IBM Business Analytics

Smarter Decisions. Better Results.

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IBM Business Analytics
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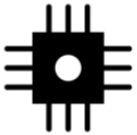


Our world is becoming

INSTRUMENTED

Our world is becoming

INTERCONNECTED

Virtually all things, processes
and ways of working are becoming

INTELLIGENT

… to help build a Smarter Planet

Data Explosion In A Smarter World!

Volume of Digital Data

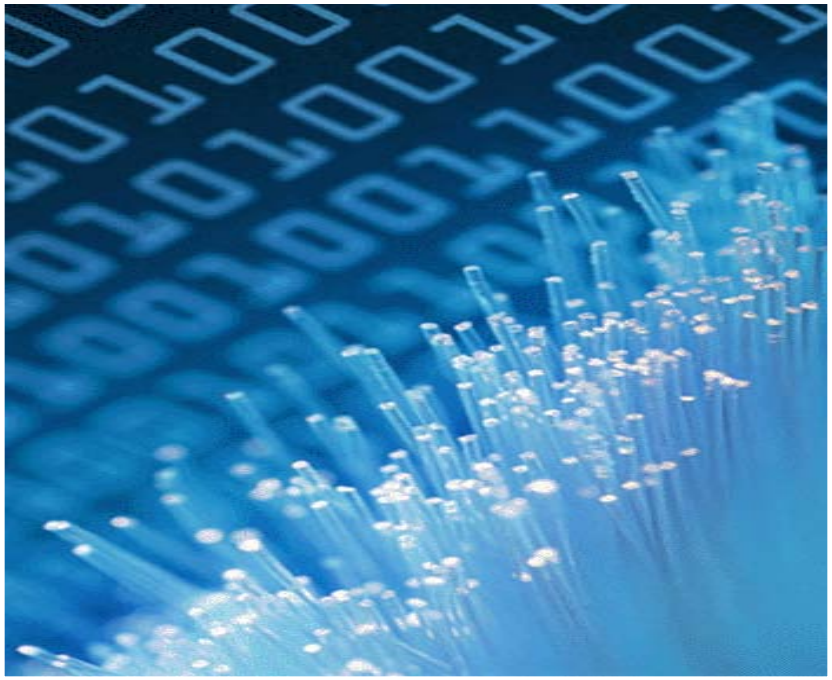
- 57% CAGR for enterprise data through 2010
- Machine generated data : Sensors, RFID, GPS..

Variety of Information

- 80% of new data growth is unstructured content
- Emails, images, audio, video..

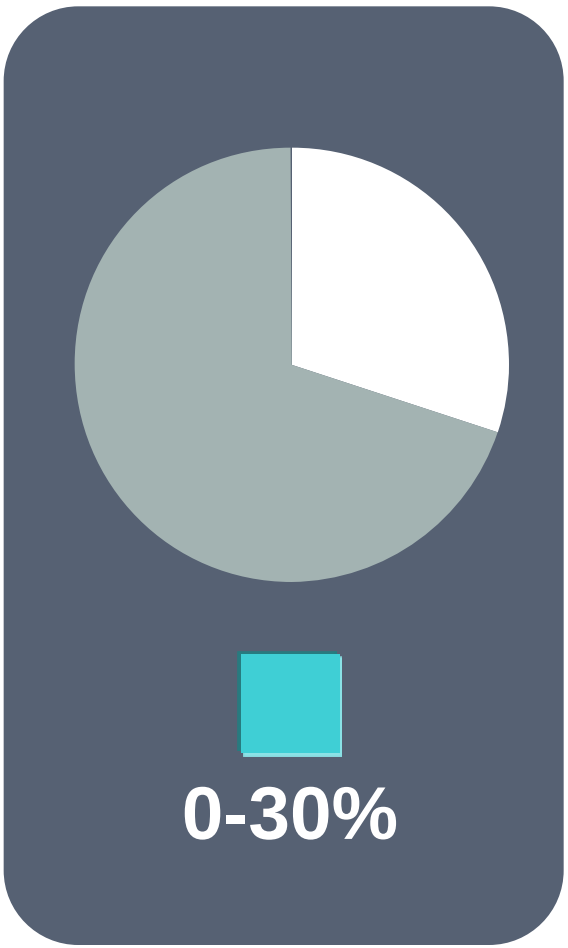
Velocity of Decision Making

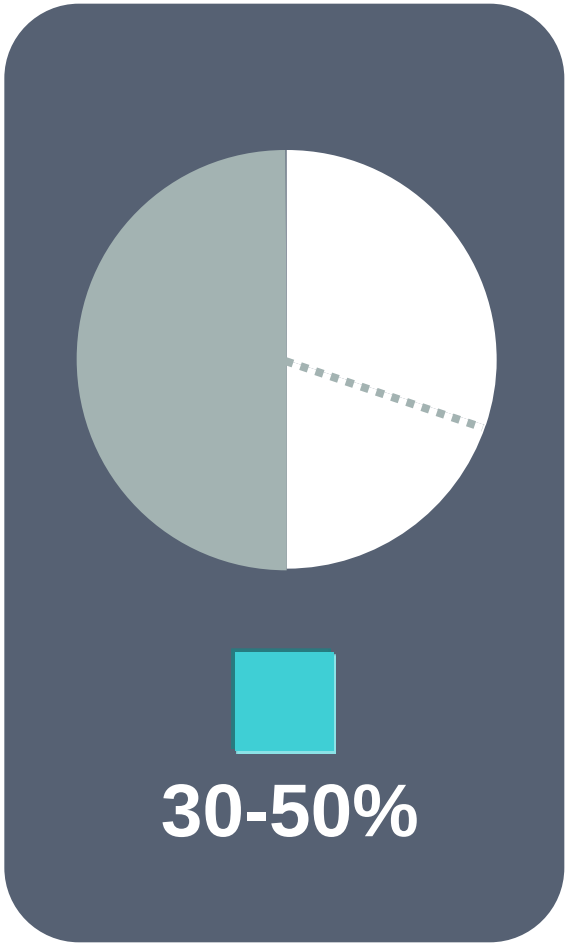
- Rapidly changing business climate
- Need to get ahead of the curve : predict issues and fix them

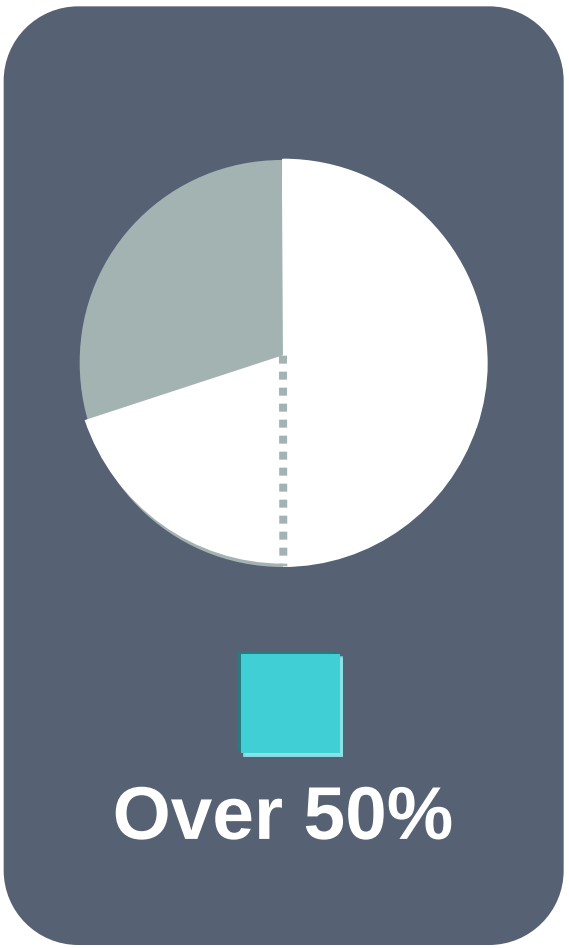


New Data → New Information → New Decisions

Percentage of users that don't have confidence in their information







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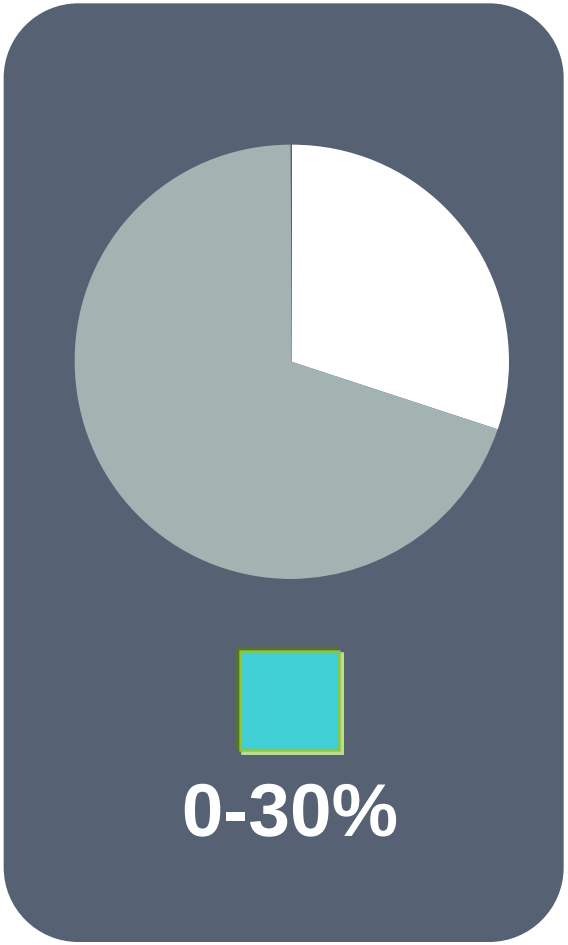
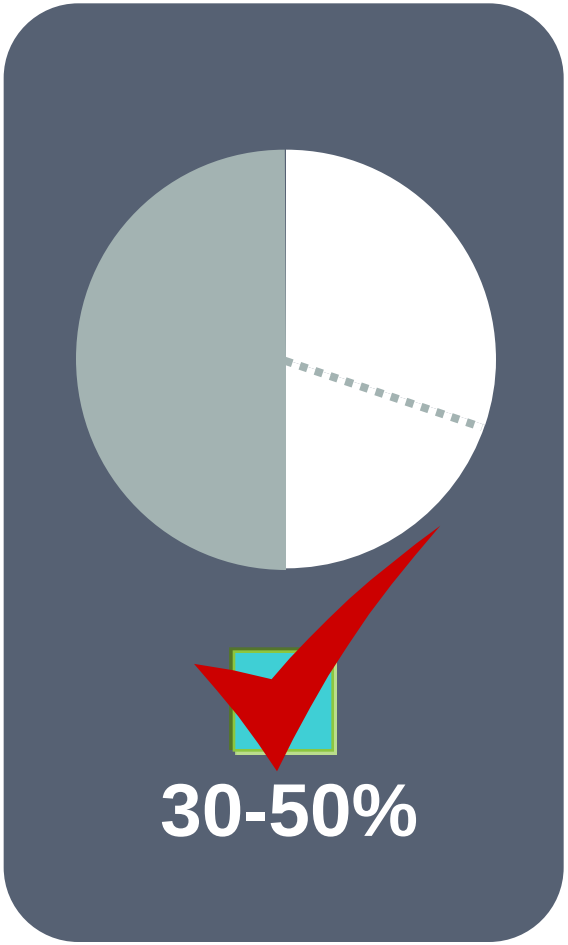
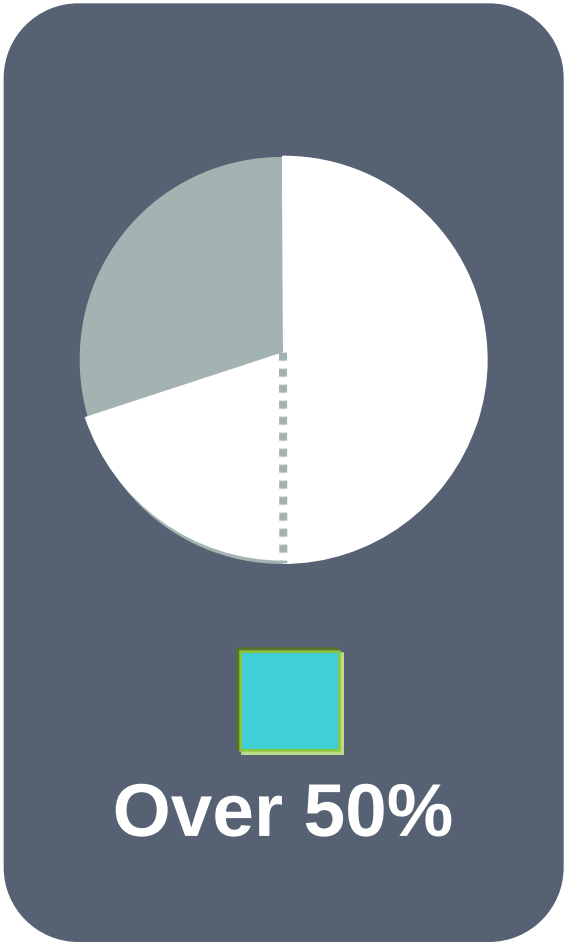






How much time do managers waste each day, searching for information?

0-30 min

1-3 Hours

Over 3 Hours

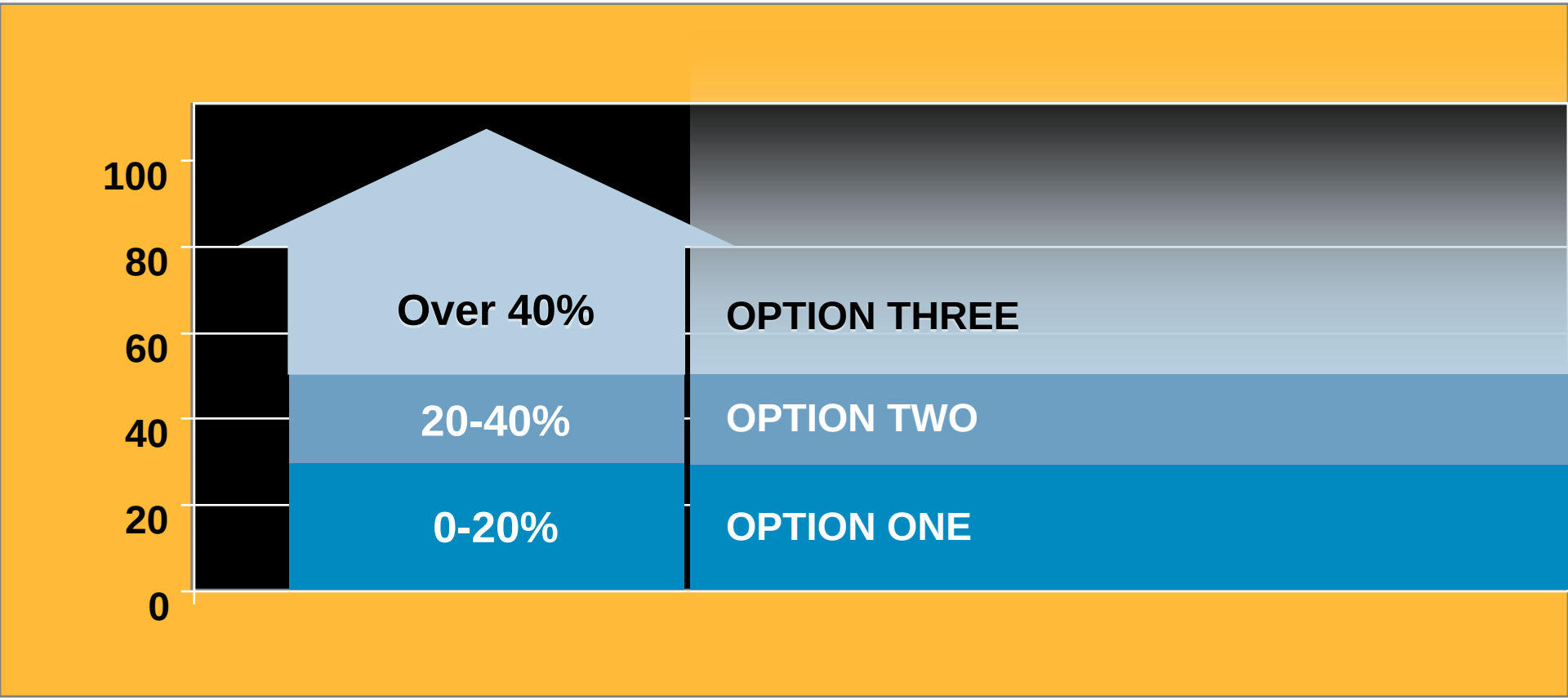
Time managers waste each day searching for information

0-30 min

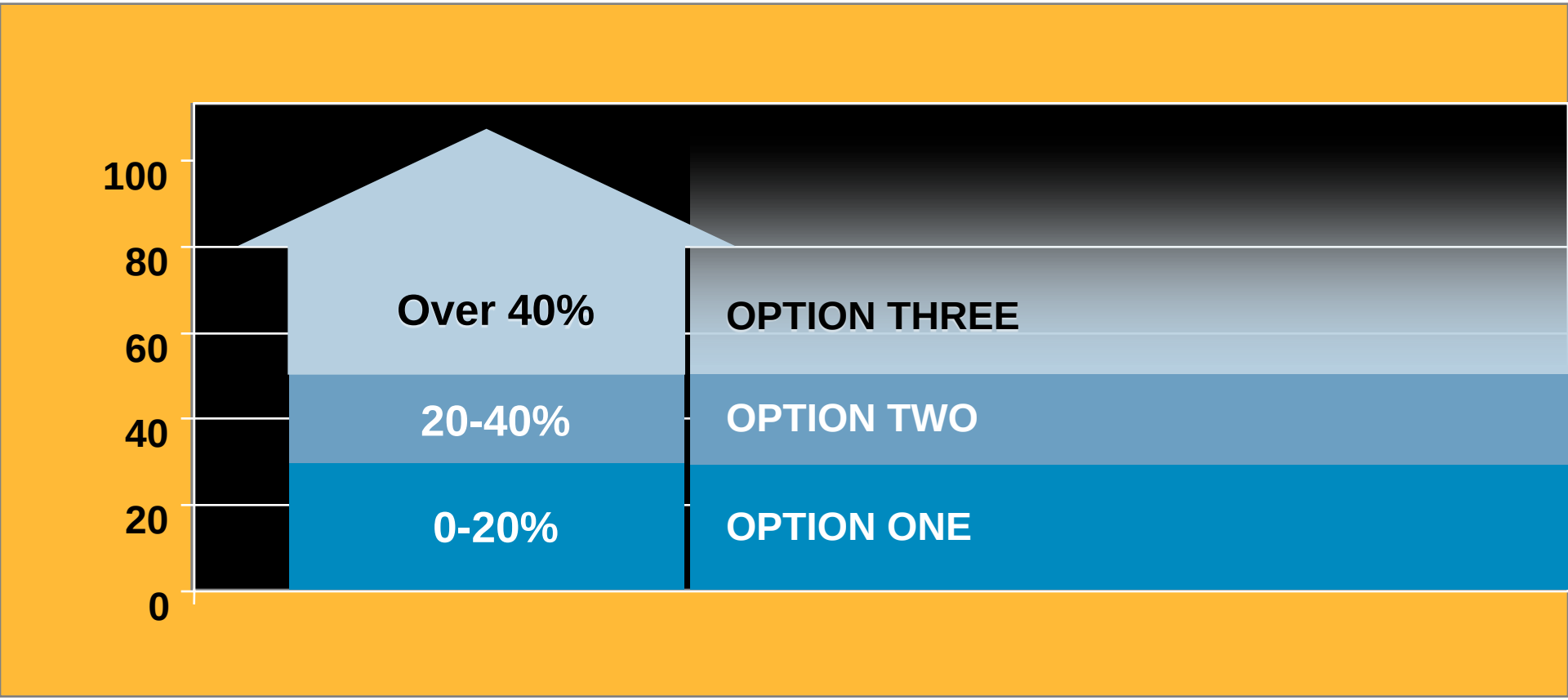
1-3 Hours

Over 3 Hours

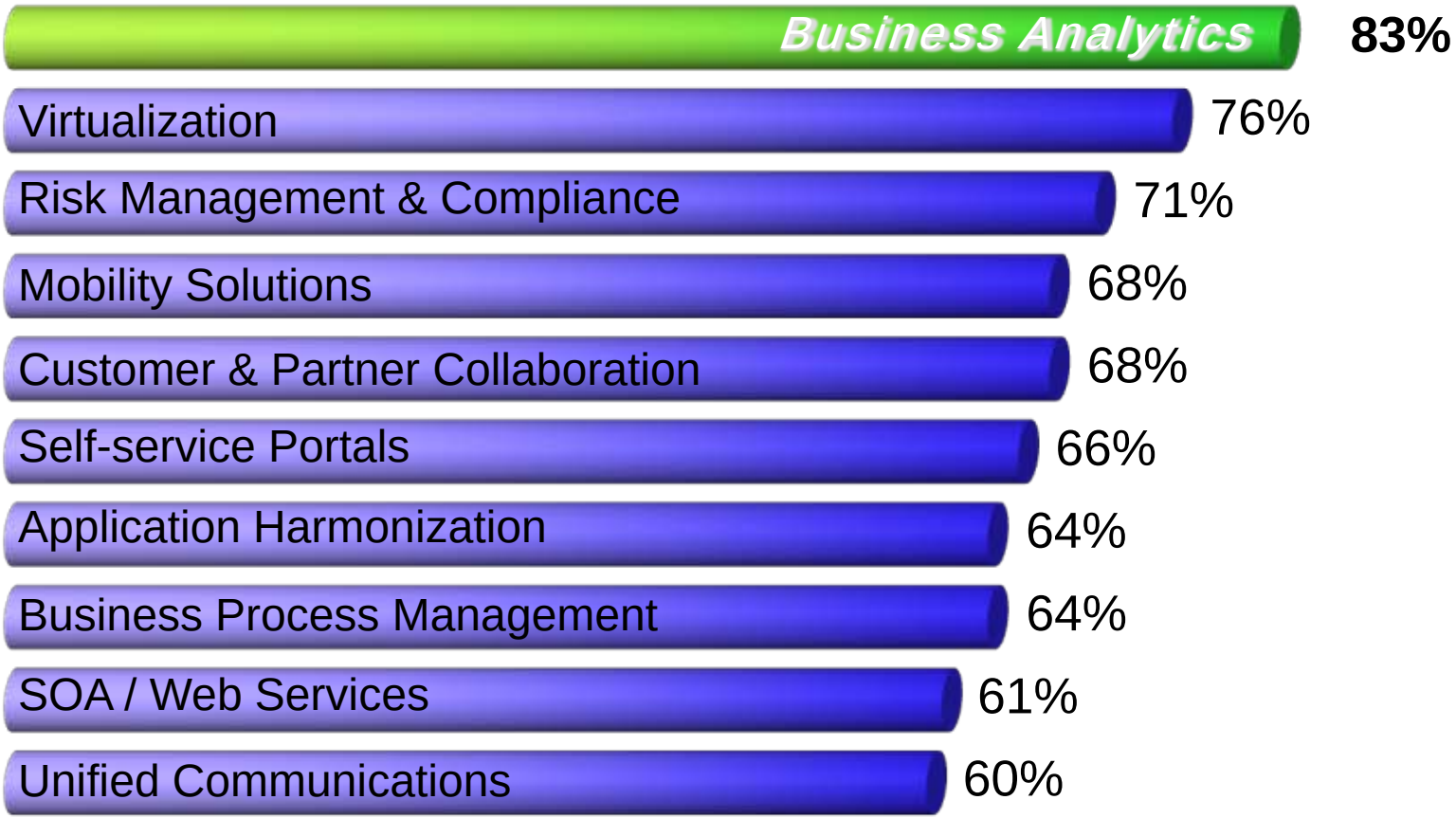
What percentage of managers accidentally use the wrong information at least once a week?



Percentage of managers accidentally use the wrong information at least once a week



#1 CONCERN

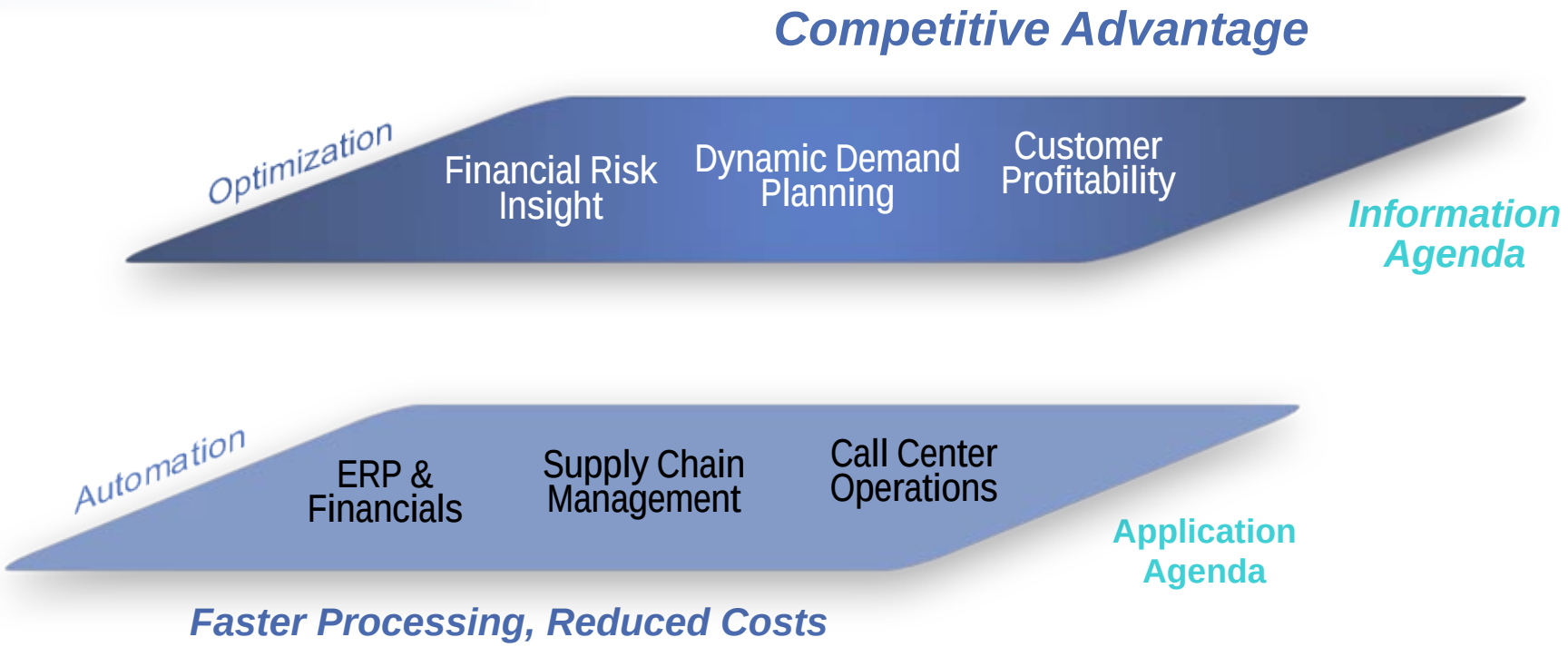


Source: IBM Global CIO Study 2009, n = 2345,

New Investments Increasingly Focus on Optimization

Organizations Striving for Competitive Advantage

Business Optimization Growth is 2 Times Faster than Business Automation



Business Analytics

- Instrumented
- Interconnected
- Intelligent

Information Led Transformation

PERFORMANCE

DECISION MAKING

TRUSTED INFORMATION

DATA

IBM is Aligning Behind Four Key Initiatives

"Our resources are limited"
I need efficiency

Green & Beyond

"Data is exploding and it's in silos"
I need Insight

New Intelligence

"My infrastructure is inflexible and costly"
I need to respond quickly

Dynamic Infrastructure

"New business & process demands"
I need to work smart

Smart Work

IBM Investing in Core Business Analytics & Optimization Capabilities

Services

redpill
Customer Analytics
2009

NISC National Interest Security Company, An IBM Company
Federal Govt Security
2010

BAO Software

COGNOS
BI & Performance Management
2008

ILOG™
Business Rules & Optimisation
2008

SPSS
Predictive Analytics
2009

Coremetrics An IBM Company
Web Analytics
2010

Foundation

FileNet
Business Process & Content Management
2006

SRD
Identity Resolution
2005

Ascential Software
Enterprise Data Integration
2005

DataMirror
Dynamic Data Integration
2007

IAS
Name Recognition
2006

dwl
Customer Data Integration
2005

iphrase
Search & Content Management
2005

unicorn
Metadata Management
2006

princeton softech
Enterprise Data Management
2007

solid.™
Real-time, In-Memory Data Management
2008

EXEROS
Data Discovery
2009

Guardium®
Database Monitoring & Protection
2009

Datacap
Data Capture & Content Management
2009

Initiate
Data Integrity & MDM
2010

CAST IRON SYSTEMS
Cloud Data Integration
2010

Continued Expansion of These Core Capabilities

Services

BAO Software

Foundation

OpenPages

- **Proven GRC solutions leadership; ~ 200 customers across all sectors**
- **Addresses a growing market opportunity**
  - Expands applications to Enterprise-Wide Risk Management
  - Supports “Office of Finance” with Compliance and Risk Management
  - Deepens existing industry solutions for Integrated Risk Management
  - Arms BAO Services practice with world-class enabling technology platform
  - Synergy with Information and IT Governance, Risk Management, and Security
- **As partner, already embeds IBM Cognos BI and offers IBM Hosting**

NETEZZA

- **Leading provider of data warehouse appliances with over 350 clients with blue chip reference accounts in all major industries**
- **Extends market opportunity**
  - Complements workload optimized systems, and Cognos, SPSS, InfoSphere software
  - Speed and simplicity of deployment accelerates solutions in high-growth markets and among small and mid-size clients
- **Complementary expertise;** Netezza technology and expertise in focused appliances will extend innovation leadership in information appliances

The acquisition is subject to applicable regulatory clearances and other customary closing conditions.

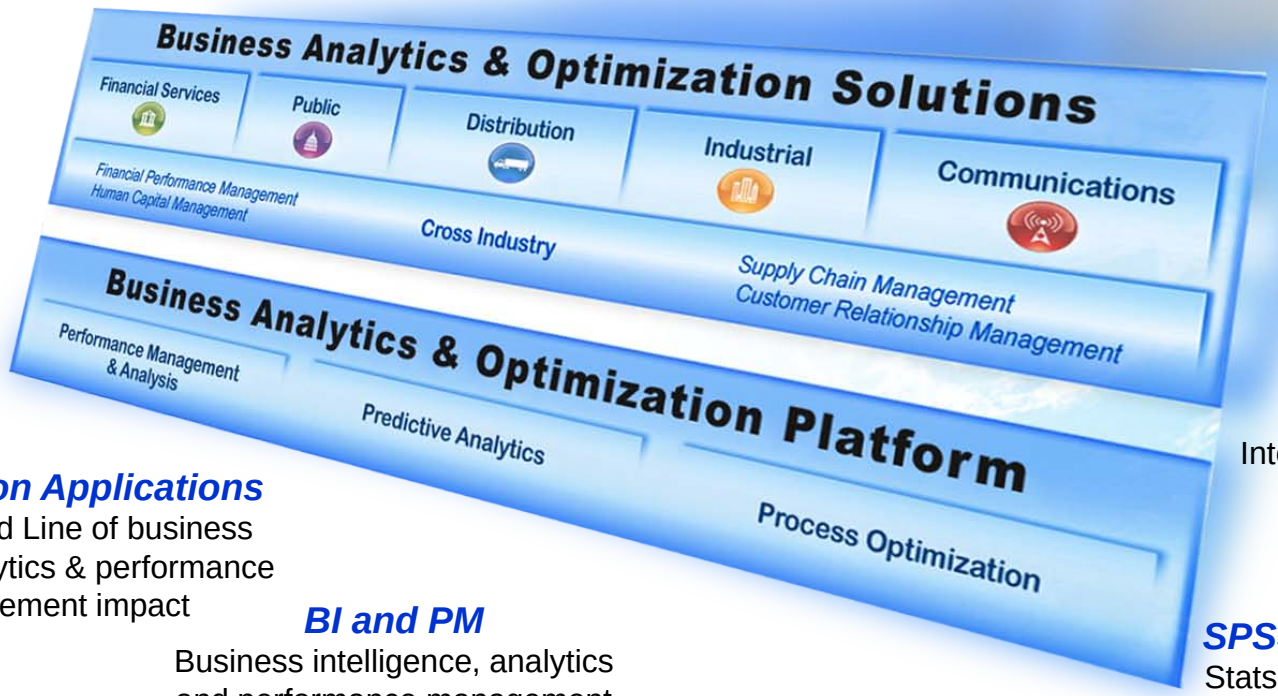
IBM Business Analytics

SPSS AN IBM® COMPANY

Cognos® software

OpenPages an IBM® Company

Clarity Systems an IBM® Company



Clarity
Financial Governance (including XBRL)

Open Pages
Integrated Operational Risk Management

Information Applications
Industry and Line of business specific analytics & performance management impact

BI and PM
Business intelligence, analytics and performance management platform

SPSS Predictive Analytics
Stats and predictive analytics for high impact decisioning

Optimizing Business Performance

MARKETING

FINANCE

SALES

HR

Decide & Act

CUSTOMER SERVICE

IT

PRODUCT DEVELOPMENT

OPERATIONS

Optimizing Business Performance

MARKETING

FINANCE

SALES

HR

How are we doing?

Why?

What should we be doing?

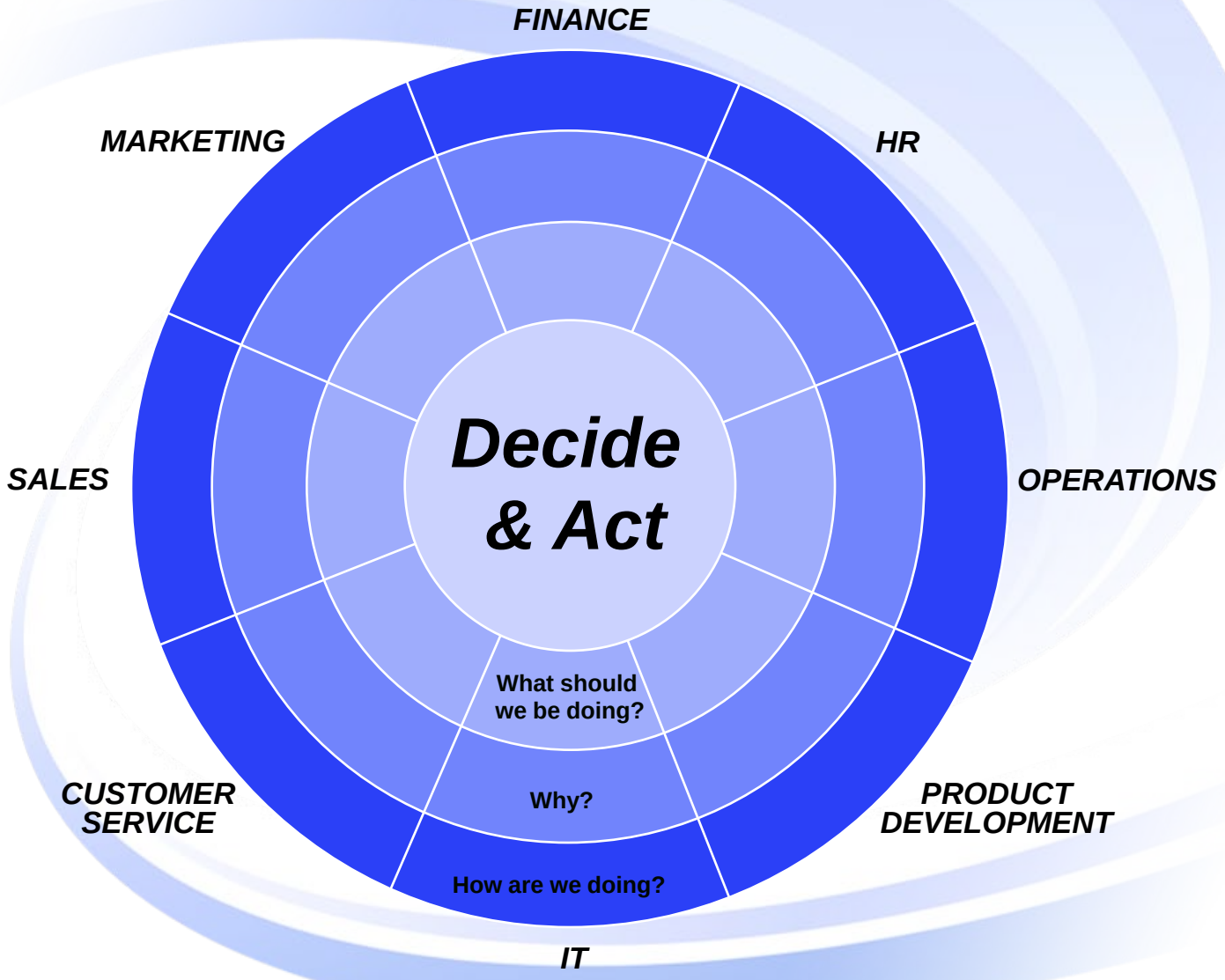
CUSTOMER SERVICE

IT

PRODUCT DEVELOPMENT

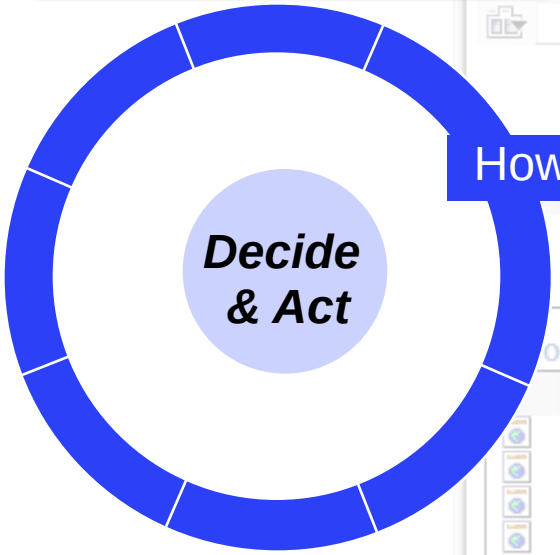
OPERATIONS

Informed, Aligned Decisions and Actions

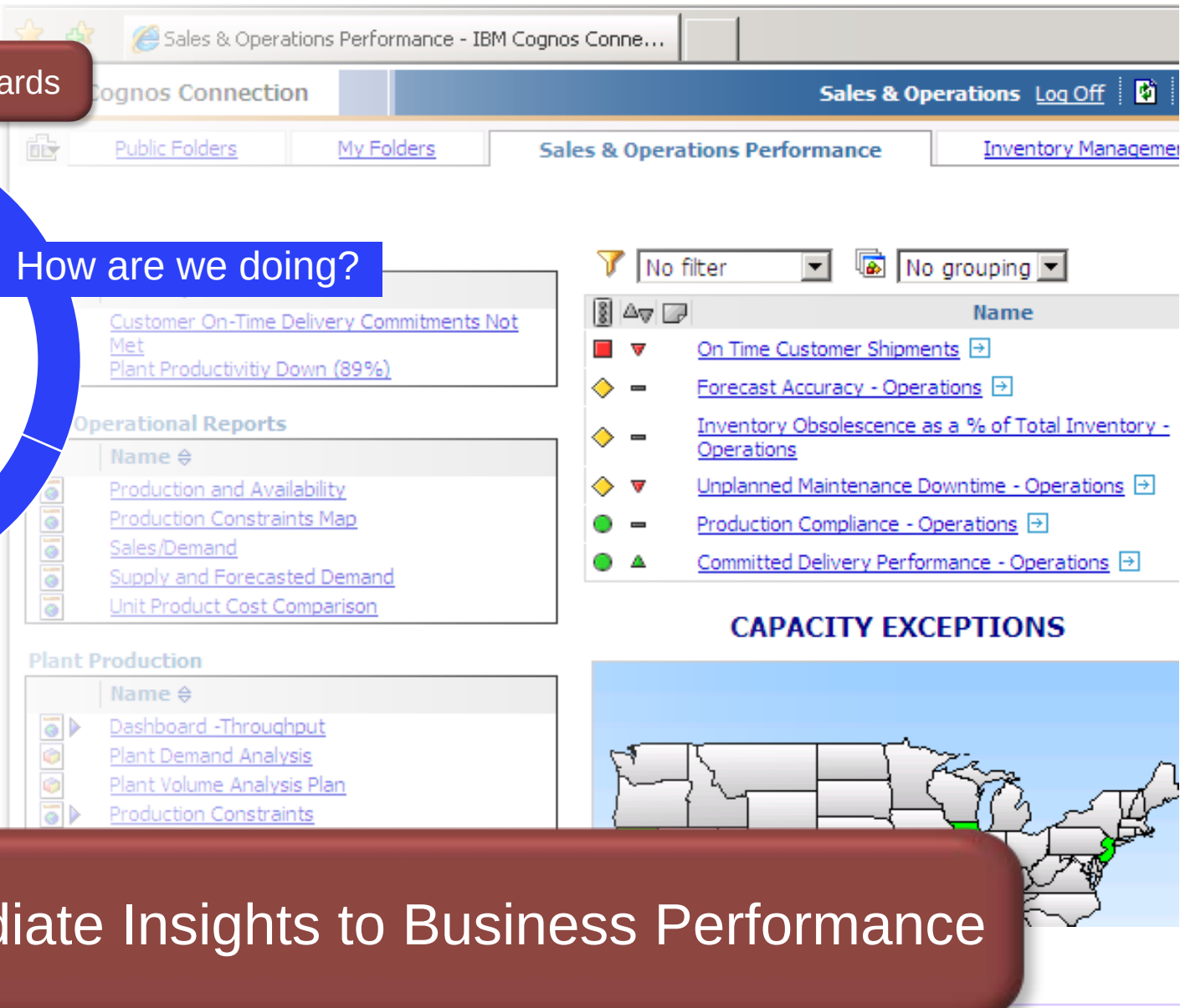


For Example…….

Scorecards & Dashboards

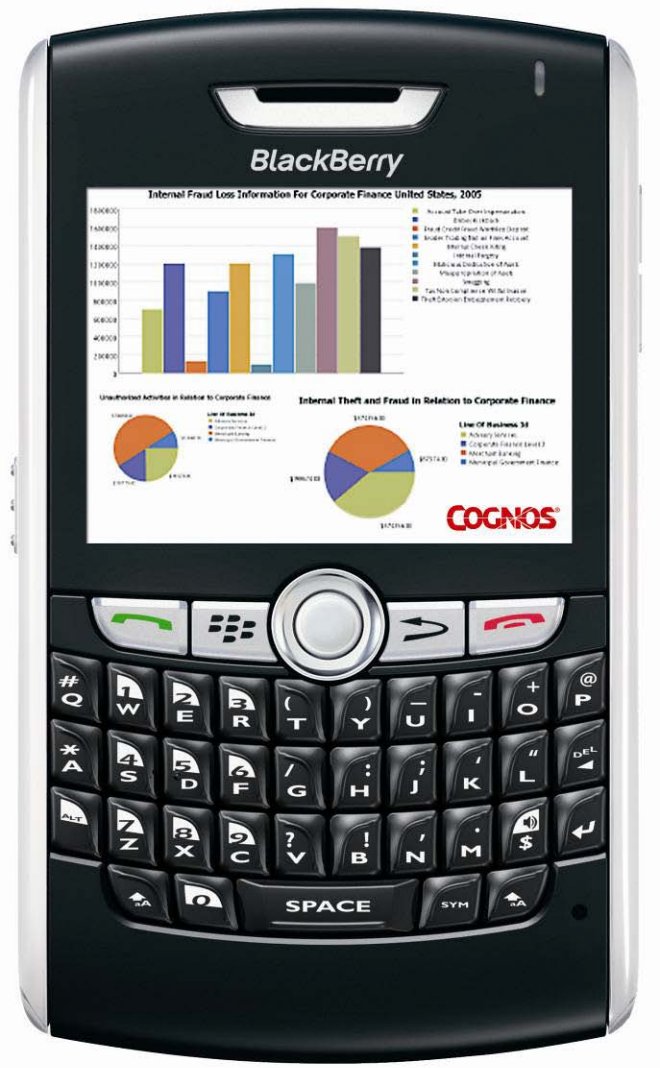


How are we doing?



Immediate Insights to Business Performance

Example: Cognos Mobile

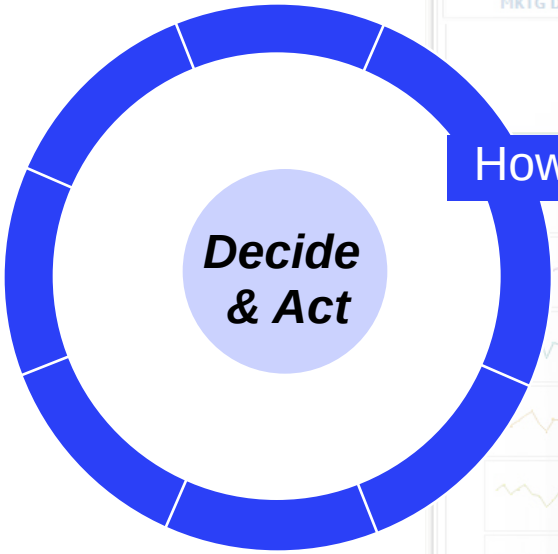


- Delivers Cognos 8 BI content to mobile users
  - Can view and interact with the exact same reports that have been authored for the Web, PDF…
- Leverages the Cognos 8 platform, including security
- Rich native client purpose-built for BlackBerry, Windows Mobile, Symbian

For Example…….

Scorecards & Dashboards

Reports



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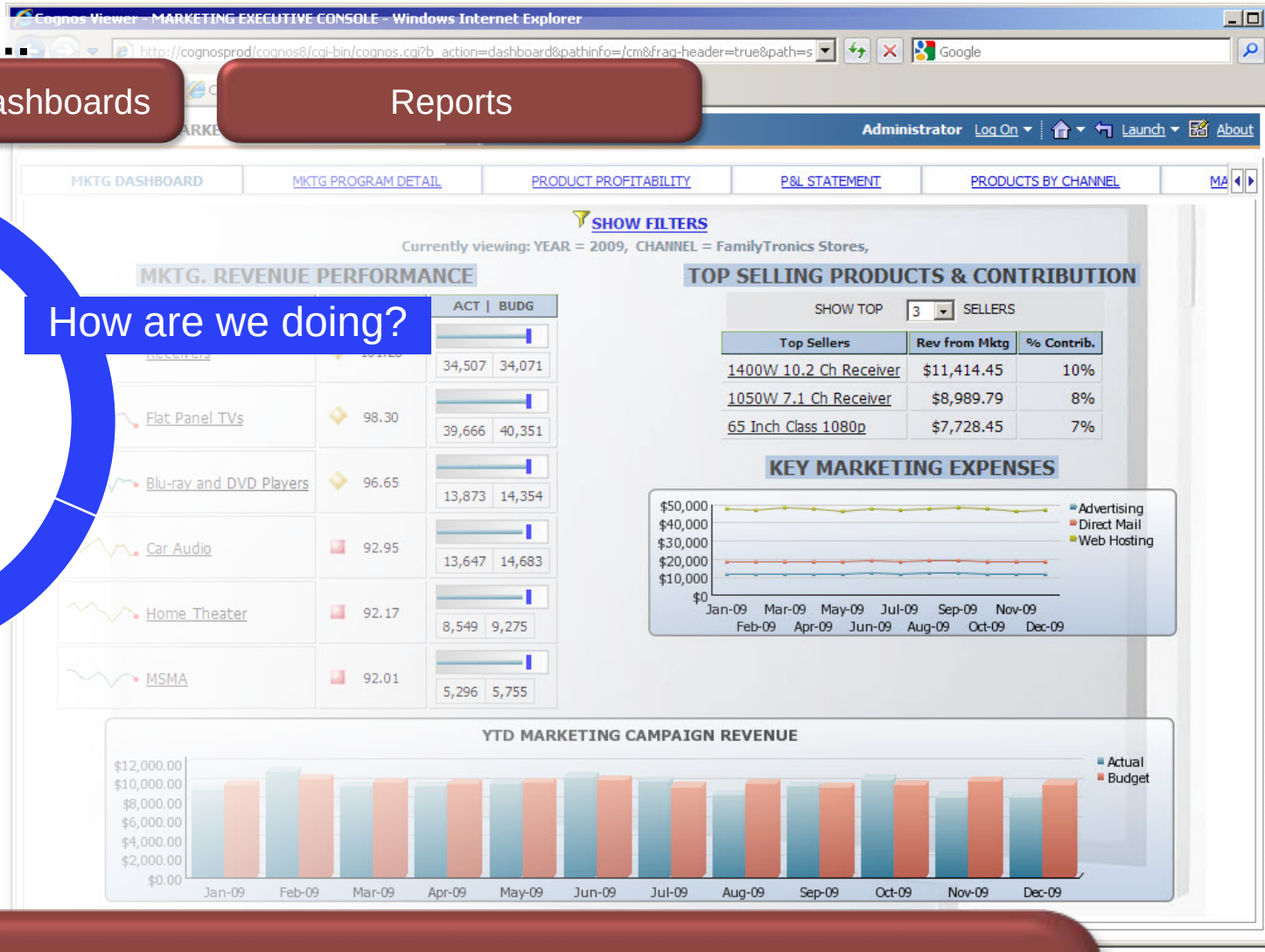


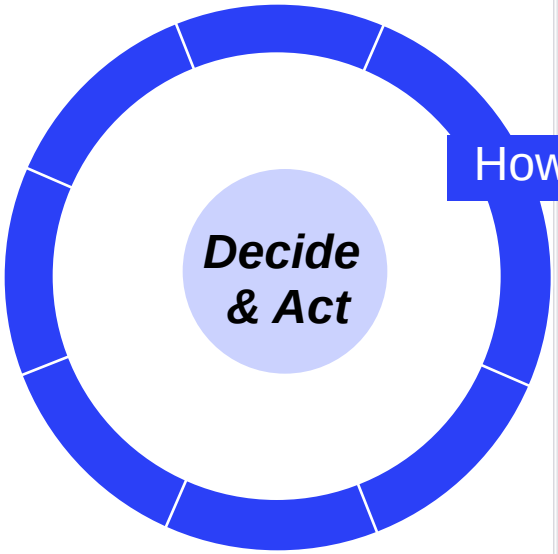
Immediate Insights to Business Performance

For Example…….

Scorecards & Dashboards

Reports

Real Time Monitoring



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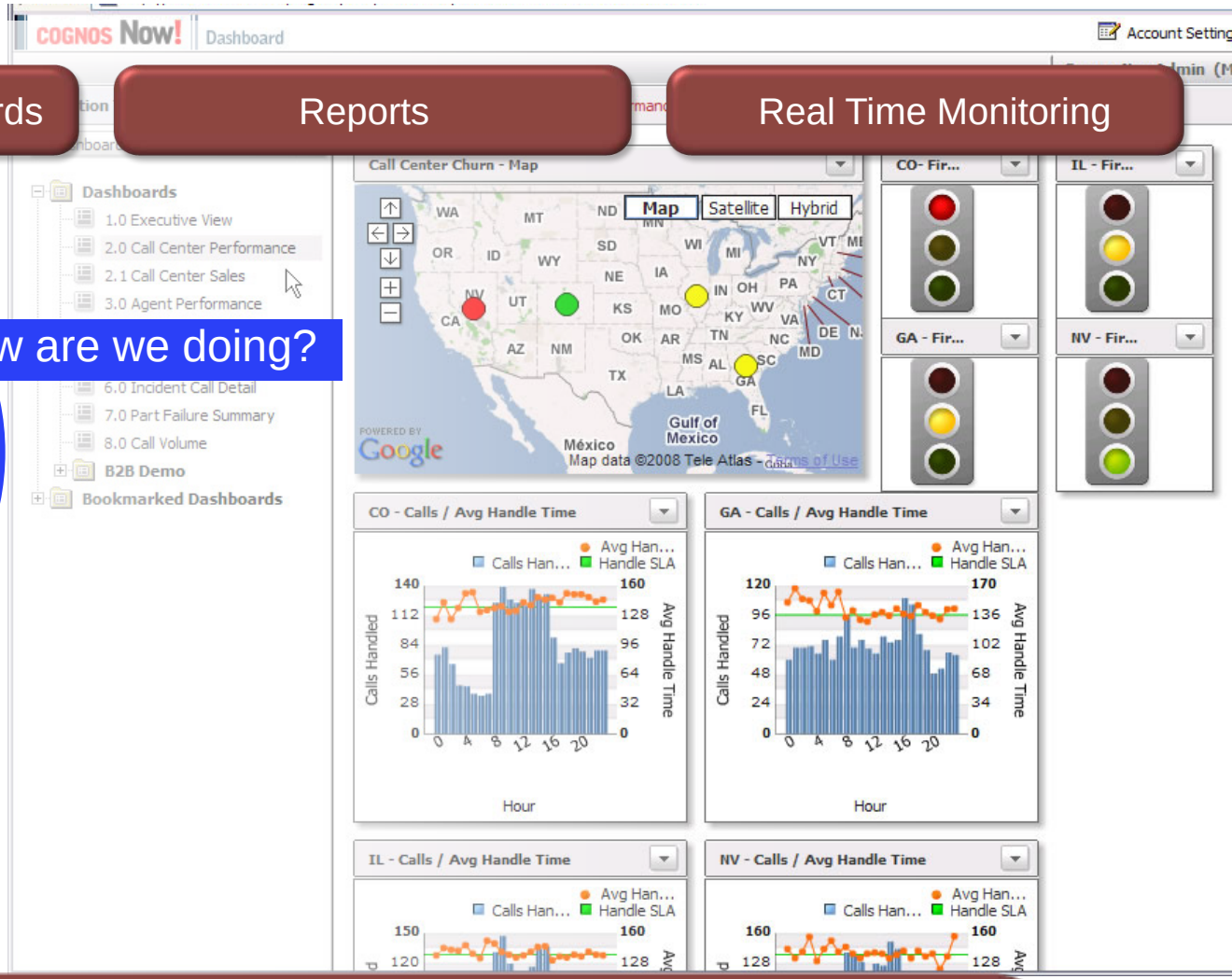
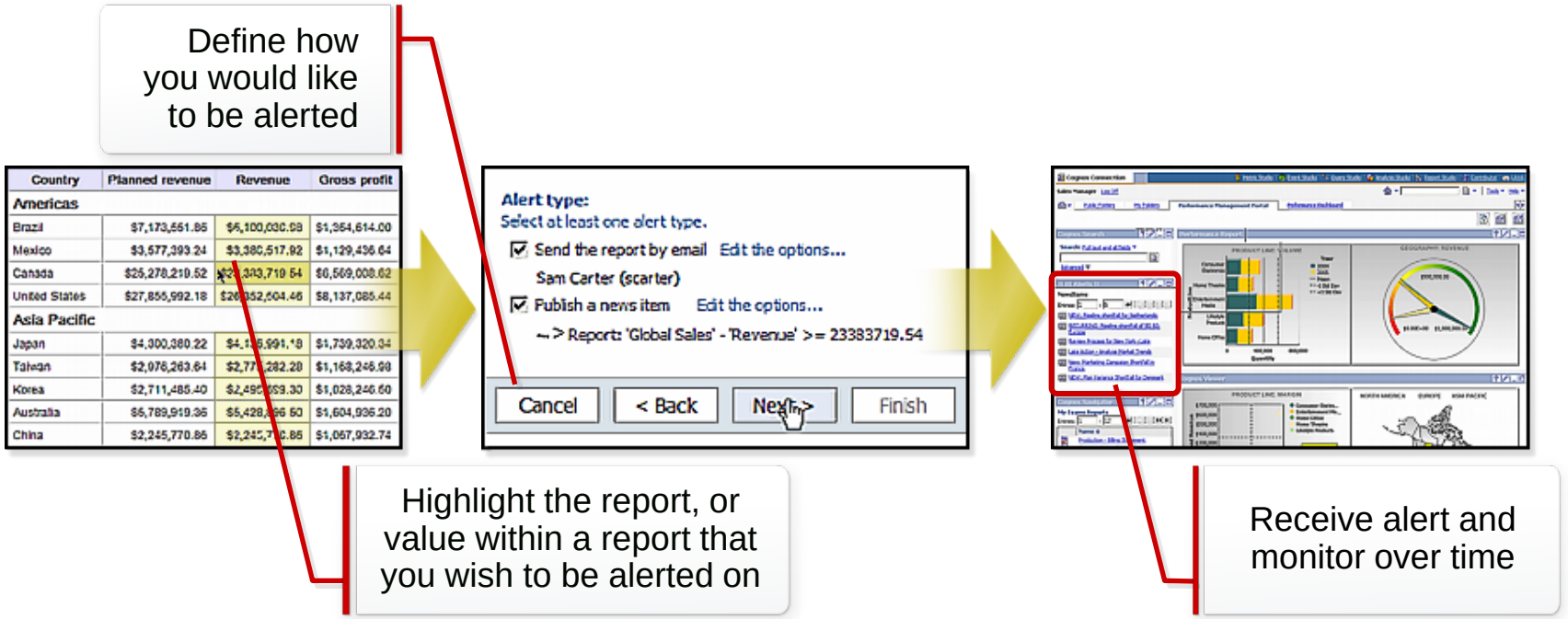


Immediate Insights to Business Performance

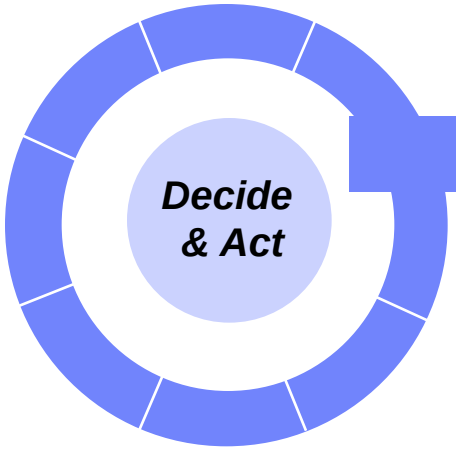
Example: Self-Service Personal Alerts



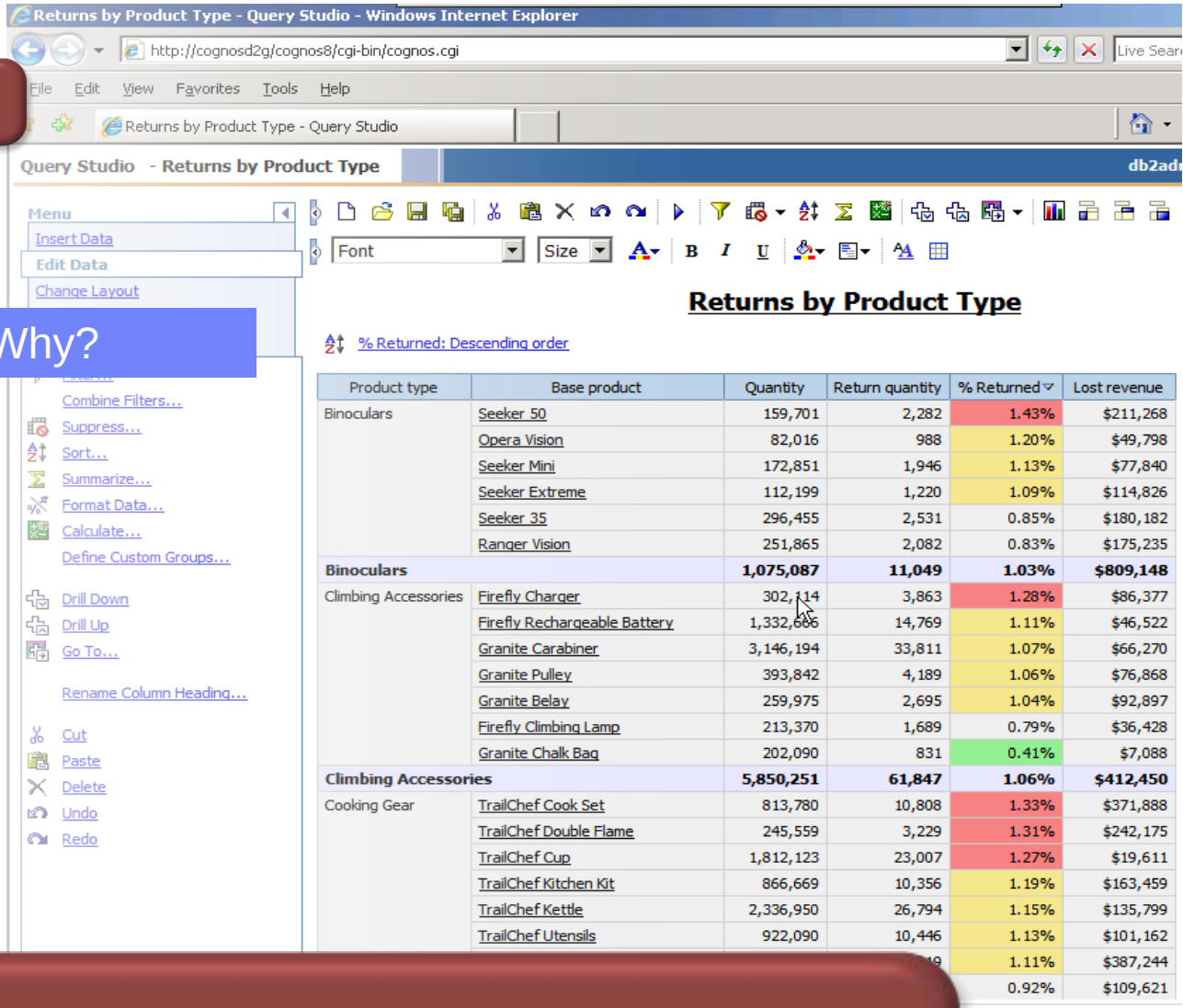
- Users can easily create their own alerts for scheduled reports
- Users can control when and how they receive critical information without IT intervention

For Example…….

Ad Hoc Query



Why?



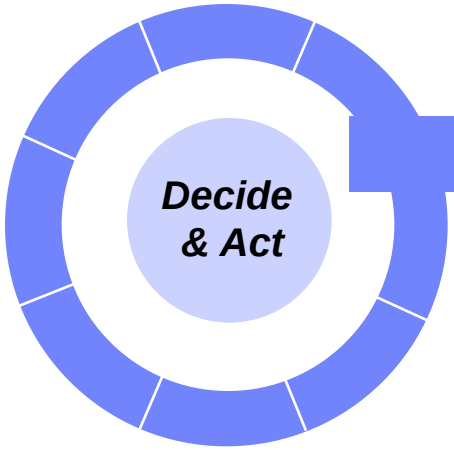
Product type	Base product	Quantity	Return quantity	% Returned	Lost revenue
Binoculars	Seeker 50	159,701	2,282	1.43%	$211,268
	Opera Vision	82,016	988	1.20%	$49,798
	Seeker Mini	172,851	1,946	1.13%	$77,840
	Seeker Extreme	112,199	1,220	1.09%	$114,826
	Seeker 35	296,455	2,531	0.85%	$180,182
	Ranger Vision	251,865	2,082	0.83%	$175,235
Binoculars		**1,075,087**	**11,049**	**1.03%**	**$809,148**
Climbing Accessories	Firefly Charger	302,114	3,863	1.28%	$86,377
	Firefly Rechargeable Battery	1,332,666	14,769	1.11%	$46,522
	Granite Carabiner	3,146,194	33,811	1.07%	$66,270
	Granite Pulley	393,842	4,189	1.06%	$76,868
	Granite Belay	259,975	2,695	1.04%	$92,897
	Firefly Climbing Lamp	213,370	1,689	0.79%	$36,428
	Granite Chalk Bag	202,090	831	0.41%	$7,088
Climbing Accessories		**5,850,251**	**61,847**	**1.06%**	**$412,450**
Cooking Gear	TrailChef Cook Set	813,780	10,808	1.33%	$371,888
	TrailChef Double Flame	245,559	3,229	1.31%	$242,175
	TrailChef Cup	1,812,123	23,007	1.27%	$19,611
	TrailChef Kitchen Kit	866,669	10,356	1.19%	$163,459
	TrailChef Kettle	2,336,950	26,794	1.15%	$135,799
	TrailChef Utensils	922,090	10,446	1.13%	$101,162
				1.11%	$387,244
				0.92%	$109,621

Deeper Analysis of Trends & Patterns

For Example…….

Ad Hoc Query

Trend & Statistical Analysis



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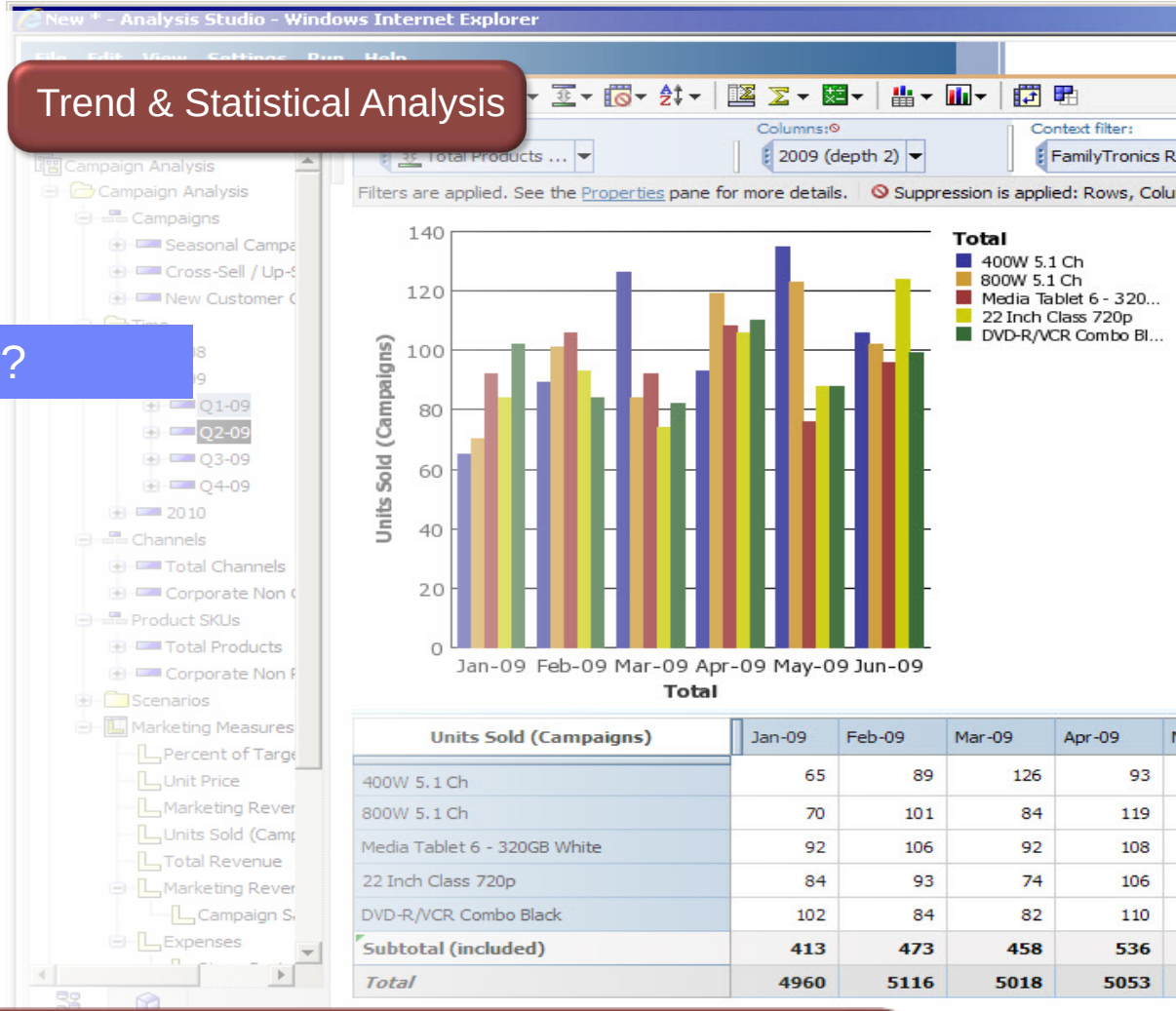


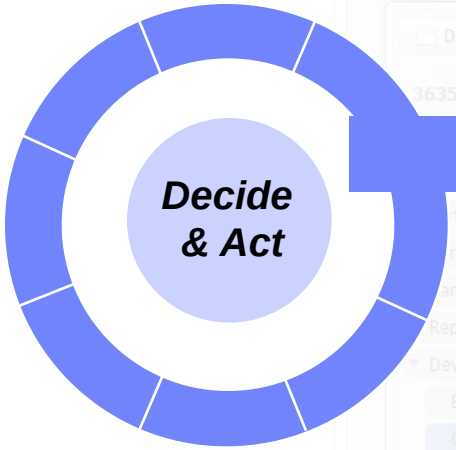
Deeper Analysis of Trends & Patterns

For Example…….

Ad Hoc Query

Trend & Statistical Analysis

Content/Text Analytics



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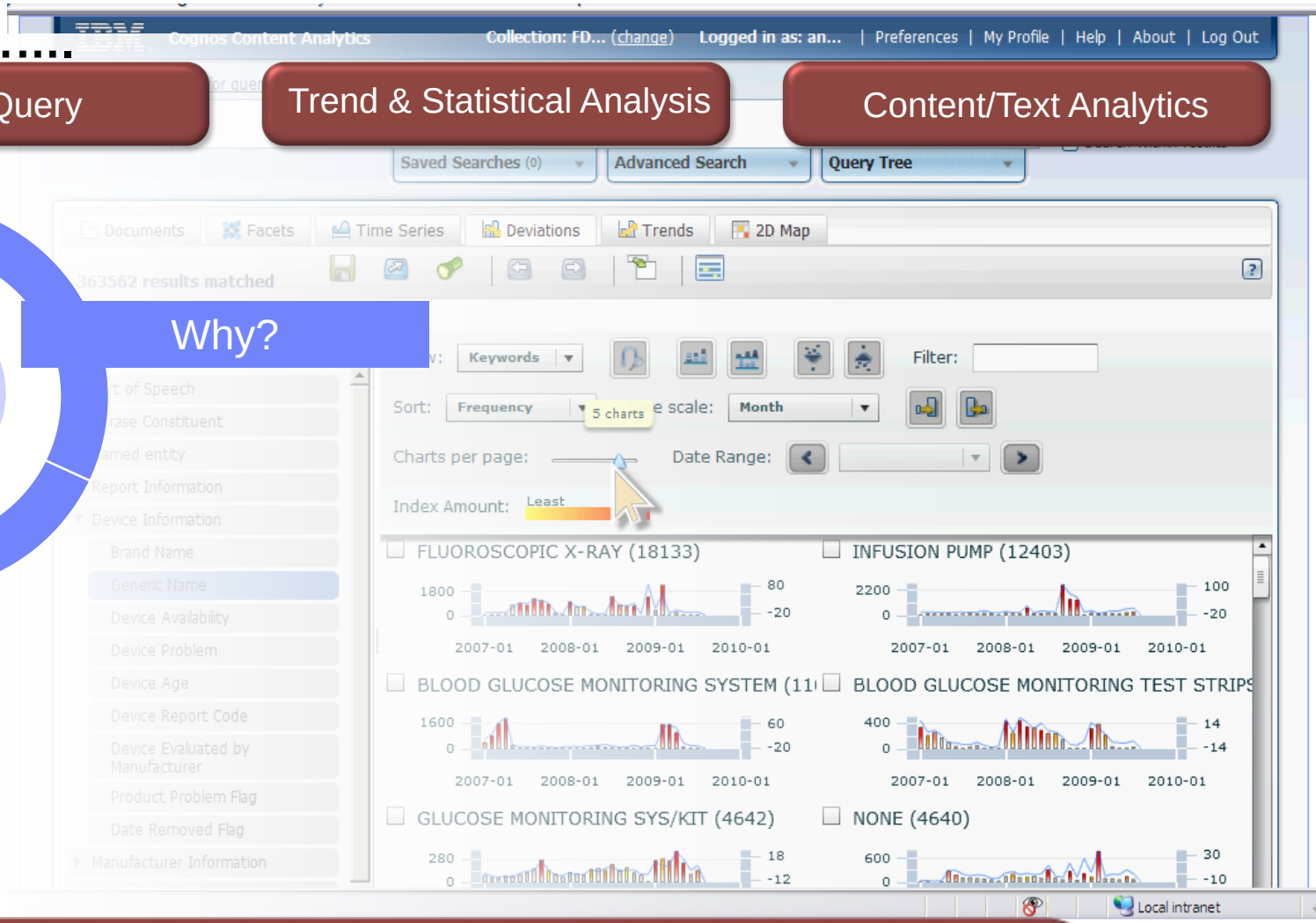
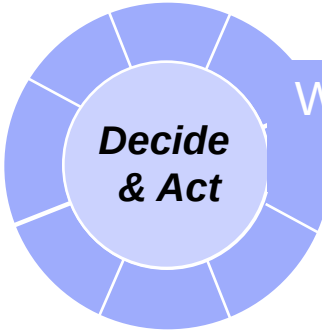


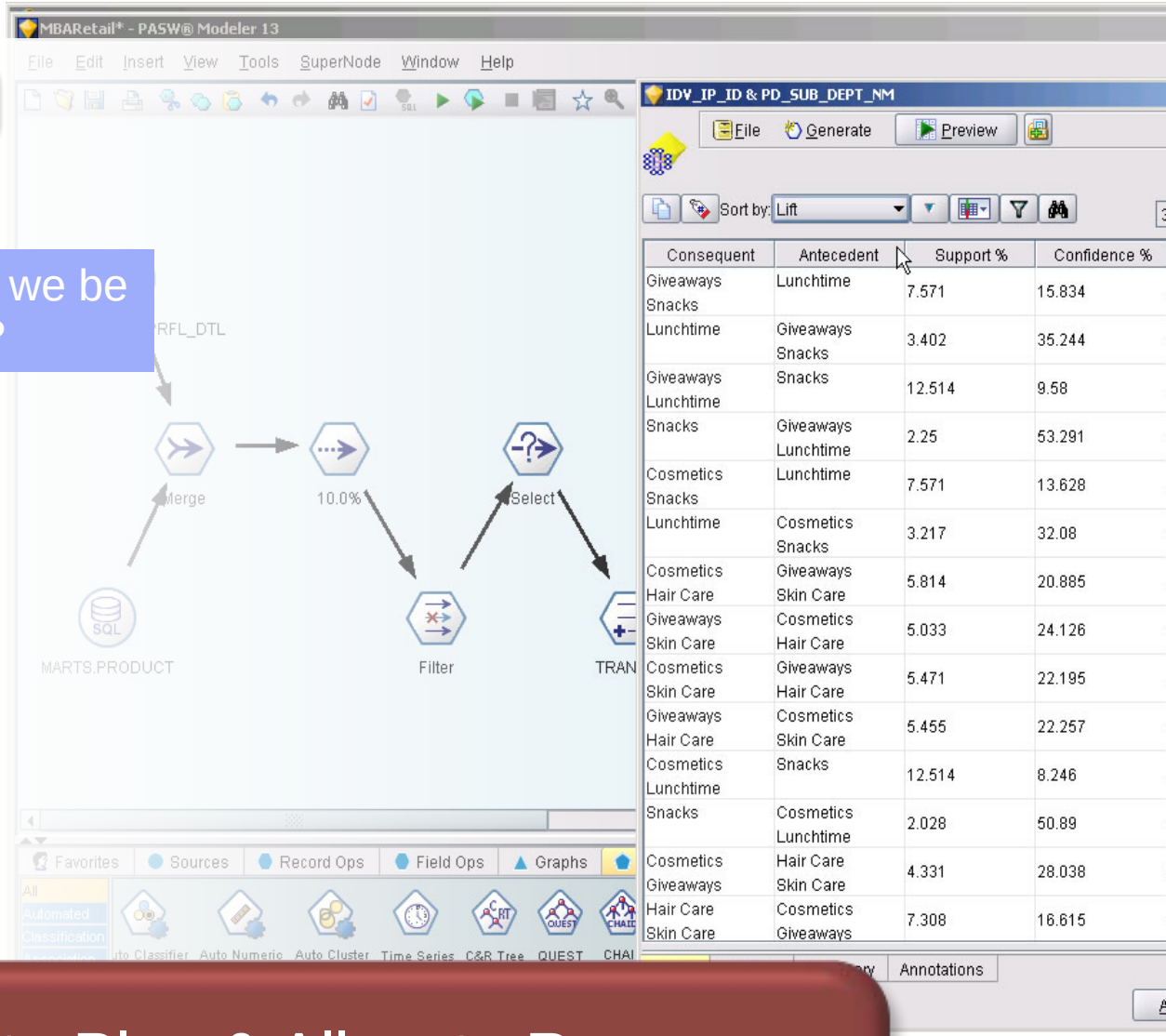
Deeper Analysis of Trends & Patterns

For Example…….

Predictive Modeling



What should we be doing?

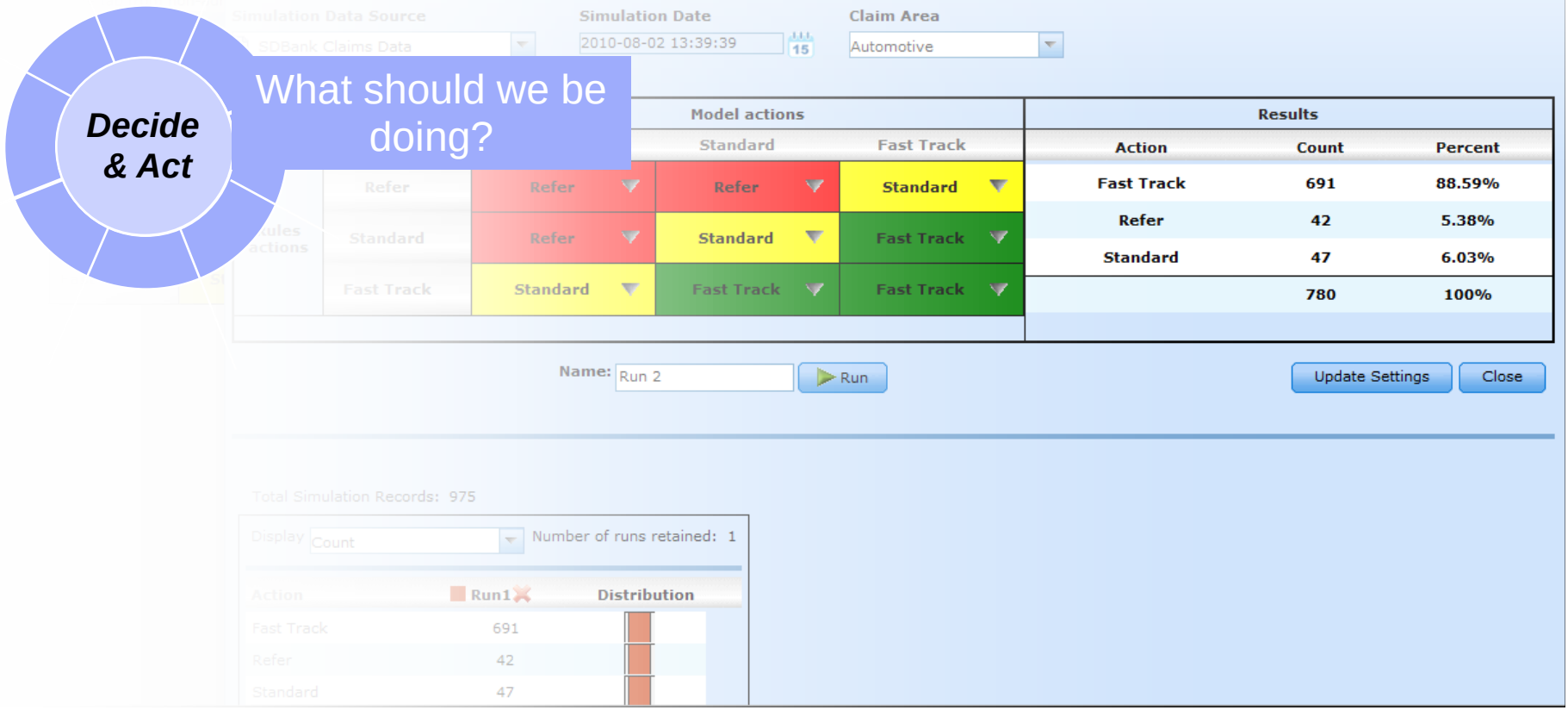


Foresight to Plan & Allocate Resources

For Example…….

Predictive Modeling

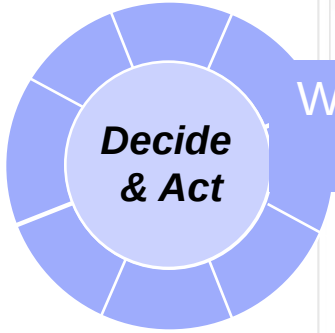
Decision Management



Foresight to Plan & Allocate Resources

For Example…….

Predictive Modeling | Decision Management | Planning & Budgeting



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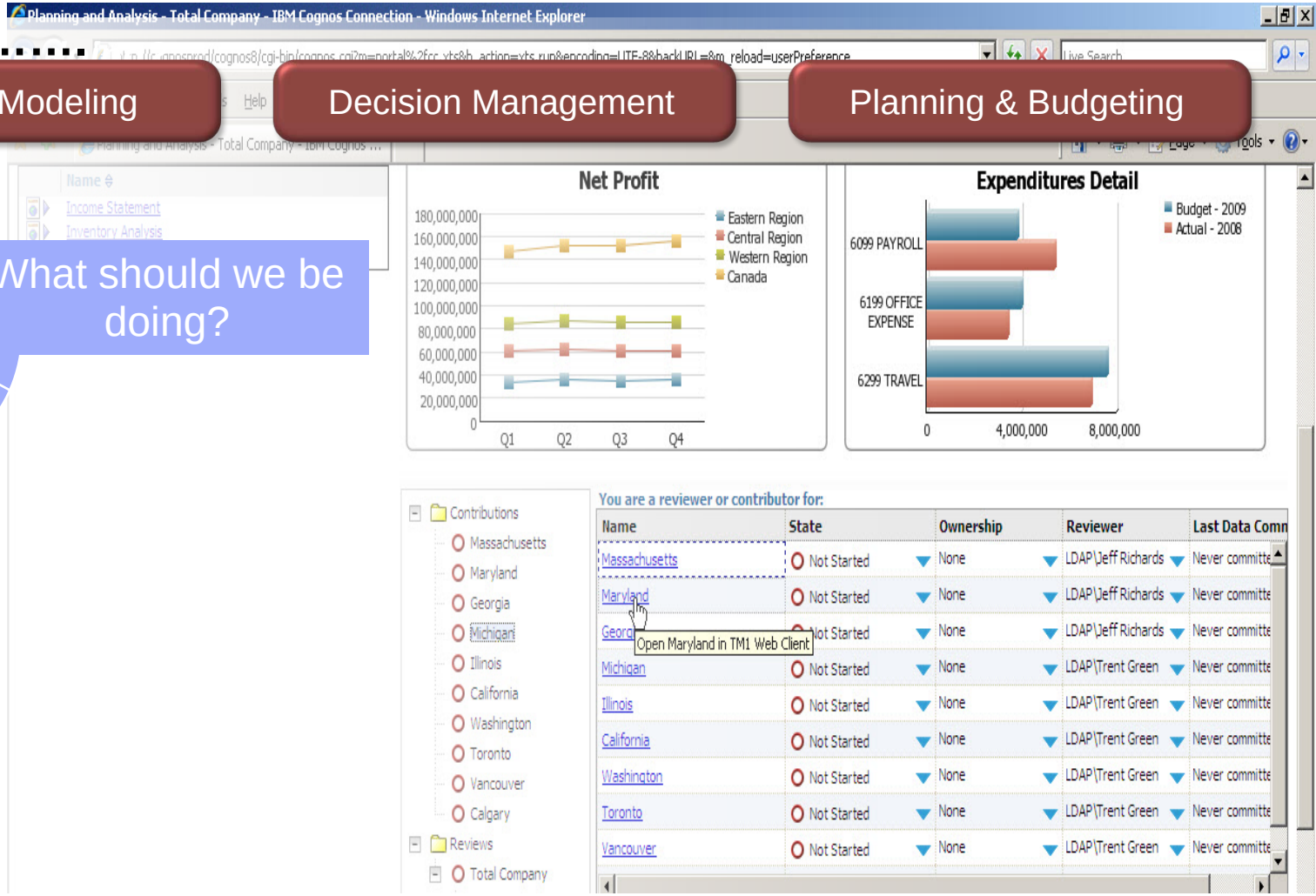
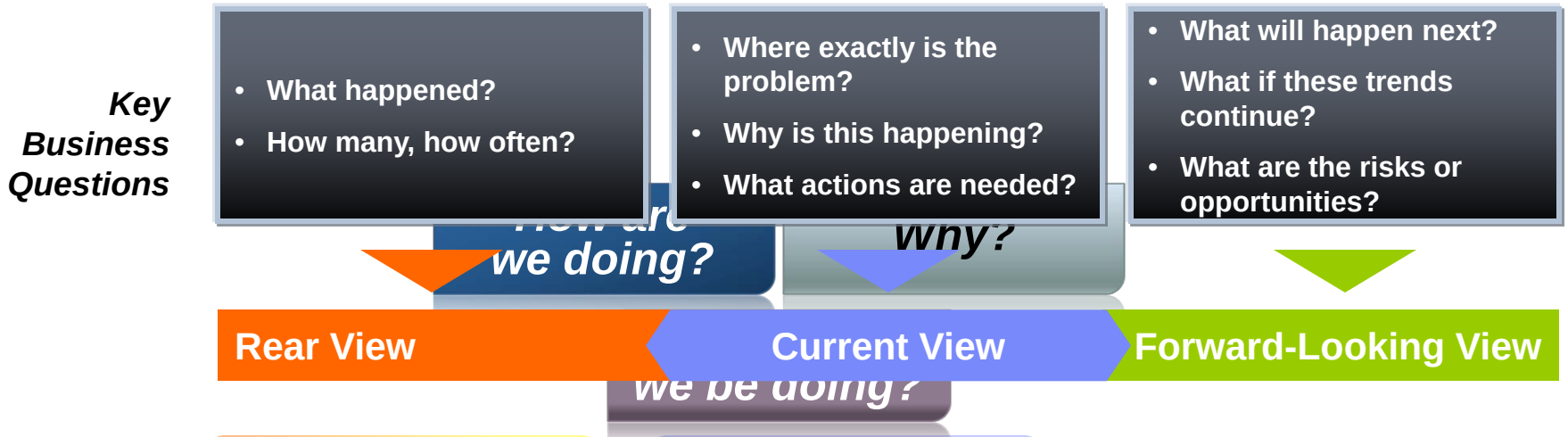


Foresight to Plan & Allocate Resources

Three Questions for Business Insight



Examples of Business Insight

- **Balance sheet, profit and loss, and cash flow statements**
- Revenue and cost variance analysis

- **Customer, product and market profitability**
- Spend optimization
- Working capital analysis
- Market, customer and channel pricing
- Sales and supply chain effectiveness

- Cash forecasting
- **Scenario-based planning and forecasting**
- Strategic investment decision support
- Volatility and risk-based predictive and behavioral modeling

Source: 2010 IBM Global CFO study

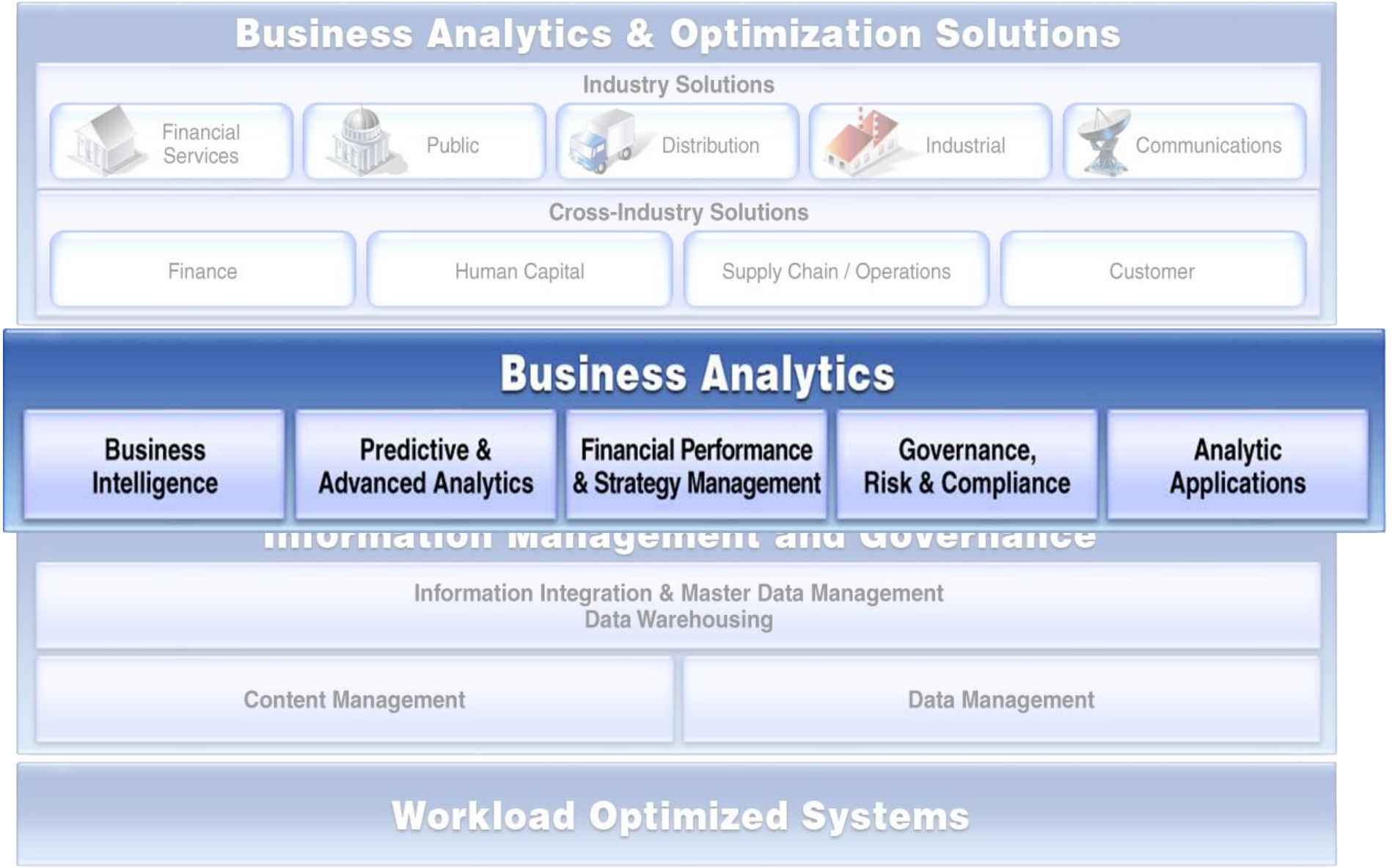
All BI Capabilities in One Solution

- Full range of capabilities needed to improve decision-making and manage performance

Cognos BI

- Query
- Reports & Dashboards
- Analysis
- Scorecards
- Event Management
- Google Search
- Mobile
- Office

Eliminates need for multiple tools,
lowering costs and easing standardization


Business Analytics & Optimization Solutions
Industry Solutions
Financial Services
Public
Distribution
Industrial
Communications
Cross-Industry Solutions
Finance
Human Capital
Supply Chain / Operations
Customer
Business Analytics
Business Intelligence
Predictive & Advanced Analytics
Financial Performance & Strategy Management
Governance, Risk & Compliance
Analytic Applications
Information Integration & Master Data Management
Data Warehousing
Content Management
Data Management
Workload Optimized Systems

Business Analytics & Optimization Solutions
Industry Solutions
Financial Services
Public
Distribution
Industrial
Communications
Finance
Customer
COGNOS
10
Business Intelligence
Analytic Applications
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Workload Optimized Systems

Cognos 10: Intelligence Unleashed

Smarter Decisions. Better Results.

Freedom to **Think**

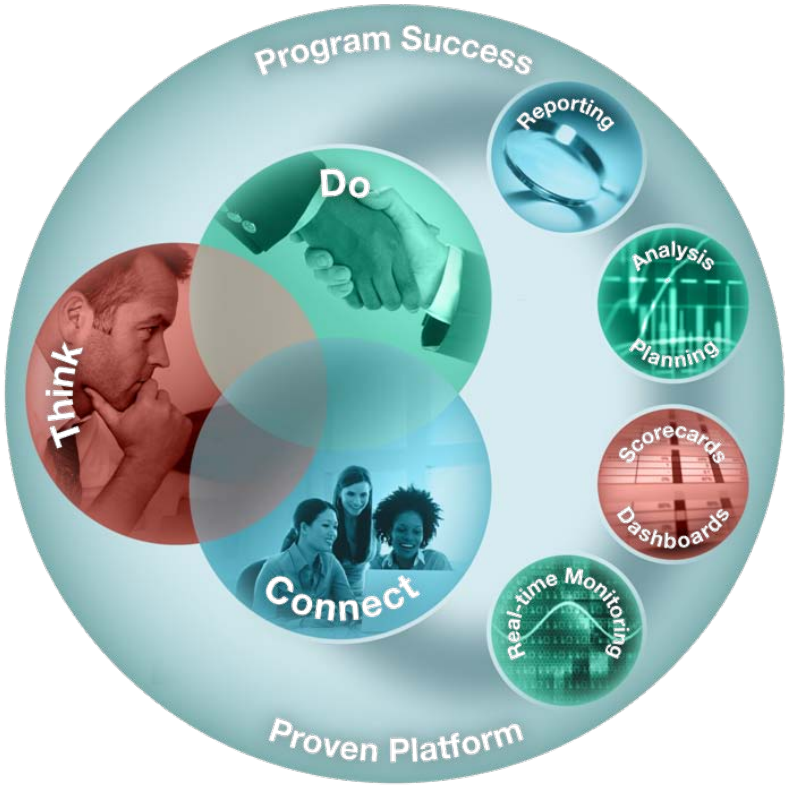
- Unified workspace
- All time horizons
- Progressive interaction

Connect with Others

- Decision networks
- Business context
- Accountability

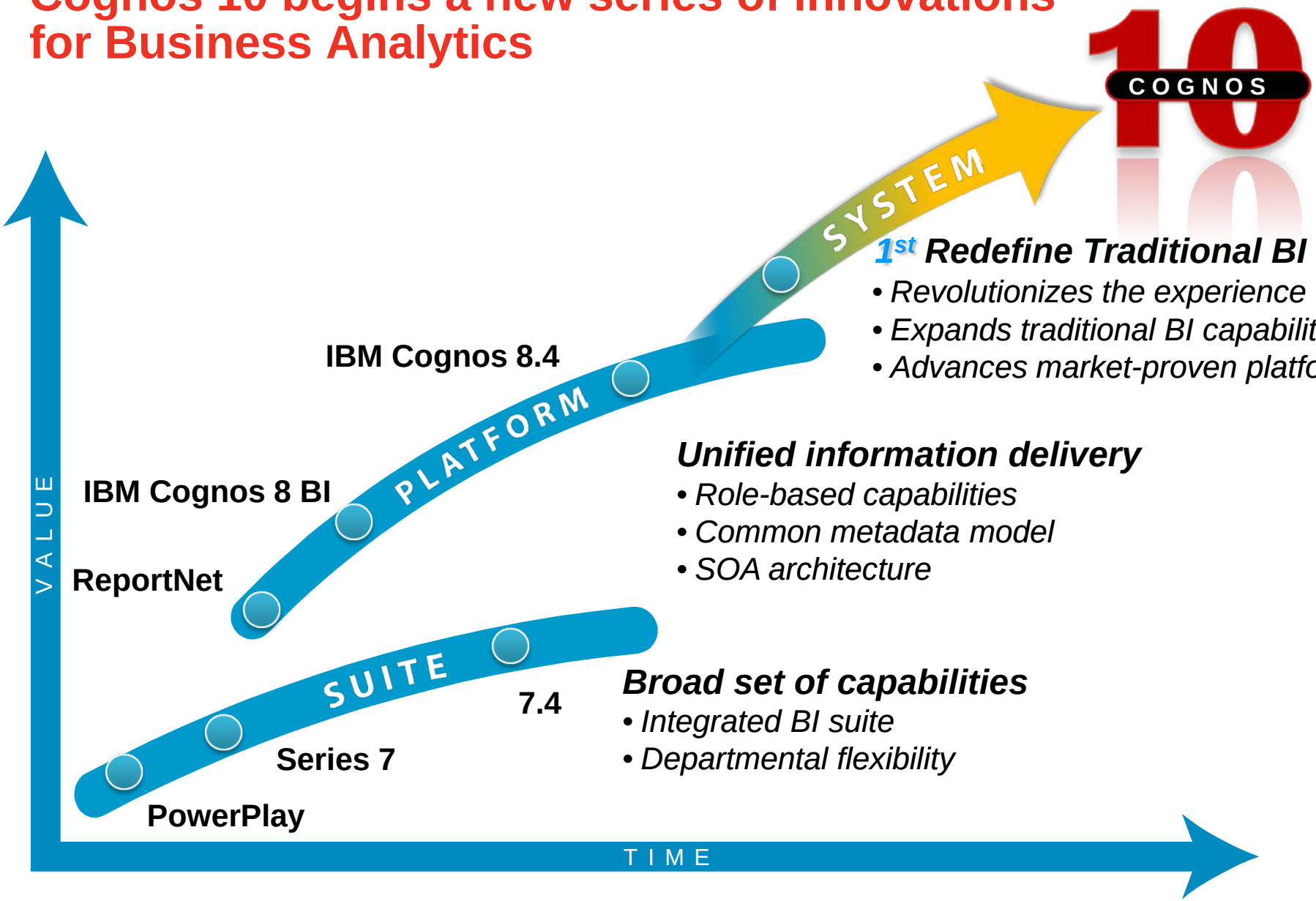
and Simply **Do**

- Mobile and Disconnected
- Integrated
- Real-time



A revolutionary BI workspace delivered on a proven platform with seamless upgrade

Cognos 10 begins a new series of innovations for Business Analytics



1st Redefine Traditional BI

- *Revolutionizes the experience*
- *Expands traditional BI capabilities*
- *Advances market-proven platform*

Unified information delivery

- *Role-based capabilities*
- *Common metadata model*
- *SOA architecture*

Broad set of capabilities

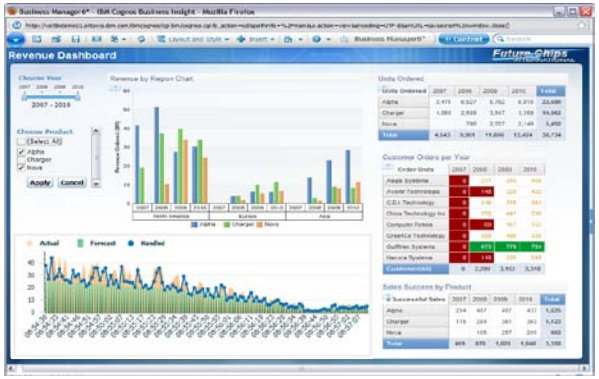
- *Integrated BI suite*
- *Departmental flexibility*

The Top 10 of Cognos 10

1. **Unified workspace** with greater power, intuitive navigation and cleaner look
2. **Breadth of analytics** across historical, real-time and predictive information
3. **Collaborative BI** through built-in collaboration and social networking
4. **Easy data inclusion** by the business from one value, to entire data sets and external files
5. **Analytics on the go** for more devices and disconnected interaction
6. **Faster performance** with in-memory processing
7. **Seamless upgrade** and ease of ongoing management
8. **Trusted expertise** with built-in training videos, 'how-to' books and user communities
9. **Expanded deployment options** include Cloud**,** System z, and Power
10. **Cognos 10 Ready added value** of TM1, Planning, Analytic Applications and SPSS Modeler

Unified workspace with greater power, intuitive navigation and cleaner look

Breadth of analytics across historical, real-time and predictive information



Unified Workspace delivering breadth of analytics

Analytical Reporting	Real-Time	Scenario Modeling	Advanced Analytics
Drill	*What is*	*What-if*	*What might be*

Business Manager6* - IBM Cognos Business Insight - Mozilla Firefox

http://vottbidemo01.ottawa.ibm.com/ibmcognos/cgi-bin/cognos.cgi?b_action=icd&pathinfo=%2Fmain&ui.action=view&encoding=UTF-8&errURL=javascript%3Awindow.close()

Layout and Style | Insert | Business Manager6* | « Content | Search

Revenue Dashboard

Future-Chips INTERNATIONAL

Choose Year

2007 2008 2009 2010

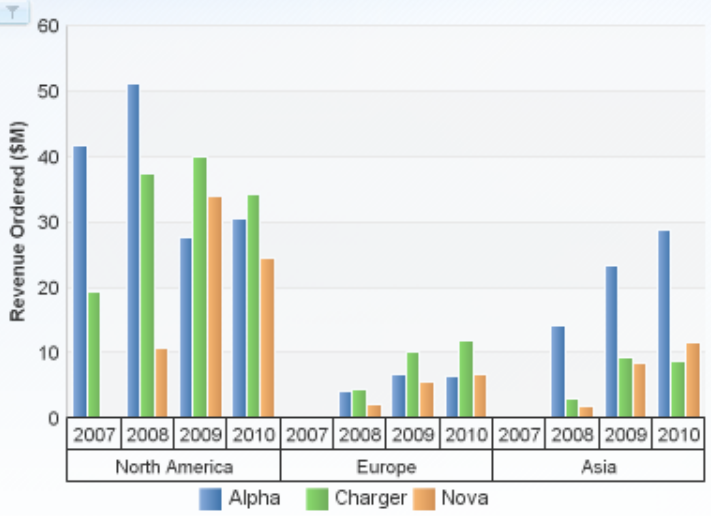
2007 - 2010

Choose Product

- [x] (Select All)
- [x] Alpha
- [x] Charger
- [x] Nova

Apply Cancel

Revenue by Region Chart



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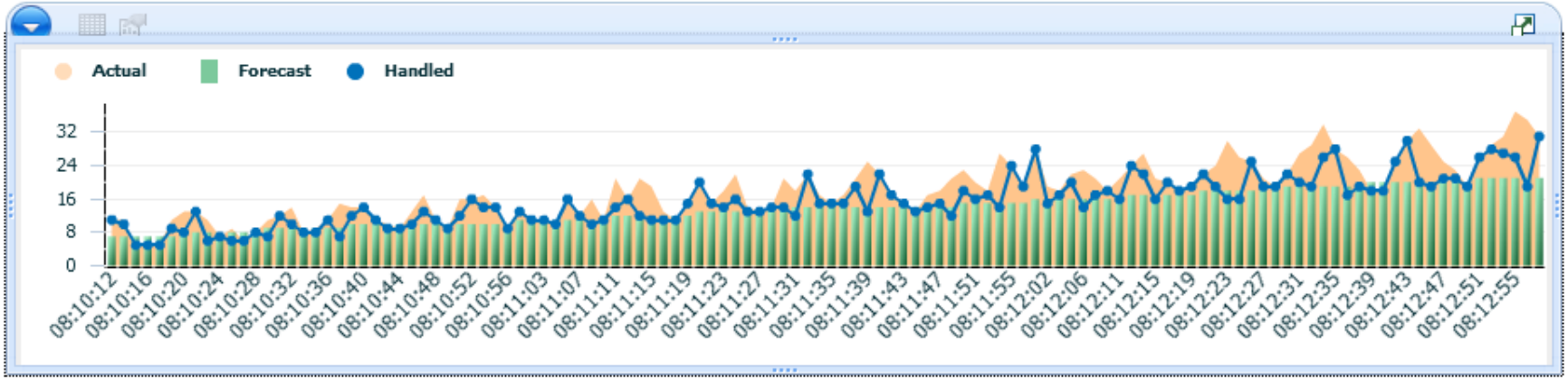

Transferring data from vottbidemo01.ottawa.ibm.com...

Business Manager6* - IBM Cognos Business Insight - Mozilla Firefox

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Layout and Style | Insert | Business Manager6* | << Content | Search

Revenue Dashboard

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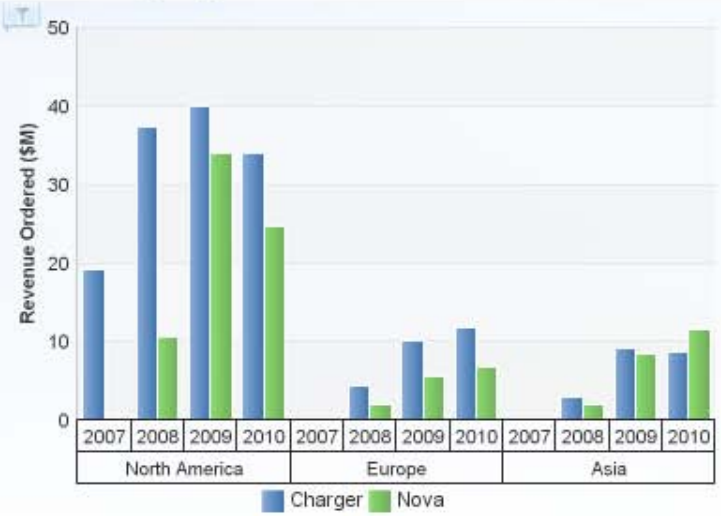
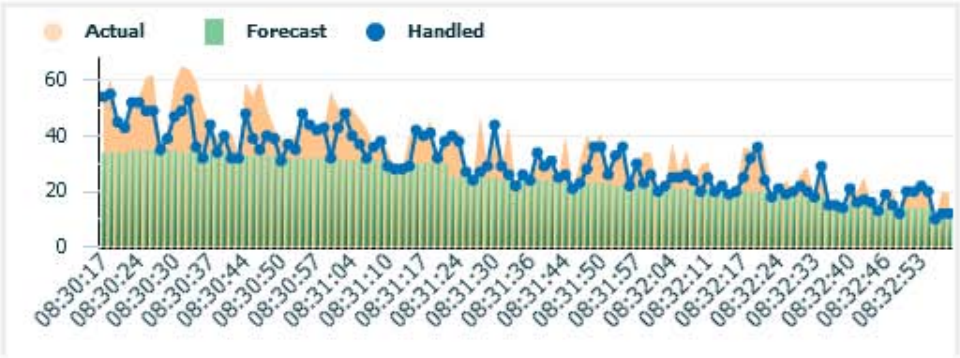
Revenue by Region Chart





Done

What-if analysis and local scenarios

"*How much do we need to increase pipeline or conversion rates to impact sales for poorly performing segments by $X"?* – Sales Manager

"If we reduced materials and inventory holding costs by 5%, how much would this reduce our total inventory costs"? - Operations Manager

"If we decreased campaign and promotional spending by x%, how much would this impact our lead generation numbers"? - Marketing Manager

"How would a 10% reduction in our sales workforce potentially impact sales performance"? - HR Manager

CUSTOMER NEEDS

- **Everyone needs greater understanding to drive better decisions in the organization**
  - All decision makers need insight beyond dashboards and managed reports
  - Analysts need to inform the organization with insight beyond reporting numbers
  - Advanced Analysts want to uncover patterns and relationships beyond information manipulation
- **Organizations need to expand the information set they consider for analysis**
  - Analyzing all available information to drive informed decisions
- **Organizations must infuse analysis throughout decision-making to sustain competitiveness**
  - Ability for all users to analyze information to drive better business decisions
  - Business users want to self-discover, manipulate information, model data to create scenarios

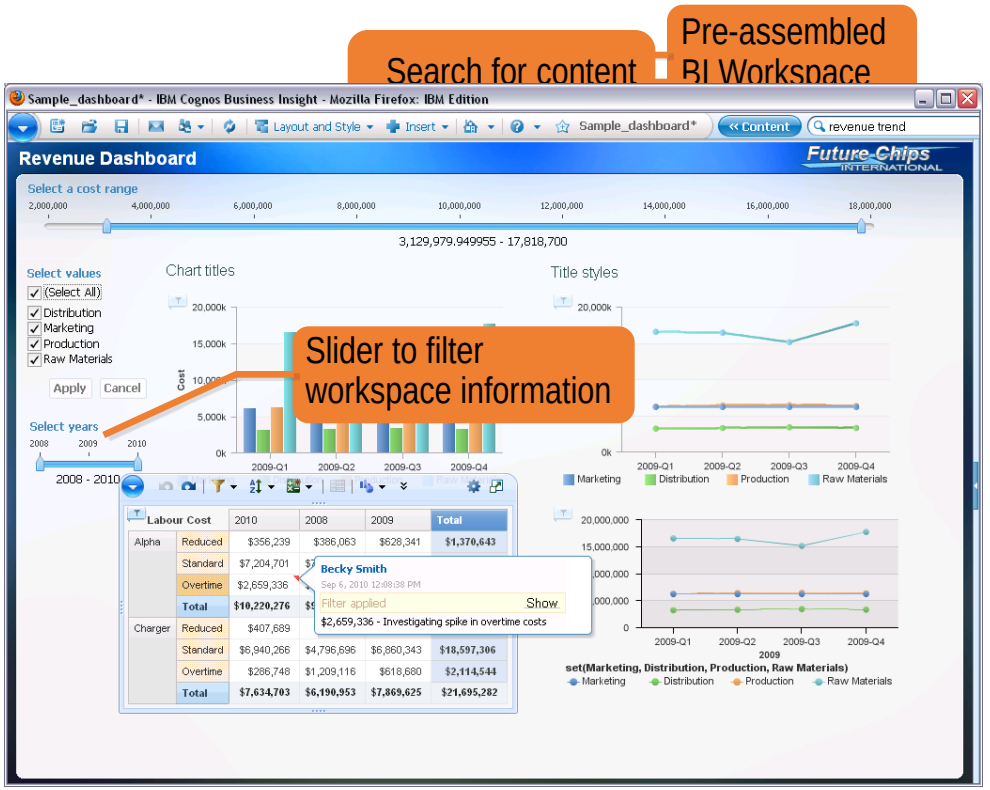
A BI workspace that is the start of your day

Intuitive and easy to use it is the single place that you go to find and do your work.

IBM Cognos Business Insight

Solution Highlights

- Pre-assembled workspace content
- Search assisted authoring
- Drag and drop assembly
- Dynamically filter
- Quicker and deeper insight in to data
- Seamless graduated experience



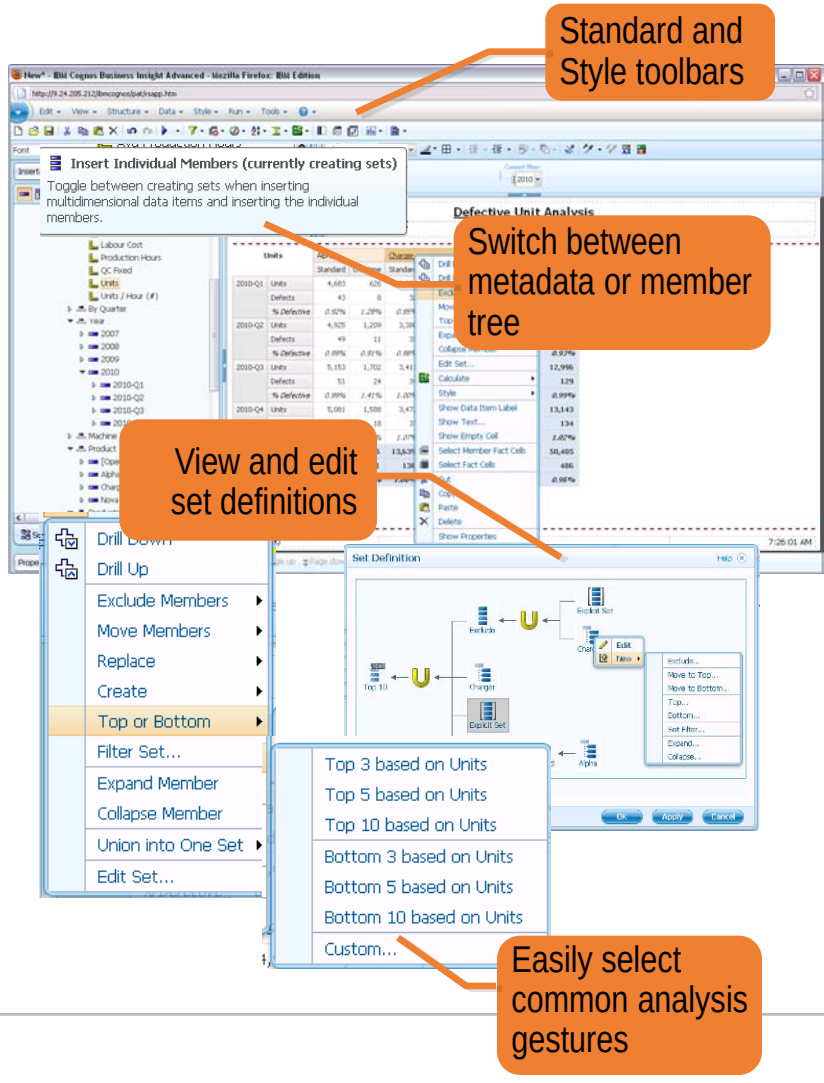
Seamlessly shift to more advanced analysis

Perform complex analysis tasks quickly and easily to get to the "why" behind an event or action to improve business performance

IBM Cognos Business Insight Advanced

Solution Highlights

- Intuitive drag-and-drop interface
- Integrated data exploration and analysis
- Calculations, drill, filter, pivot, top/bottom count
- Manage set definitions
- Flexible format, layout and distribution
- Multiple queries, formatting and charting



Collaboration is Everywhere

The Chasm

Expectations in a business context

Business User

"I need to easily connect with people who are relevant to the decisions I make."

Manager

"I need to better understand the perspectives of my colleagues."

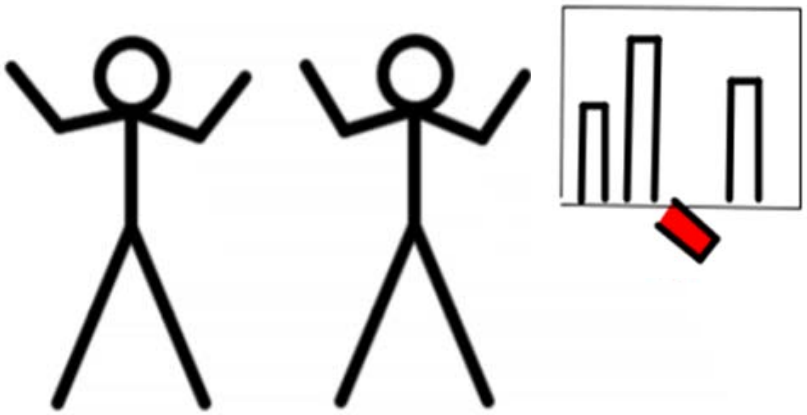
Executive

"I need to easily access decision history in order to learn, reference and create best-practices."

How you collaborate with BI today

How you collaborate with BI today

Did you include all the right people?



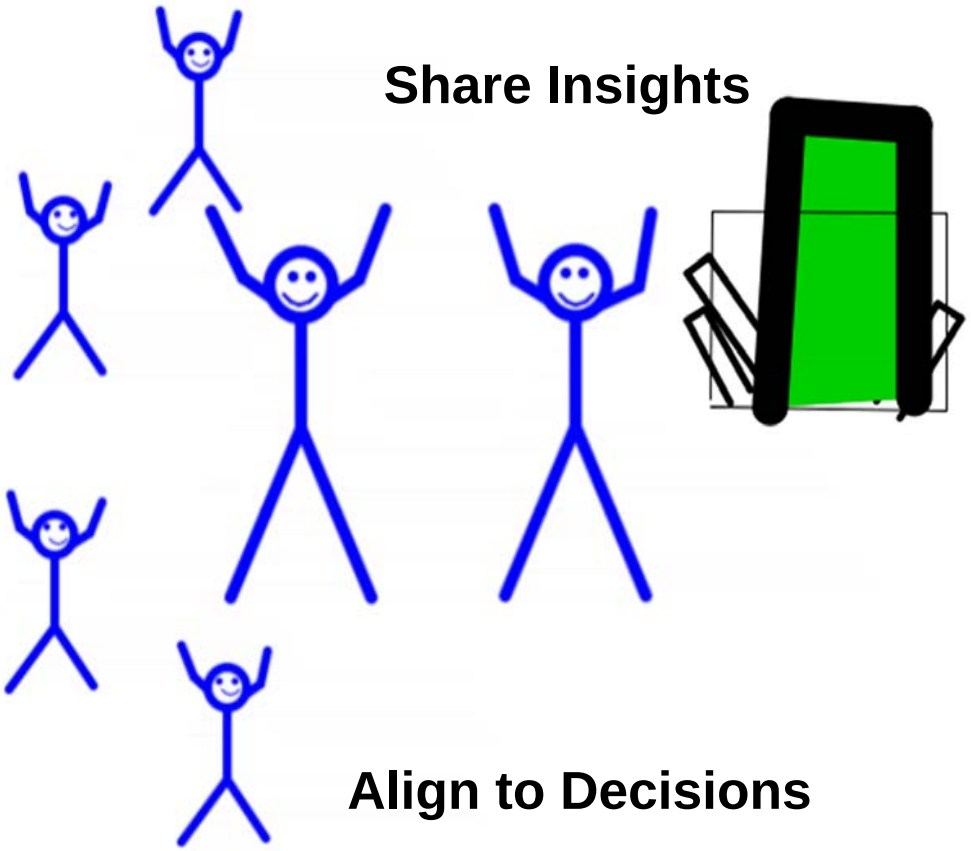
Did you have all the information to make the right decision?

How you collaborate with IBM Cognos Collaboration

How you collaborate with IBM Cognos Collaboration

Discuss issues

Share Insights



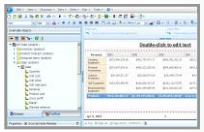
Align to Decisions

IBM Cognos Collaboration

IBM Cognos 10 BI

Reports

Ad-hoc queries

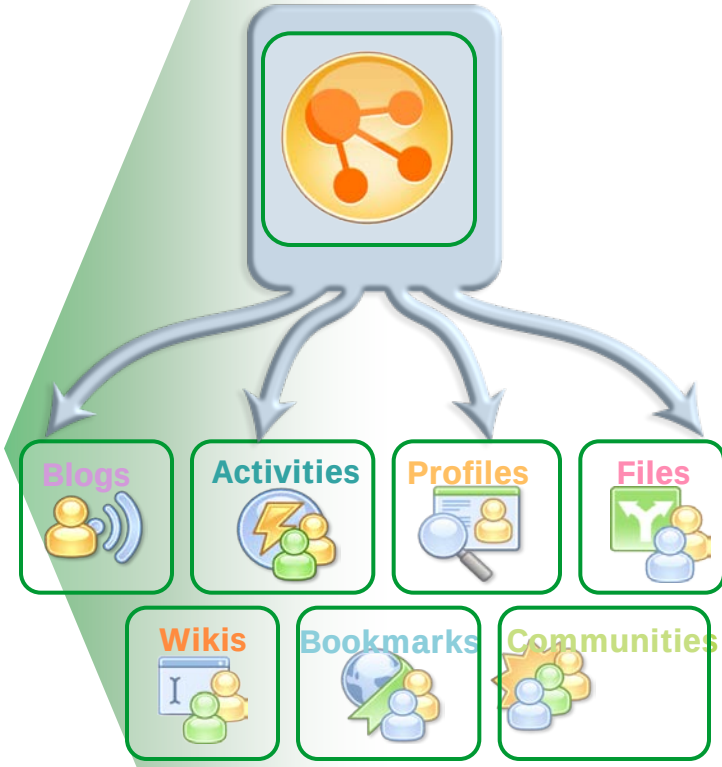


Analysis

Dashboards

IBM Cognos Collaboration

Lotus Connections



Integration with Lotus Connections

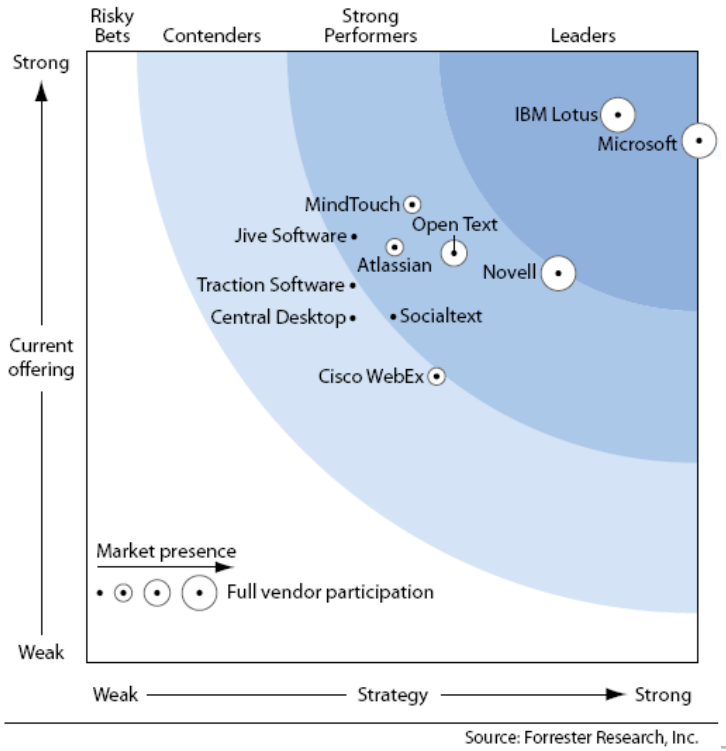
IBM positioned as a **leader** in Gartner's Magic Quadrant.

Gartner Magic Quadrant for Social Software in the Workplace, October 2009:
copyrighted October 2009 by Gartner, Inc

IBM's Lotus Connections looked, at minimum, a year or more **ahead of SharePoint** in its social computing capabilities out of the box. It was a lot prettier looking, too.

C.G. Lynch, CIO.com Rants: Enterprise 2.0 Faceoff: Microsoft Lags Behind IBM in Social Software, June 10, 2008

Figure 3 Forrester Wave™: Collaboration Platforms, Q3 '09



Source: Forrester Research, Inc.

Products Workspace

Future Chips INTERNATIONAL

2010 Expenses

Distribution	15,815,253
Marketing	24,814,311
Production	27,860,560
Raw Material	51,620,978
YTD Cost	**120,111,102**

2010 Income Statement — Actual YTD

N. America	131,686,659
Europe	26,227,077
Asia	49,532,821
YTD Income	**207,446,557**

2010 Revenue by Products — Actual YTD

Alpha	31,857,226
Charger	41,216,007
Nova	31,337,564
YTD Product Sales	**104,410,797**

Choose Year

2007 2008 2009 2010

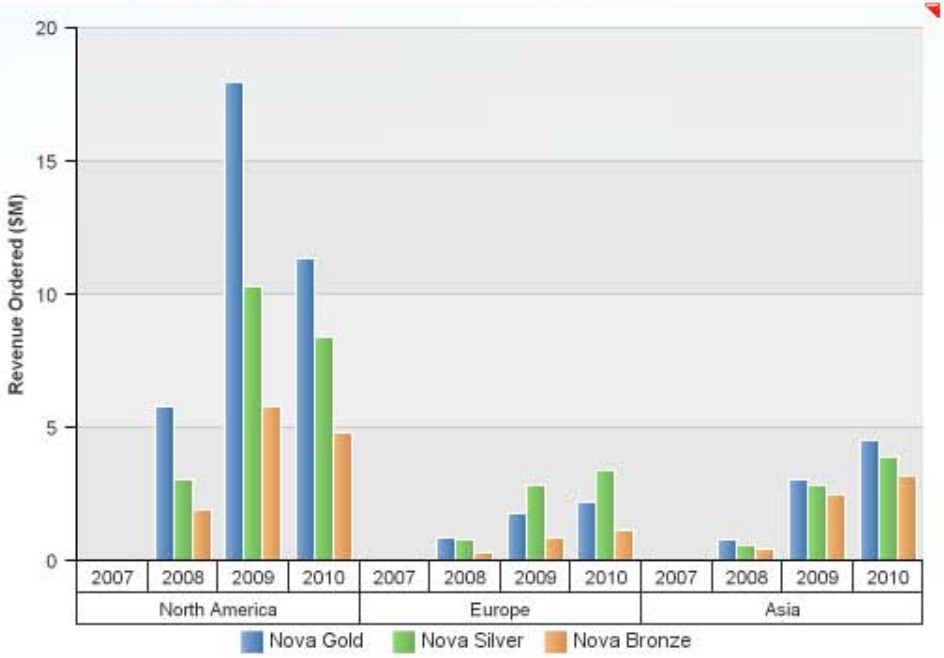
2007 - 2010

Choose Product

- [ ] (Select All)
- [ ] Alpha
- [ ] Charger
- [x] Nova

Apply Cancel

Revenue by Region Chart



Units Ordered

Units Ordered	2007	2008	2009	2010	Total
Nova Gold		402	1,208	899	2,509
Nova Silver		239	855	787	1,881
Nova Bronze		145	494	463	1,102
Nova		786	2,557	2,149	5,492

Sales Success by Product

# Successful Sales	2007	2008	2009	2010	Total
Nova Gold		89	194	170	453
Nova Silver		63	130	154	347
Nova Bronze		55	99	111	265
Nova		105	257	240	602

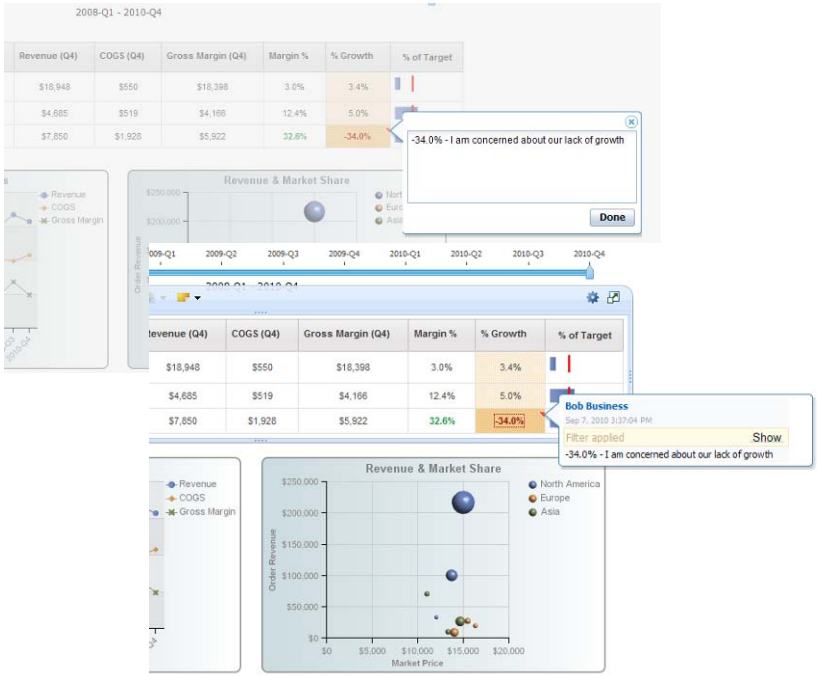
Ensure greater context for decisions

- Add another dimension to the information

Annotations

Solution Highlights:

- Add, view and edit comments on reports, report parts, individual cells or data points in reports and report parts
- Comments are indicated by colored flags
- All annotations are included as endnotes when exporting



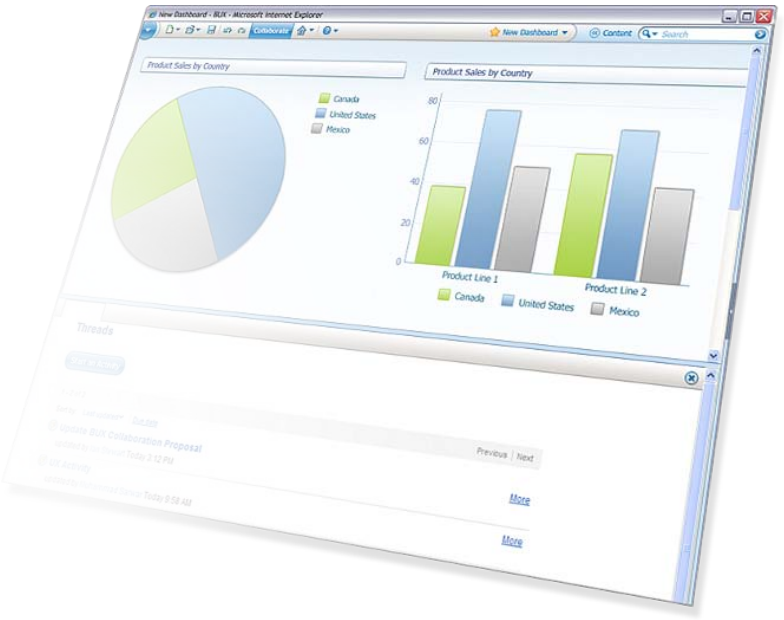
Build a reliable corporate memory

- Easily reference past decisions

Integrated Search

Solution Highlights:

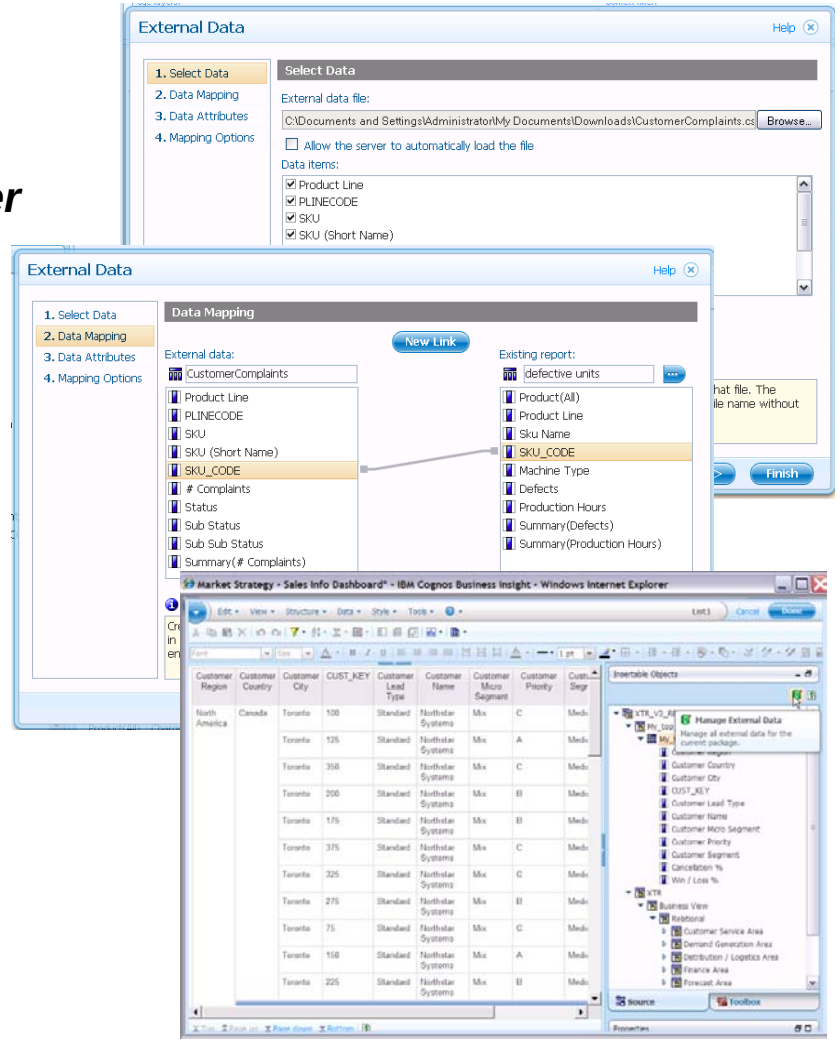
- Search for the following directly from Business Insight:
  - Lotus Connections Activities history
  - Annotations
  - Current Lotus Connections Activities
  - Any related items in Lotus Connections



Easy data inclusion by the business from one value, to entire data sets and external files

Combine external, departmental, and your own data to corporate information resulting in broader perspectives

External Data



Solution Highlights

- Import external data sources into reports or query subjects
- Leverage external data as report filters
- Publish for reuse and update
- Provide IT governance

http://vottbidemo01.ottawa.ibm.com/ibmcognos/cgi-bin/cognos.cgi?b_action=icd&pathinfo=%2Fmain&ui.action=view&encoding=UTF-8&errURL=javascript%3Awindow.close()

Layout and Style | Insert | Business Manager6* | « Content | Search

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Future Chips INTERNATIONA

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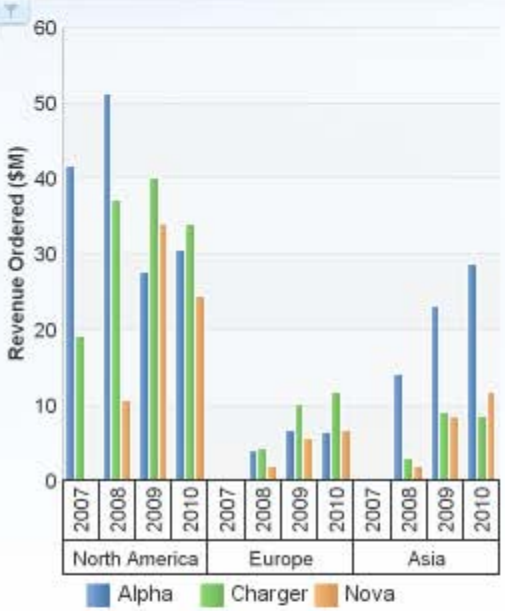

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Total	**4,543**	**9,901**	**11,866**	**12,424**	**38,734**

Sales Success by Product

# Successful Sales	2007	2008	2009	2010	Total
Alpha	294	487	407	437	**1,625**
Charger	115	284	361	363	**1,123**
Nova		105	257	240	**602**
Total	**409**	**876**	**1,025**	**1,040**	**3,350**

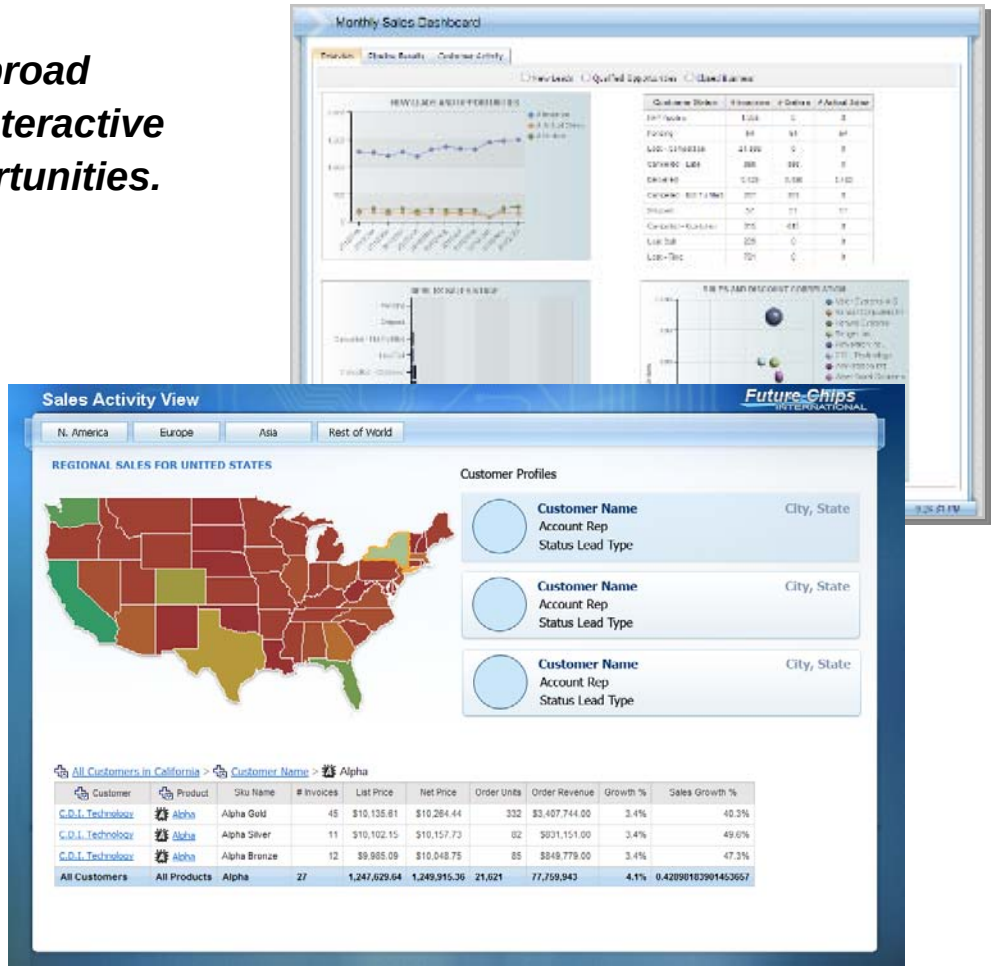
Business drivers for disconnected BI consumers

(Executives/front-line workers) are looking to…

Interact with a rich user interface, and easily filter data in dashboards with prompts	**Interactivity**
Access and work with information without wait times	**Performance**
Access and interact with dashboard content while disconnected from the network	**Disconnected**
Access dashboards as attachments in email rather than through a website	**Distribution**

Offline interactive Dashboard and analysis, delivering very fast, self contained BI to reach more users

Extend the reach of BI and analytics to a broad audience of consumers so they can use interactive reports to uncover new insights and opportunities.



IBM Cognos Active Report

Solution Highlights

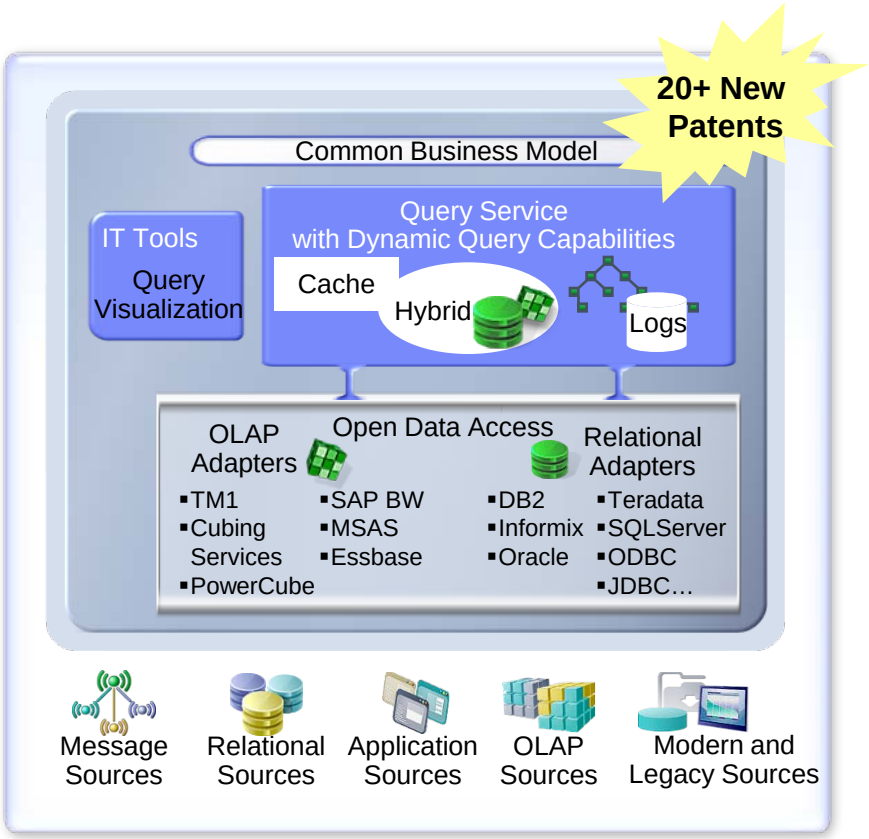
- Disconnected reporting application
- Self-contained, interactive content
- Easy to consume
- Mass deployment, Easy consumption
- Performance

Faster performance with in-memory processing

Deliver optimized access to all data regardless of where it resides

IBM Cognos Platform

- **Solution Highlights**
- Enhanced Query Service with Dynamic Query:
  - 64-bit in-memory optimized query generation with pattern intelligence to improve performance against complex heterogeneous data
  - In-memory calculations and aggregate operations for faster compute time
  - New optimized caching for hierarchies, members, facts, calculations and prompts for improved report performance
  - Initial conformance is for OLAP sources: SAP BW, TM1 and Essbase.



3x faster query

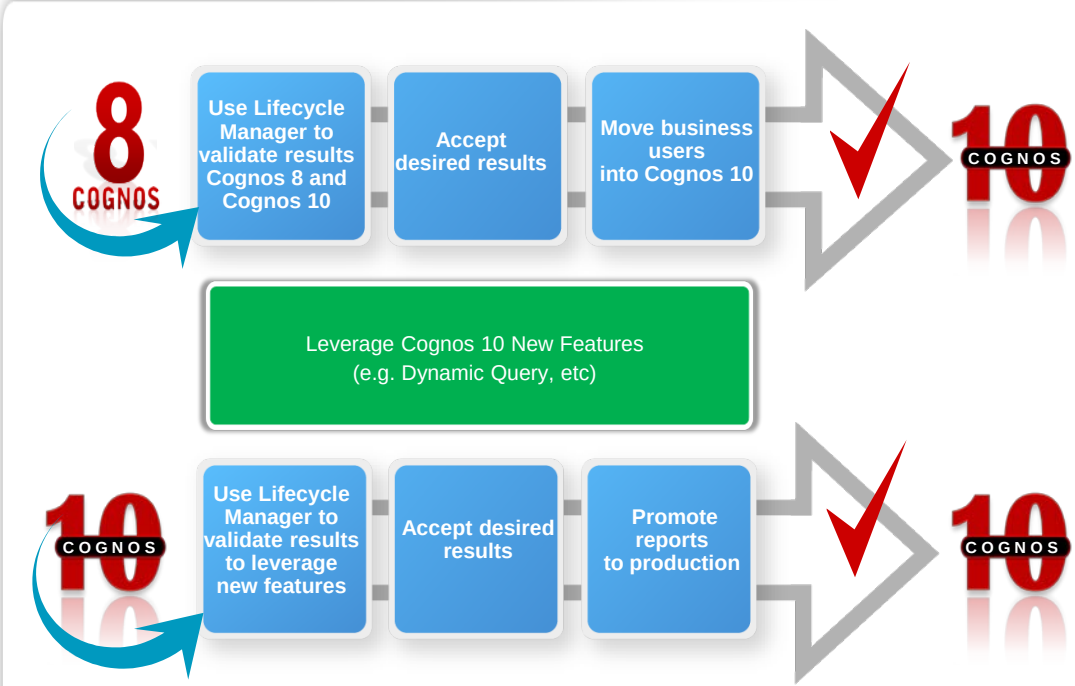
** When compared against IBM Cognos 8 BI software. Based on selective results from tests conducted in the IBM Performance and Scalability Labs on pre-release Cognos 10 software*

Seamless upgrade and ease of ongoing management

Reduce system management effort and speed time to deploy new functionality to the business community

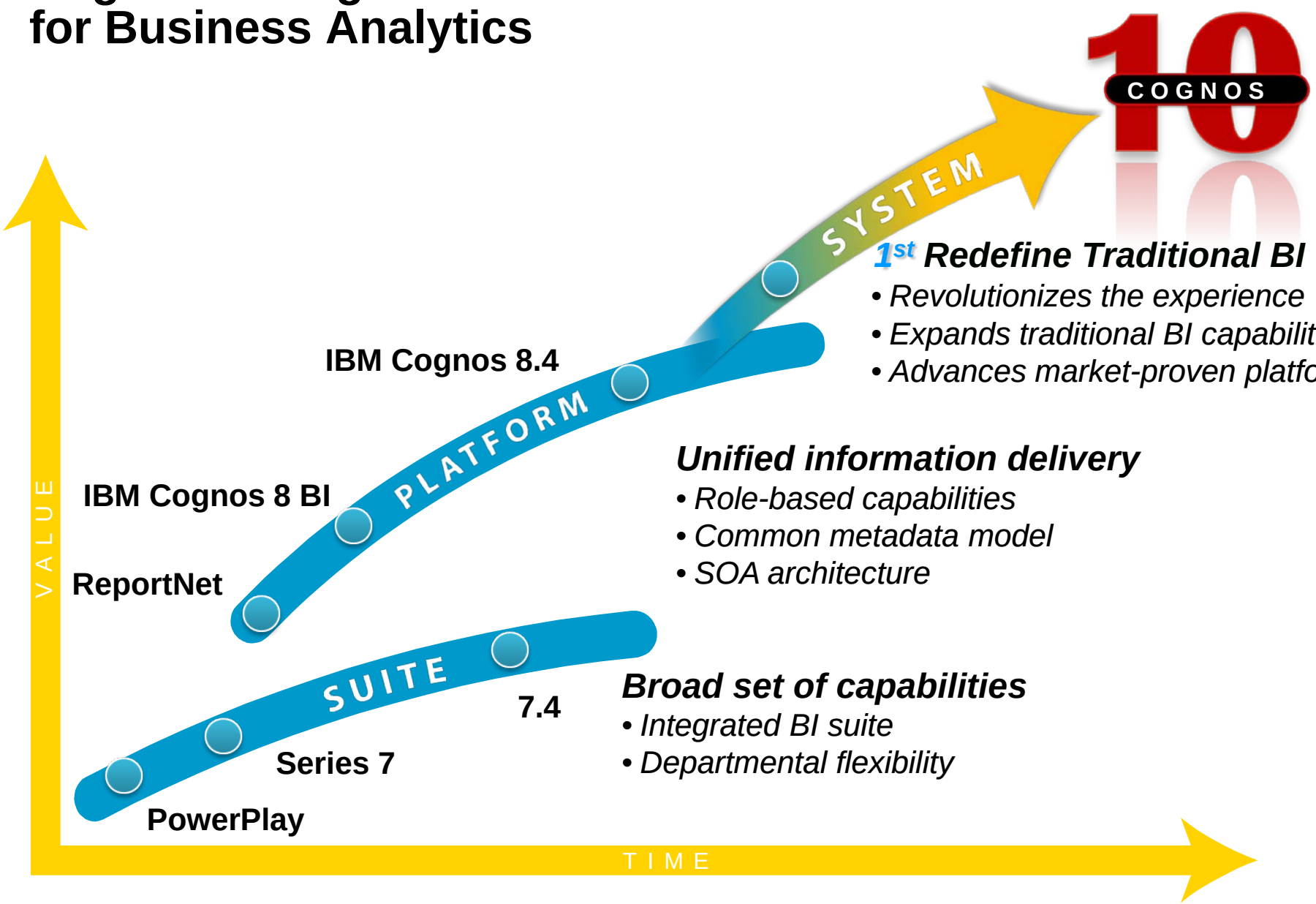
IBM Cognos LIfecycle Manager

- **Solution Highlights**
- Validate single environment
  - Assess impact of change in operating environment, (e.g. refresh pack, data source changes)
- Compare multiple environments
  - Streamline upgrade process and increase IT efficiency
- Use beyond upgrade to quickly assess impact of any change that could effect BI content



Upgrade first, then leverage new features

Cognos 10 begins a new series of innovations for Business Analytics



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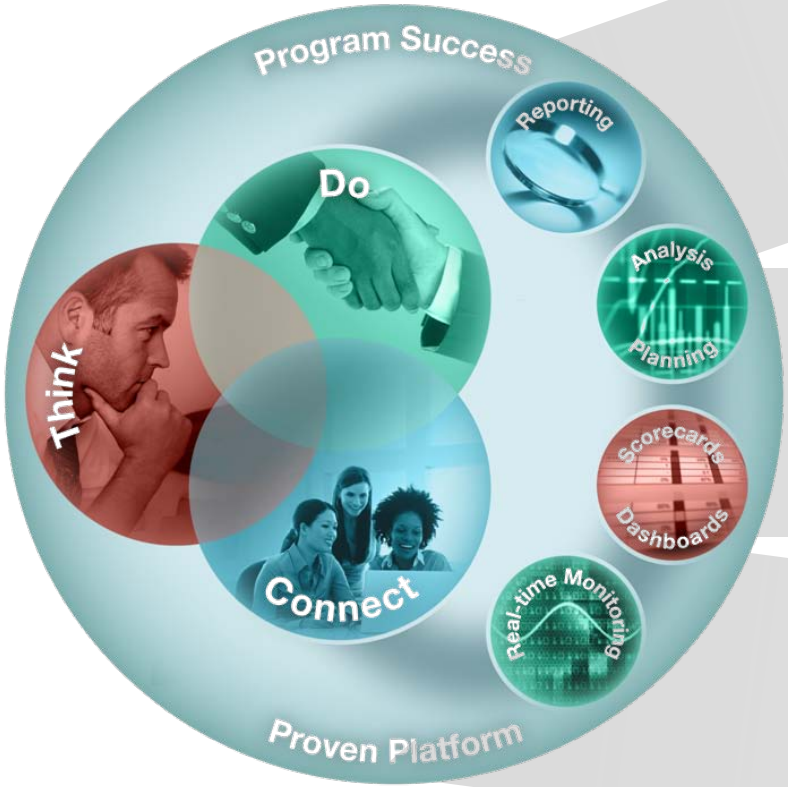
Cognos 10: Intelligence Unleashed
Smarter Decisions. Better Results.



Meet the needs of an evolving workforce

Step up team decision making

Accelerate business impact

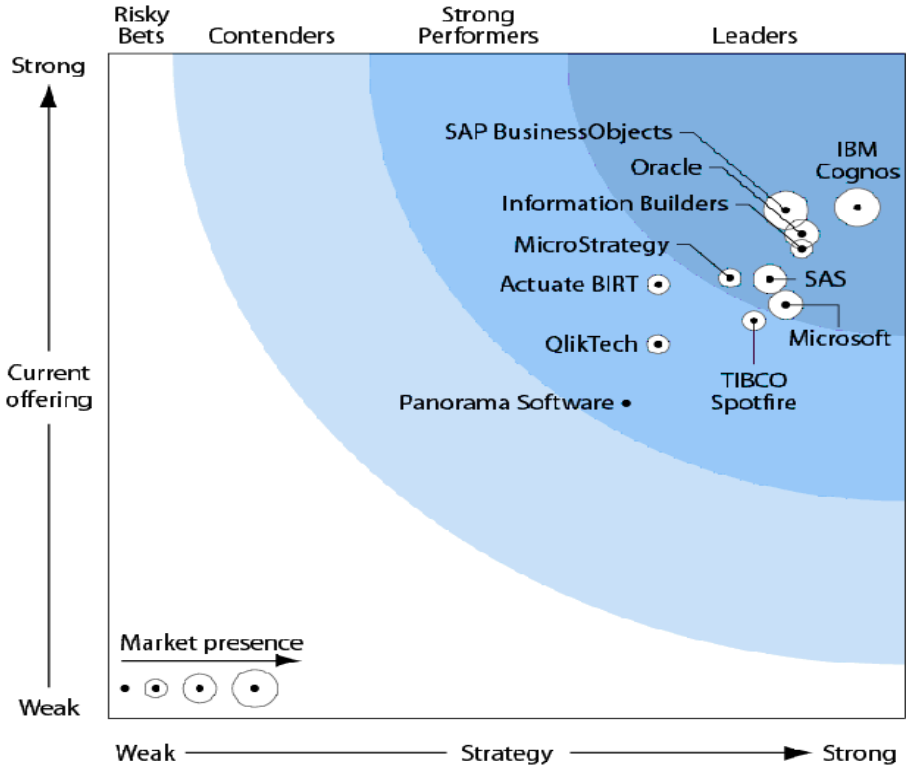
Forrester Wave Q4 2010 Chart for BI Offerings

Highlights

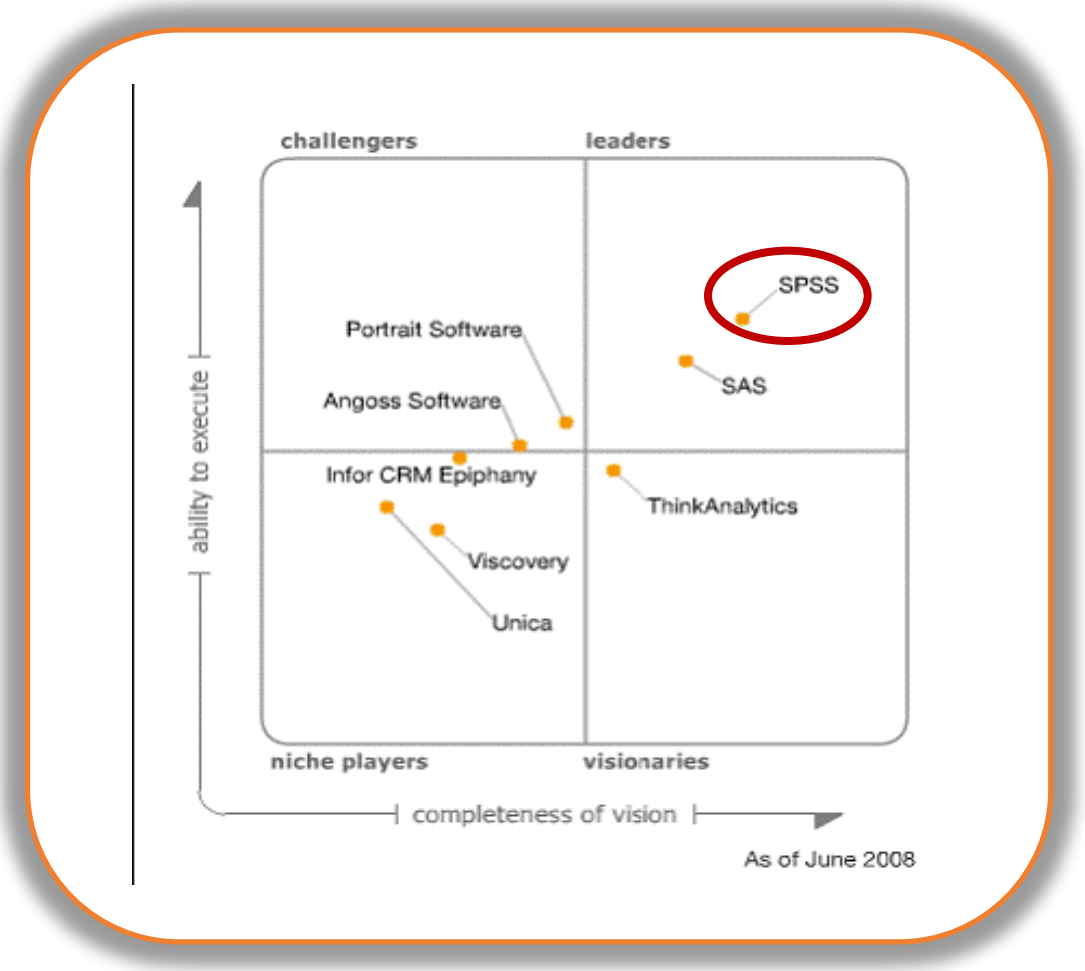
IBM is now the clear market leader in Current Offering and Strategy, having jumped ahead of SAP Business Objects.

IBM is now only vendor to be recognized as the leader in Strategy/Vision in both the ForresterWave for Enterprise BI and the Gartner Magic Quadrant for BI Platforms.

IBM leads the scoring in Current Offering, Architecture, Strategy, Product Direction (only vendor to receive a 5.00), Global Presence, Partner Ecosystem, and Functional Applications.



Gartner – For Predictive Analytics



Performance Management Platform of Choice

Insurance

- 9 of the world's top 10 Insurance companies
- 9 of the world's top 10 Property & Casualty companies
- 8 of the world's top 10 Life & Annuities companies
- 6 of the world's top 10 Reinsurers
- 7 of the world's top 10 Insurance brokers

Banking

- 10 of the top 10 US Banks
- 9 of the top 10 European Banks
- 6 of the top 10 Asian banks
- All top 10 Investment Banks

Manufacturing

- 9 of the top 10 High Tech companies
- 19 of the top 20 Consumer Goods companies
- Implemented by the Top 10 Automakers
- 5 of the top 7 global Oil & Gas companies

Performance Management Platform of Choice

Telecom

- 4 of the world's 5 largest Telecommunications companies

Life Sciences

- 25 of the top 30 Pharmaceutical Companies use Cognos BI
- 17 of the To 25 Pharmaceutical Companies use Cognos Enterprise Planning

Retail

- 25% of Top 250 Global Chains
- 36% of Top 100 Retailers
- 16% of Top 75 Food & Drug
- 17% of Top 100 Restaurants

Strong Customer Base in India: a sampling

Thank You