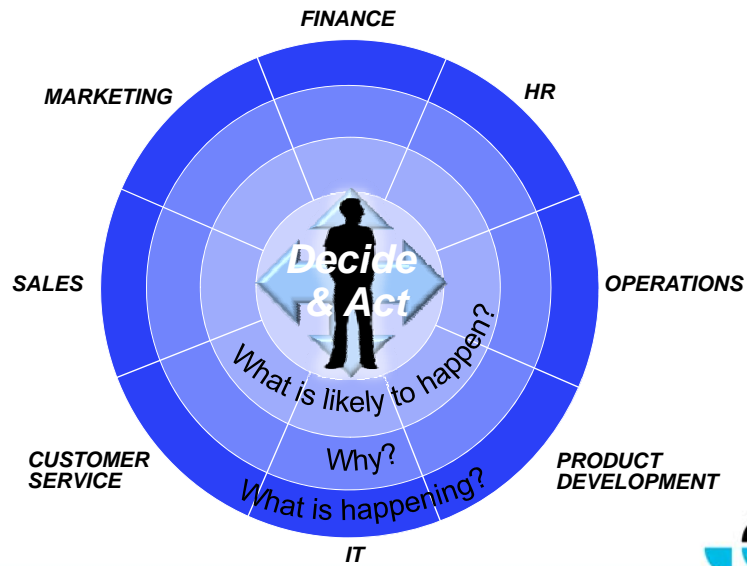
Real Business Results

- 30% reduction in serious crime overall, including a 36.8% reduction in crime in one targeted area
- 15% reduction in violent crime
- 4x increase in the share of cases solved in the MPD's Felony Assault Unit (FAU), from 16 percent to nearly 70 percent
- Overall improvement in the ability to allocate police resource in a budget-constrained fiscal environment

"We're catching this immediately and we're doing it every day. On short notice, we're able to shift officers to a particular ward, on a particular day, right down to the shift level." *Larry Godwin, Director of Operations*

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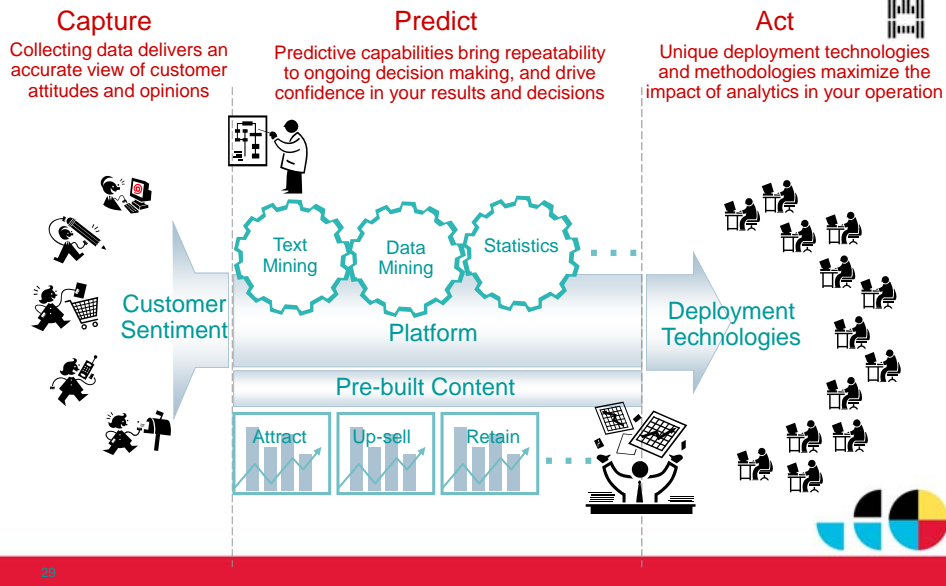
Informed, Aligned Decisions and Actions



Agenda

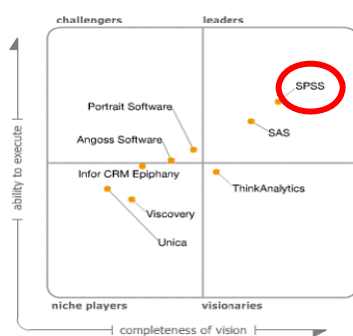
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Enabling the Predictive Analytics Process



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Real Value...Real ROI...Real Impact!



Gartner Magic Quadrant™: Customer Data Mining



- 94% of customers achieved a positive ROI, average payback in 10.7 months
- Over 90% of users attributed an increase in productivity to SPSS
- 81% of projects were deployed on time, 75% on or under budget

“This is one of the highest ROI scores Nucleus has ever seen in its Real ROI series of research reports.”

Rebecca Wettemann, VP of Research,
Nucleus Research

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The IBM SPSS Difference



- ✓ Full-spectrum advanced analytics provider
 - Unsurpassed in breadth, depth and quality of analytics
- ✓ Use not limited to technical experts
 - Focused on delivering the value of analytics across the organization
- ✓ Open, SOA approach that fits seamlessly with existing environments
- ✓ 40-years experience analyzing data about people
- ✓ Highly complementary to the rest of the IBM portfolio



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WIN an Apple iPad2!!
Just complete the online survey
via email link after the event to enter.



Questions?

THANK YOU

