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From Siloed Data to Actionable Insights: Mastering the Digital Supply Chain

QLIK

AUGUST 5, 2020

We want things when we want them—that's the immediacy of modern life. Until recently, many people likely didn't spare a thought for how an item gets to our local store shelf or our doorstep. The importance of supply chains has become more evident during the pandemic, as shortages of everyday items have become a topic of everyday conversation.

But some of us constantly think about improving the supply chain, and that includes the companies that provide the materials that keep the factories and schools running, like SDI. We're a digital supply chain company that focuses on aligning inventories to overall reliability and enterprise risk management strategies, which ensures the on-time delivery of those essential personal protective equipment (PPE) and mission-critical maintenance, repair, and operations (MRO) products: the indirect supply like bearings, belts, and big machinery.

For manufacturers, reliability is about equipment uptime. They are looking at millions of dollars lost for every hour their equipment is down. As a digital supply chain company, our goal is to improve the way our clients manage these critical supplies, reduce their risk, and save them money. We do this by streamlining and digitizing their supply chains.

Democratizing Data: Breaking Down Internal Silos

When I joined SDI almost four years ago, my initial role was in the sourcing organization, helping our supply chain experts produce reports as they put together pricing quotes on MRO supplies. Sourcing

these products is one component of the end-to-end supply chain service we offer, which includes sourcing, the procure-to-pay process, master data management, on-site storeroom operations and inventory management, as well as continuous improvement/reliability projects.

I had some background in supply chain planning and procurement from a previous job, and I was great with Excel. In fact, I could do my entire job in Excel, because at the time, I didn't know what other tools were available. I hadn't been exposed to an enterprise-level BI solution before working at SDI.

I wasn't hired as an analyst; I was a procurement guy, but based on my skill set, my boss asked if I could map out where all our clients were located. That was my first data visualization project, and I had no idea where it would lead.

Let me try to describe the landscape here three years ago, when I did that first visualization. We had siloed areas of expertise. And because we're a procurement-focused organization with people managing individual contracts and purchases, that expertise was spread out all over the place.

It meant employees relied on tribal knowledge and sharing information with each other. So, while we were able to provide our clients with the visibility to cross-reference inventory data across their various plants that we managed, our buyers weren't able to leverage data effectively between accounts. Being able to share that knowledge internally, to aggregate transaction history, and visualize the supply chain could mean shorter lead times and quicker turnaround for customers who relied on just-in-time deliveries.

Picking a Solution That Drives Adoption

After the initial success of my first visualization, we began looking at possible analytics solutions. Beyond just the visualization layer, we knew we needed to address the databases as well as our data collection methods. To help us, we consulted with digital technology firm Bardess Group, and built the ZEUS technology platform, which now includes modules for Data Analytics, eProcurement, Storeroom Technology, and Inventory Management. The cornerstone of this B2B platform is a dynamic marketplace enabled by AI-automated item categorization, intelligent part recognition and identification, and buying automation through the use of bot technology.

Initially built as a way to better manage our data and processes internally, the technology stack includes Qlik Sense as the data visualization layer. Qlik Sense won out over competitors because of its data ingestion, ETL tools, integration with Oracle, and especially the online Qlik Community. As I came to learn, this last feature would be extremely valuable to me. I'm entirely self-taught, so being able to leverage the Qlik Community was a big plus when I first tried out Qlik. It felt intuitive. I could learn this. And then, if I ran into any issues, Qlik has comprehensive guides and hundreds of people in the Qlik Community who are eager to help as well. That felt powerful to me.
Now it was time for deployment. Our first priority was to develop an app that would democratize our spend data so our buyers could make more informed decisions. On that first app, we had some assistance from the people at Bardess. They helped us cleanse our data, because we knew any confusion about it would be a major hurdle for adoption among the intended users.

Then we began building out the specs, KPIs, and reporting metrics based on feedback from those users. We tried to make it look sleek for those users who were tentative about adopting this kind of tool. But while we heard feedback that the visualizations were impressive, some people needed to simply pull data from a table. So, we still have that option, but the important thing is that now everyone has the same data. That table they are consulting is not an Excel sheet sent six months ago

by email. Everyone is looking at the same data, and all the prices are in the same currency, for example.

Different employees will want to interact with data in different ways. Just make sure it's the same data.

To drive adoption, first we had a gap period while we were performing user acceptance testing (UAT). During that gap, employees could access the data through the Qlik layer of ZEUS, or they could still consult the reports sent by email every day. We gave people a chance to get used to the app. Once that trial period was over, it was time to close off that other option. We said, "This report you used to get by email is not going to be available by email anymore. All the data is in ZEUS." All the data is in Qlik."

Tapping the Resource That Was Ours All Along

Today's SDI is a much different company from where I started. Qlik has been the most impactful part of our new technology stack, because it promotes the data literacy of our workforce. People who wouldn't describe themselves as tech savvy, including some of the people I used to produce reports for, found Qlik easy to use. Now they've gained a new skillset.

For those people who are more advanced, they have the option of creating their own views through the edit function. That drives adoption for this group, because it gives them independence, recognizes their talents, and makes them feel that they're part of the process. ZEUS has improved the company's mindset regarding data and has helped us shift the industry to guide our customers along their digital transformation.

The process where we see the greatest impact is in sales. It's common in this industry to have a big company come to you and say, "We have this portfolio of business worth millions of dollars, and we are now opening up an RFQ process based on these 20,000 items. Please provide your quote in two weeks."

It's not unusual for companies to test the market this way. However, the value that SDI brings goes beyond just finding the lowest cost for the critical parts and supplies that companies need. And a lot of the suppliers in our network will not respond to this kind of query, because they know the company putting out the RFQ may ultimately just be looking for ammunition to drive down the quote from their incumbent. So many vendors would produce a bid based on only partial data.

Telling your clients an insightful data story can separate you from the competition.

ZEUS changed all that, because it allowed us to tap into a valuable, underused resource: our own historical transaction data. Our own history is extremely useful in understanding where to source these items for an RFQ. Now, we are able to take data dumps, clean it up, and grade and analyze the supply chain, so we can run an RFQ against our database of millions of transactions a year. From here, we can design an insightful story to present with the Qlik presentation layer.

Since implementing Qlik within our ZEUS platform, we've cut our number of RFQs by more than half, because we can focus on the bids where we know we can truly save a prospective client time and money. We aren't wasting our suppliers' time—or our own—with bids that go nowhere. This improves our relationship with suppliers. It also means that when we talk to current and prospective clients, we

aren't just providing a quote—we're telling an insightful story about their spending in a way that no other vendor can.

Truly, Now, on the Cutting Edge

I always try to be forward thinking. And at SDI, our mission is to change the way people think about and manage their MRO and indirect supply. We are now getting into some interesting things with robotic process automation in conjunction with ZEUS. We're using robots to gather data from various sources that are important to us, like the Bureau of Labor statistics. We can send the robot to grab the data from the government website, put it into a table, and load it into ZEUS. We can also automate the data on certain processes, like understanding the mail traffic in our inbox. Which suppliers are responding, and who's not responding to us? We can then feed that data into ZEUS to create supplier scorecards.

Automation highlights employees' personal attributes, knowledge and client relationships. It also means less busywork.

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We're cautious about making things 100% automated, because you still want the human there guiding the process when that factory goes down half a world away. Our strategy is for the robot to provide the human expert with information, but it's still up to the expert to make the decision.

I know there is some concern about automation taking away jobs, but I think this strategy actually makes my colleagues less susceptible to job loss because of how it highlights their personal attributes, knowledge of the industry, and relationships with clients. All it means is they now don't waste their time on busywork, doing menial aggregate tasks. And a person who can now use BI to make data-driven decisions, even someone who never considered themselves tech-savvy, has a world of professional opportunities open to them. Especially during a pandemic, these are skills that allow a person to work remotely.

Today, SDI's business is more cutting edge than ever before. While the manufacturing industry has been slower to adopt digital technologies, SDI has continued to make performance and productivity improvements by implementing digital technology and data analytics in the value chain. When I look back at the road we've traveled in the past three years, I know that we are on the leading edge in this industry and that we are better able to help customers along their journey to a digital supply chain.

Zeus, powered by Qlik, has allowed us to take siloed data and expertise and transform it into actionable, data-driven insights. People of all technical skill levels can take advantage of that democratized data, and their informed decisions are a huge win for the company and industry as a whole.