DATA-DRIVEN
TRUCKING

P&S TRANSPORTATION'S DATA-CONSCIOUS
BUSINESS CULTURE PAVES THE WAY FOR USING ANALYTICS
TO TRANSFORM BIG DATA INTO BIG INSIGHT

BY MAURICIO PAREDES

The data explosion that is occurring in the freight transportation industry offers both incredible opportunities and difficult challenges for carriers and brokers. The industry leaders in the years ahead will be those companies that can meet the challenges and leverage their data to inform decision-making at all levels of the organization. The data-driven approach generates a wealth of information about every facet of the business, and it is not just the visibility, but the real insight gained from the data that empowers people to take the actions that solve problems, improve performance, and boost profits. Challenges arise because companies will need their business culture to develop a heightened awareness of the entire data management process. Success with changing the culture requires simultaneous efforts that focus on processes, people, and technology. At P&S Transportation, we are creating the data-conscious culture that is essential for our growth by ensuring our data is clean, establishing data champions within each department, and using cutting-edge technology from McLeod and Microsoft for data analytics.

Data-Driven Trucking Requires Clean Data

Transportation companies are discovering more and more ways to analyze and leverage the large pools of data that information systems collect. There's a catch, however. Problems with the quality of your data can undermine your efforts to gain visibility into the business. You can't analyze data that you fail to capture accurately. And the results of your analysis are worthless if you're using data that is faulty or dirty.

Faulty or incomplete data is one of the basic reasons that companies need to create a data-conscious culture. Every effort to improve the company by using new software tools is put at risk if the data fed into those tools is not clean and accurate.

A good example of incomplete data for some trucking companies is the commodity of each load. It may be possible to gain valuable knowledge by analyzing revenue, profit, load velocity, deadhead, service failures, and more in relation to the commodity that is being hauled. But if commodity has never mattered that much in the past, people are not inclined to enter the commodity in the field on the software screen when entering the load. The result is that every attempt to obtain new insights into your business in terms of commodity is cut short by the missing data.

Faulty data, which can cause just as many problems, may occur for a variety of reasons. If different people create separate accounts for the same customer within the software system, every bit of analysis involving that customer is questionable at best and possibly useless. This problem can happen easily, particularly given that company name changes are so common. One of your customers is suddenly operating under a new name, someone on your staff doesn't know that, and a new account in the system is created for that customer.

Many companies have grown and succeeded without ensuring all of their data was clean, so people don't often see any reason to become more data-conscious. Management may not see the need to establish stronger procedures for data governance. But many of the business strategies that have worked in the past are not suited to the future. You need to be looking ahead to be prepared for the exciting possibilities that data analytics is creating.

There are countless ways that you can discover valuable insight into the nature of your business. This knowledge can provide actionable information that makes the difference between profit and loss. For example, is there a connection between safety data and revenue? Today's data analytics will allow you to explore that question, but only if you are regularly capturing all of the safety data you'll need and you're capturing it cleanly.

Looking for actionable knowledge concerning safety data is only one of many avenues of inquiry. Down the road, it will pay to make full use of all the fields available in your software system and to ensure that everyone across the enterprise is faithfully following your data governance rules. The time spent doing this now will bring substantial returns in the future.

Find Your Data Champions

Changing a company's business culture in any significant way is hard work. It requires working on multiple fronts simultaneously. Here are the strategies we've employed in our work of creating a data-driven culture at P&S.

- ### Help get people personally invested in clean data

  With the right technology, you can allow people across the organization to analyze data in ways that previously required specialized IT skills. When people are using data regularly to answer their own questions, they understand first-hand why clean data matters. As they conduct their day-to-day jobs of creating reports, they encounter the data issues and the data discrepancies first-hand.

- ### Identify the Spock and Kirk in each department

  In the Star Trek science fiction series, Spock was the person who collected data and provided it to Kirk, who was the person who used the data to determine a course of action. In your company, the person who traditionally handles reporting for a department is the Spock. This person is the expert on gathering the data needed to explore any topic related to the department's operations. The person who uses that data to make decisions is the Kirk. The Spocks will become your data champions.

- ### Train your data champions in McLeod IQ and Power BI

  At P&S each of our data champions took a class in McLeod IQ so that they could learn how easy it is to extract data and use it in Power BI. Once they learned how to use this technology, they became more excited about promoting data consciousness to everyone else in their departments. When your work is affected directly by the quality of the data, you're more inclined to encourage other people to care about the issue. Whenever any of our data champions discovers a problem with the data, we help them figure out why it happened, how it affects their analysis, and what needs to be done to fix it. Then they can pass along this information to the rest of the people in their department.
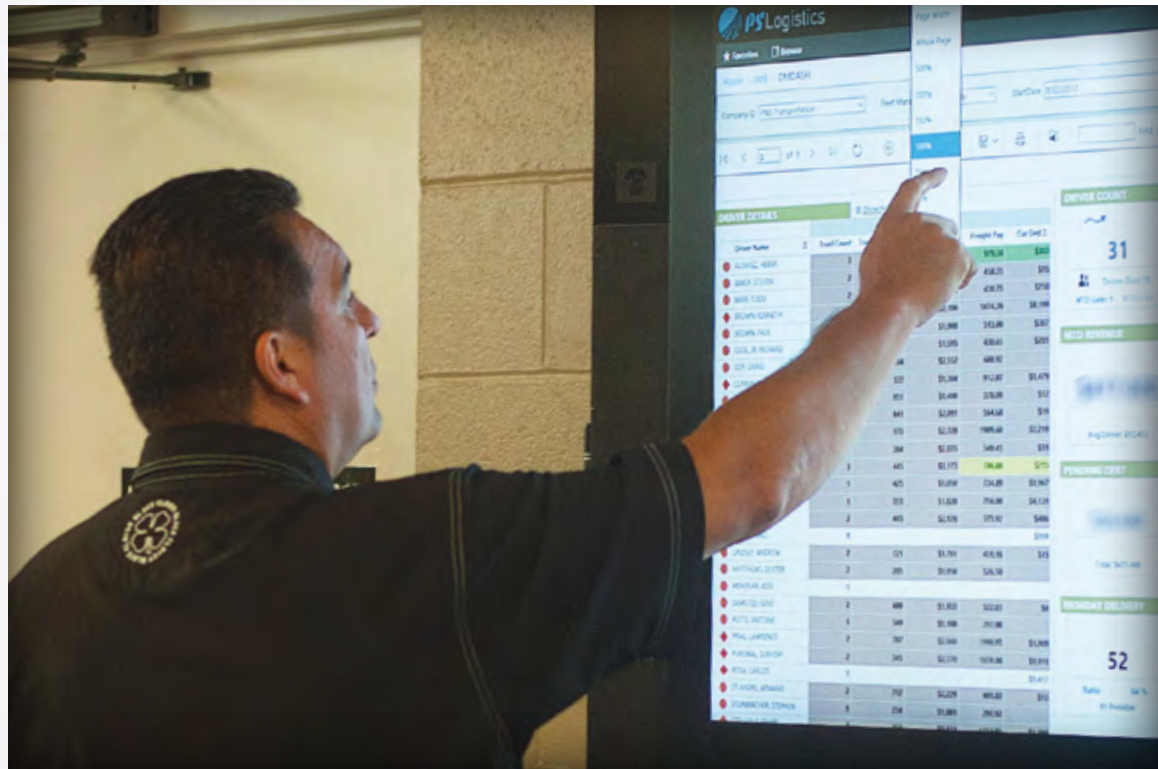
- **Transform the culture by fostering change from within, not by forcing it down from the top**

  By showing people how to use McLeod IQ, they learn about the problems that arise if the data being fed into the system is bad or incomplete. They know the potential of the technology is there, but they see that they can't make use of it because the data is not in good shape. This motivates them individually to work for better data management. When data champions discover faulty data and they happen to know that the person sitting right next to them may be the cause of the problem, they're more likely to speak up and address the issue immediately. Change then occurs organically as opposed to being dictated from upper management, and this is the basis for solid and sustained change.

- **Think of data as an asset**

  Trucks are treated as valuable assets and get special attention to ensure that they are being handled as such. We make sure we give trucks proper maintenance and that they're being treated properly by the driver. Data deserves to be given special treatment as well, because it is also a valuable asset for carriers and brokers. Taking this approach to data ensures that your data will be in good shape and you'll be able to start leveraging it as an asset in ways that will lower your cost, increase your profits, and help you make better decisions. Data is an asset that is sitting there waiting to be used to improve the business.

- **Create a mindset that looks beyond Information Technology to include Business Data, Business Process, and Business Technology**

  The habit of classifying the use of software as "Information Technology" is outmoded. We need to think in both broader and more specific terms. We need to recognize that the technology isn't only about information, it's about the business, and that data and process are vital components. The effective use of technology depends on good data and carefully designed processes. This means that in addition to managing data carefully, trucking companies need to pay more attention to business processes. The new software you just purchased may be amazing, but you'll never get a solid return on your investment if people at your company aren't trained in the procedures that will make full use of that tool.
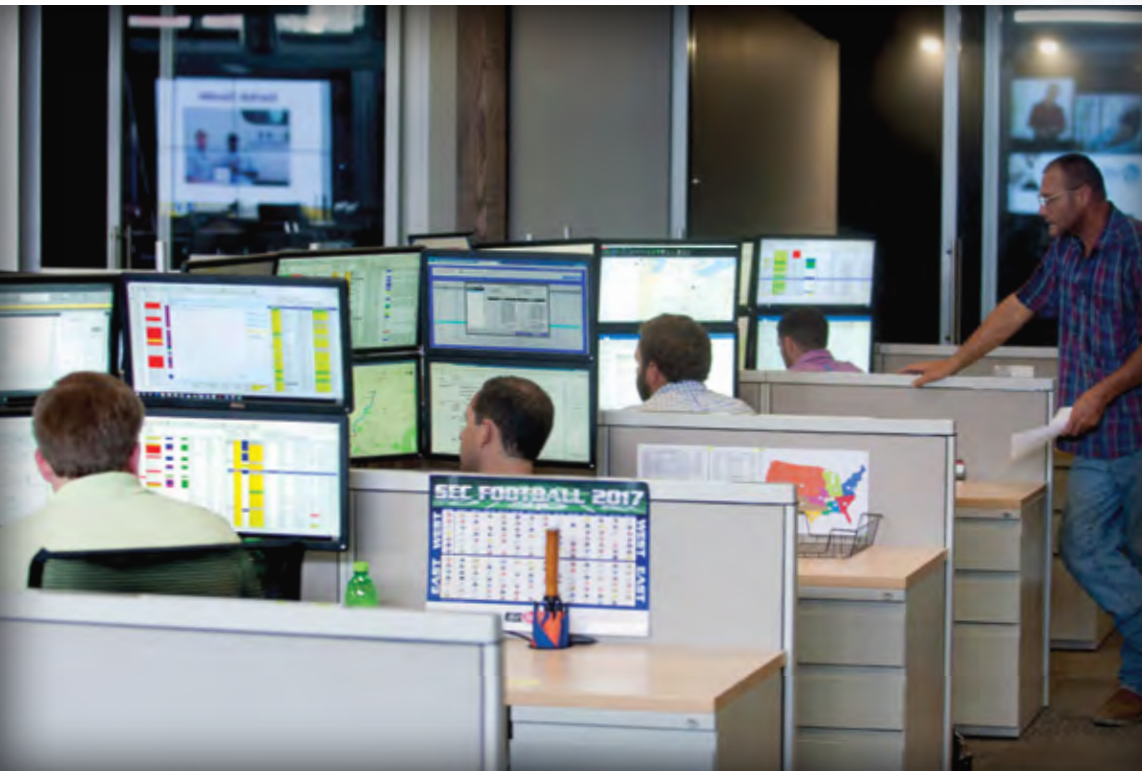
The Vital Role of McLeod IQ and Microsoft Power BI

McLeod IQ, which works with the LoadMaster and PowerBroker systems from McLeod, makes it possible for anyone to analyze data. Users can drag and drop data into Power BI and get answers to questions within seconds. In the past, getting the same information would take hours.

Before using McLeod IQ and Power BI our pattern at P&S was to present reports in spreadsheets. Power BI offers a variety of graphic displays that make it easy to evaluate the data visually. Instead of studying rows of figures in a spreadsheet and trying to determine what the data is telling us, we can view charts, graphs, dials, and other creative visual tools that reveal vital information at a glance.

Spreadsheets have the additional drawback of showing us data that's no longer fresh. Previously we were viewing reports that were full of old data about the previous week or month. We've replaced the static, stale spreadsheets with live dashboards, because McLeod IQ had made it possible to create dashboards that are fed with data that is refreshed in very short time intervals.

IQ dashboards encourage people to ask more questions. One of the ways that we improve the business is asking what-if questions. Once people start using IQ, they begin to think about more questions, which leads to more knowledge about the business and better decisions.

All of this is valuable for driving improvements in our company, but this technology also plays an indispensable role in promoting a data-conscious business culture. By bringing easy access to data analytics to people across our company, we've been able to get buy-in to our efforts to manage data more carefully. The people using IQ can see directly why data management rules are critical.

Say that someone on your staff is trying to determine which customers are generating the most revenue this week, how this week compares to last week, and how it compares to the same week last year. That person will quickly get frustrated if his or her efforts to get answers are thwarted because someone else wasn't careful about entering data correctly.

This could be anyone in the company, because the use of IQ is not confined to any level within the enterprise. We can create visibility in fine detail or at the high level. IQ data can be used to give us views of performance for the individual, the team, the department, the division, or the entire company. This versatility of scale helps increase data consciousness throughout the organization.