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The Next Wave of Business Intelligence: Intelligent Process Automation

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It's All BI to Someone

Business Intelligence (BI)

OLAP

Analytic Applications

Business Analytics

EIS

Business Performance Mgmt (BPM)

Corporate Performance Mgmt (CPM)

Enterprise Performance Mgmt (EPM)

Business Activity Monitoring (BAM)

Production reporting

Query & Reporting

Enterprise Reporting

Data Warehousing (DW)

Ad-hoc analysis

Portals

Advanced analytics

Data Mining

Data quality

Dashboards

Statistics

ETL

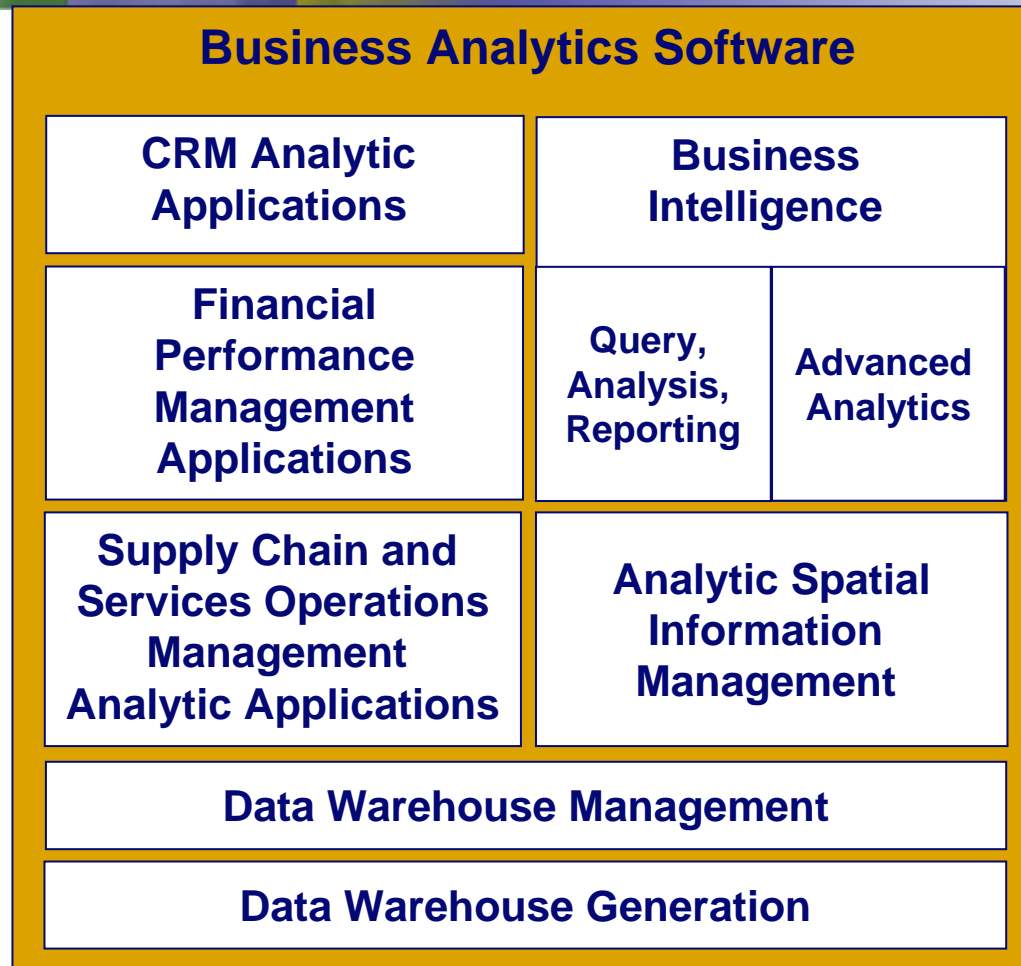
Scorecards

Data visualization

Business Analytics: Definition

Software market comprises tools and applications for tracking, analyzing, modeling and delivering data in support of decision making and reporting processes.

Business Analytics: Taxonomy



	Size	2005 – 2010 CAGR
Worldwide	\$16.5B	10.0%
Western Europe	\$5.4 B	8.8%

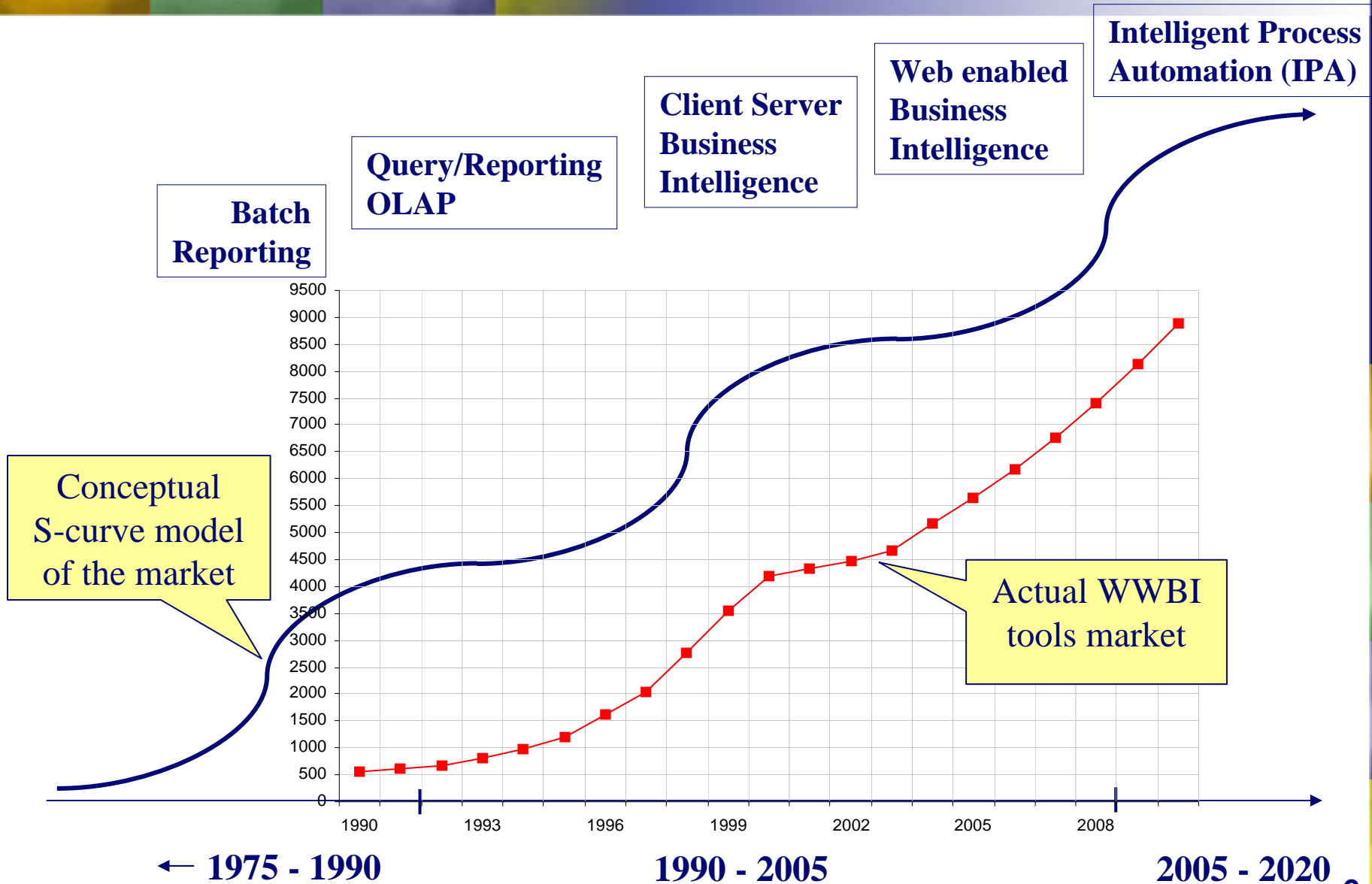
Intelligent Process Automation (IPA)

Definition

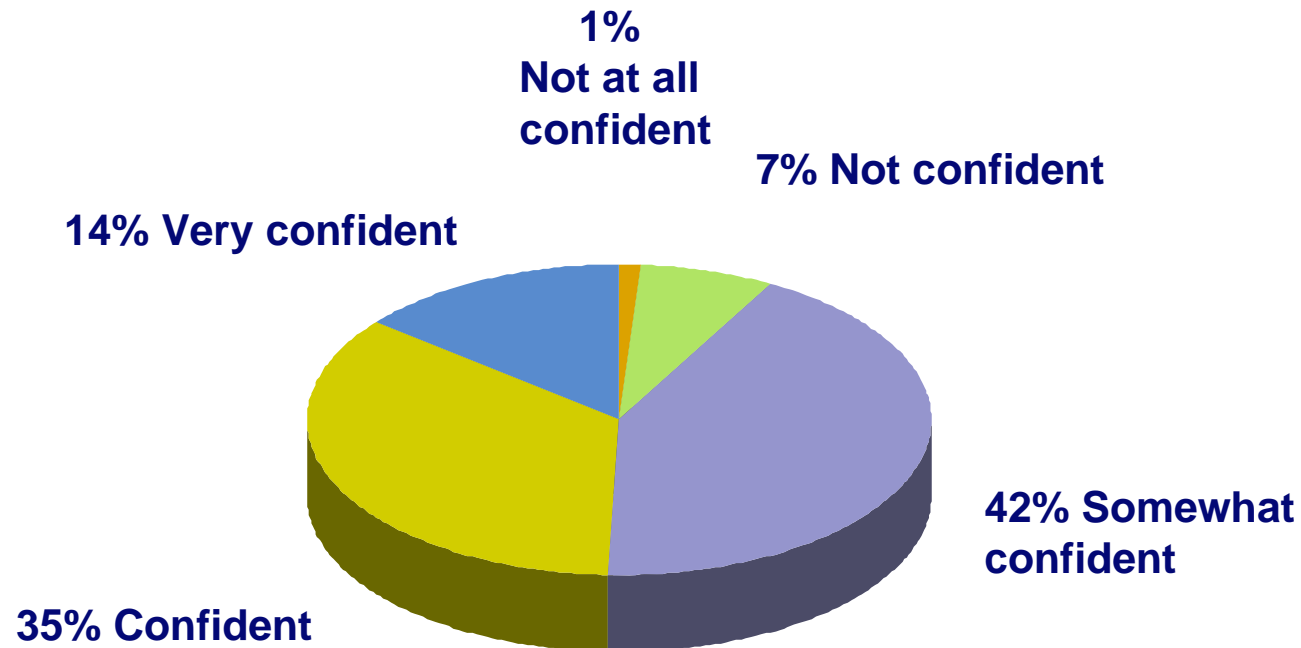
Intelligent process automation is the convergence of the BI tools and Business Process Automation deployment software. *IPA* software automates repeatable, operational decisions within business process sets in response to events where analytics drive the workflow.

- **Automating repeatable, operational decisions**
 - Roots in operations research (e.g., airlines, supply chain)
 - Workflow-based, guided analytics and collaborative support
- **In response to events**
 - Run-time, event-driven capabilities where event-monitoring triggers a process
 - Continuous in-process business activity monitoring, rather than after the fact data integration
- **Analytics drive the workflow**
 - Predictive models evaluate alternatives
 - Optimization considers risks, probabilities

How Did We Get Here?



Provide the Right Data and Tools to the Right People at the Right Time

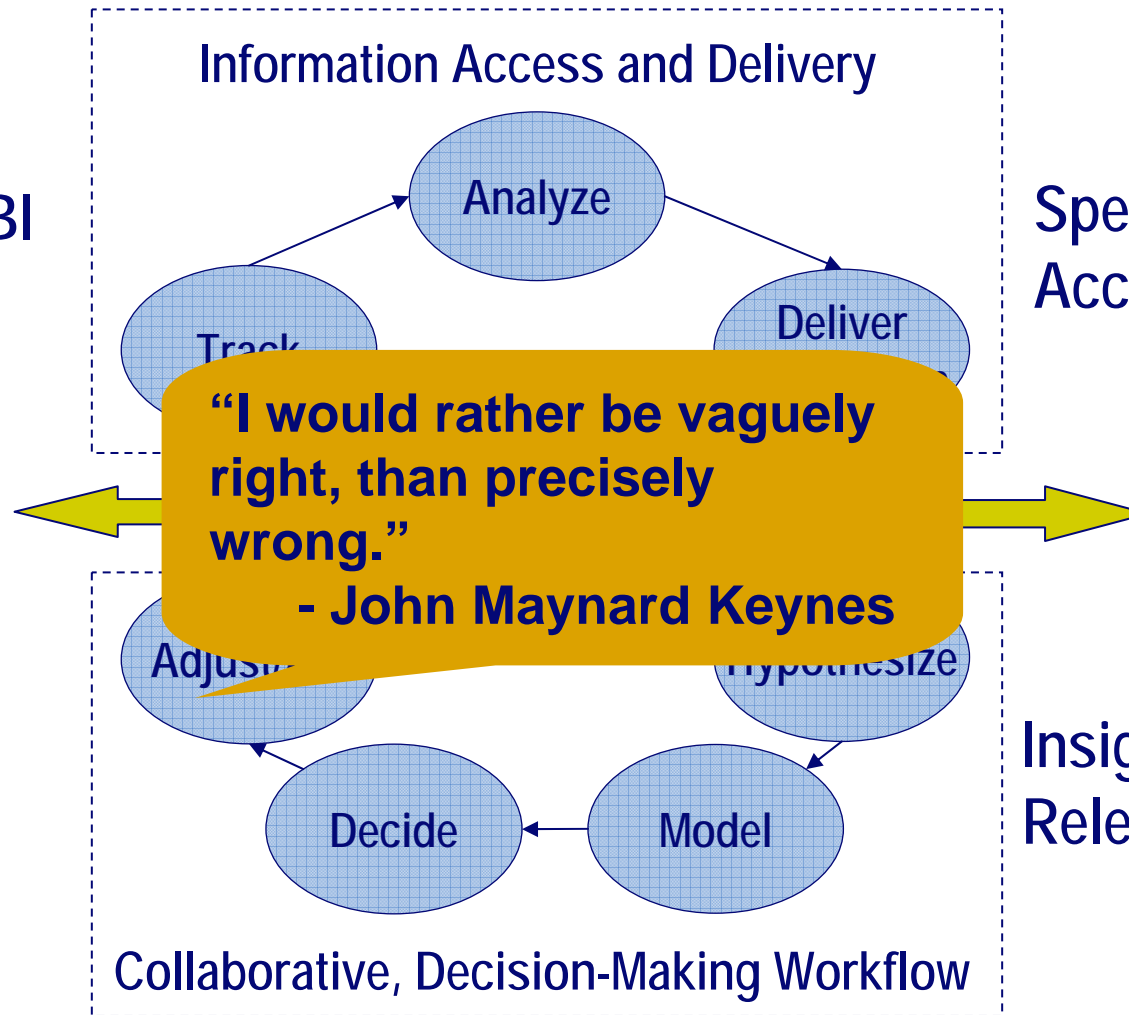


Q. How confident are you that the majority of reports developed by your company deliver relevant data to the right person at the right time.
n = 199, Source: IDC Reporting Survey, 2005

From What to Why and How

Traditional BI

Speed
Accuracy



Advanced
analytics

Insight
Relevance

The Purpose Behind BI

Speed and Accuracy

- Who are our best suppliers or most profitable customers?
- Which new prospects should we target?
- Where are our expenses growing faster than sales?
- Which products are experiencing quality problems?

Insight and Relevancy

- Should we extend credit to a particular customer?
- What will be the impact of a price change?
- How does recent customer activity trend predict future behavior or customer attrition rates?
- How does a certain pattern in product quality data predict future servicing costs?

Market Drivers

- Compliance
 - Industry, National, International
 - IPA focuses on driving consistency in the way repeatable, operational decisions are made
- Performance Management
 - Dashboard that supports business process of limited use
 - Dashboards should be used to monitor business process (BI about a business process)
 - Providing a process management will be a major stimulus for the development of IPA
- Streamlining Multi-Enterprise Connectivity
 - Compliance, performance management, and other business process sets should be working across organizations

“It’s not the strongest of (the species) that survives, nor the most intelligent, but the one most responsive to change.” - Charles Darwin

More Data, More Users, Less Time

- 25% of organizations expect their DW to at least double in size over the next three years.
- 25% of organizations say that BI solutions could better meet their organizations main objective if there was more and better information available to end users.
- 70% of organizations indicated that they are planning to increase the number of internal users of BI tools over the next 12 months.
- 33% of organizations indicate that they will be providing direct BI tool access to suppliers, 40% to customers/members, 20% to government agencies
- 12% of organizations indicate that their data warehouse is loaded using continuous feeds rather than batch loads. When asked about expectations for the next 12 months, that ratio increases to 20%.

All Decision Makers Are Not Created Equal

Executives

- Tools: Dashboards and summary reports
- Applications: Strategy Management e.g. Balanced Scorecard

Managers

- Tools: Dashboards, alerts, trend analysis reports
- Application: Budgeting and Planning applications

Analysts

- Tools: Ad-hoc query, advanced analytics, multi-dimensional analysis
- Applications: Fraud detection, underwriting, customer segmentation

Line-of-business employee

- Tools: Alerts, self-service reports, search
- Applications: Call center, sales analysis, warranty analysis applications

IT: Data Integration, Data Quality, Scalability and Availability

What Makes BI Operational?

Down a few hours	42.6%
Down up to 1 day	26.4%
Down more than 1 day	20.9%
BI solution down doesn't severely impact business operations	8.5%
Don't know	1.6%

Best Candidates to Benefit from IPA

Executives

- Tools: Dashboards and summary reports
- Applications: Strategy Management e.g. Balanced Scorecard

Managers

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Analysts

- Tools: Ad-hoc query, predictive analytics, multi-dimensional analysis
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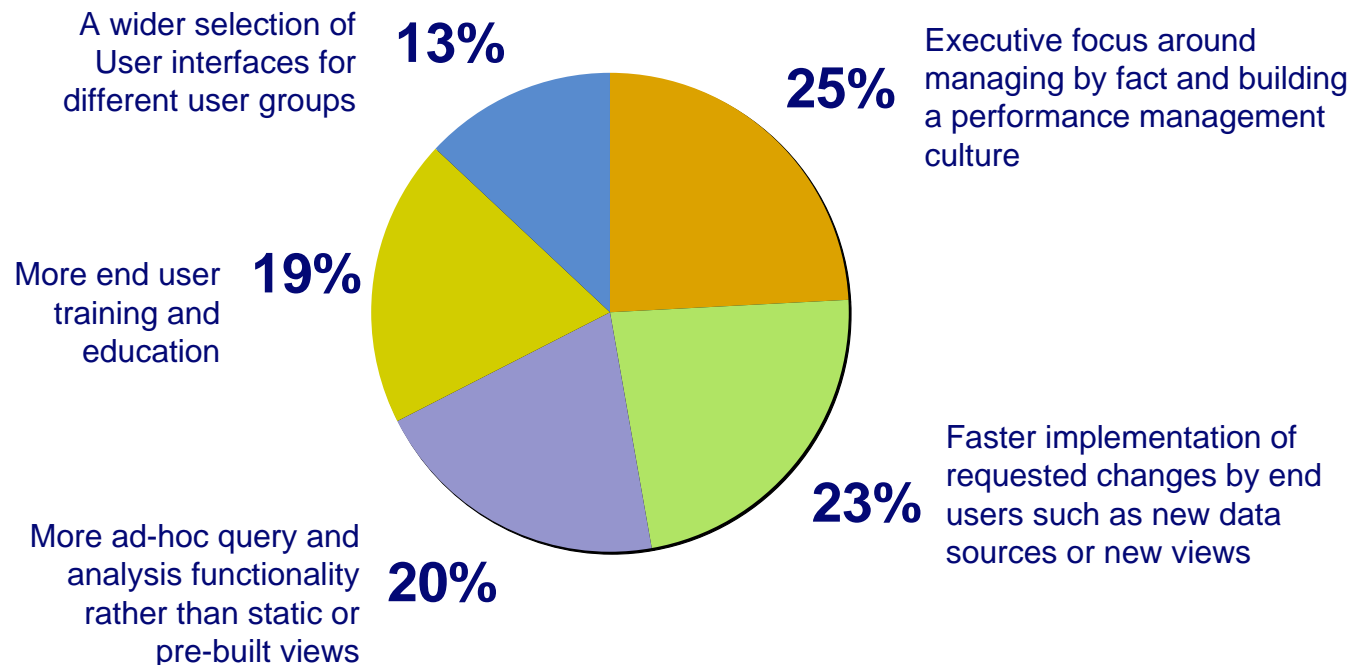
Front-line staff

- Tools: Alerts, self-service reports, search
- Applications: Call center, sales analysis, warranty analysis applications

IT : Data Integration, Data Quality, Scalability and Availability

How to Bring BI to the Masses?

- Improving Analyst Productivity
 - Depth and breadth of analytic functions and methods
 - Customers setting up information management groups
 - What will lead to wider adoption?



Desired Features of BI Solutions

Drill Down/Drill Through	75.5%
Sorting and Filtering	68.0%
Common, Consistent GUI	45.5%
Support for evaluating decision alternatives/optimization	45.5%
Advanced visualization	40.4%
Event-based, “real-time” monitoring and alerting	40.4%
Collaborative tools	37.6%
Pivoting	36.0%
Built-in workflow to guide in the analytic process	31.5%
Pre-packaged integration with enterprise applications (ERP,CRM,..)	31.5%
Other	2.8%
Don't know	2.2%

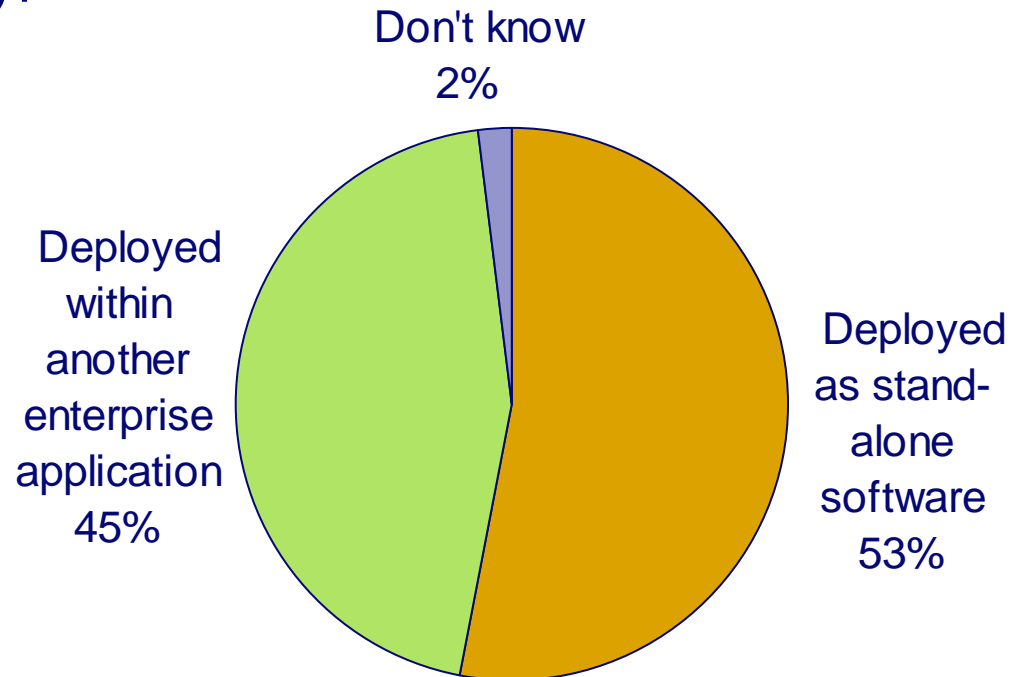
Analytic Applications vs. BI Tools

(meeting different sets of requirements)

	<u>Analytic Applications</u>	<u>BI Tools</u>
Specialization	Specialized to a business process or function or industry	Generic
Segmentation	Segmented by function – finance, marketing, operations/production	Segmented by technology (data mining, OLAP, Q&R)
Structure	Predefined business logic to produce specific results	Ad hoc query and undefined analysis
Reach	Deployed apps can reach broad #'s of business users	Tools traditionally used by 'Power' business analysts

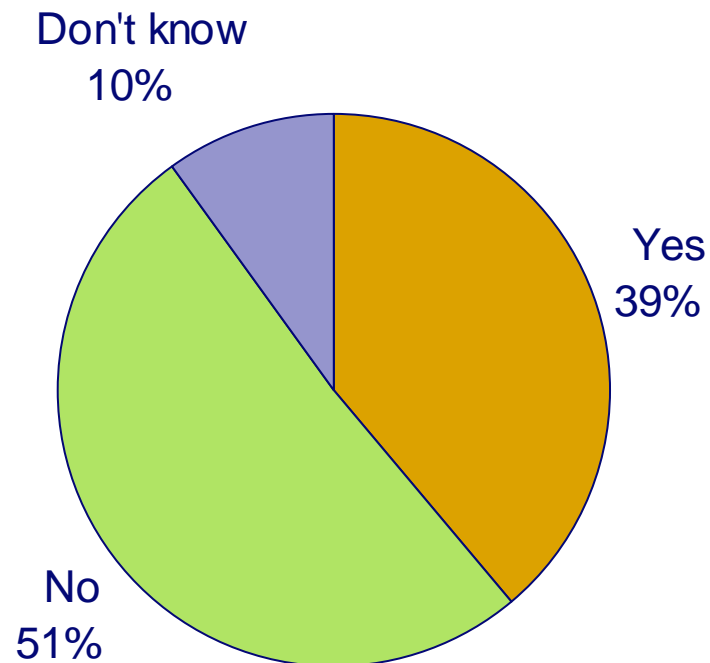
Aligning BI with Operational Applications

Q. Is your company's business intelligence software deployed as stand-alone software or within another enterprise application (e.g., ERP, CRM)?



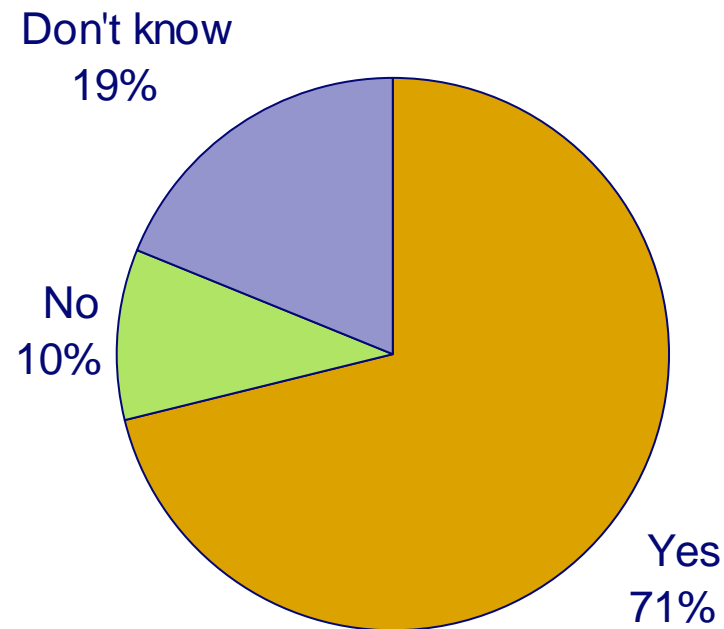
Aligning BI with Operational Applications

Q. Do the querying and reporting capabilities of your company's business intelligence solution take full advantage of packaged applications and data systems across your enterprise?



Aligning BI with Operational Applications

Q. Would you consider purchasing business intelligence tools from your company's database or applications software vendor?



How to Bring BI to the Masses?

- Improving End-User Productivity
 - Flexibility: self service 'a la' web community sites or 'myBI'
 - Interactivity and collaboration: ratings, notes, comments, annotations
 - Data Visualization: charts, graphs, tables
 - Mobility: support for all devices
 - Guidance: workflow and process support
 - Right tools for the right use cases (analytic applications and BI tools, Excel add-ins)
 - Query + Search

BI vs. Search (“for the masses”)

If your company had a chance to replace its business intelligence solutions with content access software that resembles software provided by search engines, would you consider such a technology?

(Net) Yes	52%
Yes, the general familiarity with a search interface would increase adoption of business intelligence solutions	28%
Yes, however, our company doesn't have internal expertise to implement search based content access tools for business intelligence purposes	25%
No	19%
Don't know	29%

Recommendations

- Secure senior management support
 - Promote a fact-based decision making culture
- Expand your current definition of BI
 - Beyond reporting to decision-centric BI and then to IPA
- Set up BI competency centers
 - Bring together employees from different disciplines in business and IT
- Focus on ongoing data integration, data quality and master data management efforts

Recommendations

- Provide the right data and tools to the right people at the right time (All users are not created equal: executives, managers, front-line staff, IT)
 - Increase information access through web-based dashboards that include both tables and charts
 - Increase ease of use or self-service of BI tools
 - Query + Search
 - Flexibility: self service ‘a la’ web community sites or ‘myBI’
 - Guided Analytics: workflow and process support
- Understand and document what decisions are being made in our organization and how they impact performance
 - What decisions do we need to make on a daily basis?
 - How do we make these decisions today?
 - Are these decisions made consistently?
 - Who are the best decision makers?
 - Are we capturing best practices in decision making?

“Not everything that can be counted counts and not everything that counts can be counted”

- Albert Einstein

Question/Contacts

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