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# The Analytics of Business in a Down Economy Can Business Intelligence Make a Difference

March 31, 2009



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## Business Challenges in Today's Economy

- Business leaders must be able to identify the areas that need innovation or restructuring.
- Business leaders need the ability to measure and monitor the effectiveness of strategic and tactical plans.
- Budgets are squeezed making good investments at the right cost is critical.
- Shortening of the planning cycle to better react and adjust to changes in the market.



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## Why is Business Intelligence important

- BI provides a centralized integrated view of a specific business function or the business as a whole.
- BI reduces the latency of integrating information into the business process.
- BI enables decision makers by providing the data they need at the time they need it.



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## HOW WOULD YOU DESCRIBE YOUR ORGANIZATION'S SUPPORT FOR BUSINESS INTELLIGENCE INVESTMENTS AND INITIATIVES?

Both management and end users think BI is a major asset and are generally supportive of new BI investments and initiatives	38%
Management thinks BI is an asset, but we have difficulty getting end users to utilize the reports, dashboards, and other tools we develop	27%
My end users are hungry for reports and insight, but upper management has held back support or funding for new BI investments and initiatives	27%
Neither management nor end users think BI is a major asset, so they aren't supportive of BI investments or initiatives	8%

Data: *InformationWeek Analytics/IntelligentEnterprise.com Applications Survey* of 242 business technology professionals with responsibility for BI



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## Extending BI with Analytics

- Leveraging historical data to discover trends and patterns with the intent to predict behavior or performance.
- Turning data into actionable information.
- High performance businesses that consistently outperform their competitors are 50% more likely to use analytics.

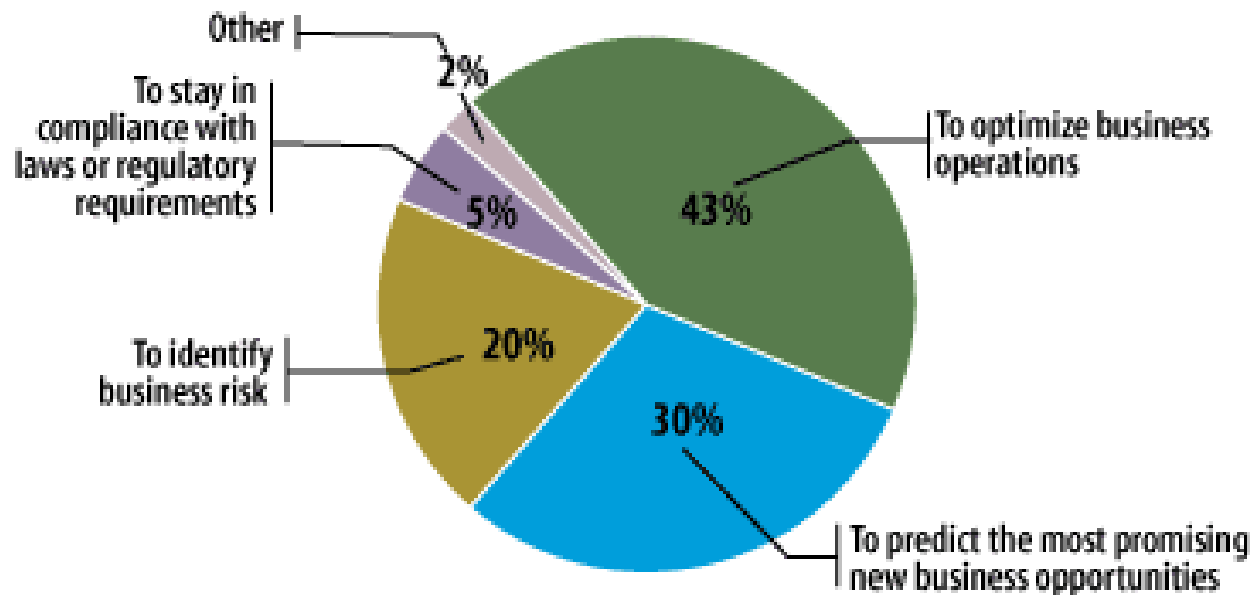


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### WHY ARE YOU INTERESTED IN ADVANCED ANALYTICS?



Data: *InformationWeek Analytics/IntelligentEnterprise.com Applications Survey* of 82 business technology professionals somewhat or very likely to invest in advanced analytics



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## Measuring the success of Business Intelligence

- Measuring the correctness and integrity of the data.
- Measuring how well the information meets the success criteria and requirements set forth in the preliminary design.
- Measuring the speed and usefulness of the information delivered to end users.
- The adoption rate by key stakeholders.



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## Measuring ROI

### Tangible Benefits (easily quantified)

- Direct correlation to revenue generation
- Direct correlation to operational efficiencies
- Direct correlation to financial profitability

### Intangible Benefits (not easily quantified)

- Better insight into data and trends
- Organizational trend toward Information based decisions

## ROI Example: Managing the Average Length of Stay (ALOS)

Investment in Business Intelligence \$462,000 (1<sup>st</sup> year)

- \$300,000 in consulting fees for design, architecture, and implementation.
- \$90,000 in Software licensing, Hardware purchase, and Maintenance fees.
- \$72,000 in additional internal resource allocations for maintenance and management of system.



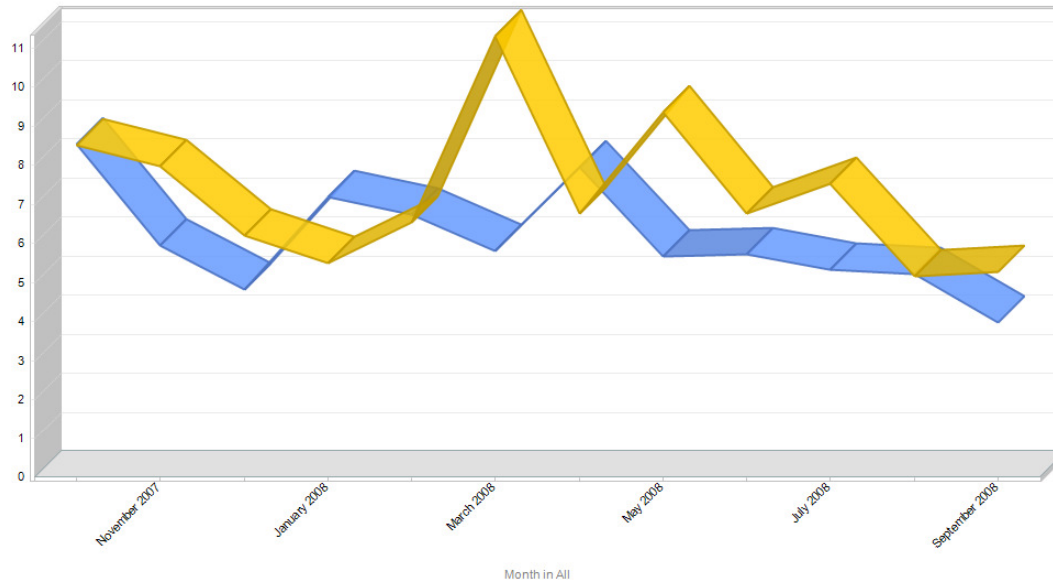
DRG: All

Date: Calendar 2008

Service Line ALOS

ALOS Trending Graph-SL

	County General		General Hospital	
	Actual	Target	Actual	Target
All	4.61	4.45	5.53	4.45
Cardiology	4.17	4.45	4.58	4.45
Endocrine	4.78	4.45	4.84	4.45
Gastroenterology	4.44	4.45	4.59	4.45
General Medicine	4.88	4.45	4.88	4.45
General Surgery	6.00	4.45	6.97	4.45
Gynecology	2.72	4.45	4.11	4.45
Hematology	5.66	4.45	5.17	4.45
Medical Oncology	5.55	4.45	7.79	4.45
Nephrology	6.11	4.45	5.52	4.45
Neurology	4.42	4.45	5.24	4.45
Neurosurgery	11.59	4.45	11.21	4.45
Orthopedics	6.25	4.45	6.70	4.45
Pulmonary	6.03	4.45	6.53	4.45
Rheumatology	4.36	4.45	4.78	4.45
Throacic Surgery	15.80	4.45	12.75	4.45
Urology	7.52	4.45	4.74	4.45
Vascular Surgery	6.32	4.45	9.09	4.45



ALOS PG Traffic Light Report

	October 2007	November 2007	December 2007	January 2008	February 2008	March 2008	April 2008	May 2008	June 2008	July 2008	August 2008	Sept
County General	6.00	8.20	13.29	5.40	7.70	17.67	16.60	9.33	9.50	4.17	10.75	
Acme Internal Medicine Associates	38.50	12.40	11.25	19.33	10.86	7.00	21.00	7.80	13.60	11.67	11.00	
Acme Nephrology Group	31.00	5.50	3.00	15.00	13.33	10.20	7.50	2.00	23.00	14.00	4.50	
Calico Internal Medical	10.00	12.67	3.50	24.00	7.00	6.00	26.00				11.00	
Dr. Ashley Ward	8.50		2.33	7.33	14.00	6.38	2.00	9.00	5.33	6.50	7.00	
Healthcare Associates			6.00			2.00				4.00		
Jasper OB/GYN	17.00	19.00	7.50	13.33	13.00	14.33	3.00	16.67	13.33	6.50	16.00	
Lopper Medical Associates	2.91	3.19	4.20	3.50	4.93	3.23	4.83	5.18	2.75	3.18	3.13	
Mountain Medical Associates			4.00	1.00						2.00		
Richard Simons Group	4.95	3.81	2.22	2.95	3.73	2.80	3.44	2.95	2.88	3.76	3.14	
Sawbones Surgical Associates	7.00		6.00			18.00	10.00					
Smithfield Medical Associates	8.54	5.94	4.83	7.19	6.74	5.81	7.96	5.67	5.73	5.34	5.21	
County General Subtotal												





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## ROI Example: Managing the Average Length of Stay (ALOS)

Recognized savings by reallocation of resources from mundane tasks

- Three (3) financial analysts spent 76% of their time building monthly Length of stay reports versus analyzing the data.
- After BI initiative, estimated first year savings of \$228,000.



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## ROI Example: Managing the Average Length of Stay (ALOS)

Recognized savings by eliminating ad-hoc data requests from other departments.

- Estimated \$1,000 per week.
- After BI initiative, estimated first year savings of \$48,000.



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## ROI Example: Managing the Average Length of Stay (ALOS)

### Spotting Trends

- By Diagnostic Related Groups (DRG)
- By Physician Groups
- By Facility

### Focus on improving processes

- Introduction of LOS management programs
- Implementation and monitoring the effectiveness on the programs



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## ROI Example: Managing the Average Length of Stay (ALOS)

### Observation

- Patients often remain hospitalized after becoming clinically stable

### Findings from programs

- Median hospitalization cost was \$5,942 or \$836 per day.
- Costs associated with treatment was 15% to 25% lower after the 3<sup>rd</sup> day.

### Results

- A reduction in stay by 1 day averaged a savings of \$680 per patient.
- Estimated 1<sup>st</sup> year savings of \$340,000  
(\$680 / day at 500 days saved per year)

## ROI Example: Managing the Average Length of Stay (ALOS)

Year 1 ROI: 33%

BI Investment: \$462,000  
Cost Savings: \$616,000

Year 2 ROI: 130%

BI Investment: \$534,000  
Cost Savings: \$1,232,000

Year 3 ROI: 305%

BI Investment: \$606,000  
Cost Savings: \$1,848,000



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## Where is Business Intelligence Headed

- **Hosted BI Solutions:** Outsourcing the implementation and management of your Business Intelligence solution.
- **Software as a Service Business Intelligence:** Leasing your Business Intelligence solution from a software provider.
- **Cloud Computing:** The pay as you go model of computing and data storage.



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## The panelists

- Brian Thomas from Key2 Consulting  
([brian.thomas@key2consulting.com](mailto:brian.thomas@key2consulting.com))
- Gary Giles from Alden Analytics
- Keith Lynn from LexisNexis
- Stuart Brooks from Acuity CFO
- Om Kundu from Suntrust



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