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Visual analytics for actionable insights
Diving into big data to lead, navigate, and disrupt

In today's marketplace, companies are under constant pressure to improve profitability. This is prompting them to seek higher levels of transparency into financial performance and uncover insights that can enhance decision making and create value. Armed with meaningful analytics, business leaders can recommend actions to improve the bottom line—adjusting pricing, reducing product costs, and rationalizing unprofitable products or services.

Of course, in order to quantify value, business leaders need information—specifically, cost data. But with more data collection points than ever before, there can be a glut of information. With too much information to sift through easily, and without a clear understanding of the facts, leaders are often unable to provide insights and recommendations to leadership.

Visual analytics can help.

According to a Deloitte survey of financial executives, nearly two-thirds of the respondents said the most important function of cost information and related business analytics is supporting strategy and strategic decision making.[1] Leveraging this information to maximize profitability and reduce cost is both a science and an art. And the upside is clear: Organizations that embrace complexity and use visual analytics to better understand their data can accelerate performance and gain competitive advantage.

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[1] "Cost transparency: Helping finance create business value," Deloitte Development LLC, 2015.

Overcome fundamental hurdles

As noted in figure 1, cost information is leveraged to support a range of decisions—from business strategy and operational performance improvement to evaluating the cost to service customers and contract profitability.

The first challenge business leaders experience on the road to profitability management is obtaining meaningful cost information from the myriad data sources that may be available. To tackle the challenge of managing data, companies need a range of business analytics. A wide variety of factors, including increased globalization and years of industry consolidation, have complicated the ability to acquire data to perform analysis. The problem: Data is available, but it may not be easily connected because it's stored in various locations and systems. For large organizations with multiple business lines, the move to a shared-services model has also made attributing costs to products or customer groups difficult. This is primarily because these service models require organizations to change how costs are captured and then allocated across businesses. Complex supply chains that necessitate ongoing transfer-pricing activities can also make it difficult for companies to get an accurate view of profitability. These complexities foster beliefs that the data is "bad" or too difficult to mine.

Fortunately, there are new tools to help sort it out.

Follow the brighter path ahead

Visual analytics tools and techniques have been developed to aggregate multiple data sets from disparate sources. Unique identifiers, such as product numbers, transaction codes, cost centers, etc., can enable the development of a Common Information Model (CIM) that provides one comprehensive source of the truth. Other business analytics tools have been devised that allow companies to build on and improve these datasets by filling data gaps, cleaning messy fields, reconciling elements across sources, and transforming the underlying structure to support subsequent analysis. Once a slow and labor-intensive process, these steps can be done much faster today, thanks to artificial intelligence, superior processing power, server sizes, and special data-science programs. A combination of powerful technology and advanced techniques are rendering common business analytics problems of the past obsolete.

Ditch your spreadsheets

Many organizations still use spreadsheets to manage data, but that technology has limitations. It's time to consider visual analytics tools that can transform the data more efficiently and get to the needed level of granularity to develop powerful insights. So where can you start?

Figure 1. Companies need a range of costing information
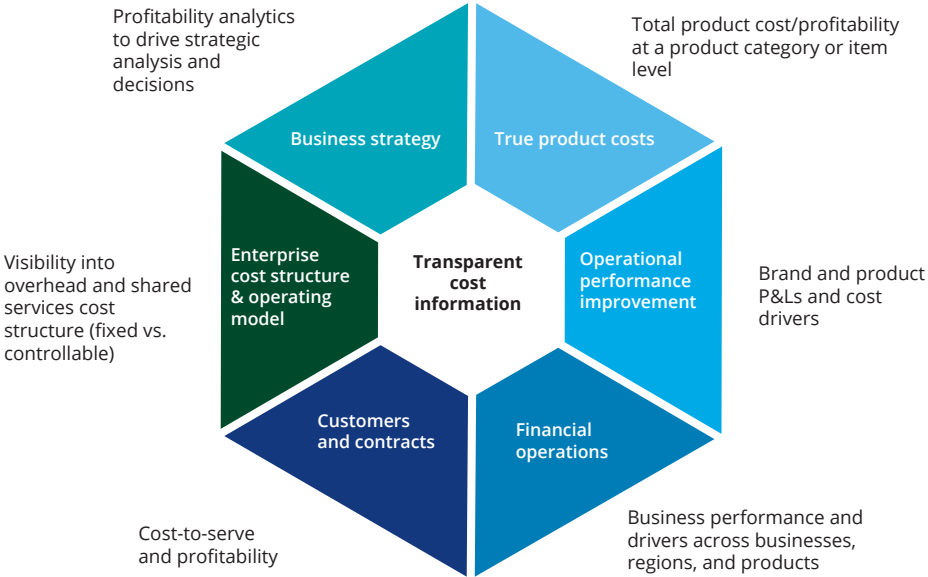
Source: "Cost transparency: Helping finance create business value," Deloitte Development LLC, 2015.

A combination of powerful technology and advanced techniques are rendering common business analytics problems of the past obsolete.

1. **Ask the right questions:** Companies must first define what information is needed to have an impact on key business decisions and strategies. Understanding what questions the organization is trying to answer enables the development of more effective and efficient cost and profitability models. The process of defining questions can also provide a guide for visual analytics and data analysis overall.

   Specifically, it's important that questions reflect an understanding of a company's strategic priorities and a sense of the major pain points that business analytics and profitability data can help alleviate. Typical questions include:

   • What's driving profit performance, and what areas in the business need attention?
   • What are the levers to reduce overhead and shared services costs?
   • What's the total cost to serve by customer, channel, or region?
   • What's driving swings in margins?
   • How is product mix impacting the business?

2. **Transform the data:** The data required to support meaningful analysis, visualization, and insight generation likely resides in disparate systems with varying degrees of accuracy across sources. The most impactful solution should start with the collection, collation, and transformation of this data into a single data model. To achieve this, common data handling and transformation challenges will need to be overcome. These include missing values, different output formats across systems, and varying levels of granularity for common fields.

   Routines in common data processing software can automatically join and cleanse data from different sources. Meanwhile, advanced software packages can intelligently impute missing values and help apply allocation methods that lead to greater levels of granularity. The evolution of data processing software and tools is helping to ensure that existing limitations in source data aren't permanent impediments to these types of analytics initiatives.

3. **Apply visual analytics:** Asking the right questions and transforming requisite data offers a new way to identify potential opportunities and make strategic changes. It allows organizations to go beyond the spreadsheet to show cross-functional data and identify what business leaders may not have seen otherwise. This approach is highly graphical, interactive, and visual. It starts with a sketch—sometimes called a wireframe—that maps out what an ideal information dashboard might look like if it were designed to answer all the critical questions the organization has identified. Once this design has been agreed upon, it's formalized as a finished dashboard.

   Basically, visual analytics is the art of creating dashboards and interfaces that display critical data in meaningful, insightful ways. Practical applications beyond cost and profitability management might include forecasting, planning and analysis, risk management, strategic sourcing, operational complexity reductions, and anti-fraud sensing and monitoring—to name a few.

4. **Leverage information into insight:** For many organizations, getting cost data to a more granular level is key to informed strategic decision making. The advancement of data transformation tools have helped overcome the historical challenges of disparate systems and incomplete data. With these tools, as well as visual analytics dashboards, companies can derive the information they need to make better strategic decisions and generate more value from costing data. This information, in turn, can provide companies with insights for managing profitability, maximizing future prosperity, and transforming risk into value across the board.

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The ins and outs of visual analytics

A majority of companies still rely on two-dimensional reports with a bunch of words and numbers to facilitate a discussion or communicate a point. But in many cases, the information lends itself to more questions, requiring iterative versions to provide the answers.

This is where visual analytics comes in.

Visual analytics is an effective way to convey cost data to management and support strategic decision making. Visual analytics encompass tools that use dynamic portals with interactivity and drill-down capabilities. They can eliminate the need for data dumps, multiple spreadsheets and databases, pivot tables, and painstaking rework every time a question comes up or a team needs to look at data in a different way. They also make complex data accessible to users, regardless of their background or skill set.

The approach to implementation is highly visual: It starts with a digital sketch (a wireframe) that depicts the design of a portal or information dashboard built to answer critical questions the organization has identified.

Using visuals helps companies think about what information they need from an analytic standpoint and in what format they want to receive it. Once the wireframes are finalized, improvement teams can build a rapid working prototype of the visual analytic portal with real data that can answer real questions. Here's an example of what a wireframe looks like:

Visual analytics offers a window into the effectiveness of an organization's costing data in answering strategic questions and highlighting specific underlying issues that need to be addressed. It also helps identify the roadblocks that are preventing users from getting the information they need. And it indicates where companies should focus their data improvement efforts in order to develop a robust analytics tool that can be leveraged for strategic decision making. In the meantime, however, they can use the prototype to drive value and decisions in pilot areas.

The point of the prototype isn't to answer every costing question the company has defined, but instead to gain an understanding of cost data issues and what needs to be fixed. The beauty of the visual analytics prototype is that it identifies what's working and leverages this to generate quick value.

Overall, leveraging visual analytics to communicate an organization's cost and profitability model allows finance to effectively partner with the business by answering a host of questions without the need for complex and manual data manipulation. Equipped with better tools, such as visual analytic portals, companies can have the information they need to make more strategic decisions and generate enhanced value from costing data.
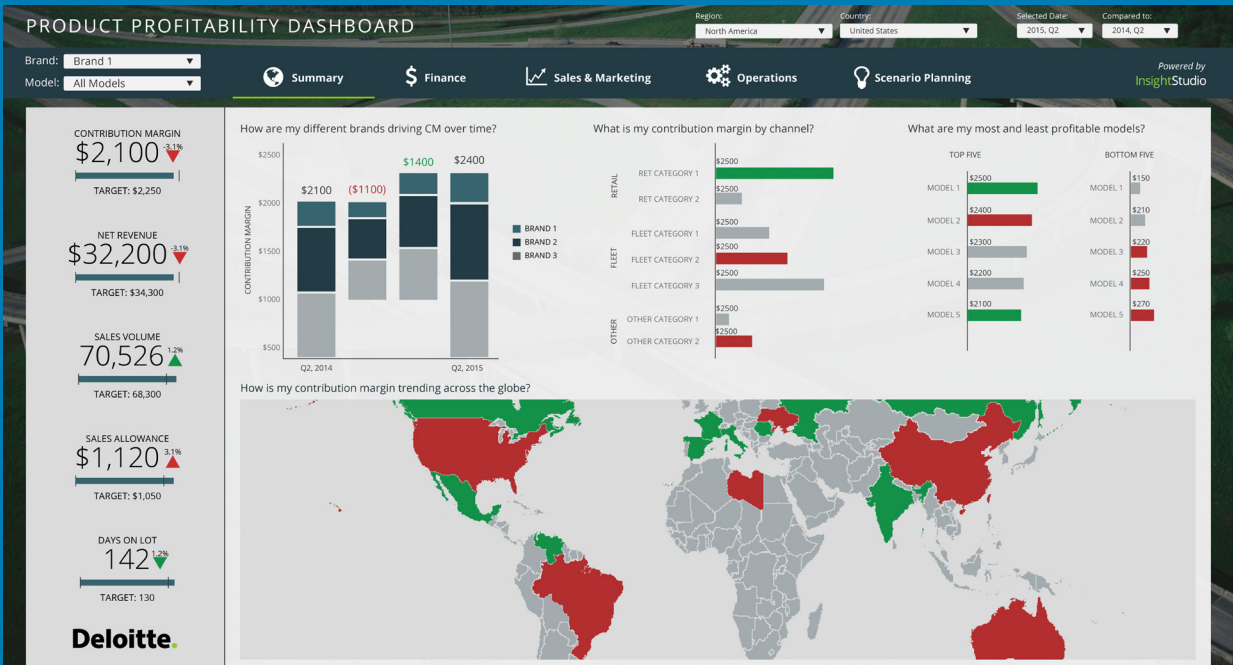
Getting clear on costs

Before organizations can manage and maximize profitability, they have to understand all their costs—a trend known as "cost transparency." Based on our survey of finance executives, here are some statistics about the importance of cost transparency and costing methodology.

Top 3 roles of cost information

Support business strategy and strategic decisions
64%

Drive product/service cost reduction
61%

Support pricing and contract negotiations
52%

Importance of transparency and strategic decision-making as a whole

78% agree this is of paramount importance

Improving cost data

93%
are, or will be, taking action to improve the quality of their cost information

4%
are contemplating a switch in cost methods as part of their improvement efforts

Source: "Cost transparency: Helping finance create business value," Deloitte Development LLC, 2015.

Contacts

To discuss your profitability challenges and how analytics can help address them, please contact:

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