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THE RIPPLE EFFECT
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Having the right materials, at the right time, for all the right reasons

Digging deeper into its inventory management practices, a global mining company finds operational gold

HOW DO YOU **BLUNT INVENTORY RISK** WHILE **IMPROVING SERVICE LEVELS**? (HINT: **DATA!**)

THE SITUATION

Way back during the Crimean War, supply officers for British forces stockpiled a mountain of supplies as a hedge against the coming winter. Sounds like a good idea, but it wasn't backed by a supply chain or distribution strategy, so the wrong gear was ordered, and critical rations spoiled before they could reach the soldiers. The consequences may not be so dire for businesses today, but many face a similar balancing act: How do you reconcile the urge to stockpile in uncertain times against the need for accuracy, efficiency and agility?

This is the situation a global mining company faced recently as it grappled with supply chain and maintenance, repair, and operations (MRO) inventory management challenges. Like a modern army, the company relies on specialized heavy machinery running in adverse conditions in remote locations, so global disruptions from the pandemic prompted it to overstock equipment and spare parts as a hedge against costly operational downtime. And while this strategy helped avoid immediate shortages, it also created surplus inventory—surplus that tied up working capital and created logistical headaches across the company's far-flung worksites.

These headaches weren't just about too much inventory—the *inventory mix* was off as well, with too much of the wrong things and not enough of the right ones. Warehouses were bursting at the seams with parts that hadn't been touched in years, would likely never get used, and just as likely would end up getting written off. At the same time, teams were constantly scrambling to source critical parts that weren't stocked appropriately, with expedited orders and asset downtime directly affecting production and revenue. Meanwhile, the post-pandemic economy shifted and the cost of capital rose, compounding financial pressures at the company. As a result, the CFO and executive team were growing increasingly concerned about the impact on the bottom line from ballooning inventory levels.

It was clear that incremental fixes wouldn't be enough. The company needed a holistic, strategic, and data-driven approach to inventory management—an approach that could align teams, optimize inventory, and free up resources for future growth.

The company called Deloitte's [Supply Chain] and [Mining & Metals practices.]

THE SOLVE

Why Deloitte? In part because of its IndustryAdvantage™ approach to engagements. IndustryAdvantage combines deep sector experience, advanced analytics, and digital innovation to help organizations solve their most complex operational challenges—helping them to achieve lasting competitive advantage and resilience in rapidly changing markets.

To that end, the Deloitte team started by conducting a comprehensive assessment of inventory and service levels—connecting the dots between inventory mix problems, ongoing pandemic-era ordering practices, and dropping service levels.

Digging a little deeper, they also found cultural contributors. Both maintenance and supply chain teams shared a goal of avoiding operational downtime but understood that goal through different lenses. One managed for *risk* by having any part available at any time, while the other managed for *efficiency* by having only the right part available at the right time. Each was frustrated with the other's mode of working.

Harmonizing the two functions—and bringing inventory management up to date—would take a strategic course correction. It would take a data-driven approach that reduced excess inventory, improved service levels, improved team collaboration, and aligned incentives. With these principles in mind, the Deloitte team developed a multi-year roadmap of 16 initiatives that could address both technical and human challenges.

Then together, Deloitte and company project teams got down to work.

What elements made for a data-driven approach? The company's inventory data informed inventory target optimization—a way to reduce excess inventory and set standards for what could come next. Supplier data—showing discrepancies between commitments and actual delivery times—informed accurate lead-time forecasting. Historical demand and demand variability (and other data) informed new company stocking policies, and fueled a custom-built target-setting model that dynamically balanced both risk and efficiency. (No more ordering parts according to blanket rules or gut feel.)

And sitting on top of it all, fed in part by data from the company's ERP and enterprise data lake systems, was a new *control tower*—a digital hub providing stakeholders real-time operational visibility, proactive alerts, and recommended actions (like flagging unnecessary purchase orders for cancellation).

Piloting these solutions in phases allowed for ongoing feedback and iterative improvements. Quarterly supply chain meetings likewise kept stakeholders engaged, helping to ensure that pain points were addressed and solutions were practical. These approaches—paired with change management support to help staff adapt to new tools and processes—bolstered credibility and adoption overall.

And when joined with the technical transformations, these approaches helped the company build a more agile, efficient, and collaborative supply chain—transforming inventory management from a financial liability to a source of resilience and competitive advantage.

ENHANCING INVENTORY MANAGEMENT FREED UP CAPITAL FOR OTHER INVESTMENTS.

THE IMPACT

The new inventory management approach is not only effective, but also scalable and can be adapted to other company sites globally. And while work on the project continues, the CFO's cash flow concerns have already started to ease. The new paradigm of data-powered decision-making reduced the company's maximum inventory targets and reorder points (the specific level at which new orders should be placed) by more than $25 million, freeing up capital for other investments. The company identified another $14 million of cost savings during the first beta test of the control tower—simply by canceling purchase orders that were no longer needed due to cancelled work orders and reservations.

Supplier relationships have improved. Canceling unnecessary purchase orders may at first seem like a negative outcome for suppliers, but doing so quickly and proactively improves communication between the two parties and reduces churn on the supplier side. (It also helps the company avoid potential penalties.)

Thanks in part to human-centered change management, end-user feedback has been positive, with a rating of 9.3 out of 10 and verbatims along the lines of *this will transform how I do my job*—a sentiment that's been underscored by a significant improvement in service reliability. The control tower has helped increase on-time, in-full (OTIF) levels for understocked parts by nearly 10%; changes in lead-time logic (the back-end system that manages the time it takes for inventory items to be replenished) for 11,000 parts has delivered an additional 10% in OTIF improvements. The upshot? Besides cost savings and operational efficiency, the company has unlocked a cultural shift whereby maintenance teams can be confident that they'll get the parts they need, when they need them—even when inventory levels are reduced.

LET'S CONNECT.

Do these challenges sound familiar?

Learn more about Deloitte IndustryAdvantage™

JOHN DIASSELLISS
Partner
Deloitte & Touche LLP
jdiasselliss@deloitte.com
+1 303 305 3972

TOMMY JACKSON
Principal
Deloitte Consulting LLP
thjackson@deloitte.com
+1 713 982 3451

SID PATIL
Principal
Deloitte Consulting LLP
sipatil@deloitte.com
+1 216 589 1474