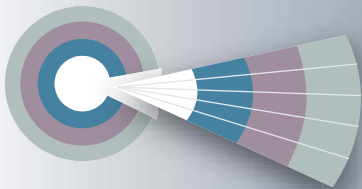


# OPERATIONS: winning at the margin



*The Performance Manager  
Series*



# INTRODUCTION

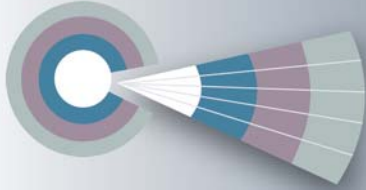
The new business book, *The Performance Manager*, can help you turn the growing information-intensity of your job from a challenge to a competitive advantage. Its thesis is simple—rather than sifting through all the data your organization may produce, if you pay attention to certain sweet spots, you will make better decisions, create better goals, and set better plans about issues that truly drive your company. We're pleased to offer you this chapter for **Operations** drawn from the book.

*The Performance Manager, Proven Strategies for Turning Information into Higher Business Performance* looks at the partnership between decision-makers and the people who provide the information that drives better decisions. It offers suggestions for 42 decision areas, or information sweet spots, taking into account your need to not only understand data, but also plan and monitor your performance. These decision areas are organized by the eight major functions of a company: Operations, Product Development, Sales, Marketing, Finance, Customer Service, Human Resources, Information Technology, plus an over-arching section for Executive Management. You will find six of these decision areas in this paper.

Each chapter introduces key challenges and opportunities companies face in the specific function. *The Performance Manager* then dives into each decision area, illustrating the core content of the corresponding information sweet spot. These are organized into two types of measures: goals and metrics, and a hierarchical set of dimensions that allow you to look at the information from a variety of vantage points.

Each decision area then offers advice on who beyond the specific function would benefit from seeing the information (e.g., Marketing should see Sales pipeline targets) to make better performance a truly cross-organizational exercise. We hope you see the value in this white paper and investigate other functional areas and their decision areas, or [take our offer for the whole book, \*The Performance Manager\*.](#)

We acknowledge and thank the great thinkers at Business Intelligence International, PMSI, and the staff and customers of Cognos, an IBM company, who offered their insights to make this publication possible.



# OPERATIONS

## Winning at the Margin

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*A man who does not think and plan long ahead will find trouble right at his door.*

Confucius

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Operations is the delivery mechanism of the business: providing both what the business sells and how that product gets to market. It is an engine driving the work in purchasing, production, distribution, logistics, and inventory management. That engine depends on input from the frontline functions of the business—Sales, Marketing, and Finance.

Of all departments, Operations has dealt the longest with the competitive situation described in Tom Friedman's book *The World is Flat*. Offshore and outsourced production, technology-enabled process excellence, and supply chain integration are part of the relentless drive for lower costs. After more than a decade of investment and continuous improvement initiatives, companies have achieved what major cost savings are possible. Managing and winning at the margins is the new competitive area for Operations.

Three critical barriers prevent Operations from working these margins to deliver the best possible performance.

**Barrier 1: *The operational back end can't see where it's going without the frontline's vision***

Operations depends on accurate and constantly updated information on what is required by customers. If you don't have accurate information about the demand (both volume and variety) for products in your pipeline, you stand to lose operational efficiency and profit margin. With better information and plans, you avoid emergency production runs to satisfy unforeseen customer demand. You reduce the need for production system change-over and setup, and so profit margins are higher. You can match production volume with customer demand to reduce inventory.

**Barrier 2: *Process bottlenecks and downtime***

Operations continuously competes against time. Can this process be faster? Can workflow processes be re-engineered and simplified to gain time? The more steps between start and finish, the more bottlenecks and downtime risk may be hidden in them.

The time to complete a series of process tasks is inflated by waiting periods. In some situations, actual process time can be as low as five to ten percent of the total time from start to finished product. When only one-tenth of the time used is productive, reducing such waste is a worthy prize.

You must identify and eliminate predictable process time-wasters. While many solutions may be internal—such as innovation, changes in materials or equipment, or upgrades to IT infrastructure—you may decide your business is better served by outsourcing to a specialist with technical and scale advantages.

Information sweet spots help generate continuous intelligence loops on the real cost of bottlenecks and downtime, showing you the benefits of increased automation or specialization.

**Barrier 3: *In a fast-paced, just-in-time economy, cost averages disguise cost reality***

With the just-in-time approach to Operations, new and changing customer requirements regularly affect workflow. It is no longer sufficient to use the standard costing analysis designed for long production runs. That approach may disguise significant variances in actual process performance costs. Customers who appear profitable on a standard cost basis may not be in fact.

By breaking down work processes into discrete activities and measuring them with accurate activity indicators, you can achieve real-time costing. The best indicators will vary with the situation. Some will be based on labor time used in machine setup. Others may directly measure the raw material used for a certain production run, or the number of quality tests required for a given customer product order. The more detailed this activity breakdown, the more accurate your understanding of actual costs. Understanding and analyzing the information sweet spots lets Operations identify process patterns and suggest cost savings.

For example, a business prints self-adhesive labels that range in complexity from two to five colors. A simple description of the work process steps includes:

- Specification
- Artwork
- Proofing
- Order confirmation
- Production planning
- Printer setup
- Production run
- Printer cleaning
- Maintenance
- Quality control
- Warehousing
- Dispatch
- Carrier routing

Analyzing the activity, the company realizes:

- More colors means higher costs
- Shorter runs mean 30 percent downtime
- The most demanding and “important” customer is rejecting and returning 10 percent of total deliveries while demanding smaller, more complex orders with just-in-time fulfillment

Based on this information, the business now understands that it is losing money on every order made by its “important” customer. Using a standard costing approach would never have highlighted this customer-specific cost reality.

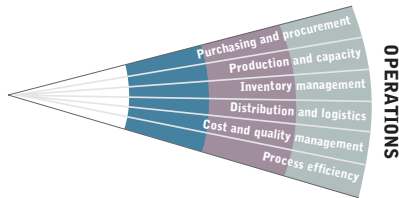
Information sweet spots that let you understand what drives the larger cost categories will have an immediate and sizeable impact on managing actual costs.

## Delivering on the Promise Made to the Customer

For Operations to win at the margins, every day and every shift must balance the need to reduce costs while staying agile enough to respond to new customer demands.

Operations has the responsibility to lead six core areas of the company's decision-making:

- **Purchasing and procurement** → Ensuring timely and cost-effective input of resources
- **Production and capacity** → Generating timely output in the face of uncertain demand, complicated processes, and variances in input
- **Inventory management** → Understanding the balance between holding cash and delivering on customer service requirements
- **Distribution and logistics** → Achieving efficient distribution and delivery
- **Cost and quality management** → Balancing the need to reduce costs with the equal requirement to deliver quality output
- **Process efficiency** → Designing a process to monitor and analyze performance benchmarks to find opportunities for greater efficiency



### Purchasing and Procurement

The purchasing and procurement decision area manages both input costs and supply requirements. In many businesses, input costs account for up to 50 percent of total costs. Effectively managing them can bring savings directly to the bottom line. For every one percent gained in input cost savings, somewhere between 0.25 percent and 0.5 percent typically will be earned as profit. This is a significant return on investment when compared to other investments and project returns.

In addition to cost, the procurement personnel must ensure inputs arrive in a timely manner. Inputs arriving too late threaten production and customer delivery; inputs arriving too early cause unnecessary inventory buildup.

Managers must balance input costs with the production outputs required to satisfy customers. In the short term, your decisions must include how to respond to shortage problems, price increases, and delivery delays. For example, you must decide whether to tie up cash in five days of inventory to buffer against recent problems in delivery. Long-term decisions include determining your supplier strategy. For example, how do you balance the savings and/or better quality from exclusive supplier agreements against the risk of creating unacceptable dependencies?

These decisions require information on specifications, procurement tenders, price quotations, and vendor performance assessments. You cannot make the necessary purchasing trade-offs without access to information sweet spots. The better you understand the trade-offs, the more finely tuned is your ability to win at the margins.

GOALS	METRICS	DIMENSIONS
Purchase Price/Unit (\$)	Actual Lead Days (#)	Fiscal Week
Reject Rate (%)	Contract Quantity (#)	Fiscal Year
Supplier Timeliness (%)	Contract Remaining (#)	Quarter
	Credit Rating (#)	Month
	List Price/Unit (\$)	Week
	Purchase Order Cost (\$)	Raw Material Category
	Purchase Orders (#)	Sub-Category
	Purchase Units (#)	RM Name
	Quality Rating (#)	Tag #
	Quoted Lead Days (#)	RM Suppliers
	Supplier Discount (\$)	Type
	Supplier Discount (%)	Supplier
	Supplier Perf. Rating	Shipment Type/Bill of Lading (#)
		Shipment Type
		Shipment Bill of Lading (#)
		Vendor Status
		Status
		Contract/Spot

FUNCTION	DECISION ROLES	PRIMARY WORK	CONTRIBUTORY	STATUS
Purchasing	Executives	•		
	Managers	•		
	Analysts	•		
	Professionals	•		
Distribution	Executives			•
	Managers		•	
	Analysts		•	
	Professionals		•	
Operations / Production	Executives			•
	Managers		•	
	Analysts		•	
Audit	Executives			•
	Managers	•		
	Analysts	•		

### Production and Capacity

Without product, there is no business. Accordingly, this decision area is the backbone of the business.

Production management depends on order fulfillment and expected sales information. Ideally, you know product demand well in advance to be able to plan capacity and schedule production runs for given products. This minimizes downtime and maximizes machine loadings. Changing a schedule, especially for an urgent customer need, means rearranging existing production schedules and results in extra setup time, change-over time, idle time, and lost capacity. *The bottom line?* It reduces your ability to win at the margins.

As with any chain of interconnected links, changes in demand affect your input requirements. The domino effect of changes spreads across the whole Operations process, creating a series of costly capacity management responses.

GOALS	METRICS	DIMENSIONS
Backlog (%)	Avg. Units per Order (#)	Fiscal Week
Capacity Utilization (%)	Avg. Units/Production Run (#)	Fiscal Year
Systems Up Time (%)	Fixed Production Cost (\$/%)	Quarter
	Marginal Production Cost (\$/%)	Month
	Production Hours (#)	Week
	Production/Batch Runs (#)	Machines
	Scheduled Production Hours (#)	Equipment Type
	Scrap Unit (#)	Machine
	Set-Up Time (#)	Mfg. Product Run Number
	Units in Production Schedule (#)	Product Line
	Units Produced (#)	SKU
	Units Produced/Hour (#)	Component
	Units Reworked (#)	Part Number
	Variable Production Cost (\$/%)	Run Number
	WIP End (#)	Organization
	WIP In (#)	Division
	WIP Out (#)	Department
		Org. Code
		Production Process
		Production Process
		Work Function

FUNCTION	DECISION ROLES	PRIMARY WORK	CONTRIBUTORY	STATUS
<b>Operations / Production</b>	Executives Managers Analysts Professionals	• • • •		
<b>Purchasing External</b>	Executives Managers Analysts Professionals		• • •	•
<b>Finance</b>	Executives Analysts		•	•
<b>Sales</b>	Executives Analysts		•	•
<b>Customer Service</b>	Executives Analysts		•	•

To counter this, you must communicate new information immediately so that Operations can adjust its schedule in the most effective manner. You must also communicate potential delays to Customer Service for resolution. Closely monitoring this ebb and flow of changing circumstances through production information sweet spots lets Operations maximize its use of production capacity.



### Inventory Management

Shipping appropriately bundled products to fill customer orders is the concern of the inventory management decision area. Balancing customer requirements, speed of order fulfillment, and the volume of buffer stock you need to hold are key.

The principle of holding buffer inventory is simple—but the larger your product range, the greater the complications. If a business has 5,000 specific product items and 10,000 customers, there are 50 million possible product/customer combinations to monitor and serve effectively. [Note: with bundling combinations, many more than 50 million.] The fact that buffer stock ties up cash compounds the urgency of decisions. If you hold one month of buffer inventory, one month of production has not earned a return—equivalent to more than eight percent (one-twelfth) of a year’s production cost.

But inventory management must also determine the financial and customer consequences of removing buffer stock from inventory. Tying up 40 to 50 percent of your inventory with products that are rarely ordered makes no sense unless key customers highly value these products.

Understanding the full implications of these decisions requires access to information sweet spots. In the example above, it means knowing the total annual sales and profit value of each of the 5,000 product items. Most will earn less than one percent of total margin. *Which ones? Of these, how many go to your most important customers, and are they seen as critical components of the order?* If order frequency is low and irregular, the case for culling these product items increases. Even if significant savings will result from this product cull, you must align the decision with input from other functions such as Sales and Customer Service. *How should you handle the notification, and what are the contingency measures if key customers complain?* Sales does not like bringing bad news to customers and expects a clear justification for such business decisions. Factual reasons will be useful when communicating your rationale to customers.

GOALS	METRICS	DIMENSIONS
Inventory (\$)	Avg. FG (#)	Fiscal Week
Inventory / Days (%)	Avg. FG (\$)	Fiscal Year
Inventory Turns (#)	Avg. Units per Order (#)	Quarter
Product SKUs (#)	FG End (#)	Month
	FG End (\$)	Week
	FG In (#)	Product SKU
	FG Inv. Carrying Cost (\$)	Product Line
	FG Out (#)	Brand
	Product SKU Order Frequency (#)	SKU
	Time since Last Order (#)	Warehouse
		Region
		District
		Warehouse

FUNCTION	DECISION ROLES	PRIMARY WORK	CONTRIBUTORY	STATUS
<b>Operations / Production</b>	Executives	•		
	Managers	•		
	Analysts	•		
	Professionals	•		
<b>Distribution</b>	Executives			•
	Managers		•	
	Analysts		•	
	Professionals		•	
<b>Finance</b>	Executives			•
	Managers		•	
	Analysts		•	
	Professionals		•	
<b>Purchasing</b>	Executives			•
	Managers		•	
	Analysts		•	
	Professionals		•	
<b>Audit</b>	Executives			•
	Managers	•		
	Professionals	•		
<b>Customer Service</b>	Executives			•
	Analysts		•	

### Distribution and Logistics

This decision area includes managing quality, cost, and timeliness of distribution and delivery. Short-term issues require the handling of customer orders and shipping using the most efficient routing, scheduling, and equipment. Long-term issues require determining whether you can reduce mileage costs, improve delivery execution, and ideally exceed customer service needs.

The operational infrastructure to distribute and deliver customer goods is intricate and costly. Many companies work with third-party carriers, distributors, or wholesalers for their expertise. Distributors specialize in particular channels, routes, and/or territories, and can distribute more quickly and efficiently than most manufacturers. Strategically placed distribution warehouses can be an advantage to, and extension of, your sales force.

While outsourcing makes sense on many levels, it does mean you lose direct control and have to accept the risks that come with loss of control. Managing such risks requires negotiating and monitoring distributor agreements with clear terms and commercial guidelines.

GOALS	METRICS	DIMENSIONS	
Damaged Units (%)	Avg. Actual Lead Days (#)	Billing Customer	Product SKU
Distribution Cost (\$)	Avg. Quoted Lead Days (#)	Industry Group	Product Line
On-Time Unit Delivery (%)	Damaged Units (\$)	Industry	Brand
Price/lb/100miles (\$)	Delivery Frequency (#)	Category	SKU
	Insurance Cost (\$)	Customer Name	Shipment Type/BOL #
	Lead Days (%)	Carrier/Distributor	Shipment Type
	Order Size (#)	Distributor/Carrier Type	Shipment BOL #
	Shipments On Time (#)	Carrier	Ship-To Location
	Total Shipments (#)	Carrier Activity Status	Region
	Units Delivered On Time (#)	Activity Status	State/Province
	Units Shipped (#)	Carrier	County
		Carrier Region	City
		Region	Zip Code/Postal Code
		State/Province	
		County	
		Zip Code/Postal Code	
		Fiscal Month	
		Year	
		Quarter	
		Month	

FUNCTION	DECISION ROLES	PRIMARY WORK	CONTRIBUTORY	STATUS
Distribution	Executives	*		
	Managers	*		
	Analysts	*		
	Professionals	*		
Customer Service	Executives			*
	Managers		*	
	Analysts		*	
	Professionals		*	
Finance	Executives			*
	Managers		*	
	Analysts		*	
	Professionals		*	
Purchasing	Executives			*
	Managers		*	
	Analysts		*	
	Professionals		*	
Sales	Executives			*
	Analysts		*	
Operations / Production	Analysts		*	

Identifying, managing, and evaluating the most effective distribution and logistics routes for customers or prospects draws on the following information sweet spots:

- **Order processing** → editing, recording, credit control, stock allocation, vehicle route, delivery sequence, customer delivery requests
- **Handling characteristics** → ease of handling, and stacking, susceptibility to damage, special requirements (e.g., temperature)
- **Packaging** → duration and type of journey, security, insurance
- **Routing and scheduling** → order size, transport capacity, customer destination network, delivery frequency

### Cost and Quality Management

In cost and quality management, you balance cost savings in one area against potential rework, rejects, downtime, or customer complaints. Purchasing may find a new, lower-cost supplier but the consequence may be higher scrap rates. *What is best for the business?*

You need to understand cost variances and their impacts. By contrasting cost differences, you can benchmark performance, identify patterns, and understand the root causes of cost differences. You also need to understand and analyze the value and cost of preventative measures that ensure quality such as training, appraising incoming materials, manufacturing processes, and inspections. The more you examine measurable work activities and the more detailed your breakdown of costs, the more detailed your understanding will be of the root causes of variances in those costs. Measuring and monitoring must be integrated with quality expectations to understand the effect of changes.

GOALS	METRICS	DIMENSIONS
Failure Cost (\$)	Defects (#)	Fiscal Month
QC Reject Rate (%)	QC Cost (\$)	Year
	QC Defects Fixed (#)	Quarter
	QC Units Sampled (#)	Month
	Scrap Cost (\$)	Mfg. Product Component
	Scrap Unit (#)	Product Line
		SKU
		Component
		Product SKU
		Product Line
		Brand
		SKU
		QC Defect Issues
		QC Defect Issues
		QC Tolerance Standards
		QC Tolerance Ranges

FUNCTION	DECISION ROLES	PRIMARY WORK	CONTRIBUTORY	STATUS
<b>Operations / Production</b>	Executives Managers Analysts Professionals	• • • •		
<b>Product Development</b>	Executives Managers Analysts Professionals		• • •	•
<b>Audit</b>	Executives Managers Professionals	• •		•
<b>Customer Service</b>	Executives Analysts		•	•
<b>Finance</b>	Executives Analysts		•	•
<b>Marketing</b>	Executives Analysts		•	•
<b>Purchasing</b>	Executives Analysts		•	•
<b>Sales</b>	Executives Analysts		•	•
<b>Distribution</b>	Analysts		•	

**Process Efficiency**

Process efficiency management looks at ways to improve operation and supply chains. This means looking for performance outliers and understanding why they occur. There are three areas where well-designed comparative performance metrics can make the difference between an industry follower and a leader:

- Internal operational processes
- External developments and trends
- Competitive benchmarking

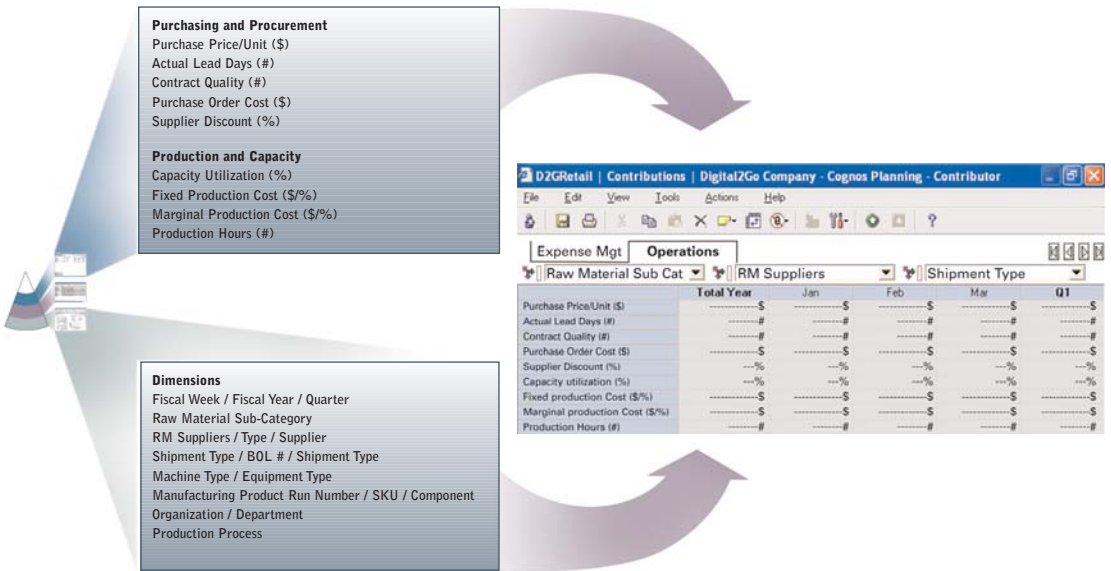
Your internal operational processes are most familiar to you, and the easiest to analyze. For example, if Purchasing’s “cost per dollar of purchase” is a benchmark, then an unusual increase in this index may indicate two things. Either purchasing costs have increased or purchases have decreased. You must determine whether purchasing efficiency has gone down or if sales have slumped. Another possible benchmark is “dollars of sales per order”. If this metric is decreasing, it can indicate that the business is filling more orders for the same dollar total in sales. This may mean that costs have risen without an accompanying increase in sales—but it may instead indicate that you need to re-engineer the business to handle smaller orders.

Taking advantage of external developments and trends requires looking outside your company. *Should you shift to low labor cost economies for cheaper manufacturing or services such as call centers? Are there new manufacturing techniques, equipment, or technologies that can introduce dramatic efficiencies?* Failing to follow up on these external efficiency developments may jeopardize your competitive position.

Beyond this focus, many leading businesses extend their monitoring activities to their competitors. Simple comparative benchmarks such as sales per employee, volume output per employee, inventory levels, number of warehouses, and others will help identify performance differences. With these identified, you can determine the actions you need to take.

GOALS	METRICS	DIMENSIONS
Operational Failures (#)	Avg. Units/Production Run (#)	Fiscal Month
Process Cost (\$)	Downtime Cost (\$)	Year
Process Value-Add (\$)	Maintenance Cost (\$)	Quarter
	Process Steps (#)	Month
	Production/Batch Runs (#)	Mfg. Product Component
	Scheduled Production Hours (#)	Product Line
	Set-Up Cost (\$)	SKU
		Component
		Product SKU
		Product Line
		Brand
		SKU
		Production Process
		Production Process
		Work Function

FUNCTION	DECISION ROLES	PRIMARY WORK	CONTRIBUTORY	STATUS
Production	Executives	•		
	Analysts	•		
	Managers	•		
	Professionals	•		
Finance	Executives			•
	Analysts		•	
IT / Systems	Executives			•
	Analysts		•	
Purchasing	Executives			•
	Analysts		•	
Sales			•	
Distribution			•	
	Analysts			





# ABOUT THE PERFORMANCE MANAGER

The book, *The Performance Manager*, is authored by:

**Roland P. Mosimann** *Chief Executive Officer, BI International*

As CEO and co-founder of BI International, Roland has led major client relationships and thought leadership initiatives for the company. Most recently he drove the launch of the Aline™ platform for on-demand Governance, Risk and Compliance. Roland is also a co-author of the Multidimensional Manager and the Multidimensional Organization. He holds an MBA from the Wharton School of the University of Pennsylvania and a B.Sc. (Econ) from the London School of Economics.

**Patrick Mosimann** *Founding & Joint Managing Director, PMSI Consulting*

As co-founder of PMSI (Practical Management Solutions & Insights), Patrick has led major client engagements and has significant experience across a number of industry sectors. Patrick Mosimann also holds an MBA from the Wharton School of the University of Pennsylvania and a B.Sc. (Econ) from the London School of Economics, University of London.

**Meg Dussault** *Director of Analyst Relations and Corporate Positioning, Cognos, an IBM company*

Meg started her marketing career 15 years ago, beginning with campaign management for the national telecommunications carrier. She then moved to market development for Internet retail and chip-embedded smart cards before moving to product marketing with Cognos, now an IBM company. She has been with Cognos for 8 years and has worked extensively with executives and decision makers within the Global 3500 to define and prioritize performance management solutions. This work was leveraged to help shape the vision of Cognos performance management solutions and to communicate the message to key influencers.

**About Cognos, an IBM company**

Cognos, an IBM company, is the world leader in business intelligence and performance management solutions. It provides world-class enterprise planning and BI software and services to help companies plan, understand and manage financial and operational performance. Cognos was acquired by IBM in February 2008. For more information, visit <http://www.cognos.com>.

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