



Advanced Planning & Analytics with IBM Cognos TM1 & IBM SPSS

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Agenda



- Finance & IT Challenges
- Overview Of Financial Performance Management Product Portfolio
- Enterprise Planning & Advanced Analytic Solutions
- Proof Points
- Demonstration
- Q&A
- Summary



Uncertainty – The New Normal Velocity and Volatility



“Over 60% of Finance executives believe that when the recovery takes hold, the heightened uncertainty in the business will remain”

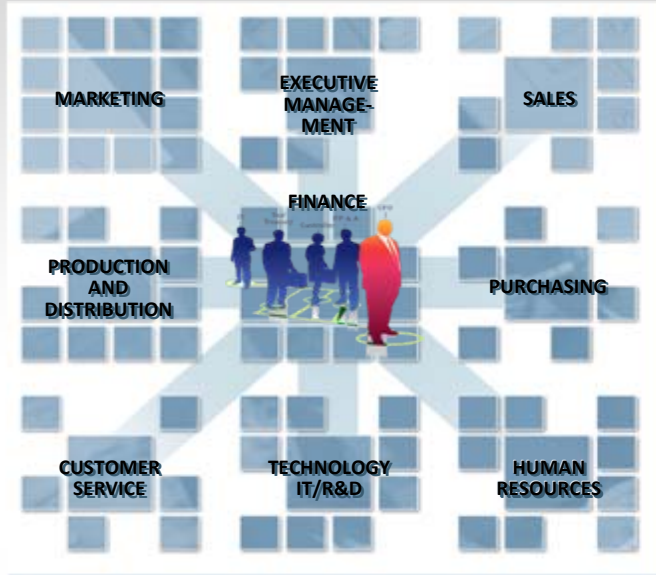
**CFO Magazine/Duke University Business Outlook,
September 2009**

“~60% of Finance organizations believe that they have to make major changes to respond [to growing industry/sector pressures]...”

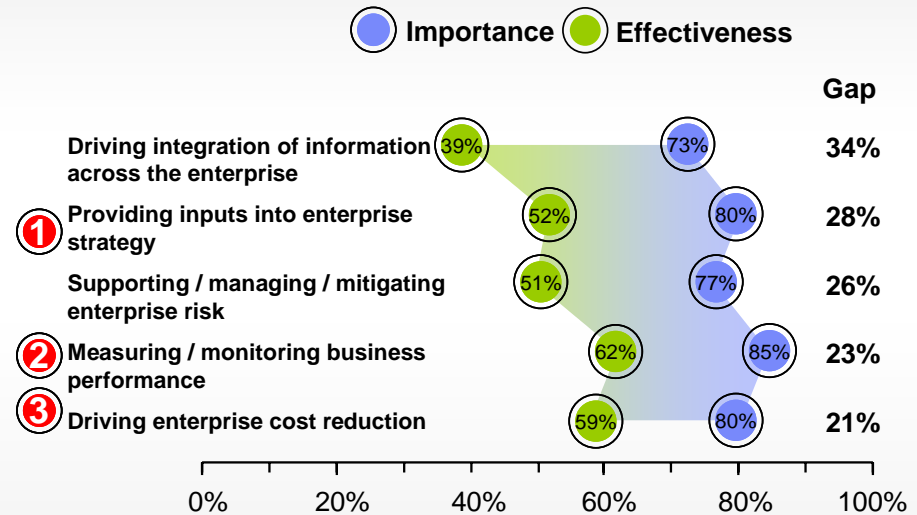
2010 IBM CFO Study



Driving a Smarter Enterprise



- 70% of CFOs believe they have an advisory or decision making role on an Enterprise Agenda
- Finance needs to improve its effectiveness in order to deliver on the Enterprise Agenda



Source: 2010 IBM Global CFO study

The Challenge with Decision-Making Today: Elevated Finance & IT Demands



**Business
Manager**



**Line
Manager**



**Financial
& Business
Analyst**



BI Professional



CIO



Executive



CFO

FINANCE EXECUTIVES

Inform, engage, and align the business user community in PM process to drive better business outcomes.

IT EXECUTIVES

Empower the business users while cost-effectively meeting requirements for performance, conformance scalability and compliance.



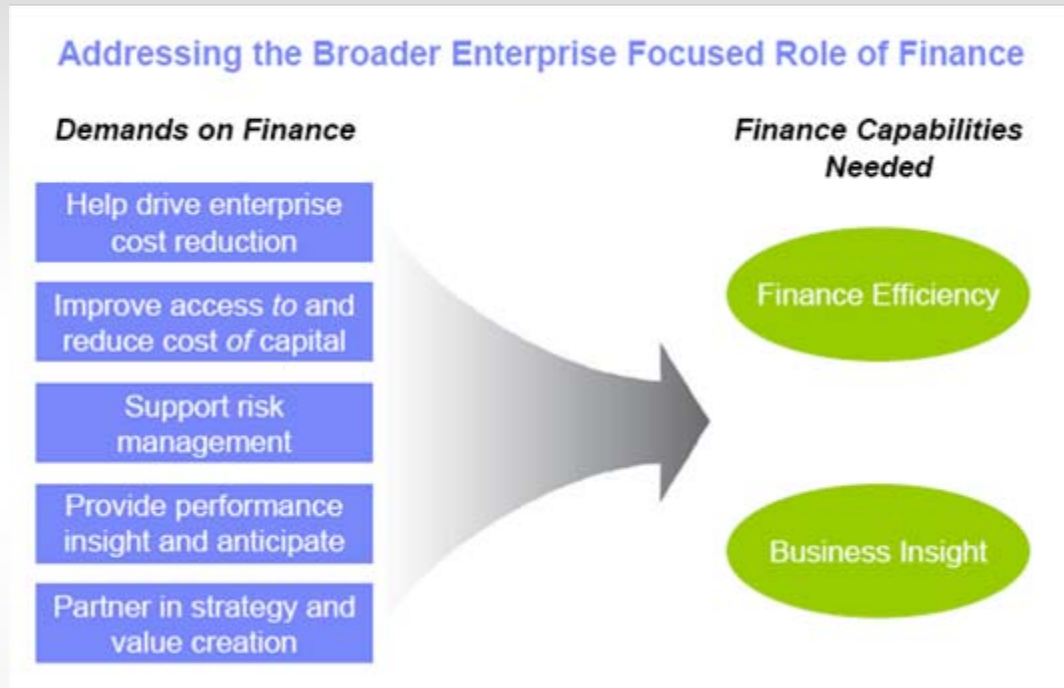
**Individual
Contributor**



Architect



This requires improved finance efficiency and business insight



Source: IBM Global 2010 CFO study

How do we get there? Information Led-Transformation



Sense and respond

Instinct and intuition

Skilled analytics experts

Back office

Automated

Predict and act

Real-time, fact-driven

Everyone

Point of impact

Optimized

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Financial Performance and Strategy Management



- Account Analysis
- Close Analytics
- Financial Consolidation
- Corporate Reporting

A 3D bar chart with four yellow bars of varying heights and a blue cylinder behind them, all on a light blue base.

- Financial Analytics
- Spend Analytics
- Profitability Analytics
- Product, Market, Channel Analysis

A 3D bar chart with four yellow bars of varying heights and a blue cylinder behind them, all on a light blue base.

- Strategic Finance
- Revenue Planning and Forecasting
- Expense Planning & Control
- Workforce Planning
- Capital and Initiative Planning

A 3D bar chart with four yellow bars of varying heights and a blue cylinder behind them, all on a dark blue base.

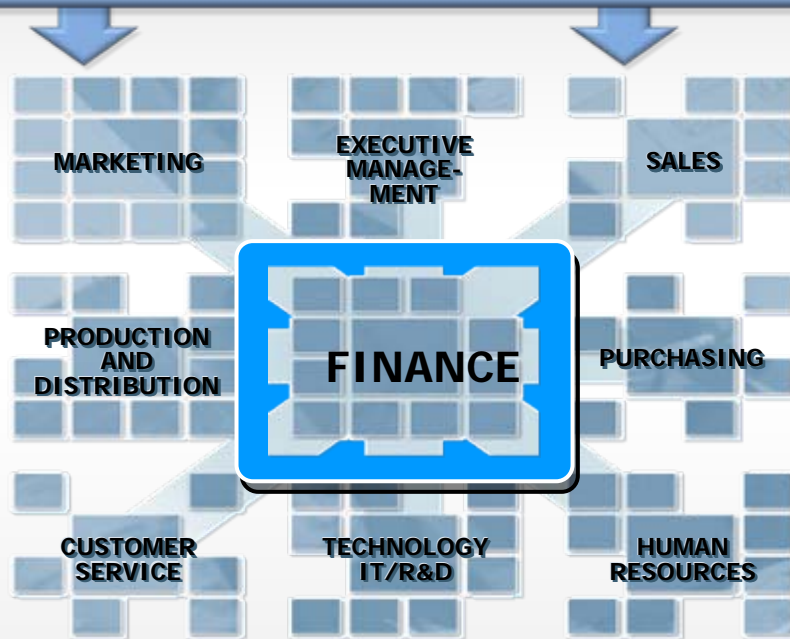


Planning and Analytics: A Distinctive IBM Advantage



IBM Advantage

- Connect strategic, financial and operational planning
- Address both high participation and deeply analytic planning
- Over 75 performance blueprints to accelerate success
- Advanced analytic value
 - Dashboarding/Visualization
 - Scenario Analytics
 - Statistics / Predictive Analytics



Business Analytics

Cognos.
software

Express

BI and planning purpose-built for midsize companies

Analytic Applications

Packaged reporting and analysis to optimize business performance

Controller

Consolidation and Corporate Reporting

TM1

On-demand Planning & Analytics

SPSS

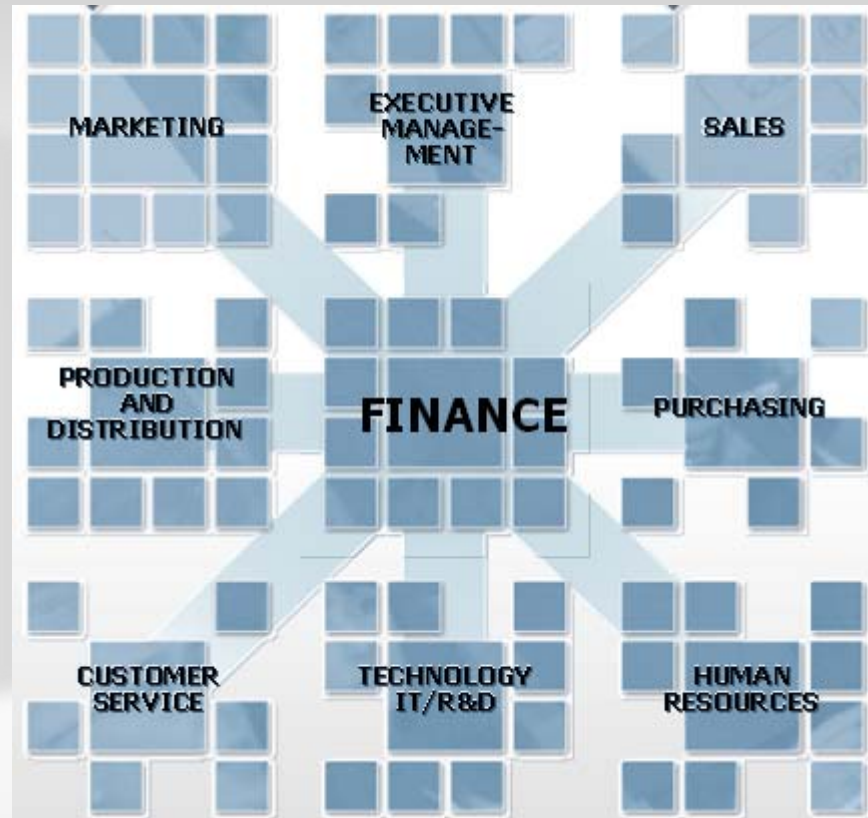
Predictive Capabilities

Business Intelligence

Reporting, Analysis, Dashboarding, and Scorecarding

Business Viewpoint

Dimension Management



PAIN: Inability to deliver timely, reliable forecasts & plans that align operational tactics with financial targets



Data governance risk of spreadsheet ONLY based systems in Finance

What percentage of receivables are uncollectable?

Increased support compliance-driven Finance initiatives

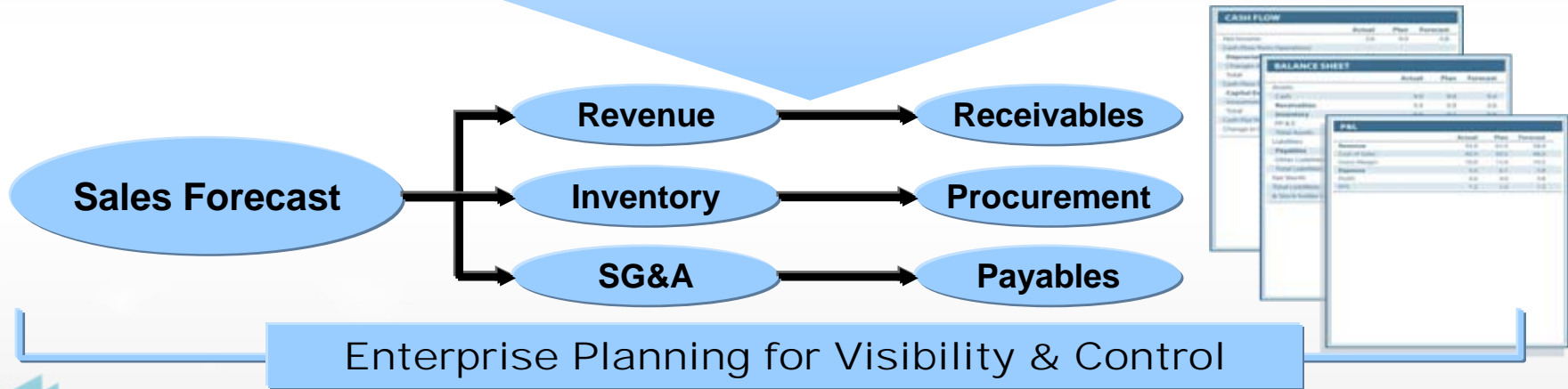


Weak Top-Down & Bottom-up Coordination

Enterprise Planning for Visibility & Control



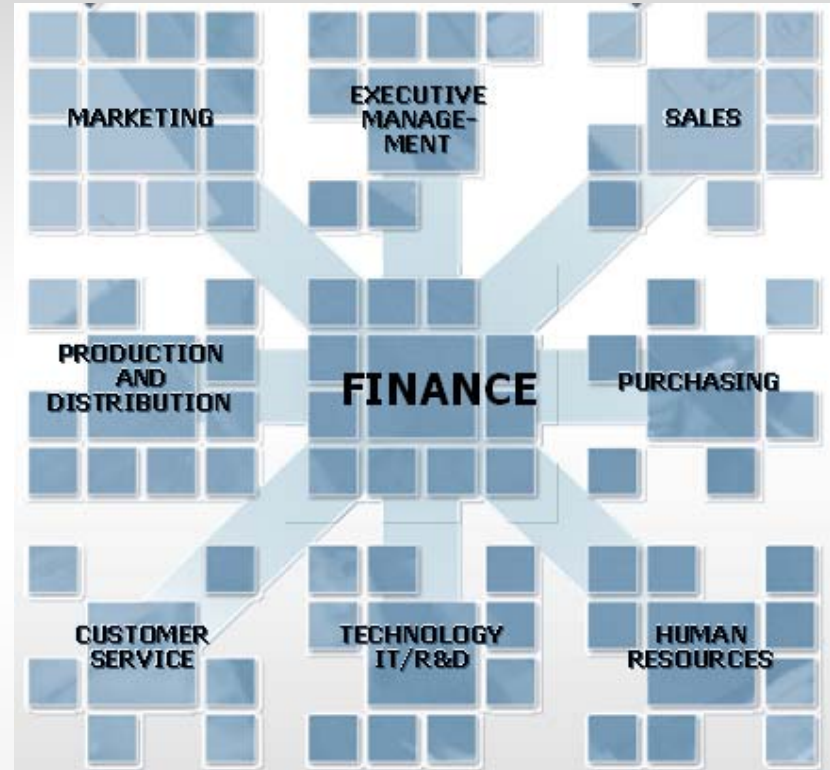
Improve forward view of the business by creating statistical relevant baseline forecasts and linking drivers to enterprise future plans



IBM Cognos TM1



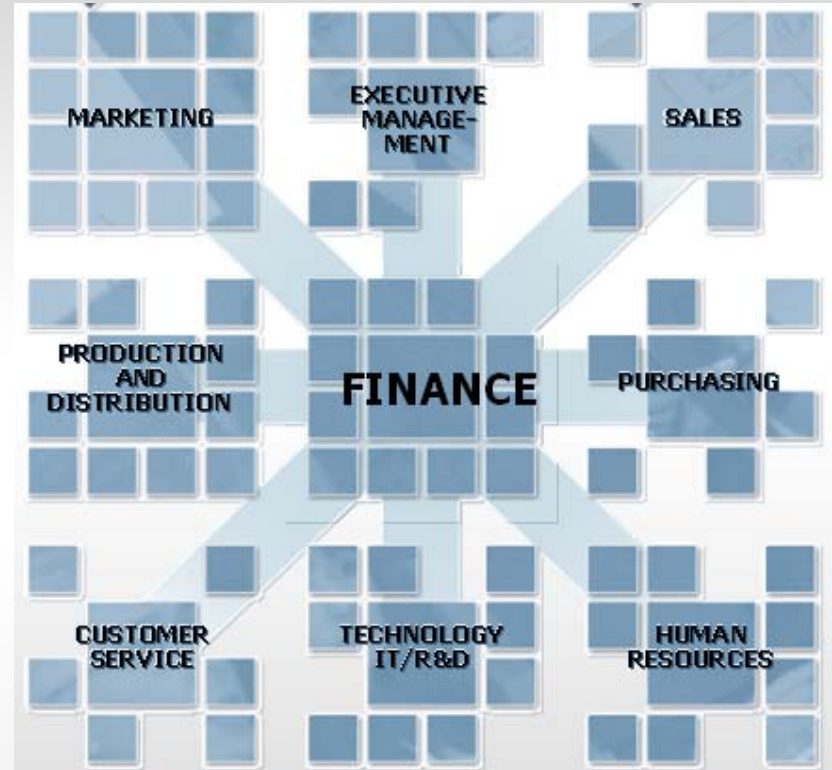
- A patented 64-bit read-write in-memory OLAP engine that provides **compact data storage** and exceptionally **fast performance**
- Model design and data access that presents business information in **familiar formats**
- **Ease of use**, thanks to a development environment that enables users to create sophisticated applications with no need for programming or traditional IT skills
- **An intuitive, flexible approach**, which enables users to easily express complex, multi-dimensional business rules
- **Fuses Analysis & Planning** together to provide greater accuracy
- A component of **Cognos 8 Performance Management Platform**



IBM SPSS



- IBM SPSS Modeler informs business decisions with predictive intelligence, helping organizations **proactively identify opportunities** that maximize profit and minimize cost.
- IBM SPSS Modeler's combination of enterprise scale data and text mining, with extensive integration capabilities, allows business stakeholders to **create powerful predictive models visually and intuitively**.
- Organizations use IBM SPSS Modeler to make **proactive decisions** using vast data stores that drive better customer management, marketing, fraud and risk mitigation, inventory management, and resource planning.



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Evolving Customer Requirements



FP & A



Contribute

- Familiar Web & Excel Deployment
- Rich Workflow
- Enterprise in scope with Application linkage
- Start small and expand enterprise wide
- Analysis Embedded in Contribution Process



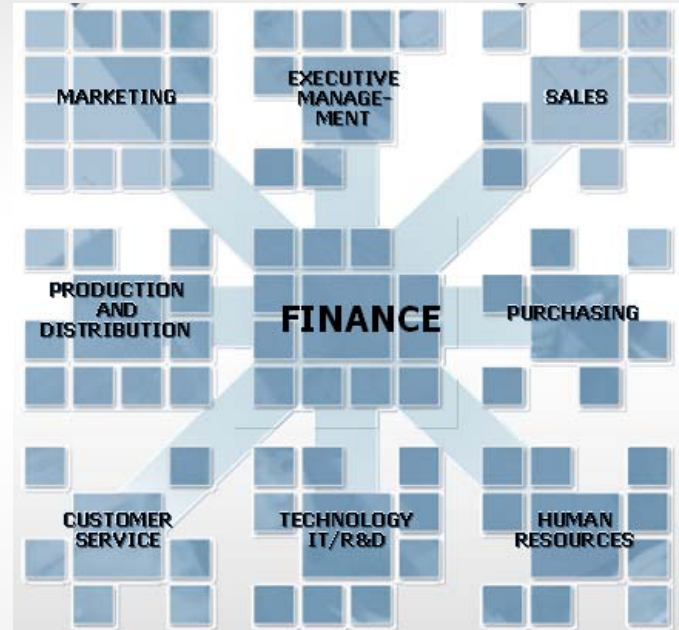
Model

- Centralized meta-data, data and business rule definitions
- Owned by Office of Finance
 - Driver based Planning
 - Rolling Forecasts
- Support of Planning Best Practices



Analyze

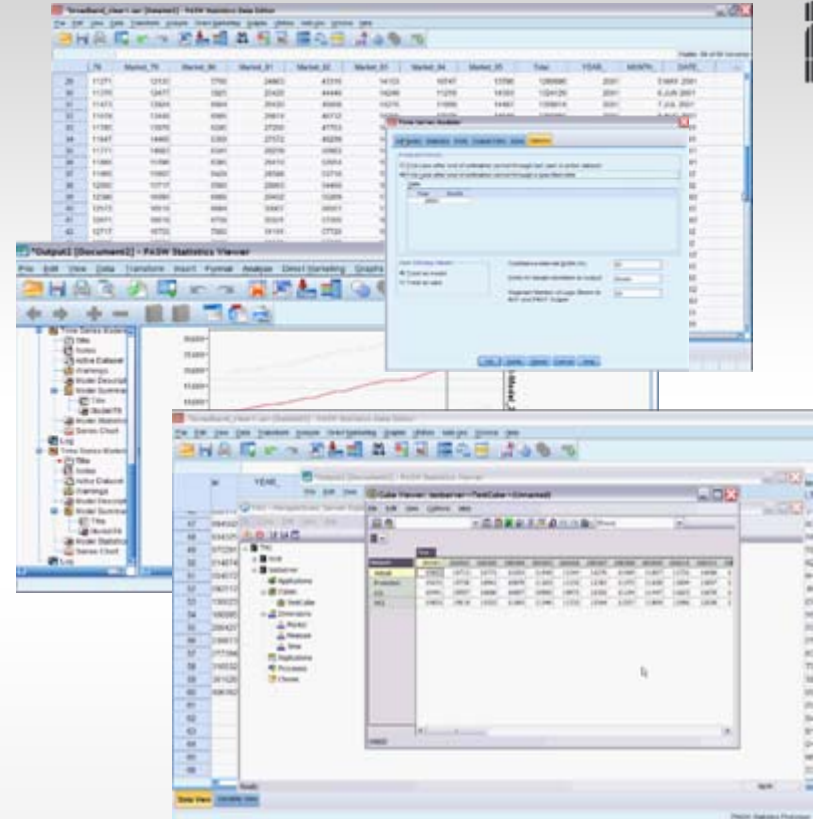
- Explore Performance Gaps
- Validate Corporate Drivers
- Define “What If” Scenarios
 - Organizational, Product Family, Product/Channel Mix
 - Test confidence levels of What If scenarios
- Validate Planning Assumptions



Predictive Forecasts with Planning for Optimal Outcomes



- SPSS to forecast future outcomes on historical data and driving factors
- Pre-populate TM1 plans with statistically significant forecasts for based line guide.
- Triangulate bottoms up plans; top down objectives and statistical forecasts to create risk-adjusted forecasts.
- Enables more proactive decision making, driving new forms of competitive advantage:
 - *Predict results and plan effectively to ensure optimal outcomes*



IBM SPSS Modeler

Model Types

■ Classification

- Generate **statistical base line forecast**.
- Algorithms that are used to make predictions or forecasts based on historical data

■ Association

- **Validate forecast assumptions** and current drivers
- Algorithms that are used to discover associations (links) or sequence (Apriori, CARMA, Sequence)

■ Segmentation

- **Identify forecast risks** in goal attainment
- Algorithms that are used to group (classify) as well as detect anomalies
- Anomaly detection is used to determine “who or what doesn’t fit?”

Executive **Tax & Treasury** **Risk** **FPA Team** **Line Manager** **Business Manager**

Association

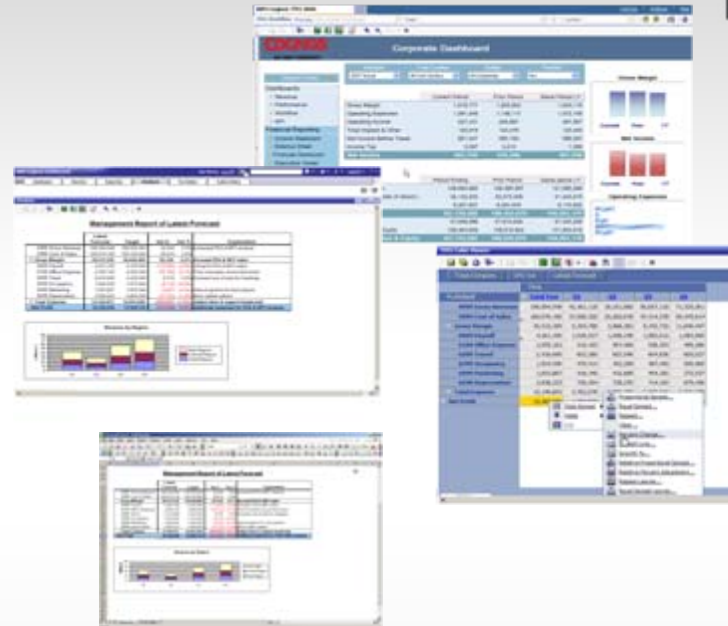
Classification

Segmentation



IBM Cognos TM1 Analysis

- **A patented 64-bit read-write in-memory OLAP engine:**
 - Optimized for large data volumes
 - Instantaneous updates from streamed data
 - Drill through to transaction systems for greater detailed analysis
- **Supports multi-dimensional analysis**
- **Advanced Sorting and Ranking**
- **Public and Personal Views**
- **Familiar Excel & Web interfaces**

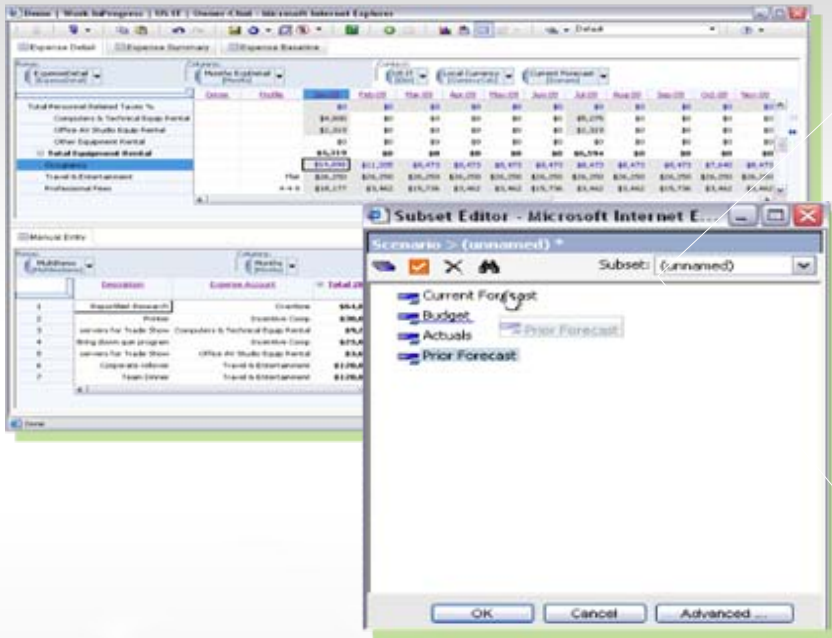


Analyze



IBM Cognos TM1

Advanced Analytics for Better Resource Allocation Decision-Making



- Personal Scenarios
- Contribution and Workflow
- Easier, Quicker Solution Deployment



Analyze – Scenario Modeling

Capabilities

- Leverage SPSS predictive capabilities
- Explore Performance Gaps
- Validate Corporate Drivers
- Define “What If” Scenarios
 - Organizational, Product Family, Product/Channel Mix
- Validate Planning Assumptions

Benefits

- Ability to meet the dynamic needs of the organization...
- Provide a fact based approach planning processes



Evolving Customer Requirements



FP & A

Contribute



Financial Analyst



Business Manager

Model



Financial Analyst

Analyze



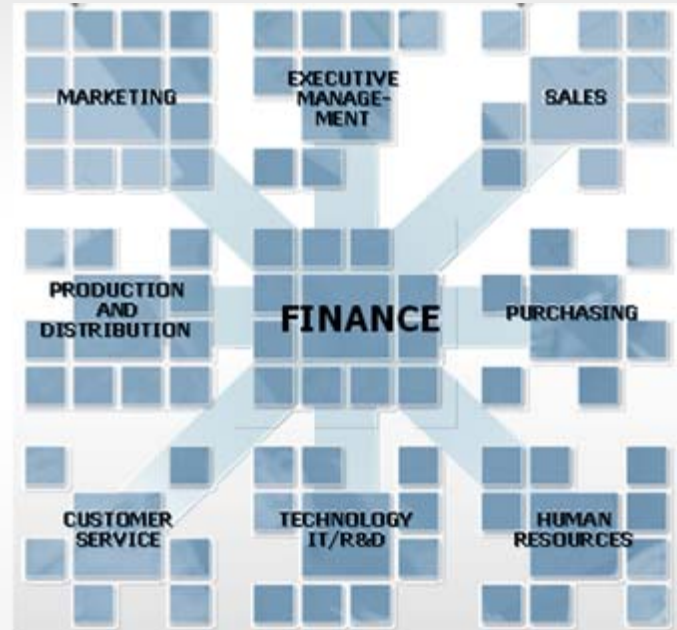
Financial Analyst



Business Manager

Model

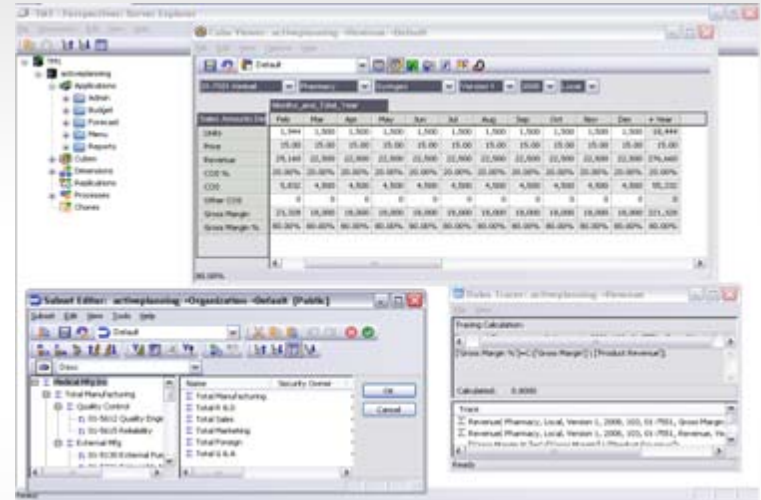
- Centralized meta-data, data and business rule definitions
- Owned by Office of Finance
- Support of Planning Best Practices
 - Driver based Planning
 - Rolling Forecasts



IBM Cognos TM1 Modeling



- Expression based modeling environment to define future based planning and analysis assumptions
- Integrated with HISTORICAL SPSS based forecasts
- On demand interactive simulation to test business scenarios
- Provides real time responsiveness for large and sophisticated models
- Can be deployed through Microsoft Excel & Contributor for new planning and analysis solutions
- An extension of the analysis process
- Owned by finance/business user



Model



IBM Integrated Planning & Advanced Analytics Modeling



Capabilities

- Fusion of Statistical & Judgment based forecasting
- Sophisticated Statistical capabilities to:
 - Generate statistical base line forecasts derived from historical data
 - Validate current forecast assumptions and drivers
 - Identify inaccurate planning
- Centralized meta-data, data and business rule definitions
- Certified connectors to SAP BW & R3
- Owned by Office of Finance
- Support of Planning Best Practices
 - Statistical & Driver based Planning
 - Rolling Forecasts

Benefits

- Ability to meet the dynamic needs of the organization
- Flexible to meet the broad requirements of financial & operational planning solutions
- Adapts to your business process
- Single version of the truth for all planning processes



Model



Evolving Customer Requirements



FP & A

Contribute



Financial Analyst



Business Manager

Model



Financial Analyst

Analyze



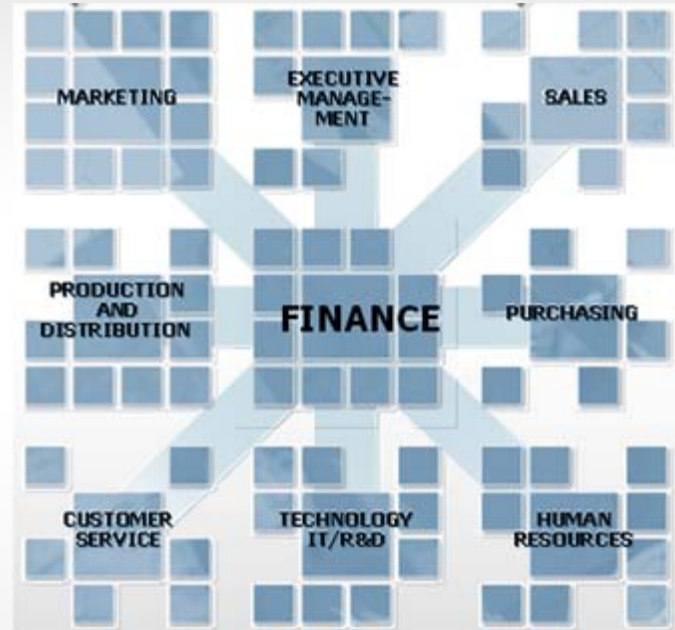
Financial Analyst



Business Manager

Contribute

- Familiar Web & Excel Deployment
- Rich Workflow
- Multiple Personalized Scenarios based on statistical base-line forecasts
- Enterprise in scope with Application linkage
- Start small and expand enterprise wide
- Analysis Embedded in Contribution Process



Contribution

Capabilities

- Familiar Web & Excel Deployment
- Rich Workflow
- Provides statistical base line personal scenarios
- Application linkage
 - Start small and expand enterprise wide
- A component of Cognos Performance Platform

Benefits

- Timeframe-appropriate Plans
- High Participation & Data Volumes
- A Wider / Deeper View
- Increased accuracy



Contribute



IBM Cognos TM1 Excel Based Contribution



- TM1 Server Explorer for power users to maintain dimensions, cubes, rules, and integration
- TM1 Excel to create rich planning and analysis solutions
- TM1 Web to deploy TM1 based Excel applications across the organization
- IBM Cognos 8 Business Intelligence for enterprise level analysis, scorecarding and financial & production reporting.



Contribute



IBM Cognos TM1 Managed Contribution



- Workflow
- Pick lists (driver execution)
- Undo/Redo feature
- End User Personalization (Multi pane docking)
- Multiple Personalized Scenarios based on statistical base-line forecasts
- Personalized Hierarchies
- Color code data changes
- Charting
- Drill down Support



Contribute



Managed Contribution



■ Deployment of TM1 Model Objects

- Quickly Turn TM1 Objects into Managed Applications

■ Planning Workflow

- Structured Planning Process Approvals

The screenshot displays the Application Definition Tool (ADT) interface. The main window shows a workflow diagram with four steps: 1. Define Contributor Views, 2. Select an Approval Hierarchy, 3. What is Unnamed, and 4. Define Security. The 'Define Contributor Views' step is highlighted, showing a list of views to be added to the application. Below this, a 'Contributor - Expense Forecast' window is open, showing a table of contributors and their roles.

Name	Role	Membership	Reviewer
Total Company	None	None	None
US Sales	None	None	None
US Operations	None	None	None
US IT	None	None	None
US Marketing	None	None	None
US Finance	None	None	None
US Legal	None	None	None
US HR	None	None	None
US Administration	None	None	None
UK Operations	None	None	None
US Sales	None	None	None

The 'Workflow Detail for Total Company' window shows the current state as 'Incomplete' and provides details about the workflow process, including the date and time of the last change.

Contribute



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Interest Expense Optimization: Increase the predictability of IBM's interest expense while optimizing over a longer term (5 years)



Business Challenge

- Short Term Focus: Interest expense accounts for 8-10% of IBM's PTI and the current forecasting process only tries to provide point estimates of expense over next 4-8 quarters
- Complex Data Interaction: Interest expense forecasting requires collection of data from disparate sources (actual and forecast), projecting IBM's funding requirements across multiple currencies and projecting future interest rates across multiple currencies
- Lack of Optimization: Current process does not plan for optimizing interest expense predictability vs. lower expense over a longer term horizon

Analytical Approach

- Data Integration: DB2 platform runs on a Cloud infrastructure and integration being done by building different system connectors to import data into one common platform
- Data Visualization and Funding Planning: Cognos interface as a one stop shop
- Interest Rate Modeling: Simulation engine to predict interest rates for multiple currencies



Business Impact

- Manage interest expense within an acceptable variability (YoY) while managing liquidity/ financial flexibility and keeping the expense low over a longer period
- Being built with help from IBM Research (Systemic Risk Institute)
 - 12 Weeks (Completed): Concept, Design and Prototype Development (Research & Treasury)
 - 4 Weeks (Initiated): Testing and Operational (Research, Finance IT and Treasury)
 - 4-8 Weeks : Optimization (Research and Treasury)



GAP provides an analytics system to performance by modeling relationship between sales capacity and revenue



CRITICAL NEEDS

Better visibility into returns expected from resource investment and whether investments are sufficient to deliver the business plan

A robust view of productivity and opportunities to improve

A comprehensive, yet easy to grasp, tool to support F&P and facilitate decision making



Gap Resource Capacity Model

- Enables analysis and modeling of historical productivity
- Test/simulates viability of sales plans/targets and hiring plans/targets relative to different assumptions (e.g. productivity improvements).
- Provides the ability to:
 - Determine the optimal size of sales force
 - Determine best deployment across various regions
 - Make accurate financial targets and determine the gap to target
 - Get a true picture of intrinsic sales force productivity in a region/brand
 - Run scenarios to assess optimal actions needed to make targets (e.g. sales force actions, expense reallocations or productivity improvements)

Resource Planning

“How many incremental sellers are needed in 2009 to deliver x% revenue growth in 2010?”

Performance Management

“Which Brands / Regions / Units have delivered returns in proportion to investments?”

Plan Scenarios

“How much revenue can I generate with the current salesforce?”



Statistical Tracking & Assessment of Revenue (STAR): Accurate forecasting of quarterly results



Business Challenge

- Early and continuously forecasting of in-quarter results a highly critical activity to enable rapid shifts of focus and resources to close gaps.
- Forecasting is a manually intensive effort, involving a wide range of considerations and inputs
- Additionally, biases due subjective perspectives by analysts and management have sometimes resulted in surprise misses toward the end of the quarter.

Analytical Approach

- STAR delivers quarter-end revenue estimates for WW and Geo/Brand audience
- Predictive analytics for revenue. Uses statistical techniques to analyze historical pipeline / contract data at a detail level
- The assessments are updated on a weekly basis and go to the IMT/sub-Brand (e.g., France/AMS SO) level.
- STAR defines the starting point for the business, which then needs to add intelligence such as supply constraints, major announcements, detailed knowledge of the largest deals in the works, etc.



Business Impact

- Efficient generation of revenue assessments by eliminating the manual effort of the bottoms-up revenue forecasts
- Objectivity / lack of bias in the assessments
- Accuracy and consistency for greater for greater actionability
- Improvement over incumbent assessments as measured by the average deviation from actual (over last 7 quarters):





Cognos Viewer - Marketing Analysis - Windows Internet Explorer

http://cognosprod/cognos8/cgi-bin/cognos.cgi?b_action=dashboard&pathInfo=/cm&frag-header=true&path=storeID(%2230) Live Search

Cognos Viewer - Marketing Analysis

Cognos Viewer - Marketing Analysis Admin Log On Launch About

Key Reports and Analysis

Marketing Analysis

MAJOR PROGRAMS CY Planning MARKETING PLAN CONTRIBUTIONS Cross-Sell Analysis

CROSS-SELL CAMPAIGN HISTORY NEW CUSTOMER CAMPAIGN HISTORY SEASONAL CAMPAIGN HISTORY PROGRAM EXPENSES

CROSS-SELL CAMPAIGNS

1. Select the YEAR(s) for your Campaign exploration.

2. Then select the PRODUCT CLASS for which you wish to view Campaign Performance.

3. When you select a PRODUCT CLASS, the list of SKUs in that class will appear BELOW. Optionally choose SKUs to narrow your focus.

4. Press FINISH apply your filters.

2008
2009
2010

Select All Deselect All

Product Class

Flat Panel TVs
Home Theater
Blu-ray and DVD Players
Receivers
MSMA
Car Audio

Finish

THEATRE IN MOTION

REVENUE [\$K]

Month	Budget	Actual/Forecast
Jan-09	\$4,200	\$4,500
Feb-09	\$4,200	\$4,800
Mar-09	\$4,200	\$4,500
Apr-09	\$4,200	\$4,600
May-09	\$4,200	\$4,700
Jun-09	\$4,200	\$4,800
Jul-09	\$4,200	\$4,700
Aug-09	\$4,200	\$3,800
Sep-09	\$4,200	\$4,200
Oct-09	\$4,200	\$3,800
Nov-09	\$4,200	\$3,800
Dec-09	\$4,200	\$4,000

GET AND RECEIVE

REVENUE [\$K]

Month	Budget	Actual/Forecast
Jan-09	\$1,400	\$1,400
Feb-09	\$1,400	\$1,200
Mar-09	\$1,400	\$1,400
Apr-09	\$1,400	\$800
May-09	\$1,400	\$600
Jun-09	\$1,400	\$800
Jul-09	\$1,400	\$800

IMPACT: Timely, reliable forecasts & plans that align operational tactics with financial targets. Better, confident resource allocation decision-making.



Enterprise Planning and Analysis

FROM

- ✗ Limited reach, low speed
- ✗ Financial - only focus
- ✗ Static, long horizons
- ✗ Inconsistent data definition

TO

- ✓ High participation, high frequency
- ✓ Driver-based, connected across finance and ops
- ✓ Rolling, Dynamic horizon
- ✓ Consistent data definitions

Owned by Finance, to IT Standards

Q & A



Additional Information & Assets



IBM
United States | change | Search

Home Solutions Services Products Support & downloads My IBM | Welcome | IBM Sign in | Register

IBM Cognos Innovation Center

Your connection to best practices and industry leaders

Cognos software Business Analytics

Welcome to the world of championship high performance.

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The Innovation Center brings together technology experts, finance professionals and performance management thought leaders to promote proven techniques, technologies and best practices in performance management. Connect with peers and industry leaders as you learn from their experience.

Desktop Widget

The Cognos Innovation Center desktop widget enables delivery of the latest resources, news and events directly to your desktop.

Live Events | Cognos Innovation Center Communities

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Finance Champions

Develop your strategy, educate your company and deliver a successful solution

- Prepare Your Planning and Analytics Strategy
- Navigate Workplace Politics and Culture
- Deliver a Successful Solution with Technology

Prepare Your Planning and Analytics Strategy

Assess your goals and needs, read up on the latest best practices, nail down your business case.

Define your strategy

Assessment: The Value Impact Profile for Planning
This new self-assessment tool will help Champions like you determine the gaps and barriers in your planning processes, such as managing revenue, expenses or capital expenditures. The tool guides you in defining your goals and objectives and viewing the possible metrics and benefits derived from particular capabilities.

Assessment: The Value Impact Profile for Financial Analytics
Use this assessment tool to determine the gaps in your financial analytics processes, such as profitability analysis, scenario modeling and profitability related to revenues or expenses, that

IBM

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Seven Symptoms of Forecasting Illness

An IBM Report on the Risks of Inaccurate Forecasting

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Business Forecasting Six Design Principles for Healthier Forecasts

An IBM Report on Forecasting Best Practices

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Five Advanced Practices for More Robust Forecasting

An IBM Report on Forecasting Best Practices

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