

DOW CHEMICAL COMPANY

VALUE CASE FOR REAL TIME SUPPLY CHAIN EVENT MANAGEMENT (SCEM)

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The Dow Chemical Co, a ~\$50B company, has an integrated, market-driven, industry-leading portfolio of specialty chemicals, advanced materials, agro sciences, and plastics businesses, that delivers a broad range of technology-based products and solutions to customers in approximately 180 countries. For a company with such a far-reaching supply chain, continuous supply chain disruptions such as port strikes, natural disasters, and system outages are costly and cause a great deal of impact. These types of disruptions have been difficult to predict, leaving supply chains in a reactive operating mode with high latencies in response time. Dow wants to leverage real time monitoring, big-data analytics, and machine learning technology to increase the predictive and communicative power of their existing supply chain, and they see this platform as a competitive advantage to gain additional market share in a competitive and volatile environment.

The Tauber team's goal was to devise a digital transformation strategy for bringing together the right technology, automated work processes, and organizational structure to build the value proposition for employing a real time event management service. The team recommended the implementation of a supply chain control tower, a centralized, cross-modal platform, enabled with visibility and analytic capabilities to detect and manage events in real time. As per industry research, a control tower solution is expected to reduce the overall response time by 40%, thus enabling Dow to avoid the surge in freight cost associated with delayed and suboptimal shipments.

For the value case analysis, the Tauber team conducted several stakeholder interviews and learned that high-impact events such as the "Polar Vortex," which struck the U.S. in 2015, were among the most time-consuming and expensive to manage. However, a lack of visibility surrounding the costs incurred during historic supply chain disruptions made it challenging to baseline the value case. The team estimated manpower costs by gathering data on stakeholders' time involvement through a workforce survey. They then analyzed shipment data during the Polar Vortex impact window to calculate freight cost surges. The Tauber team identified an overall theoretical value of \$6M in labor productivity improvement and freight cost avoidance over a period of three years with the implementation of a control tower and associated business/organization changes.

To build implementation momentum, the Tauber team developed a roadmap for launching a control tower pilot which identified the minimum investment requirement. The roadmap included a resourcing plan, potential technology platforms for collaboration, and the control tower engagement model.