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Rounding the Bases: How Qlik Helped Us Bring Data Literacy Home

QLIK

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In the movie and book Moneyball, the Oakland Athletics provide a powerful example of data literacy. Baseball teams had collected statistics for the last hundred years. Every single team had access to the same player information. However, the Oakland A's found an innovative analysis method that allowed them to compete with better-funded teams. The team was successful because they understood the data enough to focus on the key metrics.

There are many buzzwords going around today, including change management, innovation, and thinking outside the box. The truth is, however, doing things differently is not always the best solution. Approaching your work from a different perspective may yield positive results, or it may create chaos. Making the best decisions for your organization often comes down to understanding which changes to make.

That is where data literacy is helpful. While I am currently the manager of education at 2Fogus Data & Analytics, I have experienced data journeys at several organizations. As a Qlik Luminary, I am especially aware of the advantages Qlik brings to data analysis.

Understanding the Data Analytics Journey to Maturity

The most useful toolboxes are filled with a variety of resources. Achieving data-driven purity is about developing expertise in a variety of subjects, and it’s also about the maturity of collaboration between tools. This process takes time and travels through several stages. Along the way, data becomes an increasingly powerful resource for the business.

Much like the qualitative and quantitative forms of research, the data transformation journey has two sides. The more concrete side of the journey relates to data quality. Any organization that collects data will have data quality issues. The more you try to utilize that data, the more apparent the errors and problems.

A harsh reality: Any organization that collects #data will have data quality issues. But it's worth the effort to get it right.
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A customer's name may be entered multiple times based on misspellings. Sales teams in one city may enter aggregate data, while teams in other cities itemize information. A column labeled "sales" may or may not include the purchase of a warranty. This is aside from issues related to software compatibility or visual representations.

Before serious progress toward data-based decisions can be accomplished, the data itself must be trustworthy. That means creating mechanisms to ensure data quality. Qlik Sense users, for example, may find it useful to add a data quality report to the environment. Whatever the solution, the early steps in the journey must include creating some kind of data governance solution.

The other side of the journey is more intuitive. Having great data is just part of the equation. You must also have a genuine curiosity and the ability to ask the right questions. Most organizations are very familiar with asking, "what happened?" That is why data reports include a snapshot of the data as of a specific date.

The real power in analyzing data comes from more advanced questions. Why did things happen the way they did? If the sales number decreased during the last quarter, can you explain why? Do you understand why call volume is lower on certain days? Asking "why" questions can open the door to truly understanding the data you collected.

The next intuitive step is developing a predictive analysis. This is where the true value for the company begins to emerge. Analyzing real-time product sales and production data can help a company avoid bare shelves. Traffic patterns and customer addresses can help you make an optimum choice for a new location.

But the final stage of intuitive growth involves reaching a level where insights about data trends lead to an ability to influence outcomes. How do you get more customers to your restaurant? It can start with a detailed analysis of existing customer trends. The right interpretations can tell you if the answer is changing the menu, printing coupons, or adjusting prices.

The Role of Data Literacy

Not everything that glitters is gold. Sometimes, things must be treated and polished before you can see their value. One of the largest disconnects between reality and our dream of data-driven decisions is the ability to understand data. It is simply not enough to invest in technology without an equal investment in your people.

All the dashboards and databases in the world will not translate into business benefits unless your people are data literate. Anyone can print out and examine charts and graphs, but it takes insight to make smart decisions based on data. Building that insight is perhaps the most challenging step for most organizations.

Data literacy has become somewhat of a buzzword, but beyond the marketing lingo is a real concept that is fundamental to making data work for your company. Data literacy is simply the ability to read, manipulate, analyze, and argue with data.

This definition has many different elements for a reason. Reading and manipulating data are the first steps in data literacy. Most people outside analyst fields never progress beyond the ability to read a spreadsheet or chart. Graduating to data analysis and arguments is generally an intentional act. While platforms like Qlik Sense can make data reading and manipulation second nature, people must be trained to analyze and argue.

When Data Can Save Lives

The harsh reality is that many companies never see the forest for the trees. They collect massive amounts of data on everything possible. However, without a strategic data analysis approach, they can never convert that data into useful information. Even worse, they can collect the wrong data and miss essential insights.

An example of this information gap relates to a healthcare service project that I worked on, titled *Call To Balloon*. Most people who call emergency service numbers like 911 need immediate care. In fact, emergency calls are perhaps the best example of a field where crunching numbers can have direct impact. It's simple: faster treatment saves lives. Shaving even a few minutes from treatment delays result in a massive impact.

The project's goal was to shorten the time between the call and the performance of treatment. The name *Call To Balloon* referred to the time between the first call for help, and the use of a balloon to open a clogged artery. We had a similar project named *Call To Needle* for those who suffered a stroke. We started by creating a collaborative data pool by combining information from several different groups. Specifically, we included data on several stages of emergency response, including the initial call, dispatching the ambulance, collecting the patient, and returning them to the hospital for treatment.

Focusing on heart failure patients, we analyzed every stage of this emergency response. We found several areas where improvements could be made, including a streamlined admittance process for heart patients. With the *Call To Balloon* and *Call To Needle* projects, we shaved more than 20 minutes off the patient wait time by ensuring the blocked artery treatment room was always ready for the next patient.

It's important to understand that each of the organizations participating in this project was already collecting data. These groups already had people combing through the data periodically. It was only after pooling the data resources and applying a specific data analysis strategy that we found real insights.

I can provide another example based on my experience at UWV. Since 2008, several offices within UWV used QlikView. It started with our HR offices, but over time more and more groups were requesting licenses. Before long, our QlikView server was full of large, random data pools and competing dashboards.

As the project leader, I was charged with writing the plan to centralize the QlikView Competence Center. When we began in July 2009, we had four staff and fewer than 100 users. A few months later, we had 15 people, including analysts, testers, dashboard designers, and full-time management. Five years later, we had more than 3,000 users and 140 dashboards.

But that is only half of the point. Most importantly, we had a centralized strategy with better control and data management. While we had more dashboards, we had standard functions and guidelines. We were able to work faster and across teams because everyone spoke the same language. Many teams were even able to reuse reports or data sets created for other units. Suddenly, we were able to convert mountains of data into actual usable information.

Actionable Advice: Building Toward Analytics Maturity with Qlik

One of the best advantages of making data-based decisions is that they are reproducible. In the same manner, you can use some basic tactics when you want to push your organization toward data maturity. Using these can help ease the transition between data storage and data literacy.

The first thing to understand is that data without a strategy can be useless. You have to enter your data journey with an eye focused on building a framework around your strategy. That means setting up an architecture within your organization to maintain a cohesive analysis operation. Make sure you start small with a proof of concept and build your business intelligence plan as part of your organizational strategy.

If you build a database, users will come. However, most of these users will be early adopters who may or may not understand how to properly utilize data. That is why establishing data evangelists within your organization is critical. These ambassadors can help draw in more users, while providing a powerful example of best use cases. They can help you make sure your employees can draw useful insights from the data.

The final piece of advice is regarding structured learning. Success means being proactive with your learning plan. Creating hands-on training in both Qlik dashboards and basic data analysis principles will ensure a basic level of competence. You must then extend on that competence by using real-world examples. Help your staff to learn which questions to ask of the data so that they can improve their work.

Perhaps at the end of the day, helping your staff to reach their own potential is the key. People don't want to fail, and most people genuinely want to find those hidden insights. They just need a little help getting there.

As the Oakland A's learned in *Moneyball*, data is not the complete picture. It takes building a team around a successful data literacy strategy to make the difference.