



CITO Research

Advancing the Craft of Technology Leadership

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Saving Lives with Business Discovery

Business Discovery for Everyone

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Introduction

We're in an age marked by an unprecedented volume of data. Many organizations are still trying to figure out how to comprehend the data they have. We've heard a lot in the press about how Wall Street and consumer websites use data to spin out trading algorithms and track consumers' purchasing behavior. But the under-told story is that, with the right tools, everyone can gain insights and take decisive action. Lives can be changed or even saved with data.

Right now, using a self-service business intelligence (BI) platform called Business Discovery, people all over the world are using data to achieve unprecedented goals. People are improving the way they work, sometimes solving problems in minutes that would have taken years with other methods. These are the new pioneers. They are gaining powerful new insights, as data, alive in its context, opens up new possibilities and solutions never before considered.

Police and doctors have always used data to solve vexing problems and serve society. But now, Business Discovery is opening up new understanding, which is helping public servants and care providers negotiate critical problems, such as crime or the need for preventive care—with unprecedented speed and accuracy. CITO Research has unearthed two very different stories that exemplify the power of Business Discovery for everyone.

To Catch a Killer

In the southern Swedish city of Malmo, residents were terrorized for more than a year between October 2009 and November 2010 by a sniper. He shot people at bus stops, sitting in cars, and in their homes. One person was killed, and several were wounded in 15 separate incidents, shocking a typically peaceful city in a country with a low crime rate overall. All of the victims had certain characteristics in common, which suggested the work of a serial criminal with a specific motive.

The Skane (southern Sweden regional) police had more than one million individual reports, tips, and call records taken over the course of the year, and more than 2 million reports in its archives.





It was only a matter of time before the shooter struck again. The police had to work fast to avert another tragedy. Fortunately, the Skane police had a secret weapon—they'd made an investment in Business Discovery software some years earlier.

Since 2001, the Skane police have used the Business Discovery platform to compile and present crime statistics, display data with unprecedented depth and clarity and optimize force deployment and administrative efficiency. Formerly, data was isolated in individual databases, available to only a select few. But with Business Discovery, more than 100 desktops across the Skane force now use the platform, and it's easy for all members of the 3,500-person force to access data visualizations developed on the platform.

Still, this was the first time anyone had attempted to use Business Discovery to solve a crime in progress. The Skane force decided to put Business Discovery to the test. Investigator Berth Simonsson estimated it would have taken at least three months for three full-time investigators to aggregate all individual eyewitness tips and police reports. Reviewing and comparing all 2 million existing reports—comprising more than 2 billion rows of data—would have taken 43 years for one investigator. Instead, in three hours, the police loaded 2 million records from disparate sources into the Business Discovery platform. In three minutes, one analyst was able to isolate 58 tips that could be linked to the shooter. In November 2010, police arrested 38-year-old Peter Mangs and charged him with one count of murder and nine counts of attempted murder.

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"This has been a labor-saving tool for the police," says Simonsson. "Police analysts ask questions and our Business Discovery platform delivers answers instantly. Instead of going through reports manually, we have been able to go through lots of information quickly to find a link that otherwise would have been hard to detect."

Business Discovery for Law Enforcement: To Catch a Sniper

- 1 million witness reports, tips, and call records were gathered in a year
- 2 million reports were in the archive

Without Business Discovery

Reviewing all evidence would take one detective **43 years**.



With Business Discovery

In **3 minutes**, one analyst was able to pinpoint 58 clues pointing to the same suspect. After investigation, that suspect was arrested.



To Protect the Health of At-Risk Children

Access to affordable quality healthcare is one of the most pressing issues facing society today. In a difficult economic environment, it is becoming more difficult to secure adequate health coverage due to government and private industry cutbacks. More families are finding it difficult to maintain healthy lives, as insurance companies, doctors, and the government struggle to control the cost of healthcare. In many communities, voluntary, preventive care is under threat. When low-income families don't get preventive care, they head to the emergency room for treatment, which drives up costs for everyone, including taxpayers and insurance customers.





Such was the case in a small city in the southern region of the US state of Georgia, where the Sibley Heart Center Cardiology division of Children's Healthcare of Atlanta maintained a clinic. Sibley has 44 cardiologists and a total of 150 employees across 18 outpatient clinics throughout Georgia, seeing 25,000 children in more than 30,000 visits a year.

Georgia recently mandated that all government employees use PeachCare, a version of Medicaid, instead of private insurance. PeachCare offers lower reimbursements for medical providers than most private insurers. "Payor mix" is an important metric for Sibley, which must constantly strike a balance between providing the best care to a given population and maximizing the number of patients moving through the system so that clinics can stay afloat. The typical proportion of PeachCare patients in a Sibley clinic is a little over 50%. At the southern Georgia clinic, 76% of the patients at the clinic were on some form of government-subsidized insurance, including PeachCare.

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The predominance of government-subsidized insurance, which pays much less than private insurance, was affecting the bottom line enough that the clinic risked closure, which would eliminate jobs and place the health of 500 children at risk. In rural southern Georgia, many parents work low-wage jobs and cannot afford to miss a day of work, fill up the gas tank at \$4 or \$5 a gallon, and take their children on an 8-hour round trip to Atlanta to see a cardiologist, which would be the next-best alternative. The far more likely scenario is more trips to the emergency room for their children's chest pain, incurring enormous expense for families, insurance, and the hospital, whether the child turned out to have a cardiac problem or not.

Fortunately, Sibley had invested in a Business Discovery platform, which it used to build a revenue application. Using the application, Sibley explores both financial performance of each clinic as well as the entire lifecycle of patients, including which doctors refer and treat them, how long they spend in the office, which tests are administered, what portion of revenue is paid to hospitals that host the clinics, the cost of medical equipment, and many other factors. At a glance, analysts and doctors can see how financial performance changes based on any of these factors. In order to





keep their doors open, Sibley can subsidize clinics that are losing money by altering other revenue streams in the network. But that can only happen if the information to substantiate the decision is available and actionable.

Sibley used its downstream revenue application to explore how clinics capture revenue from tests. It turned out that in one clinic, and several others like it, only about 20% of the total payment went to the Sibley professional doing the tests; the rest went to the hospital where the clinic was located because the hospital owned the machines and the space. When Sibley presented this information to the hospital, the hospital agreed to let Sibley capture 100 percent of the revenue. The clinic stabilized its revenue and remains open today. With the confidence that came from the power of Business Discovery, Sibley is now considering expanding in the area.

Business Discovery for Healthcare: Keeping Kids Healthy

Business Discovery platform was used to ask questions such as:

- What was the revenue paid to the hospitals? The health practitioners?
- What was the revenue paid for medical equipment?

The revenue analysis found:

- 20% was going to personnel
- 80% was going to facility costs

This meant that the cardiology clinic might have to close, risking the health of 500 children.



Using the Business Discovery application allowed Sibley to follow the money trail and alter revenue streams. Sibley negotiated for 100% of the revenue to go to the practitioners to keep the clinic open for the children.





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“We don’t go into medicine for the business,” says Dr. Patrick Frias, cardiologist at Sibley. “We’re here to take care of these kids. But we have to pay our employees. Having this data at our fingertips, in a downstream revenue application that provides robust support for our cost accounting, really helped us. We’ve been able to serve a population that we probably wouldn’t be serving today. And we did it using software that did not cost us an arm and a leg.”

Business Discovery Is For Everyone

Business Discovery is for everyone, and it’s an important tool for changing, even saving lives. Like many other people, police and doctors are not typically trained on traditional BI tools, which require writing complex queries to retrieve data in reports from databases. When lives are on the line, there is no time for waiting. Business Discovery rapidly delivers tailored insights that meet each user’s unique needs and timelines, visualized in graphics that really drive the facts of the case home. If you don’t get the answer you need right away, you can ask a different question and keep going.

Business Discovery is all about giving people the freedom and flexibility to explore a lead or a “hunch,” anywhere, at any time—it’s robust and secure, yet app-driven, light, and mobile, so it carries information wherever it’s needed. Anyone can start asking questions and gaining insight right away—and if your job is stopping crime or protecting children’s health, that’s something you can really appreciate.

Information can change the world in ways you haven’t imagined yet. It can help solve crime, save lives, and make the world a better place.

Business Discovery is all about giving people the freedom and flexibility to explore a lead or a “hunch,” anywhere, at any time.





Conclusion

Data isn't just grist for money-making apps and algorithms. It can also help dedicated public servants perform vital services. The 20th-century mindset favored experts asking questions, with answers in an expected shape, in the form of reports. Facts only emerged in the same format as the questions being asked. It took a long time to arrive at an actionable conclusion.

The 21st century mindset rewards rapid, innovative thinking and asking questions on the fly, breaking down barriers and silos that isolate information. We get more answers, faster. Sometimes those answers are in the nick of time, and can even help stop a serial killer or keep a clinic open for 500 kids. When we let go of old paradigms, we gain new insights. We won't just ask better questions of the data we've already collected; we'll gather data we never would have thought to gather before, because we now know we can make it useful. The answers we find will surprise and delight us and make a tangible difference in the world, changing and even saving lives. This is Business Discovery, and it's for everyone.

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