



## Dallas Area Rapid Transit

*Delivering insight across the organization by getting users on board with analytics*

---

### Overview

#### The need

Operating, maintaining and expanding a public transit network across 13 service area cities in North Texas, DART must plan its finances carefully to optimize cost-efficiency and service levels, and invest in its future.

#### The solution

DART extended its planning capabilities with new analytics tools, which provide instant insight into key metrics such as ridership service levels, costs and subsidies across the transit network, and enable scenario modeling.

#### The benefit

With easier insight into operational metrics, DART can plan its routes, timetables, maintenance schedules and investments more effectively – while saving time and costs for its planning team.

---

When an automobile gets a flat tire, it can delay a handful of passengers. When a commuter train gets a flat spot on one of its wheels and needs to be taken out of service, it can delay hundreds of people. And when you're running a transit network that transports over 220,000 passengers per day, with dozens of interconnecting routes, the cumulative effects of a single flat wheel can put a whole city behind schedule.

To balance its service levels with its budget and investment targets, Dallas Area Rapid Transit (DART) needs to understand every aspect of its network – from the top-level needs of the 13 service area cities it serves, right down to the wheels of each train and bus. It requires insight into the interactions between its routes, timetables, ridership, service levels, ticket income and many other factors. In short, it needs analytics.

Working with IBM and IBM Business Partner Cresco International, DART has built an analytics platform based on software from the IBM® Watson™ Foundations portfolio, which not only allows for sophisticated business planning based on multiple possible scenarios, but also delivers instant insight via reports, dashboard and KPIs, generated with just a few clicks of the mouse.

---

*Most public transit companies recognize the value of analytics – but projects often falter when users are reluctant to adopt new tools. “The key difference is executive support. If you can deliver useful tools that turn your execs into believers, they will help drive the cultural change that weans people off their spreadsheets,” says Sarah Fontenot-Hill, Senior Manager at DART.*

---



---

## Solution components

### Software

- IBM® Cognos® Business Intelligence
- IBM Cognos Planning

### IBM Business Partner

- Cresco International
- 

## Balancing the needs of an expanding network

DART has just opened the Orange Line extension to Dallas/Fort Worth Airport, which will be followed by a link to the University of North Texas at Dallas, and a new downtown link.

To fund these investments and the agency's day-to-day operations, DART receives an annual budget of USD1 billion. Funding to support the annual budget comes from a one-cent tax in its service area cities, federal grants and revenue from fares. Sarah Fontenot-Hill's team is responsible for producing DART's capital and operational budgets, as well as its 20-year financial and operational plans.

Sarah Fontenot-Hill comments: "We have been using IBM Cognos® Planning for more than 15 years, and it is difficult to imagine how we could create our plans and budgets without it. What we lacked, however, was an easy way to get the insights out of our planning models and into a format which the rest of the business could easily access, understand, and use in their decision-making."

DART's quarterly and monthly reporting typically involved exporting data to spreadsheets, and then cleaning and reformatting it for specific audiences – a time-consuming process that hindered the flow of information across the organization. It was time to find a better way.

## Next stop: business intelligence

Working with Cresco International, an IBM Business Partner that specializes in business analytics, the DART budget team deployed version 10.2.1 of IBM Cognos Business Intelligence, enabling much tighter integration between DART's planning and reporting capabilities.

"The technical side of this kind of project is only half of it," says Sarah Fontenot-Hill. "Strong change management is vital too. When we talk to our peers in the industry, we see a lot of public transit companies that make big investments in business intelligence software, but never reach maturity. When the going gets tough, people go back to their spreadsheets.

"At DART, we have found an approach that works. It's vital to start with your senior leaders and turn them into believers, because they are the only ones who can really drive adoption down through the organization. The best way to make them believe is to show them the power of the technology without overwhelming them – so you need to develop tools that are both useful for them and extremely easy to use."

This focus on simplicity and usability is embodied in every analytics tool, report and dashboard that DART develops.

"They log into Cognos, click on the 'Reports' tab, and press a button – that's all there is to it," says Sarah Fontenot-Hill. "It's easy for them, and it's much easier for my team too, because we're not spending hours pulling together reports for other people. Our philosophy now is that if you ask us for something once, we'll do it for you; if you ask us twice, we'll work out a way to help you do it for yourself."

## Powerful engine for analytics

For users in the budget team itself, the IBM solution provides the powerful capabilities they need to perform sophisticated analyses.

---

*“Business planning would be more difficult for us without our IBM Cognos solutions.”*

— Sarah Fontenot-Hill, Senior Manager, DART

---

“People who work in business planning roles are always addicted to data,” explains Sarah Fontenot-Hill. “Having the right tools is a huge advantage. Cognos is a one-stop shop, because it makes it easy for us to pull down multi-dimensional data from all areas of our organization and model different scenarios to help us make the right decisions about where to go next. You just can’t do that with spreadsheets.”

Instead of manually exporting data to spreadsheets and reformatting it, DART’s budget team and contributors can now output reports within a few mouse-clicks – which, when one person is managing 15 or 20 cost centers, can save hours of low-value spreadsheet work. As a result, despite two members of the team moving to other roles, DART’s budget cycle still runs efficiently and is completed on schedule.

“We can also be much more agile in our response to the business,” says Sarah Fontenot-Hill. “For example, we had a meeting last year where a VP asked a question about eight cost centers. One of our analysts went off to pull the figures, and we didn’t see her again for 45 minutes. This year, when a similar issue came up, she was back in five.”

### **Insights into a brighter future for public transit**

With the technology in place, DART is able to free up insights that had previously only been available to specialists, and democratize the use of information throughout the organization.

“For our maintenance team, it’s easier to model service levels against budgets,” says Sarah Fontenot-Hill. “If they need to cut their budget, for example, they can run scenarios with

different assumptions to find out which activities they can scale back without an adverse impact on safety or customer service.”

In the near future, DART’s planners will be able to analyze ridership on each route and work out which routes are most useful to the public and productive to the agency. If a route starts underperforming, is that because it’s poorly designed? Or is it just affected by a temporary issue, such as roadwork? If DART reduces the hours of service on a given route, how will that impact its overall budget and service levels? If it cuts or redesigns a route, what effect will that have on other interconnected routes?

Human resources policies can be put under the microscope also. As healthcare costs continue to rise, how can DART ensure that health insurance remains affordable, without saddling either the agency or its employees with an unfair proportion of the costs?

In the future, DART even plans to get down to the level of the flat wheels on its train carriages. If it can identify the patterns that cause such problems – whether it’s a faulty section of track, a poorly designed maintenance schedule, or even driver error – it can find ways to maintain its assets more effectively. Ultimately, this will mean that even more passengers can get to their destinations reliably and on time.

“All these questions depend on analyzing a complex web of interrelated factors,” says Sarah Fontenot-Hill. “Our IBM Cognos solutions give us the ability not only to gain insight into these areas, but also to get that insight out to the business, to help people make better decisions and work smarter every day.”

To fuel its analytics-led evolution, DART will continue upgrading its technology landscape. Its roadmap includes migrating its IBM Cognos Planning models to IBM Cognos TM1®, for even faster performance and more powerful scenario analysis.

## About DART

Dallas Area Rapid Transit (DART) helps its passengers travel around Dallas and 12 surrounding cities, providing modern public transit services and customer facilities tailored to make journeys fast, comfortable and economical. Its extensive network of DART Rail, Trinity Railway Express (TRE) and bus services moves more than 220,000 passengers per day across a 700-square-mile area. The agency employs 3,600 people and has an annual budget of USD1 billion.

For more information about DART, please visit [www.dart.org](http://www.dart.org)

## About Cresco International

Cresco International, headquartered in Dallas, TX, is an IBM Business Partner with deep technical and functional skills in IBM Business Analytics technologies. Cresco acts as a trusted advisor, complementing its clients' business knowledge with the technical know-how, industry expertise and global reach required to take their businesses to the next level.

To learn more about services and solutions from Cresco International, please visit [www.crescointl.com](http://www.crescointl.com)



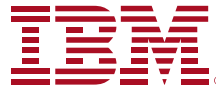
## About IBM Business Analytics

IBM Business Analytics software delivers data-driven insights that help organizations work smarter and outperform their peers. This comprehensive portfolio includes solutions for business intelligence, predictive analytics and decision management, performance management, and risk management.

Business Analytics solutions enable companies to identify and visualize trends and patterns in areas, such as customer analytics, that can have a profound effect on business performance. They can compare scenarios, anticipate potential threats and opportunities, better plan, budget and forecast resources, balance risks against expected returns and work to meet regulatory requirements. By making analytics widely available, organizations can align tactical and strategic decision-making to achieve business goals.

## For more information

For further information please visit [ibm.com/business-analytics](http://ibm.com/business-analytics)



---

© Copyright IBM Corporation 2014

IBM Corporation  
Software Group  
Route 100  
Somers, NY 10589

Produced in the United States of America  
September 2014

IBM, the IBM logo, [ibm.com](http://ibm.com), Cognos, TM1, and Watson are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at [ibm.com/legal/copytrade.shtml](http://ibm.com/legal/copytrade.shtml).

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions. It is the user's responsibility to evaluate and verify the operation of any other products or programs with IBM products and programs. THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.



Please Recycle

---