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Peter Carr
Kewal Dhariwal
Andrew Bitcon

Kewal Dhariwal and Andrew Bitcon prepared this case study under the supervision of Dr. Peter Carr to provide material for class discussion in the Supply Chain Management – MBA Residential program for the Centre for Innovative Management (CIM) and as part of the development of the Supply Chain Collaboration Online Research Institute (SCCORI) at CIM. The authors do not intend to illustrate either effective or ineffective handling of a managerial or strategic business decision. The authors have disguised certain names and other identifying information to protect confidentiality.

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Case Study A: Supplier Collaboration

The Ultra Large Tar Sands Company (ULTS) is one of two major oil sands producers in the Fort McMurray area. Its production, combined with nearby Big Tar Oilsands Corporation (BTOC) is approximately 500,000 barrels of oil per day, about one quarter of Canada's domestic requirements. The two companies together expend almost two billion Canadian dollars annually on procurement, and are directly or indirectly responsible for the employment of close to 10,000 people.

ULTS is the slightly larger producer of the two operators, with a procurement expenditure of over one billion dollars per year, 40% of it directly in the Fort McMurray area. ULTS is the largest employer of aboriginal people in Canada and, due to their attractive salaries and benefits, they are recognized as one of the top 100 employers in the country. They are also planning an expansion that would see the company's production double by 2008.

Pat Stephens is Senior Buyer for Chemicals at ULTS. Today, Pat has set aside his regular Saturday morning jog along the Athabasca River to work on a special assignment for the Director of Materials Management. This assignment may have a significant impact on the future of the Materials Management Department at ULTS and also on Pat's career. He is working on this assignment on a Saturday because his regular work hours are consumed by having to create new purchase orders and deal with late deliveries, unplanned "emergency" requirements, and invoicing issues.

This heavy workload, borne daily by Pat and the other buyers in Materials Management, is part of the reason for Pat's assignment. During the last five years, the staff complement in the Purchasing Department at ULTS has decreased by almost fifty percent due to attrition through retirements, and difficulty attracting experienced buyers to Fort McMurray. Adding to the loading issues are the impending expansion and corresponding increase in procurement, and the company's wish to keep costs down. Senior management has made it clear that hiring new staff is not an option.

Pat has already been working, as part of a three-person team, on a "Supplier Collaboration" pilot project. Pat's team targeted commodities with large dollar expenditures (\$1 million or more per year), high volumes of transactions, and multiple suppliers, and initiated a competitive process to select a single supplier for each identified commodity. Their work resulted in closer working relationships with a small group of innovative suppliers and generated significant savings for ULTS.

It is as a result of the team's success, that the Director of Materials Management has now asked Pat to further explore strategic sourcing and provide a recommendation on how ULTS could maximize savings and alleviate the heavy transaction burden in the purchasing department. The recommendation must identify potential cost savings and forecast impacts on service to internal customers, systems requirements, staff training, and relationships with the local community.

In developing his recommendation, Pat has many factors to consider.

The supply chain environments of ULTS and their friendly competitor, BTOC, are affected by the large physical scale of their operations, their remote location in northern Alberta, and the unique nature of tar sands mining operations.

With the exception of the specialized mining equipment, the materials purchased by ULTS are very similar to those of large petroleum refineries in other parts of the country. However, a critical business issue faced by ULTS and BTOC is their distance from major supply centres. There is a limited supplier presence in Fort McMurray with the bulk of purchases are shipped out of Edmonton, Calgary, or Toronto.

This isolation, combined with the unique specifications of some equipment (trucks, shovels, etc.), results in greater inventory management pressures on both the operators and their suppliers. It also necessitates a more sophisticated and thorough approach to logistics.

Unique business drivers for ULTS' (and BTOC's) purchasing department, includes the minimal impact of customer considerations and the maintenance-focused nature of production. Their finished product is neither variable nor configurable and is, in the short-term at least, unaffected by customer preferences. Demand for the finished product has historically exceeded the company's ability to supply.

Unlike manufacturing businesses, in tar sands mining, there is no strong link between production volumes and procurement requirements. As a "process industry" (oil & gas, chemicals, mining, etc.), procurement demand at the oil sands company is dependant on the type of equipment utilized, the weather, and the quality of the maintenance processes. For example, if improperly specified valves are installed, and the weather is particularly cold, and the Maintenance Department does not do the required servicing, then demand for parts for those valves will be high, regardless of production volumes.

Therefore, procurement of maintenance, repair and operations items (frequently referred to as MRO items), management of their inventories, and predicting need for items that are not dependent on production levels are key business issues.

The team's progress to date

Pat reflects on how the strategic sourcing pilot project has unfolded so far. From the beginning, the project had the appearance of a radical move. Instead of asking for the traditional price bids, Pat and his team invited potential suppliers to submit business cases for handling larger shares of ULTS business. The suppliers were instructed to exclude pricing and focus on process improvements instead. They were asked to answer four questions:

1. What additional volume (of presently supplied commodities) could you supply without additional work or process changes?
2. What other commodities could you supply without additional work or process changes?
3. What other commodities could you supply with additional work and/or process changes?
4. What are you unable to supply and what you prefer not to supply?

Once the business plans were assessed, the team then worked closely with their selected suppliers in two focus areas:

- a. analyzing how ULTS was ordering materials and where those materials were being used,
- b. examining the supplier's business practices and vendor relationships to identify cost savings that could be shared between the supplier and ULTS.

The first focus area resulted in some significant early process improvement wins. For example, in one pilot case, Pat determined that the majority of "issues" of a certain commodity were going exclusively to one area of the plant. Further analysis revealed that the cost of issuing and recording individual transactions was greater than the actual cost of the commodity. As a result, a "free-issue" bin was set up in that area.

The second area was much more controversial. To be selected as a sole source supplier, successful vendors were required to provide full financial disclosure, including contracts with second tier suppliers and profit margins. In a spirit of collaboration and trust, which was often difficult to develop, Pat's team would work with the supplier to find innovative ways of reducing their costs. The cost reductions were then shared between the supplier and ULTS.

Pat brought vendor representatives on-site and gave them access to ULTS' internal plant maintenance systems for forecasting demand. Each vendor was then given responsibility for managing their own inventory, invoicing ULTS only once materials were actually used. In more than one case, Pat's team made presentations to manufacturers to persuade them to add an ULTS preferred supplier to their distributor list.

Drawbacks

While Pat's team racked up some impressive cost savings, the single source supplier collaboration route has had some drawbacks.

Due to the unique nature of the supplier collaboration process, greater numbers of ULTS staff are being involved in each commodity initiative:

- a) Since the majority of the benefits are generated by closely examining both ULTS' costs and the vendors' cost structure, new "forensic style" financial and accounting skills are required. Most purchasing staff, including Pat, do not have this background.

- b) The initiative requires that new cost savings measures be developed. Previously, management could just compare the last price paid to the new price (as a result of bidding) and calculate the savings. Calculating “soft” cost benefits, such as inventory reduction and process cycle time improvements, has proven to be much more difficult. Pat has had to rely heavily on the Business Services department for both financial analysis and cost savings calculations.
- c) Giving vendors greater commitments and greater access to ULTS’ data has created confidentiality and liability concerns among senior management. This has necessitated involving the Legal and Risk Management departments in every supplier collaboration negotiation.

Involving so many extra ULTS staff in the process has extended all the timelines on the Supplier Collaboration projects. It has also significantly increased the complexity of negotiations, as many more concerns, agendas, and egos have had to be satisfied before a new contract is implemented.

For Pat and his colleagues there has been the added stress of trying to keep up with the significant changes in their job requirements. A short year ago, Pat was an experienced and respected Senior Buyer whose primary job requirements were to understand the chemical market, prepare Requests for Quotations (RFQs), and issue Purchase Orders (POs). Today, his key roles are developing sourcing strategies, educating suppliers and internal customers about the new processes, coordinating the development of process improvements, and managing key relationships. His colleagues’ roles have gone through similar transformations.

But, there are even broader-reaching considerations. In the Fort McMurray economic area, there has developed a two-tiered employment scenario. Those who work at one of the oil sands companies earn a lucrative salary while those who work in one of the local, predominately retail businesses, earn minimum wage. A shortage of local housing and services has driven up the cost of living in Fort McMurray and raised other social issues for children and families. Changes to ULTS’ business processes or future investments have a direct and immediate effect on the Fort McMurray economy and the lifestyles of its residents.

Senior management at both ULTS and BTOC are acutely aware of their companies’ impacts on the local economy, and both factor the welfare of the local business community and its’ citizens into every business decision.

Supporting the local economy and the aboriginal community is very important to both oil sands operators. This results in additional reporting requirements and some collaborative and development activities not found in other Supply Chain Management departments. For example, Pat’s department tracks and reports on local and aboriginal business volumes in conjunction with how their department is encouraging and promoting these businesses.

Any process change that may jeopardize the health of local suppliers, therefore, requires a cautious approach. Closer relationships with fewer suppliers is an idea with much theoretical acceptance by management, but the impact on local suppliers who are “shut out” of the business for significant periods of time is a nagging concern to many executives. Pat knows that any recommendation he makes will be questioned in detail regarding its impact and consequences (real and perceived) on the Fort McMurray economy.

Where should they go from here?

Despite these difficulties, the Director of the Materials Department likes the new approach and sees it as the way of the future for ULTS. He does, however, have some serious concerns around reliability of supply, community relations, and the criticality of maintaining healthy suppliers in a geographically isolated business area. His main question, however, is, “How do I measure the benefits and report them to the Executive Council?”

Pat considers what form of supplier collaboration he should recommend. His two colleagues are divided on how to proceed.

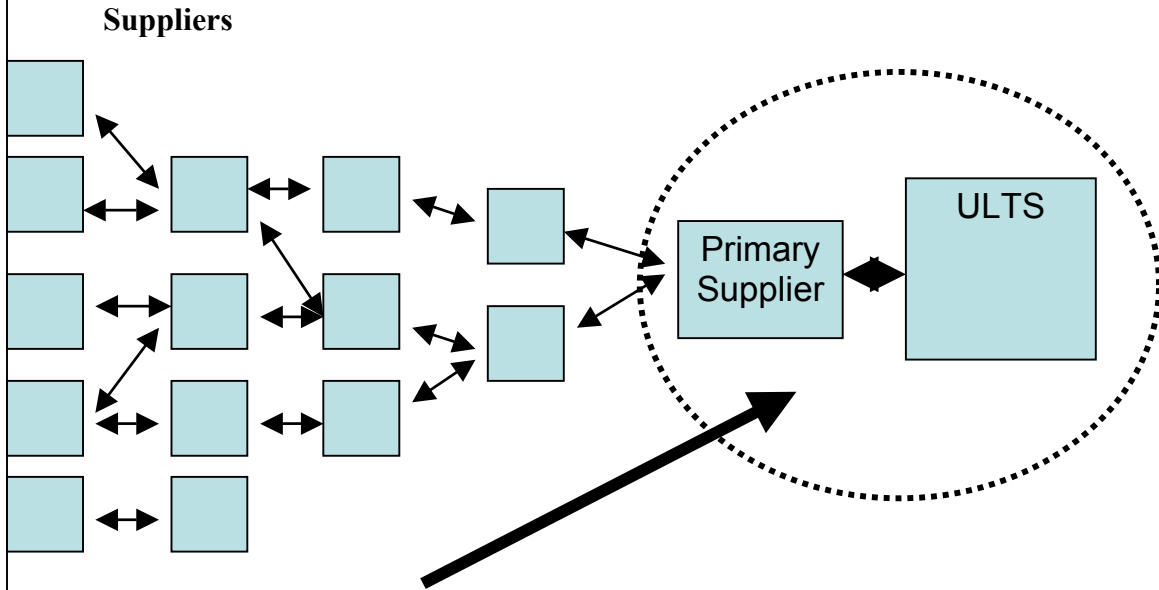
Simone LeClaire, a recently hired MBA from Toronto, believes ULTS should work exclusively with local suppliers. She prefers to conduct detailed analyses of the cost structures of ULTS and each primary supplier and then use this analysis to identify opportunities for collaborative process improvements. She argues that this method saves money for both ULTS and its suppliers, and promotes trust and further collaboration.

John Dawson, a middle-aged “veteran” with 10 years experience at ULTS, favours a thorough analysis of the entire supply chain, from Tier One suppliers down to Tier Four and beyond. John believes this analysis will identify “bottom feeders” that are part of ULTS’ supply chain but are adding no value. He believes that elimination of these vendors will reduce costs far more than “tinkering at the front end.”

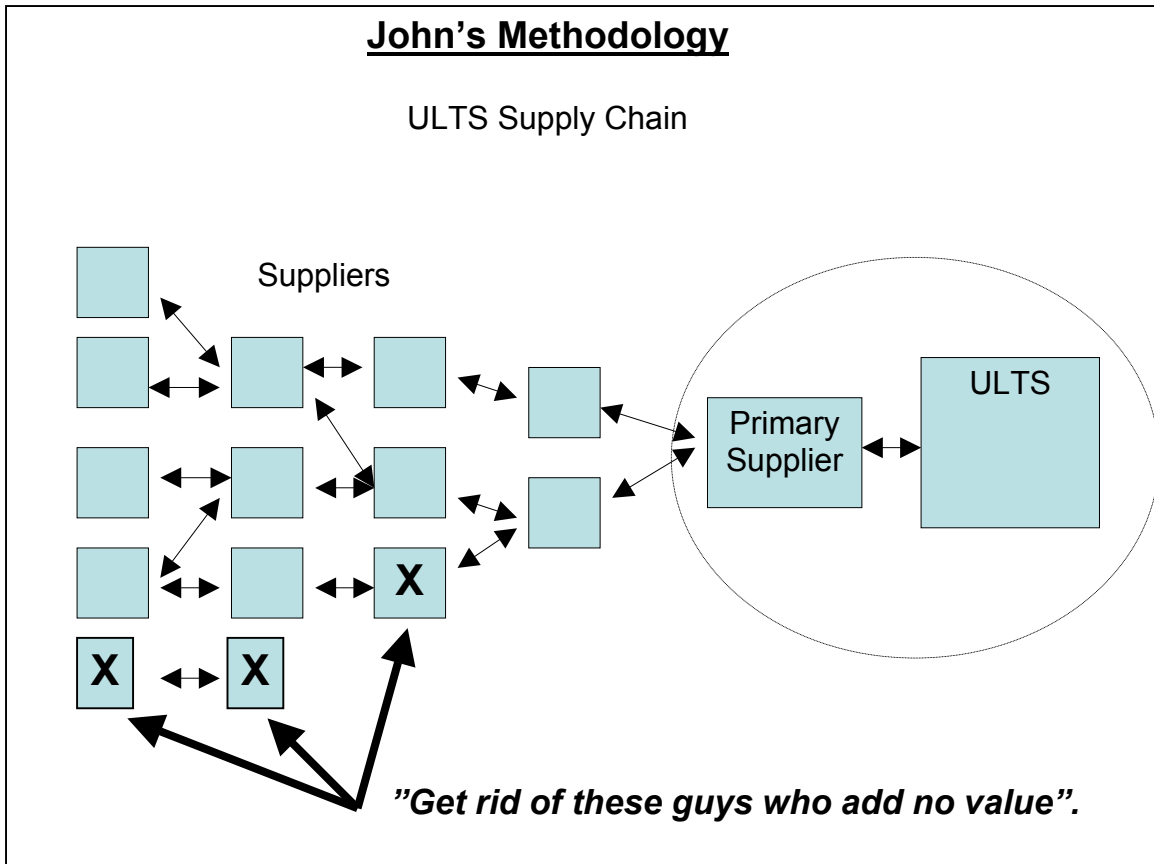
Both Simone and John are lobbying hard for their preferred methodology. Pat now has to decide whether he wants to recommend a teacher/mentor role (Simone’s style) or a hunter/killer role (John’s style) for his department. As he contemplates his decision, he refers to the charts submitted by Simone and John.

SIMONE'S METHODOLOGY

ULTS SUPPLY CHAIN



"Focus here where we have the most leverage"



Regardless of which methodology he chooses, Pat knows that technology will play a big role in the success or failure of his Supplier Collaboration Model. Some of his key suppliers have invested heavily in new software technology and are now “internet-enabled and eCommerce-ready.” Unfortunately, unlike many of its competitors, ULTS has not upgraded to an Enterprise-wide Resource Planning (ERP) system.

ULTS is running a highly customized legacy system, which cannot handle Internet transactions. The legacy system is managing ULTS’ current internal needs effectively and senior management is reluctant to risk the disruption of a full-blown ERP upgrade.

Pat realizes his vendors are ahead of ULTS on the eCommerce curve and wonders how he can take advantage of their capabilities without incurring heavy information technology (IT) costs at ULTS.

An even bigger issue, though, is how other ULTS employees will respond to the new Supplier Collaboration model. Pat’s approach is non-traditional and controversial. End users do not seem overly concerned; in fact, Maintenance likes having supplier representatives on site and being able to place orders against established contracts. “As long as I get my stuff when I need it, I don’t really care about the details,” is their common response.

However, several buyers outside of Pat's team have expressed skepticism and feel ULTS is being naive if they think they can trust suppliers with key commercial data. As each new corporate scandal unfolds on the nightly news, Pat's department colleagues are asking, "Can we really trust a supplier with that intimate a relationship? Will they really work with us or will they take advantage of us to pad their bottom line?"

In addition to the acceptance hurdle, Pat wonders if the current ULTS buyers have the necessary skills and mindset to be successful with the new methodology. Pat refers to a recent survey of the Canadian purchasing industry and realizes that his department's demographics are quite different than the national average. (Reference Exhibit 1). He contemplates whether these differences will work in his favour or against him.

Many of Pat's colleagues are from the "old school" of oil patch procurement. "Three bids and a buy," is their mantra for supplier relations. These buyers are used to being measured on their ability to obtain price concessions, the number of purchase orders issued, and making sure the inventory shelves are full.

In Pat's model, the buyers must perceive and analyze the big picture. Instead of looking for the lowest price, they need to focus on what they are buying and why. They need to be able to analyze spending, research alternative products or suppliers, and prepare business cases for senior management.

Despite ULTS' high wages and their scenic, recreation friendly, location in Northern Alberta, attracting a committed experienced Supply Chain expertise has been a challenge. Turnover is higher than the Canadian average as many employees "put in their northern time" and then move to more populated centers after they have acquired valuable supply chain and refining experience.

As the temperature drops and the snow starts to fall on the forested hills outside his backyard, Pat wonders which option will stand up when purchasing volumes start to increase. He considers the seven key questions he must answer in his recommendation to the Director of Materials Management:

1. Should ULTS expand their Supply Collaboration model? Why or why not?
2. If so, what model should we adopt, the teacher/mentor role or the hunter/killer role?
3. How can we utilize technology?
4. How do we transition our people from price-buyers to relationship-managers?
5. How do we handle suppliers who don't get the business?
6. What commodities should we target? What criteria do we use for selection of commodities, successful supplier, etc.? (Reference Exhibit 2).
7. How do we measure benefits, supplier performance, and buyer performance?

**EXHIBIT ONE
DEPARTMENT DEMOGRAPHICS**

	National Average	ULTS
A. SCM Experience		
No experience	15%	0%
Less than 1 year	4%	5%
1 year to less than 2 years	6%	9%
2 years to less than 3 years	5%	8%
3 years to less than 5 years	12%	13%
5 years to less than 10 years	17%	20%
10 years or more	42%	45%
B. Number of Years in Present Position		
Less than 1 year	8%	4%
1 year to less than 2 years	15%	17%
2 years to less than 3 years	11%	8%
3 years to less than 5 years	19%	24%
5 years to less than 10 years	21%	25%
10 years or more	28%	22%
C. Age Groups		
Less than 20 years of age	0%	0%
20 to 29 years of age	7%	10%
30 to 39 years of age	25%	20%
40 to 49 years of age	42%	37%
50 to 59 years of age	23%	30%
60 years of age or older	2%	3%
D. Gender		
Male	72%	82%
Female	28%	18%

Source: National Averages taken from Athabasca University survey "Supply Chain Management Issues Study", May 2002. <http://www.athabascau.ca/scm/scm0004.htm>

**EXHIBIT TWO
ULTS SPEND ANALYSIS**

	Percentage of Total Spend	Percentage of Total Invoices
Maintenance Services	16.8%	10.4%
Catalyst	14.3%	5.2%
Building Construction Services	12.9%	8.3%
Additives	10.8%	7.0%
Process Equipment	7.8%	3.9%
Pipe, Valves, & Fittings	2.3%	15.6%
Measurement & Testing	5.0%	5.2%
Chemicals & Gases	3.7%	2.4%
Miscellaneous MRO	1.7%	5.2%
Electrical & Instrumentation	5.0%	7.8%
Rotating Equipment Spares	2.3%	6.5%
Tools & Rentals	2.3%	5.9%
Fleet / Fleet Mtce	1.9%	1.3%
Cleaning & Disposal	1.9%	1.3%
Safety Equipment	1.7%	1.2%
Professional Services	1.6%	1.0%
Fabricated Equipment	1.4%	0.8%
IT hardware / software	1.2%	0.7%
Environmental Services	1.2%	1.0%
Security & Safety	0.8%	0.7%
Travel / Entertainment	1.9%	5.2%
Storage	0.5%	0.3%
Office Supplies	0.4%	1.0%
Telecommunication	0.3%	1.6%
Dues / Memberships	0.1%	0.3%
Totals:	100.0%	100.0%

Source: refinery spend analysis, averaged across multiple companies.

EXHIBIT THREE

SAMPLE LIST OF SCM FUNCTIONALITY AVAILABLE

SAP Supply Chain Management Functionality

Networking

- [Private Exchange](#) – Provides e-marketplace infrastructure that enables you to extend your supply chain processes across enterprise boundaries by linking suppliers, partners, and customers
- [Supply Chain Portal](#) – Lets users collaborate with colleagues down the hall or across the globe, both inside and outside the enterprise
- [Mobile Business](#) – Extends the efficiencies and benefits of networked supply chain management to every member of the network -- no matter where they are

Planning

- [Collaborative Demand and Supply Planning](#) – Enables buyers and sellers to collaborate on demand and order forecasting, synchronizing plans based on the dynamic exchange of information
- [Supply Chain Design](#) – Allows you to align your supply chain infrastructures to changing market conditions, such as new product launches and new customer segments, that enable you to reduce your time to value

Coordination

- [Supply Chain Event Management](#) – Monitors every stage in the supply chain process, from price quotation to the moment the product arrives at the customer site -- including alerts when things go wrong
- [Supply Chain Performance Management](#) – Monitors and reports on key indicators and objectives of supply chain performance, including costs and assets across the supply chain network

Execution

- [Collaborative Procurement](#) – Integrates Web-based buying processes, including rule-based procurement, automated replenishment, and multiple supplier support
- [Collaborative Manufacturing](#) – Manages supply chains throughout all stages of the manufacturing process – even across enterprise boundaries.
- [Collaborative Fulfillment](#) – Enables you to quickly determine where and when you can obtain a product, and handles order management, availability checks, and transportation management.

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