

Combining the Power of Predictive Analytics with IBM Cognos Business Intelligence

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Business Analytics

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Agenda

- The changing nature of decision making
- The power of predictive analytics
- SPSS introduction
- Power of Cognos + SPSS
- Informed decision making with statistics
- Informed decision making with predictors
- Integration of Cognos BI + SPSS Modeler
- Summary

How Decision-Making is Changing

“We are in a historic moment of horse-versus-locomotive competition, where intuitive and experiential expertise is losing out time and time again to number crunching.”

Ian Ayres, author of “Super Crunchers”



Quality and value of decisions

Decisions from “Intuition”

- “Instinct”
- “Hunches”
- Based on experience

Automated Decision-Making

- Knowledge, policies and practices embodied in business rules
- Decisions made efficiently and consistently
- Objective

Predictive Decision-Making

- Accurate predictions based on historic patterns
- Leverage all available data
- Flexible, evidence-based decisions
- Robust in volatile environments – models re-generated from latest data to reflect changing trends.

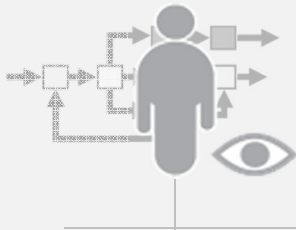
Imagine If Your Decision Makers Could...

...predict and treat infection in premature newborns 24 hours earlier?

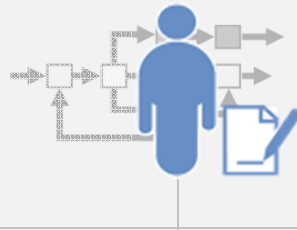
...adjust credit lines as transactions are occurring to account for risk fluctuations?

...determine who is most likely to buy if offered discounts at time of sale?

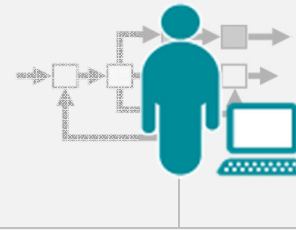
...apply inferred social relationships of customers to prevent churn?



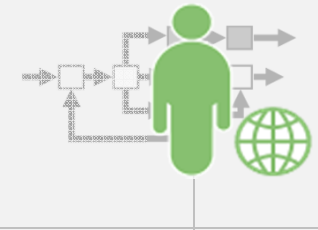
Physician



Loan Officer



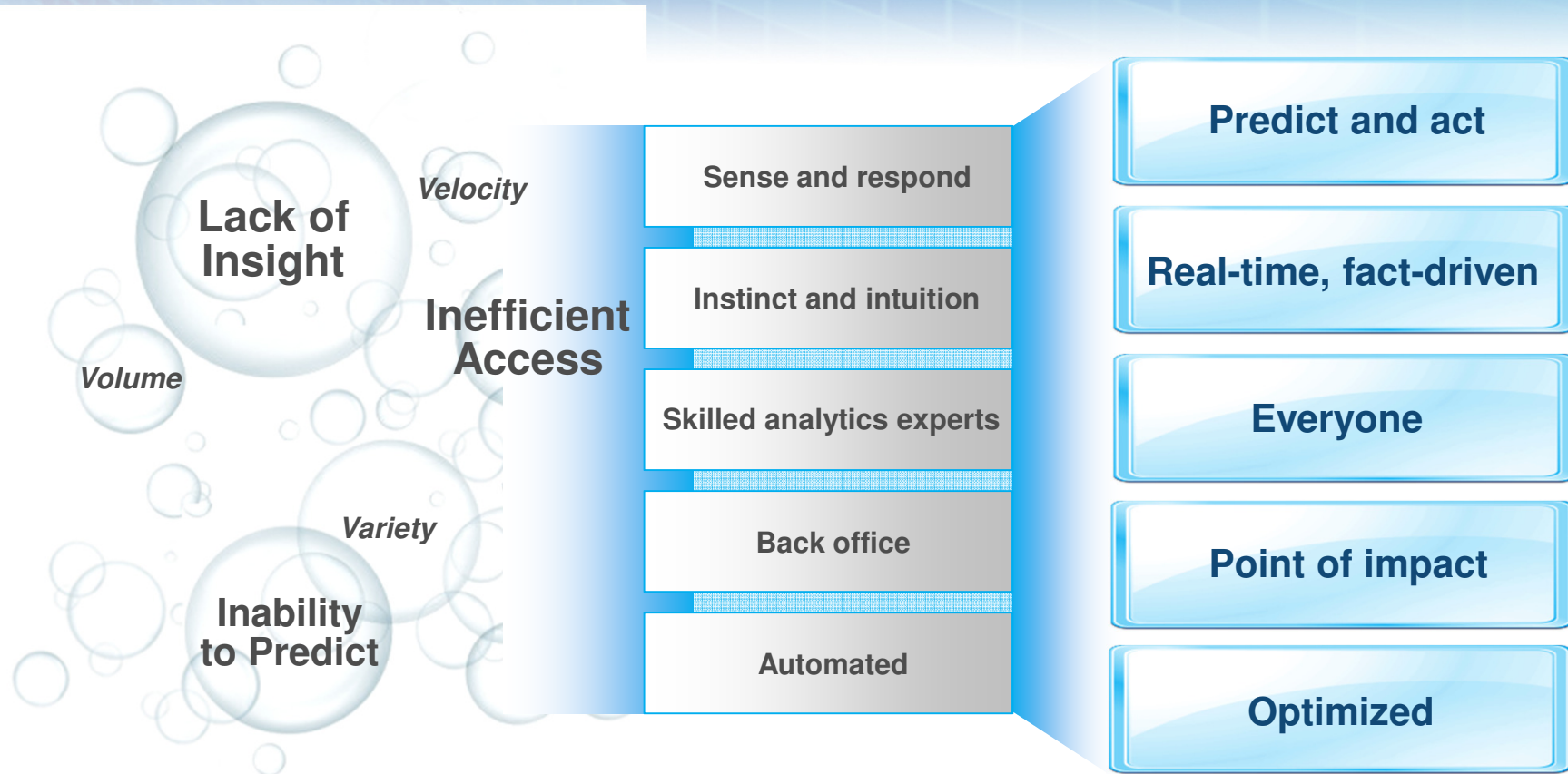
Retail Sales Associate



Telco Call Center Rep

...improve every transaction, process and decision at the point of impact, based on the current situation, without requiring that everyone be an analytical expert

New ways of working to improve decisions and actions



New ways of working to optimize decisions and actions



Predictive Analytics offers Unique Insights to Answer those Tough Business Questions

- Predictive Analytics is a transformational technology that enables more proactive decision making, driving new forms of competitive advantage
- Analyzes patterns found in historical and current transaction data as well as attitudinal survey data to predict potential future outcomes



IBM SPSS: Industry Leader in Predictive Analytics

- 40+ year heritage, with a single aim:
 - to drive the widespread use of data in decision making
- Drove the creation of the Predictive Analytics market
- Acquired by IBM October 2009

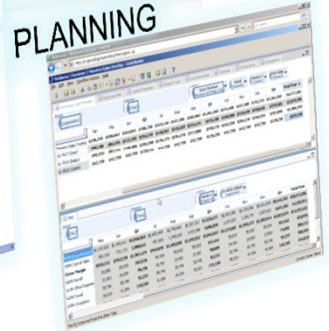
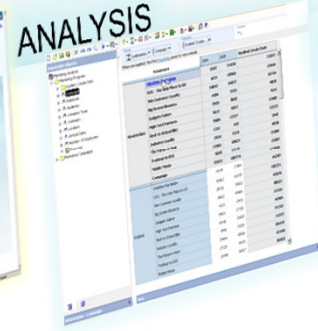
- Enables organizations to predict future events and proactively act upon that insight to drive better business outcomes

IBM BI and Performance Management Capabilities Help Decision Makers Find the Answers

How are we doing?

Why are we on/off track?

What should we do next?



Cognos
software



Executive



Manager



Business User



Line of Business Manager



Business Analyst



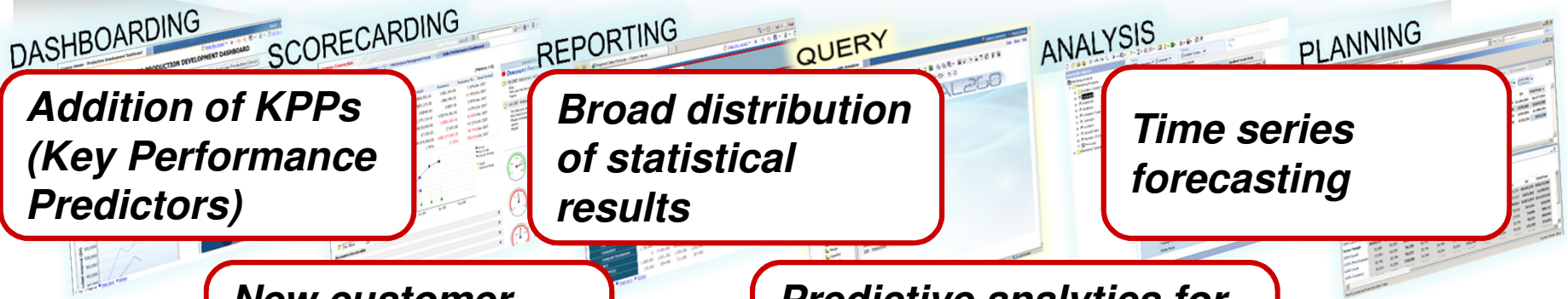
Financial Analyst

SPSS Enables New Solution Value for IBM Cognos Customers

How are we doing?

Why are we on/off track?

What should we do next?



**Addition of KPPs
(Key Performance Predictors)**

**Broad distribution
of statistical
results**

**Time series
forecasting**

**New customer
insight through
Data Collection**

**Predictive analytics for
deeper understanding
of the data**



Executive



Manager



Business User



Line of Business
Manager



Business Analyst



Financial Analyst

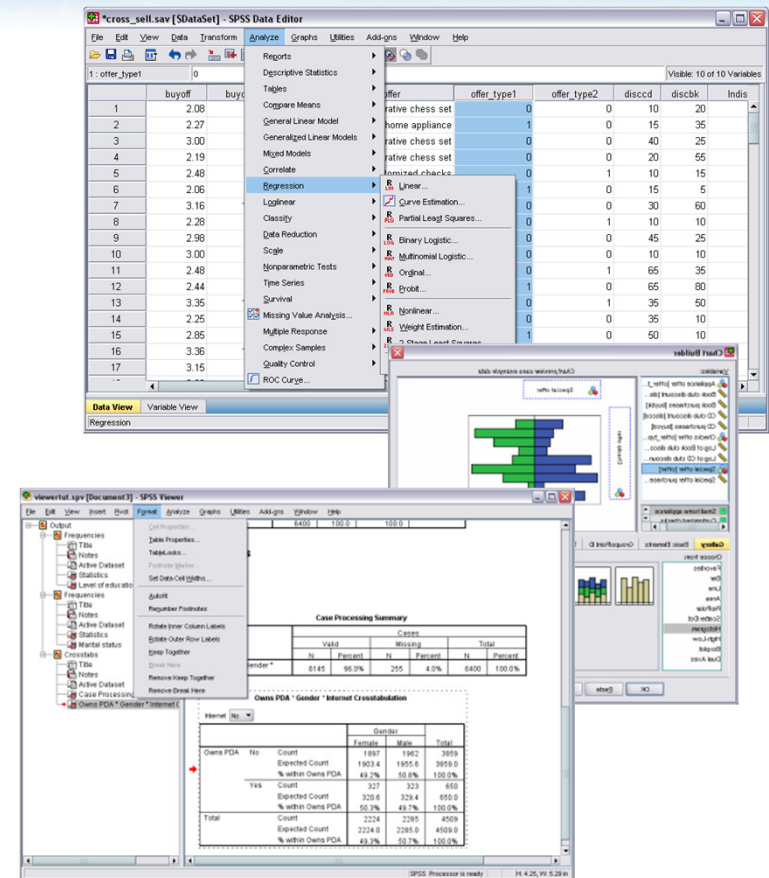
Make informed decisions with statistics

Validate your assumptions and test hypotheses

IBM SPSS Statistical Analysis

Solution Highlights

- Comprehensive workbench
- Increase functionality with add on modules, scripting and programmability
- Flexible deployment options maximize resource utilization





Demo
SPSS Statistics

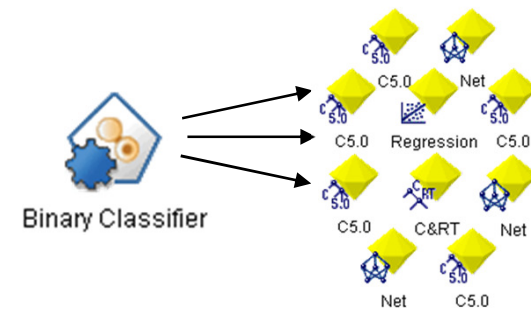
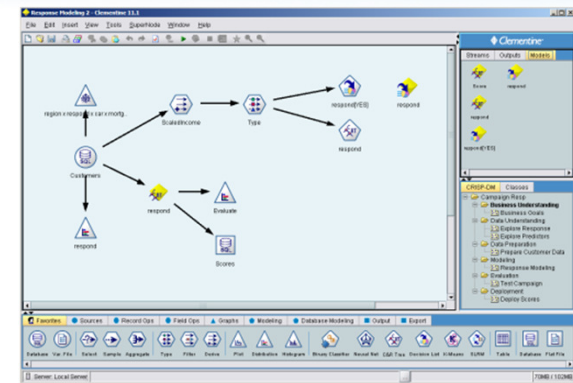
Make informed decisions with predictors

Infer the outcome of every interaction by modeling the hidden relationships in your data

IBM SPSS Predictive Analytics

Solution Highlights

- Easy to learn, no programming approach to data mining
- Automatically create accurate, deployable predictive models
- Choose the best solution with multi-model evaluation
- Data mining within standard databases
- Multithreading, clustering and use of embedded algorithms





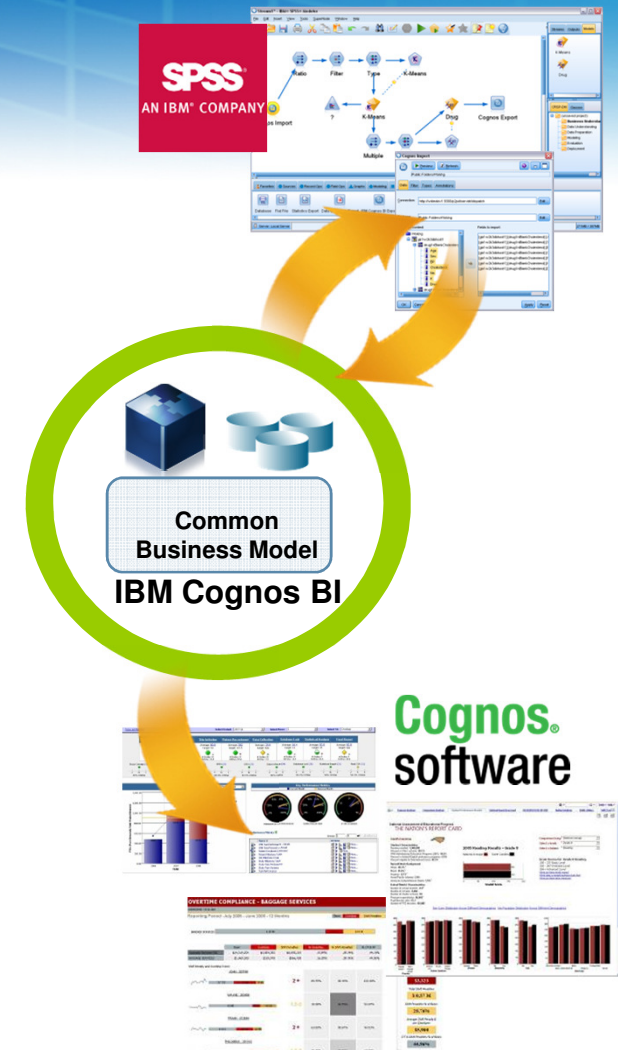
Demo
SPSS Modeler

Deliver the power of predictive analytics into the hands of the business users

Uncover key insights in your corporate data by integrating predictive analytics as a core activity to drive business decisions

Integration with IBM SPSS Modeler Solution Highlights

- Leverage BI to identify problem or situation needing attention
- Develop factual context using reliable trends, patterns and predictions.
- Easily distribute the results to broad user communities



Streamline process to create and distribute predictive results

Leverage your investment in data modeling and IBM Cognos BI

IBM SPSS Modeler 14.1

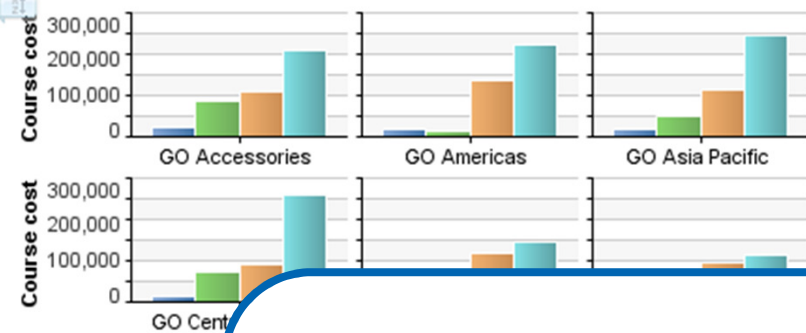
Solution Highlights

- Interact with familiar data view
- minimize IT involvement for data access and preparation.
- Automatically publish predictive results to Cognos BI package

The screenshot displays the IBM SPSS Modeler 14.1 interface. The main workspace shows a workflow starting with 'Cognos Import', followed by 'Ratio', 'Filter', 'Type', and 'K-Means' nodes. A 'K-Means' node is also shown below the main flow. A callout box labeled 'Consume sanctioned BI data' points to the 'Cognos Import' node. Below the main interface, the 'IBM Cognos BI Export' dialog box is open, showing fields for 'Connection', 'Data source', 'Folder', 'Package name', and 'Mode'. A callout box labeled 'Export directly to IBM Cognos BI' points to the 'Export' button in the dialog.

HR Analysis

Training Cost by Region



Employee expense t
Compliance
Personal Developm

Training Expense

Course cost

GO Accessories			
GO Americas			
GO Asia Pacific			
GO Central Europe	\$399,300.00	(\$34,800.00)	1.09%
GO Northern Europe	\$316,100.00	(\$4,800.00)	1.02%
GO Southern Europe	\$237,700.00	(\$14,150.00)	1.06%
Total	\$2,048,600.00	(\$202,650.00)	6.58%

Demo: Cognos 10 and SPSS Modeler 14.1 Integration

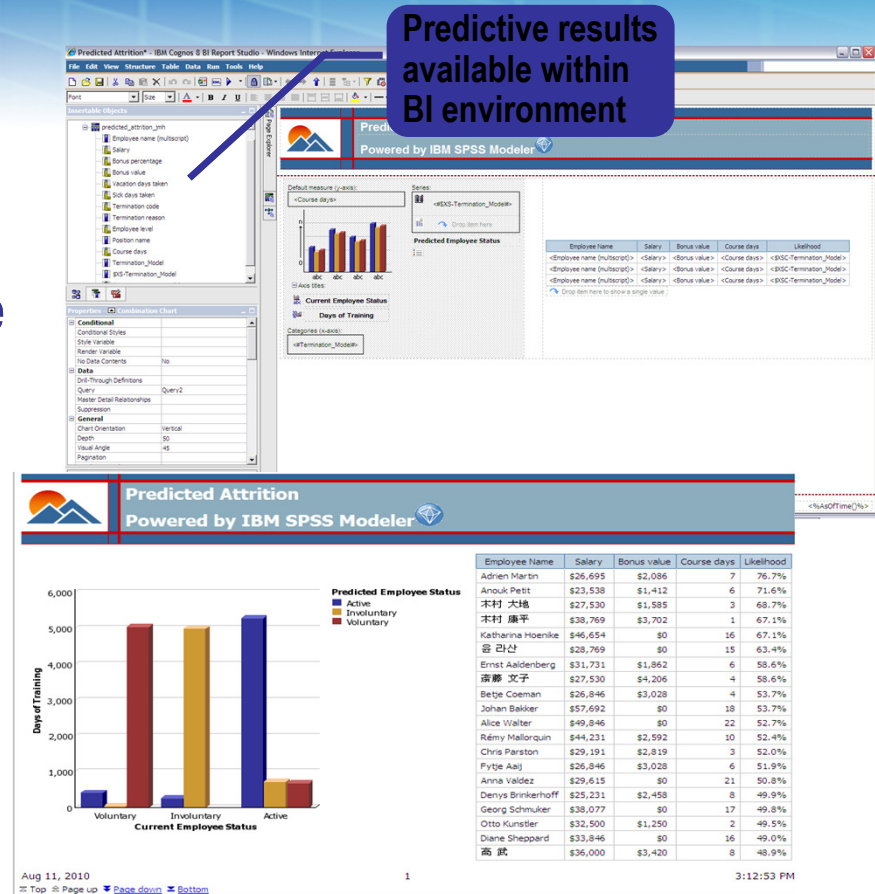
Add predictive intelligence IBM Cognos BI Dashboards

Focus efforts around the future – anticipate, rather than react.

IBM Cognos Business Intelligence

Solution Highlights

- Predictive results immediately available to IBM Cognos Business Intelligence
- Easily compare current state to predicted result
- Measure by effect of key factors on predicted outcome.



Summary



How are we doing?

Why are we on/off track?

What should we do next?

- IBM Business Analytics answers the 3 performance management questions
 - Drives better business outcomes by freeing the business to develop new insights
 - Provides the predictive ‘brains’ for the next generation of decision making and business optimization
 - Predictive intelligence can be broadly distributed to decision makers via IBM Cognos BI reports and dashboards