



**Deloitte.**

The in-memory  
computing revolution  
How businesses are  
putting SAP HANA™  
to work

# Now is the time

Of all the advances made recently in business analytics, perhaps none are more important than the increased speed and accessibility offered by the in-memory capabilities introduced by SAP HANA™. Put simply, it's becoming much easier for a wider range of users to tap deeper insights from an organization's data—faster.

Read these case studies, and you'll notice a thread running through them. By and large, these cases reflect a desire to innovate—to take something an organization has done dozens or hundreds or thousands of times before, and do it differently with HANA. In our experience, that's where clients can get the most value from HANA.

Sure, incremental improvements are possible with HANA—executing the same processes more quickly or reducing costs. But HANA tends to work best for leaders who identify their toughest challenges, then reimagine how they could be solved in a HANA world.

As you read, keep those tough challenges in mind. Deloitte and HANA just may give you the ability to solve problems in a whole new way—as many of these cases show.

Regards,

A handwritten signature in black ink, appearing to read 'Lee Dittmar', with a small dot above the 'i'.

Lee Dittmar  
Global Leader, SAP HANA and Analytics  
Principal, Deloitte Consulting LLP

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### Why HANA?

HANA is SAP’s in-memory computing technology. With in-memory, companies can crunch massive amounts of data, in real-time, to inform immediate decisions in virtually every part of the business. The marketing team can use it for real-time modeling of changes to sales campaigns. Operations can adjust fulfillment and supply chain priorities on the fly. Internal audit can implement real-time fraud and threat detection. You get the idea. Wherever there’s data, even massive amounts of it housed in different types of systems, HANA can help transform it into useful, actionable insights.

In practical terms, putting their business on HANA means that companies have ready access to data across the enterprise—at a time when the ability to process information and respond to meet rapid shifts in the market environment can be a considerable competitive advantage.

# Asset analytics

## Helping a power company prevent equipment failure



### The challenge

Maintaining 60,000 transformers scattered across Canada is no small task. Executives at this utility company wanted to better manage their assets to hold down equipment-related costs and avoid downtime, but several obstacles stood in their way:

- Each region managed its own reporting.
- Regional data was manually input into spreadsheet reports.
- Data was not standardized across regions.

As a result, executives did not have a single view of their transformer assets, which hindered smart decision-making.

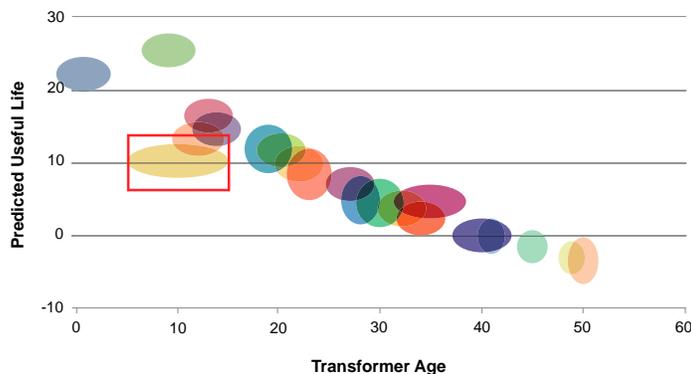
### How we helped

Deloitte helped provide the utility company with a reliable way to predict equipment failures. Even a few years ago, it would have been nearly impossible to continually monitor the millions of bits of transformer sensor data and other relevant data.

Today, with SAP Predictive Analytics on HANA, managers and field crew have real-time information graphically displayed on desktop and mobile dashboards. They can easily see the expected useful life of a transformer based on age, geography, insulation score, and more. This helps them to prioritize maintenance, avoid downtime, and maintain customer trust.

### Analytics in action

Transformer predicted life expectancy dashboard



While the useful life of most transformers diminishes gradually with age, the manager can see that one group of transformers (indicated by the red box) is deteriorating much faster. Digging deeper into the data, the manager finds that this group of transformers is close to a new construction site, which is affecting performance. To extend the useful life of these at-risk transformers, the company installs protective shields to help prevent future damage.

### Potential bottom-line results

- Lower equipment-related expenses
- Reduce downtime
- Improve customer satisfaction

Deloitte can help you make smarter decisions about how to reduce equipment-related costs and gain more value by strategically planning upgrades and replacements. Here are a few industries that may benefit:

- Oil and gas
- Aerospace and defense
- Manufacturing
- Transportation
- Power and utilities

# P3 managed analytics

## Helping consumer product companies improve pricing, promotions, and profitability



### The challenge

One of the toughest problems that many consumer product (CP) companies face is that decision-makers across marketing, finance, and sales do not have accurate insight into their products, brands, and channels. Brand managers need timely, decisive information to competitively price their products and fine-tune promotions, and executives need visibility into profitability across the brand categories. However, many companies' traditional databases are bogged down by vast amounts of product, geographic, and customer data. A simple report can take days or even weeks to be produced, which means the information is outdated, and possibly irrelevant, before it is even analyzed.

### How we helped

Deloitte built an SAP HANA analytics solution tailored to help consumer product companies improve pricing, promotion management, and profitability. Our solution is used by several of the world's leading CP companies to provide insights for:

- Pricing: Setting optimum pricing strategies and tracking performance (e.g., establish price gaps across channels and determine their elasticity)
- Promotions: Setting marketing campaign targets and evaluating ROI by channel, customer, and brand
- Profitability management: Segmenting and monitoring channel profitability; tracking and adjusting product/product mix performance by customers, programs, and regions

Today, with Deloitte's P3 solution on HANA, brand and sales managers have real-time, customized information graphically displayed on their desktop and mobile devices. These interactive dashboards fit each users' needs and responsibilities. The solution is also scalable so that users can easily slice and dice data going back five years or longer. Best of all, the information is accurate and timely, providing valuable insights that can lead to smarter decisions.

### Potential bottom-line results

- Improve profitability
- Inform smarter business decisions
- Enhance campaign effectiveness

Deloitte's P3 solution can help you make smarter decisions about how to optimize pricing, evaluate promotions, and improve product and customer profitability. Here are the functional areas we can help:

- Pricing: Establish product prices to improve competitiveness and profitability by geography, distribution channels, and customer segment
- Marketing: Evaluate products and develop special promotions for improved ROI
- Sales: Boost sales with more competitive pricing and marketing strategies

# Supply chain analytics

## Helping an aircraft manufacturer reduce delivery time and improve profitability



### The challenge

A leading aerospace and defense manufacturer with a complex assembly process could not accurately predict component lead time, which caused the company to miss delivery dates, forfeit on-time performance bonuses, and erode customer satisfaction. To effectively manage the organization's total end-to-end delivery time, managers needed the ability to accurately track thousands of parts sourced from around the world. Leadership turned to Deloitte to develop the analytics capabilities needed to help improve profitability, reduce delivery times, and restore customer confidence.

### How we helped

Deloitte created a solution to unlock the client's diverse set of variables and improve manufacturing processes. Using proprietary algorithms, complex statistical simulations, visualizations, and in-memory technology, the Deloitte team identified specific ways to enhance performance across the complicated global supply chain. The solution's predictive capabilities helped managers answer tough questions. Which parts increase the risk of production delays? How could unforeseen internal or external events affect delivery time? Which critical high-risk parts require strategic inventory? And more.

The company used these analytics insights to enhance its manufacturing process and parts inventory. In the first year, the manufacturer achieved:

- \$100 million overall cost savings
- 36 percent shorter lead time
- 12 percent decrease in underutilized capacity
- 20 percent reduction in inventory holding costs
- 35 percent improvement in schedule stability
- 45 percent increase in on-time delivery

### Potential bottom-line results

- Improve cash flow and profitability
- Reduce delivery time
- Lower risk by anticipating production problems before they occur
- Improve customer confidence

### Analytics in action

The solution helped the manufacturer identify critical parts that were likely to delay landing gear production. The company is now able to assess the order lead time for every part—down to each bolt—and gain insights needed to develop strategies to prevent assembly delays. As a result, the company can optimize inventory to improve cash flow while maintaining an adequate supply of parts to meet delivery dates. The organization has achieved increased profitability while improving overall competitiveness and customer satisfaction.

Deloitte can help organizations make smarter decisions that can result in reduced lead time and higher profitability. Here are a few industries that may benefit:

- Aerospace and defense
- Construction
- Automobile and heavy machinery manufacturing
- Technology manufacturing
- Robotics and high-tech manufacturing

# Marketing analytics

## Helping a telecommunications company improve campaign effectiveness



### The challenge

A nationwide provider of wireless voice, messaging, and data services was locked in a fierce competition for subscribers. The company's channel-management team deployed an extensive digital marketing campaign, but they were unable to get prompt reports that would help them evaluate effectiveness of online ads and make quick, informed strategic decisions to improve response rates. The team relied on a complex manual process to query information from their enterprise data warehouse. Even a simple request, such as the number of subscribers accepting a campaign offer, could run for hours. The marketing team asked Deloitte to help them improve their ability to attract and retain valuable customers.

### How we helped

Deloitte developed and implemented a marketing analytics solution based on SAP HANA. The in-memory database significantly improved query performance by eliminating manual processes and crunching millions of records in seconds rather than hours. With faster analysis, marketers could quickly assimilate data, test, and evaluate alternative campaign tactics and then develop offers that help build revenues and increase subscriber loyalty. They could also drill down to the subscriber and account levels to obtain detailed information on customer care. Here are a few of the benefits:

- Timely insights to help improve campaign effectiveness
- Extensive ad-hoc query and analysis capabilities
- Standardized marketing metrics to evaluate effectiveness

Following the successful pilot, the marketing analytics solution was enhanced to support customer segmentation and customer engagement using a flexible cloud-based platform.

### Analytics in action

Understanding which promotional offers will stimulate a positive customer response is often as unpredictable as the weather. Is an offer for unlimited data or free music streaming more appealing to 18 to 24 year olds? With analytics in real time, marketers can see which offers to which customer segments and in which advertising channels are getting the best response rates. They can then adapt promotions—that same day—to capitalize on the insights.

### Potential bottom-line results

- Increase customer loyalty
- Improve revenues
- Enhance campaign effectiveness
- Segment customer offers to improve profitability

Deloitte can help marketing organizations make smarter campaign decisions—fast. Here are a few industries that may benefit:

- Telecommunications
- Retail
- Financial services

# Ready?

SAP HANA can unlock data insights that often reveal unexpected ways to help businesses reduce costs, eliminate duplicate work, speed delivery time—and more.

This booklet describes just a few of the analytics solutions based on HANA that Deloitte has helped leading companies deploy. Below is a representation of other use cases we have developed since the advent of HANA. Our experience extends over virtually all industries and functional areas. If you're ready to learn how HANA can help you develop innovative solutions to tough challenges, we should talk.

- Inventory management
- Pricing and margin management
- Capital expenditure analysis
- Out-of-stock analytics
- Sales and operations
- Transportation and logistics
- Point-of-service analytics
- Profitability analytics
- Trade promotion analytics
- Supply-driven manufacturing
- Expense management
- Spend analytics
- Sensing and responding applications
- Situational awareness and alerts
- Sensor data analytics

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