



Supply Chain Collaboration Keeps Workers Warm and Projects On Schedule in Northern Alberta

BACKGROUND

Being a successful Oil Producer in today's turbulent market requires determination, resources and highly efficient operations. This is especially true in the oil rich region of northern Alberta Province, Canada, where the oil has been trapped in sand for millions of years and where winter temperatures drop below - 50 °C. Despite these challenges, several large oil companies are investing heavily to construct the facilities needed to mine, extract and upgrade "oil sands" to produce and distribute synthetic crude oil.

These massive construction projects require thousands of temporary skilled workers who must be transported to this remote region from cities across Canada, the US and other countries. Once they arrive, they must be housed, fed, transported to and from their job sites each day and, finally, returned to their home towns. Getting these valuable resources to the job site on time and ready for work is essential for a successful project. Keeping workers contented under these stressful conditions is also required – unplanned turnover of skilled workers and the ensuing delays can quickly ruin the economics of a large construction project.

THE CHALLENGE

The challenge is to coordinate and synchronize the operations of hundreds of different organizations so that the supply of transportation services and accommodations meets or exceeds the demand.

Oil Co.'s logistical challenges include coordination of:

- 10,000+ temporary workers on a variety of shifts and rotation cycles
- 135 simultaneous construction projects
- 300 different construction contractors
- 23 different Lodges that provide housing and meals for workers
- 300 buses that transport workers from lodges to worksites and back every day
- Buses & airlines (commercial and private) to bring workers to Ft. McMurray, Alberta, and return them home

In mid 2008, chaos prevailed. A system of faxes, phone calls and emails that had worked well when demand was small, was now overwhelmed. Problems included: workers arriving with no room reservation, workers stranded at bus stops in below freezing temperatures, frustrated workers quitting one oil company's project to hire on to another.

THE SOLUTION

Consultants from JK Data Analytics, led by co-founder, Dr. Kevin McCormack, were contracted to first stabilize current operations and then redesign existing processes for more reliable delivery of services. JKDA's experienced supply chain consultants dug in at the operational level. They interviewed oil company logistics personnel, outside contractors, lodge managers at each of the twenty plus lodges, bus and airline company officials, and individual workers who lived the process. With the information gathered, the JKDA team quickly mapped the current processes and identified the gaps. The fundamental problem was a lack of consistent, reliable and timely communications among the Supply Chain partners.



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JKDA's methodology includes building a "Process Solution Framework" that identifies changes required in organization structure, work flow and information flow.

"We help build multi-company collaborative networks that deliver critical information at key decision points across the Extended Enterprise for faster and more reliable decision making. We also use the results of our global best practices research to help design efficient and effective Supply Chain work flows. We deploy advanced information technology in a few weeks using a SaaS delivery model. Our solutions provide measurable value quickly and minimize our customer's required investment in people and financial resources. Feedback on process performance is critical, so our solutions include "collaborative network analytics" that measure and report on Key Process Performance Indicators (KPIs) and alert on deviations from targets."

Dr. Kevin McCormack

JKDA recommended a centralized, web-based information repository that gave access to critical information to all participants in the collaborative supply chain network. By providing real-time supply and demand information to all participants in the network, hundreds of faxes, emails and phone calls each day would be eliminated. Having visibility to medium and long range forecasts, better planning and scheduling decisions could be made by each participant. Supply Chain partners could synchronize their operations and increase the performance of the entire Extended Enterprise. Targeted benefits included: reduced costs due to overbooked lodges, dramatic reduction of "no shows" on room reservations, the project schedules were more reliable and the workforce was contented.

Building a web portal solution in a matter of days was not something the oil company's IT services were staffed to do. JKDA identified and managed the necessary technologies and people needed to build a complete LODGE MANAGEMENT SYSTEM (LMS). On Demand Analysis was the vendor selected to provide both Web Portal development and its Discover Analytics™ BI software for ad hoc reporting, trending, dashboards and alerts. RackSpace® hosted the secure MS SQL Server that housed the oil company's data and ran the web portal software. JKDA's "improvisational" method of development required getting a "skeleton" solution in the hands of the users quickly, soliciting their feedback and molding LMS to meet their needs. With this approach, the solution builders "improvised" as users' understanding of their complex process grew. As part of the design team, user acceptance was near 100%.

Just six weeks after the project start date, a solution was in place that the oil company could rely on. There was no software to buy and no long drawn out implementation process. Software was provided via "Software as a Service", data is hosted remotely and access is provided via the internet. Users access LMS on-line for both data input and for accessing transaction data for analysis and reporting. Quick Reference Guides were created to instruct different levels of users, and a training program was put in place to train hundreds of contractors how to enter data and monitor their room requests for approval.

In just ten weeks from the Oil company's call to Dr. McCormack, user feedback had been collected and the first set of modifications to LMS were up and running. A new *Synchronized* Extended Enterprise environment was in operation with hundreds of business users participating. Today, LMS continues to deliver reliable results, enthusiastic users continue to offer their ideas for improvement, and this oil company continues to save millions of dollars each year through more efficient and reliable operations.

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