

WHITE PAPER

Supply Chain as a Strategic Asset

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by Stephen C. Rogers & Robert Porter Lynch

Purpose: The primary purpose of this White Paper is to provide a framework for senior executives to transform their the Supply Chain from simply a *tactical, product delivery* or *cost center* to a more holistic *strategic asset* that first *creates* and *captures* new value, and *delivers* that value to the bottom line, then enhances *competitive position* and creates the kind of *competitive advantage* that is difficult for others to copy. The hallmarks of this strategic asset approach are:

- Smart investments, both financial and relational, in physical and human/intellectual assets
- Collaboration and Strategic Alignment to address the speed, complexity, integration and flexibility required
- Clarity of what exactly creates competitive advantage, including, but not limited to cost reduction.
- Building a strong Value Chain composed of multiple suppliers and an “owner” company (the large end-use buyer) that outperforms the competition

This strategic framework enables Supply Chain managers to deliver improved results in a severe downturn relative to traditional approaches, be positioned to create even more value when the rebound occurs, and provide a strategic approach to the Supply Chain’s role in the business going forward.

Goal: The goal is to *create sustainable competitive advantage* – to position the company to weather storms, rebound quickly when market conditions warrant, deliver attractive financial returns and put Supply Chain managers in position to help plan and execute those business-critical action plans in close cooperation with the CEO and CFO (i.e. have a seat at the direction setting table as a key contributor). We will address how to cut costs *strategically* in the last pages and in another White Paper.

The Massive Historic Shift

Since WWII companies have been changing their production to be more specialized on their internal core competencies, while sourcing more and more from outside suppliers, as represented by this chart:

Percentage of Goods & Services Purchased from Outside Suppliers



While this shift was taking place, most companies still address their Supply Chain management tactically rather than strategically. (Note: we should update this chart to fit the Canadian Oil Industry)

Figure 1: Percentage of Outsourced Goods & Services

Supply as a Strategic Asset

Contents

Purpose:	1
Goal:	1
PART ONE: SHIFTING FROM <i>TACTICAL</i> TO <i>STRATEGIC</i> IN THE SUPPLY CHAIN	4
Broader, More Strategic Perspective	5
Value Chain.....	6
Structure.....	7
Conduit for “Value Flow”.....	7
Value Engine.....	8
PART TWO: TAKING A STRATEGIC VIEW OF THE VALUE CHAIN	9
Strategic Battle of Value Chains.....	9
Three Different Types of Value Chains	11
Supply chains have both vertical and horizontal dimensions.....	12
Networks of Customers & Suppliers	12
Strategic Portfolio Management:	14
PART THREE – MANAGING SUPPLY AS A STRATEGIC ASSET.....	16
Managing Strategic Assets	16
1.Integrated Strategy	16
2.Value Chain Portfolio	17
3.Asset Planning.....	20
Option 1: Invest in new assets	20
Option 2: Incrementally Invest in existing assets.....	21
Option 3: Operate existing assets	22
Option 4: Mothball assets of value	23
Option 5: Shut down or sell assets.....	23
Supplier Development	24
Measuring Results.....	26
1. Leading Indicators.....	26
2. Financial Metrics	26
Measuring Asset Value -- Longer Term	28
Risk Management	28
•Myopic.....	29
•Legalistic	29
•Transactional:	29
Value Proposition.....	29
Conclusion.....	30
The Supply Challenge	30

The Great “Mindset Trap”

Mindsets determine the way a person sees a problem or opportunity, frame their understandings, and funnel the way they respond.

These are called “paradigms,” which become problematic if the mindset *limits* your view of the world and thus constrains the possibilities that might emerge in reality.

Too many Supply Chain managers don’t challenge traditional thinking, and get trapped in an industry specific, tactical-transactional mindset, overlooking the potential of creating real strategic value.

For those willing to see, understand, and take action on the greater potential in Supply Chain management, there is a bold new future ahead.

Supply as a Strategic Asset

PART ONE: SHIFTING from *TACTICAL* to *STRATEGIC* in the SUPPLY CHAIN

Traditional View of Supply Chain: In recent years Supply Chains have increased in importance across many industries, including oil and natural gas, as management recognizes that the Supply Chain is the channel for delivery of its products to its customers. However, how the Supply Chain is managed still often lags in its importance to the business. (see Figure 1: Percentage of Outsourced Goods & Services) To some degree this is driven by traditional views of the value chain (which emerged from SCM's roots joining procurement with logistics over twenty five years ago) which still regards the supply process:

- As a *cost center* to be minimized in order to increase margin between cost of goods sold and selling price.
- As a *logistics conduit* to get product (goods or services) to the next link in the chain (direct customer) and little else.
- As a *mechanism to improve purely financial measures* by reducing internal assets (often through outsourcing) so as to increase return on assets by reducing the internal denominator of the asset-return equation.

How companies think about supply is also driven by traditional views of what the Supply Chain *includes*, which, in turn, determines what its *primary focus* should be. For example, in heavily product-oriented B2B companies like oil and gas the Supply Chain focus is on the upstream (supplier) part of the chain; whereas in heavily marketing-oriented B2B companies the focus is on the downstream (customer) part of the chain, and in largely consumer-driven companies (B2C/retail) it's the upstream part of the chain.

Furthermore, companies typically think of *assets* only as either "hard" and/or "financial" assets held by the company itself¹ (the denominator in the Return-On-Assets equation). What's not included is the Supply Chain *outside* the company's boundaries

The Great Anomaly

Examine your company's recent Income (P&L) Statement.

What percentage of the expenses are *internal* versus *external*?

In most product-oriented companies,* the *external* expenses range from 50% to 80% (the average is about 65%).

If your company's *external* buy falls into this range, should supply management be considered a *strategic function*? Should the supply base be treated as a *strategic asset*?

However, what often happens in large, publicly held companies is the largest asset bases inside the company are minimized (via outsourcing) to increase Return-On-Assets (ROA).** Which simply increases the level of external expenses, making the chain even more important.

*in service-oriented companies this % varies considerably.

** in many cases by outsourcing the assets to lower the denominator of the Return-On-Assets calculation, which typically boosts stock prices.

Figure 2: Is Supply a Strategic Asset?

¹ These include short term financial assets on the balance sheet like inventory and accounts receivable; and long term hard assets like property, plant and equipment (See Figure 5: Broad View of Strategic Assets)

Supply as a Strategic Asset

because what's not included on the balance sheet is seldom considered an "asset." This "asset paradigm" is myopic, and leads executives to "miss the mark" (see Figure 2: Is Supply a Strategic Asset?)

Narrow, Tactical/Transactional Results

This myopic view then drives a tactical-transactional management approach to the Supply Chain (see Figure 3) that can fluctuate widely depending on the market conditions the company faces:

- In *severe downturns*, like the oil and gas industry is currently experiencing, it becomes a *cost center* to be squeezed to deliver reductions that can increase profits and cash flow.
- In *major upturns* or bubbles, like 2003-07 just before the "Great Recession", it becomes a *bottleneck* that needs to be released to deliver more products faster during shortages.
- In *routine* markets it becomes a "given" in the value equation; something management, for the most part, assumes will be there and operate on "automatic pilot." No major outages and no major changes – manage it to support marketing and financial goals with some moderate level of continuous improvement to offset inflationary cost increases.

Broader, More Strategic Perspective

The compelling change required is managing supply – *not tactically* but rather *strategically* – aiming at really making a difference in the long-term advantage a company creates in the *competitive* playing field. (see Figure 4)

From a business standpoint the Supply Chain essentially plays a large role in creating the product

Evidence of Tactical-Transactional Supply Management

Here are several symptoms of a tactical, transactional Supply Chain:

- SCM seen as a "cost centre"
 - Push for Lowest Component Cost
 - Use "3 bids and a buy" for determining best supplier
 - Squeeze Vendor in Negotiations
 - Manage All Suppliers as Commodity Vendors
 - Suppliers treated like "replaceable parts"
- Onerous Contracts
 - Penalties for Non-Compliance and no rewards for exceeding goals
 - Risks shed onto Supplier
 - Supplier Gets Even on Change Orders or during Economic Bubbles when demand is high Demand
- Arbitrarily extend payment terms to suppliers to capture more cash flow

Figure 3: Tactical Transactional Supply Management

Flawed Tactical Thinking about Supply Chain Cost the Auto Industry Billions

For two decades Detroit's automaker's went on a "squeeze the vendor" crusade, hacking, slicing, and overseas outsourcing their Supply Chains in an attempt to gain profitability against their Japanese rivals who were now producing in North America. (70-80% of a car is outsourced through the Supply Chain)

The result was a disaster. In the five year period leading up to the Great Recession of 2008, Detroit's Big Three (GM, Ford, & Chrysler) collectively lost over \$100 billion. Warranty costs skyrocketed. Costly recalls and litigation were ruinous. Suppliers were mercilessly driven into bankruptcy – by 2007, 500 suppliers a year left the industry.

At the same time, the Japanese competitors in North America, viewing their suppliers as strategic partners, all remained profitable.

Figure 4: Flawed Thinking in Auto Industry

Supply as a Strategic Asset

a company sells (i.e., drilling and pumping oil) and then distributes (revenue depends on it). Supply Chain often represents the largest area of external assets and people (how the company actually does work and operates depends on it); it develops and commercializes the next generation of products (R&D, Engineering and capital projects); and it often determines the performance and quality of the product in the eyes of the customer (through inputs purchased from suppliers and internal operational outputs). These are essential roles in the creation of competitive advantage that sustains a business over the long haul.

Supply is a Major Strategic Asset: Thought of in its entirety (including both owner production assets and supplier and distribution partner assets), for many companies the Supply Chain is by far *the largest asset it “owns,”*² and is very strategic to the company’s ability to succeed both financially and in the market.

While Supply is a major strategic asset, (see Figure 5) it is seldom managed as one. Rather it is managed as an expendable or easily replaceable (like a replaceable part) fragmented asset that management assumes will always be there, even when abused (the routine-market view noted above). This expendable, replaceable supplier belief is tragically flawed.

However, in order to manage the Supply Chain as a strategic asset, it is important to step back and consider what makes up this asset. Unlike traditional assets a company fully owns, the Supply Chain is both a *direct* and an *indirect* asset, much broader and more complex than just its internal component:

Value Chain: The Value Chain is an **end to end (E2E) entity**. To be managed as a strategic asset all three parts of the chain need to be considered – *upstream* (suppliers),

Managing Supply Chain as a Strategic Asset

The idea of “Asset Management” has, heretofore, been squarely within the purview of financial management. On every company’s balance sheet are clearly stated assets, generally in the categories of *financial* assets (such as Cash, Receivables, Sold Inventory, Royalties, & License Fees) as well as *hard* assets (Machinery, Equipment, Plant, Land, Buildings, Raw Materials, Unsold Inventory, etc.) Both *financial* & *hard* assets are easily translated into concrete dollars.

However, there are other strategic assets that are critical to the successful operations of a company, such as intellectual property, know-how, brand trust, trademarks, and so forth. Moreover, there are *vital* (from Latin *vita* meaning “life”) assets that relate to people (culture, sales force capacity, productivity, innovation & engineering capability, cross-functional teamwork, quality of leadership, adaptability, imbedded competencies, etc.) These must also be managed.

In addition, there are other *virtual* assets that rest outside a company’s direct control, and are thus *indirect* assets, but no less important. These *virtual/indirect* assets include such things as:

- Key Customer Relationships
- Strategic Supplier Relationships
- Strategic Alliances
- Regulatory Relationships
- R&D Relationships
- Community and NGO relationships

These too must all be managed as *Strategic Assets*, though they don’t appear on the Balance Sheet.

Figure 5: Broad View of Strategic Assets

² E2E Supply Chain includes external and internal supply (usually plants) chain assets, thus it includes both the assets of the owner and all its suppliers and distribution partners.

Supply as a Strategic Asset

internal (owned production assets and human assets that operate them), and *downstream* (customer and distribution channels). This means it is made up of multiple tiers (layers) that include each tier's set of supplier, internal, and customer relationships.

The key is prioritizing efforts depending on the business situation and avoiding the temptation to forget its E2E span. Managing one part of a strategic asset independently from another will lead to dysfunction between tiers and parts of the chain; thus, in a crisis, each company's traditional management focuses on protecting its own internal assets, mercilessly cutting upstream costs, and praying for downstream relief.

It is much more beneficial for upstream and owned parts of the chain to collaborate, coordinate, and integrate to deliver lower cost for both suppliers and owners by eliminating waste and making downstream volume more profitable.

Structure: The end to end (E2E) Value Chain has a **different ownership structure**. Companies neither directly "own" nor "control" their Value Chains -- suppliers own their part; customers own their part; and the company owns its part.

That means decision processes need to mirror that complexity – companies want to do business with each other but rarely get to completely control each other. Hence there is a strong need for collaboration, coordination, and synchronization between decision spaces with efforts to formalize those decisions to offset suspicions or clarify expectations (such as labor agreements, purchase/sales contracts, delivery standards, long term service/support, etc.).

In many ways Value Chain Structure is similar to the internal challenges of cross-functional integration, adding a healthy dose of steroids. *Influence* and *alignment* becomes far more important than *command* and *control*; and historical track record breeds either trust or distrust, which in turn drives the level of legal wrangling (from very little to a lot). This is way the best practices of strategic alliances are vital to success.

Conduit for "Value Flow": Supply Chains are not just product flows; they are far more complex than that. Think of the Supply Chain as an asset that contains five kinds of capital that establish "value flows":

1. **Physical/Product Capital** – plant and equipment and the product flows from them.
2. **Financial Capital** – financial assets and the billing system that money flows through. For smaller companies, cash flow is essential; for larger companies, return on capital flow is paramount along with cash and profit. This reflects an underlying flow of financial capital (money) while managing the financial implications of a range of risks.
3. **Human Capital** – people and the information, competencies, and skills that flow through them across/between companies. Productivity flow, data flow, communications flow, and speed of flow are results of human capital flow. While physical capital is typified by *products*, human capital is exemplified by *services and business intelligence*.
4. **Intellectual capital** – unique knowledge assets (patents, trade secrets, etc.) and the "idea Supply Chain" that flows across companies creating an innovation flow sparked by

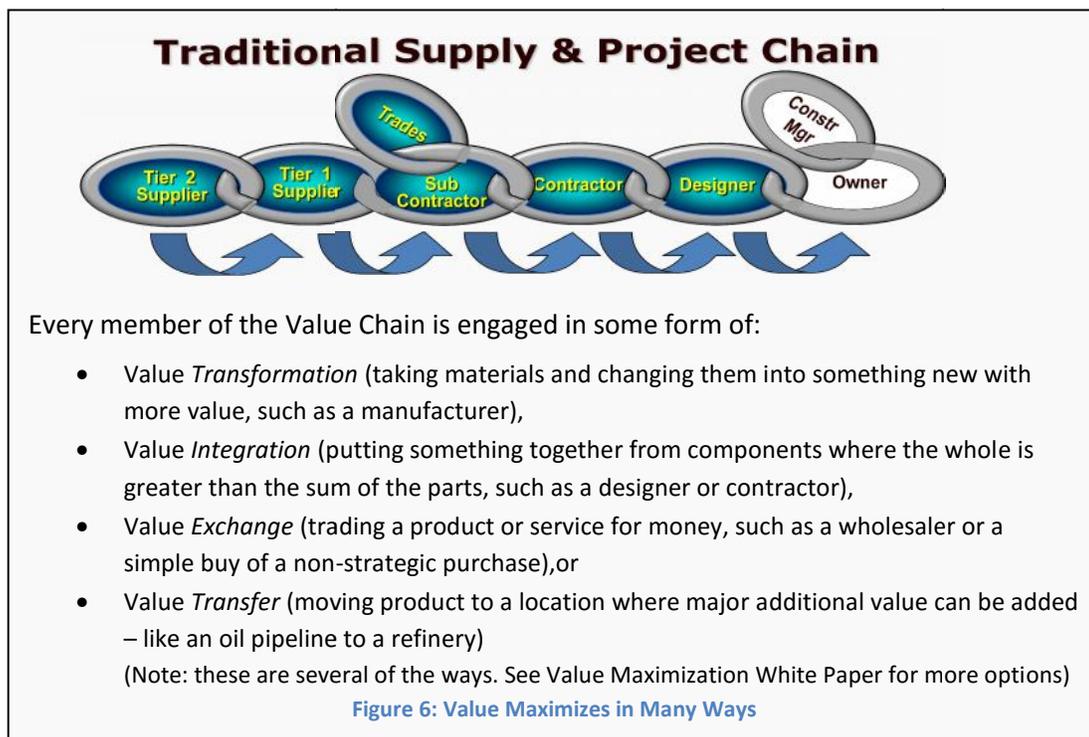
Supply as a Strategic Asset

intellectual capital in the chain. New ideas, data, technologies, reduction of non-value-added work and better use/deployment of resources flow powerfully through the chain when valued by and built upon/utilized by every member of the chain.

5. **Social capital** – relationships, both cross-functional internally and cross-company externally. These relationships can flow across boundaries in several ways – person to person, within teams, company to company, and between groups of companies. Think of them in terms of Person:Person, Company:Company, and, Many:Many within and across the Supply Chain. The two factors that impact social capital flow are strategy/goal alignment and trust. When distrust is present (in *adversarial* relationships) or not valued (in *transactional exchange*), the power/flow of social capital becomes negative, non-existent, or minimal.

Value Engine: The real power of the Value Chain is maximized when all five of these value flows are *synchronized, aligned, and harmonized*, much like a well-tuned engine. Take one of these five out of the “value engine,” and poor performance is inevitable. At the same time, for parts of the chain that are non-strategic but need to operate to maintain the business, managing the flows can also be flexible, handling those that add little differentiation without as much fine tuning.

Only if all your competitors are performing poorly or tactically will you not recognize the flaws. But if one competitor gets it right (both the engine tuning and the strategic vs tactical balance) your competitive advantage can suffer badly, as the next section demonstrates (See Toyota/Honda versus Big Three).



Supply as a Strategic Asset

PART TWO: TAKING A STRATEGIC VIEW OF THE VALUE CHAIN

In this section, we will examine how some of the best companies see their value chains as a strategic lever to enhance their business and deliver competitive advantage, the different value chains that need to be addressed, and both the horizontal and vertical dimensions that need to be engaged.

Strategic Battle of Value Chains

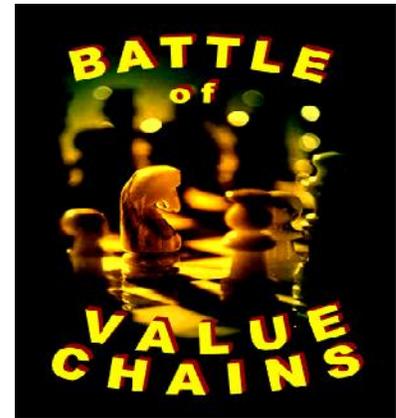
The best companies have learned that their ability to create strategic competitive advantage is not totally in their control; a company is only as good as the sum of what it does itself plus the quality and value of its “inputs” from its entire value chain – much like the analogy of “you are what you eat – if all you eat is junk food, you will not be healthy even if you do some small level of regular exercise.

Here’s a perfect example that demonstrates this principle.

Because 70-80% of their cars were made by their suppliers, when Toyota then Honda entered the North American marketplace thirty years ago, they brought their value chain strategy with them. To outsource such a heavy proportion of their cars to suppliers meant more than just quality and cost control, it meant creating and maximizing value at every segment of the value chain.

While quality was paramount, the Japanese OEMs emphasized a collaborative, high trust, high performance relationship throughout their entire value chain. They saw both suppliers and dealers as part of their *team – strategic partners*. Customer satisfaction, speed of delivery, integration and reduction of parts, reduction of total cost in the chain, reduction of non-value added work, lowering warranty costs, lean principles, reliability, increased flow of innovation, and *mutual* profitability were core objectives. Suppliers were expected to be more profitable, and to invest a portion of those profits into advanced technologies for their OEM partner to use exclusively for a period of time.

Toyota and Honda³ saw their suppliers and dealers as alliance partners, not vendors and peddlers to be manipulated and squeezed, unlike their rivals in GM, Ford, and Chrysler.⁴ In fact, when suppliers got into trouble, they sent their own experts to work side by side in the supplier plants to solve the problems. The value chain concept extended from supplier to their auto dealers and finally to highly valued customer relationships formed with the auto buyer – the consumer. Customer satisfaction was the ultimate test of the value chain strategy.



**To be the Best at Creating
Strategic Competitive
Advantage We must be the Best
At Every Step of Creating Value**

³ See Nelson, Dave, Mayo, Rick, & Moody, Patricia; *Powered by Honda, Developing Excellence in the Global Enterprise*, Wiley, 1998

⁴ Chrysler did adopt the Japanese value chain model for a brief interlude from 1992-1998, during which time they made a revolutionary transformation producing better cars more efficiently and made enormous profits. Tragically this was all reversed when Chrysler was sold to Daimler Benz in 1998, and thereafter went into serious decline resulting in bankruptcy a decade later. See Stallkamp, Thomas; *Score! A Better Way to Do Business – moving from conflict to collaboration*; Wharton, 2005

Supply as a Strategic Asset

Battle of Value Chains

Early in their evolution, each Japanese chain was unique, often with interlocking shared ownership (Keiretsu), but over time the chains began to share members with their competitors and expand to include local suppliers in each geography – especially outside Japan.

To be the best at improved competitive position and creating competitive advantage requires:

- Accessing the best skills at every step of the value creation process
- Recognition that parts of the chain are shared by competitors (suppliers servicing more than one customer in the industry)
- Trust to protect unique jointly created innovations for those that developed and own them
- Willingness after a reasonable period of exclusivity to allow suppliers to sell to other companies in order to syndicate investment risk and improve supplier financial health
- Suppliers that are healthy are more willing and able to invest in the future and contribute their innovations to the buyers they trust.

Impact of Collaborative Innovation in Total Cost of Ownership at Honda

Intrigued by Honda's dramatic impacts, Robert Porter Lynch (co-author) met with Dave Nelson, Honda's Senior Vice President, who set up the value chain strategy for suppliers. He drew me a picture of how the collaborative approach drove innovations and cost savings. An average component part that cost \$1.00 in the first production year dropped to only 58¢ by the end of the model run (usually about seven years).



Nelson went on to say:

“When we receive a suggestion from our suppliers, we split the savings 50/50. However, if a supplier is not making their profit numbers, we give them a larger percentage of the savings (in the short term), sometimes up to 100%. It helps them out.”

-- Dave Nelson, Sr. V.P. of Procurement, Honda *interview, 1997*

Supply as a Strategic Asset

By the late 1990s, the result was crystal clear – Toyota and Honda were beating Detroit’s Big Three with better quality, lower costs, higher profits, and growing market share. By 2000, while GM’s warranty costs were exceeding their profits, Toyota was taking over as the world’s largest auto company. It took another decade, after bankruptcies, and numerous crises before Detroit started to understand what their more collaborative rivals were thinking.

Three Different Types of Supply Chains

All companies have *three different types of Supply Chains* and the oil and gas industry is no different.

- **Ongoing Product/Service supply** including both operations and maintenance/repairs (huge in oil & gas),
- **Capital Project supply** (which in a depleting asset industry like oil and gas is not only vital but also something that needs to be sustained even during downturns), and
- **Admin supply** that supports the human resources and overhead operations in each company in the chain., including *Research, Marketing & Sales supply* that supports the company’s strategic research, promotion, and sales force; *Information Technology supply* which provides computer information systems, data analysis, and internal communications; and *Finance supply* (auditors, banks, investors, outsourced accounting providers, analyst communication materials, etc.).⁵

At this point the Supply Chain reader may be sighing, thinking about the hundreds, or even thousands of suppliers that must all be managed strategically.

Fortunately, only about 5-7% of all the suppliers are either *strategic* or *high value* providers to which 80% of the corporate spend is focused. The rest are either *commodity* vendors or *small scale non-critical* vendors. The key is to *triage* the supply base holistically (embracing in the process the three types of chains, which includes Supply, Construction, R&D, Engineering and Sales/Marketing) and invest in the *strategic* relationships while using more efficient, less resource intensive *transactional* approaches to manage/monitor the non-strategic vendors.

Sometimes, however, companies get preoccupied with a particular type of chain or attempt to “make one size fit all” – using the practices from what may be appropriate in one arena, but are totally wrong in another, yet still expecting positive results. (see Figure 7: P&G-HP Collaboration)

⁵ Note by Steve Rogers: I continually see companies and especially Supply Chain people who just can’t see that these areas have a Supply Chain because they just can’t conceptualize a chain where the “products” are not a tangible, visible object, instead they are a service or non-tangible outcome. I think it is hard for people to deal with the concept and I think in a downturn this is one of the most fruitful chains to cut/lean out and encourage suppliers to do the same and share the savings. In a downturn, when cash and cost become extremely uncertain, the third chain – the Overhead and Administrative Supply Chain – becomes extremely important to examine for cost trimming as well, as many overhead tasks have internal, external supplier and external customer aspects.

Supply as a Strategic Asset

Know the Difference Between a Strategic Supplier and a Commodity Vendor

In much my 30 year career at Procter and Gamble I was attached to the Product chain (although the company spent almost as much on things like Marketing and Information Technology as we did on products). However in my last few years, my assignments allowed me to appreciate and impact the Admin chains. Here's a poignant example of how a Commodity Vendor tactic was inappropriately used on what should have been considered a Strategic Supply Partner:

In 2003, P&G decided it was time to outsource its global Information Technology to a company whose core competency could keep up with the rapidly changing technologies. A bidding package was provided to the prime suppliers in the field – IBM, HP, Accenture, etc.

The bids came back in excess of \$3B USD for a 10 year contract. Unwittingly, P&G was advised by an outsourcing consulting firm to take a negotiations posture to “squeeze the vendor,” augmented by a strong-arm legal contract (that eventually amounted to over 1500 pages of burdensome legal-speak). P&G's Admin Supply erroneously used heavy-handed commodity vendor tactics on what should have been a strategic partner.

After months of negotiation and one false start with another supplier, HP was awarded the contract. Within six months the relationship was unraveling – squeezed to the bone, HP was substituting grade B managers and technicians to stay profitable. The adversarial contract made it difficult for simple adjustments to be made that would allow change orders to improve operations.

If this continued for another 10 years, it was inevitable the outsourcing decision would prove to be a debacle of major proportions.

Fortunately, within six months both P&G and HP recognized the error, decided to transform the relationship into a collaborative strategic alliance, and quickly got things back on track. A half page set of eight jointly created Operating Principles was used instead of the cumbersome contract. Decisions got made quickly and for mutual benefit. Soon HP began referring to the P&G relationship as the “flagship” of all its engagements.

– Steve Rogers & Robert Porter Lynch, co-authors who realigned the relationship

Figure 7: P&G-HP Collaboration

Supply Chains have both vertical and horizontal dimensions.

The standard view of the Supply Chain is a *vertical* one; for example: “upstream” and “downstream”-- *a single company and its E2E chain (suppliers – company – customers)*.

Networks of Customers & Suppliers

However, it is also important to think about Supply Chains from a *horizontal* dimension as well – *industry focused across companies in each tier*, not just company focused. Often a multi-divisional global company can be a supplier and customer and competitor, simultaneously. In this way, Supply Chains are really more *like networks* than chains.

Supply as a Strategic Asset

Why? *Competitors often share parts of their Supply Chains* both on the customer and supplier sides.

Here's an example: Just as Procter and Gamble shares customers (like Walmart) with its competitors, such as Unilever, Colgate, Kimberly Clark and L'Oreal. Similarly P&G also shares chemical suppliers like BASF, Dow and Shell Chemical with its competitors as well.

It's common in most industries, and oil and gas is no different. Supply Chains are often made up, in large part, by a highly interconnected range of suppliers, selling across the entire industry, and to each other. Thus, what happens to one supplier-customer relationship can have rippling effects both horizontally and vertically.

During downturns, it's normal for a company to turn internally for self-preservation – cutting costs to survive, while failing to think about the consequences to its value chain partners. This is particularly important in a severe downturn in industries made up of many small service companies (like some parts of oil and gas and some tiers of the auto industry). Because small companies are highly susceptible to bankruptcy in a downturn, their demise can actually have a crippling ripple effect, and inflict real damage to larger buyers' value chains and the ability to compete coming out of a downturn, making recovery arduous and prolonged. This is so easy to forget at the nadir of a downturn when drastic cost cutting is the survival instinct. But myopic cost cutting can leave entire segments of the value chain decimated (companies, skill levels and/or useable capacity), severely delaying recovery to profitability and increased sales volume.

If few suppliers emerge healthy on the other side of the downturn, then a stubborn bottleneck hampers expanding supply to meet new demand. This is why it is important the entire value chain emerges healthy, poised for recovery. The implications of this strategic thinking should not be overlooked:

While Your Supply Chain is Strategic, Not all Suppliers Are

If you are becoming concerned that it will be physically impossible to manage all suppliers in the Supply Chain as strategic partners, this will alleviate your worry:

1. Not all suppliers are strategic. If you look at all the suppliers in your portfolio from the point of view of actual expenditures you will see that 80% of your spend is with only a small percentage of your suppliers (usually about 5-7% of the supply base). For the most part, these suppliers tend to have more impact on your ability to deliver – thus are more likely to have “strategic value.” It is this group of suppliers that need to be handled as “trusted partners.”
2. Suppliers can be categorized/ triaged into three segments:
 - **Mission Centric:** Strategic -- absolutely essential to the fundamental mission of your company. Trusted relationships are essential to ensure integration and value creation/flow.
 - **Mission Critical:** Important to successful functioning of vital parts of your business. Trusted relationships are essential to ensure continuous improvement and value flow.
 - **Mission Peripheral:** Augments the functions of your company, but easily replaceable with other vendors (ie. office supplies, etc). These can be managed *transactionally* with high efficiency technologies, such as internet buying, 3-bids and a buy, etc.

Downturns should be used as an opportunity to build long term capabilities and competitive advantage with strategic members of the supply base.

Supply as a Strategic Asset

Strategic Portfolio Management:

A Strategic Portfolio is a competitive array of the supply system, identifying key competencies needed in the value chain. Strategic Value Chain Leadership (SVCL) aims at ensuring that your company is highly selective in choosing the best deliverers of value.

Strategic Portfolio Management is essential to accomplish several objectives:

- See the Value Chain holistically as an entire flow of value that creates competitive advantage
- Define what “value” really means to suppliers. Do not confuse “value” with “cost.” (see Figure 8: Cost is Not Value). It also includes factors such as: better, faster, safer, more reliable, more trustworthy, more creative, better engineered, longer lasting, integrates advanced technology, and so forth. If you have not defined “value,” you will most likely default to “cost.” (Note: real or total cost is not just acquisition cost, but also factors in operational and disposal costs.)
- Assess how good your value chain really is in flowing value. The flow of value is epitomized by how it “RISES”
 - ✓ **Responsive/Reliable** – does the supplier adapt to changes in conditions? Good at listening to your needs? Delivers what is promised, committed to and needed (cost, time and quality)?
 - ✓ **Innovative** – is the supplier innovative, always coming up with new ways of improving on their value proposition to you (or to your suppliers several layers back)?
 - ✓ **Speedy** – quick to deliver, service, solve problems?
 - ✓ **Integrated** – highly cooperative, trustworthy, and closely linked to the delivery of value to the most pressing issues and needs several layers forward in their value chain?
 - ✓ **Synergistic** – the suppliers, taken as a whole, create real value together as a function of their alignment, collaboration, and commitment to continuous improvement.
- How the entire Supply Chain is best at *every step* in creating value compared to your strongest competitors

Cost is not Value

A BMW dealer told the story of how he lost several sales because cup holders malfunctioned or were not easy to use. Several customers turned their backs and purchased another car elsewhere.

The cup holder *cost* less than \$2 to manufacture. What was its *value*?

While the *cost* was minimal, it was the deciding factor in rejecting a \$30,000 (or greater) sale. Thus the *value* is substantially greater -- \$30,000 in revenues to the dealer, which may have represented several thousand dollars in profit to both dealer and manufacturer.

Figure 8: Cost is Not Value

Bottom Line: The Supply Chain is a strategic asset that is huge and complex – extending from suppliers to customers, across multiple tiers, across industries horizontally and vertically, with multiple owners, made up of people and organizations often driven by different goals and competitive strategies. When thinking strategically, it’s important to understand how to produce E2E (end to end) value, especially if you are a major player in the value chain.

Supply as a Strategic Asset

Management or Strategic Leadership?

As a Supply Chain professional, it's important to understand the distinction between *Management* and *Leadership*, because strategic assets are both a *leadership* and *management* function.

Inherently, *Management* focuses on efficient and effective use of resources, practices and processes that are trained, applied, replicated and measures, all aimed on daily operations vital in executing strategy. In this respect, successful managers are responsible for *delivering and maintaining* excellence.

While management skills are very important, *Strategic Leadership* focuses on gaining sustainable competitive advantage over the long term, aligning supply with business strategy, creating high levels of collaboration and trust to sustain teamwork and innovation across boundaries, and ensuring old practices are replaced by new, more effective world-class practices and measure of success. Thus, leaders are responsible for *establishing new and higher standards* of excellence.

Supply Chain Managers who rise to Strategic Value Chain Leadership coupled with strong Management will be welcomed at the Executive Leadership table.

[See note below by Steve Rogers:](#)

Note by Steve Rogers: Most leadership advocates totally underestimate how hard management is – it is not easy at all and often the training and application are not easy either – this is a real sore point for me.

The leadership gurus have made management a dirty word in business but businesses will fail if sophisticated management is not employed.

Supply as a Strategic Asset

PART THREE – MANAGING SUPPLY AS A STRATEGIC ASSET

Managing Strategic Assets

How do you go about managing something this enormous and complicated that is not controlled by have a single owner?

The answer lies in the concept of “strategic asset” and how it is managed; three issues must be addressed:

1. **Integrated Strategy:** how the supply/value chain augments the larger corporate strategy;
2. **Value Chain Portfolio:** designing an integrated value chain that extends beyond your immediate 1st tier supplier to include several tiers (layers) back, and aims at creating competitive advantage;
3. **Asset Plan:** how to manage supply assets in a way that meets that strategy, while optimizing use of resources at the lowest real cost.

1. Integrated Strategy

Unfortunately, the first inclination of Supply Chain managers is to think that we are talking about a “Supply Chain strategy.” But as seasoned business strategists will affirm, a supply strategy that is developed independently from the larger business strategy can actually hurt the business, because what might seem logical in the short term or from a Supply Chain only perspective, may not match what the business plan needs either short or long term.

For example, when Kodak was first faced with diminishing market share as digital photography first began to erode the chemically-based photography industry that had been Kodak’s field of market reign for a century. Kodak’s business strategy called for gaining more efficiency out of its existing chemical plants. Fisher Rosemont, a process-controls company, had developed technologies that could dramatically increase the productivity of chemical plants, like Kodak’s.

Kodak and Fisher Rosemont Senior Management met, and Kodak endorsed a plan to a shared risk/reward plan that would be lucrative to both companies, seeking to be a strategic partner. Kodak then directed Fisher Rosemont to present the plan to Kodak’s supply and procurement staff for final approval and implementation.

There the plan met total resistance. Why? Because the procurement personnel were all rewarded for driving the lowest cost from their suppliers, and the Fisher Rosemont would provide no rewards for procurement, even though it would help the corporation survive. After months of stalemate, Fisher Rosemont withdrew, refusing to be squeezed. Kodak supply managers found a low cost supplier from China but the results were far less satisfactory than Fisher Rosemont’s high value solution.

To manage the Supply Chain strategic asset effectively through a disruptive downturn requires matching up with the longer term strategy of the business. This requires Supply Chain Managers to develop a Supply Chain strategy aligned with the business strategy first and foremost, so that it can deliver true value from the chain for the business owners and their customers, transforming itself into an integrated *Value Chain* in the eyes of Senior Management.

Supply as a Strategic Asset

2. Value Chain Portfolio

The purpose of a Value Chain Portfolio is two-fold:

- Translate Strategy into specific supply relationships with clear *value-driven objectives*
- Array the entire multi-tiered chain as an *integrated stream of value composed of the best suppliers at each tier of the chain.*

While a Value Chain Portfolio is not just for the chain leader/owner companies, it is vitally important to the larger the company, and thus more dependent on layers of suppliers. Failure to properly embrace the full implications of Value Chain Portfolio management can end in disastrous results as Boeing painfully learned (see Figure 9). This is how the “Battle of Value Chains” takes root.

For example: While Japanese automakers have mastered the management of Value Chains, General Motors botched it completely in the mid-1990, with disastrous outcomes.

During the 1980s, the Chevy Cavalier and Pontiac Sunfire were extremely successful compact cars. In an effort to reduce costs, General Motors redesigned and reengineered its plant and supplier relationships to produce the second generation of Sunbirds and Cavaliers – a model which had been extremely popular, contributing about \$8 Billion in revenue over the model run.

Proudly boasting that the new system would save GM \$2 Billion in production costs, Chief of Procurement, Ignacio Lopez was anxious to prove his hard-nosed dealing with suppliers would result in renewed profits for GM. The Cavalier and Sunfire were GM's first cars to incorporate "design for manufacturing," containing 30 percent fewer parts than the models they replaced. Dealer showrooms were filled with brochures, and customers began ordering the nifty looking cars.

However, GM was unable to fulfill the orders, buyers became disillusioned, and bought Hondas, Toyotas, and Fords instead. In the process of trying save \$2 billion in supplier costs, GM lost \$8 billion in future revenue streams and about 2 percentage points in market share as Toyota took over global leadership.

Value Chain Integration Supply Chains are Multi-tiered

Boeing Example

When Boeing announced its plans for the 787 Dreamliner, based on all new technology, the company was optimistic its strategy to emulate Toyota’s vaunted Supply Chain would produce a massive competitive advantage.

Soon things began unraveling. The high levels of trust, collaboration, and integration were never established. Managers thought tactically, not strategically, missing warning signals that third, fourth, and fifth tier suppliers were not engaged and not able to fulfill to the quality standards required.

Worse, tier 1 suppliers who had never managed upstream tiers (because Boeing had always assembled its planes internally), were now tasked to do so – and often failed.

Things soon went from bad to worse; delays in the Supply Chain mounted from months to years. Boeing lost billions as it missed target launch dates time and again.

When I interviewed Boeing Supply Chain execs in 2011, they said that 70% of the problem was about trust, and only 30% about technology.

Had Boeing understood that the development of the Dreamliner was both a Value Chain (not supplier management) issue and a human interaction issue, the result would have been dramatically different,

-Robert Porter Lynch, co-author

Figure 9: Boeing Fails to Understand Value Chain Dynamics

Supply as a Strategic Asset

What happened?

- 1) Too many totally new suppliers who had never done business before with GM. When Lopez took over GM's purchasing business in May 1992, he rebid every parts contract in an effort to get cheaper components. Some new suppliers, unaccustomed to high production, literally bailed out saying they couldn't meet the production schedule and the profit margins were squeezed so they had no money to invest in improved plant capacity.
- 2) Too many late changes to the car's design which increased costs and threw supplier production schedules to the wind. GM never involved its suppliers early in the design process, never gaining insights into translating design into quality production.
- 3) Heavy-handed negotiations tactics by Lopez drove the best suppliers to his more collaborative and trustworthy rivals, Toyota and Honda, leaving GM with poorer quality, less competent suppliers. Quality and timely delivery problems first prevented full capacity production, and later showed up on the road, causing high warranty costs.

In the larger picture, GM had no concept of a Value Chain Portfolio that, taken as a whole, produced and ensured the *maximization of value flow* which translated end to end (E2E) through the supplier tiers on to the customer.

What cannot be overlooked is the need for *communication, collaboration, and trust* as underpinnings – think of these as the *operating system* for the entire value chain so each tier of the chain is aligned on common value-creation objectives and trusted to create and innovate together as a unit. In both the Boeing and GM examples cited above, collaboration and trust, and thus alignment, were starkly missing.

When the value chain's *operating system* is based on aligned objectives and trust, then the activation of lean value chains can be initiated. Without common objectives and trust, each member of the chain will withdraw into their protective shells, not share information, and act for self preservation, not mutual sustainability and growth.

The management of a Value Chain Portfolio enables two other equally important aspects of the strategy :

- A downstream *customer-side strategy* that focuses on the revenue necessary to sustain the business, targeting who wants to buy

Managing Complexity Requires Collaboration

Complexity creates a unique risk that requires the integration of multiple interfaces between organizations, mechanical systems, and technologies.

When you encounter complexity in strategic asset management, if the operating culture is either *adversarial* or *transactional*, the communications, joint problem solving, and systems integration mechanisms will breakdown. Members of the Value Chain then abandon any *mutual* interests of all the members of the chain, revert to their own *self-interest*, each trying to protect themselves from predators upstream or downstream.

As conditions change, the constant realignments required are doomed.

Supply as a Strategic Asset

your product at different, gradually increasing demand levels, and addressing key questions such as:

- Which customers will want Western Canada’s oil and at what price points in the oil market (now mid \$30s/bbl).
 - Will assets/capacity be brought back on line (i.e. what happens at \$55, \$65 or \$75 oil)? If so, which ones?
 - Which customer Supply Chains are well connected to your product flows and have assets attuned to the product you provide (e.g. refineries geared to the type of oil you extract and the transport systems to feed them)?
 - Who are your competitors (outside of Canada) for these customers and what do you need to do to be their supplier of choice?
- A **cost-cutting strategy** linked to a **rapid supply ramp-up strategy** --how to control/cut costs without crucifying the Supply Chain, connected with how each member of in the chain plans to ramp up quickly and efficiently when the downturn begins to turn around, poising the value chain to take rapid advantage in good times. This ramp up plan is particularly critical because it matches restarting/ramping up your Supply Chain assets to the recovery’s business opportunities.⁶ The somewhat counterintuitive aspect of this is a rudimentary recovery plan needs to be in place, at least conceptually, while the Supply Chain cost cutting is done – well before the recovery, itself, is underway. That re-start plan helps guide the way cost cutting is handled so you don’t inadvertently destroy supplier assets (“cutting muscle and bone, not just fat”)you expect to be there when you come back. This approach drives which suppliers, assets and skills survive. In simple terms: strategic cost cutting is designed to lower the value chain breakeven point to make a little money in downturns and be highly profitable in upturns.

Supply and Value Chains must be Both Efficient and Effective to be Excellent

Effective = doing right things (this is a strategic leadership issue addressing competitive advantage)

Efficient = doing things right (this is a strategic management issue addressing execution and resources)

- Wrong things right – efficient value destruction
- Right things wrong – inefficient value reduction
- Right things right – value creation and delivery = excellence

Note by Steve Rogers: Being *efficient* is both tactical and strategic, especially in complex situations – having talked with Toyota many times about this. Part of the reason about 9 in 10 entrepreneurial businesses fail is they miss the strategic management aspects of *efficiency* being as important as *effectiveness* of their product design. Customers want the outcome of both – great product at an affordable price.

⁶ In the oil and gas industry, these kinds of recoveries are often reflected in market price recovery driven by increasing demand for oil or changes in the supply side of the market (reduced capacity) and how those two sides balance over time

Supply as a Strategic Asset

3. Asset Planning

The third part of the Managing Strategic Assets in a downturn is the Asset Plan. It needs to match up with the longer term strategy outlined above. Unquestionably, engaging the “Supply Chain as a strategic asset” is more complex than traditional nuts and bolts asset management. Despite that, the triage process used in the supplier cost cutting process is virtually the same as the one used to look at internal assets during a severe business reduction. During major recessions companies have several options that are used to manage their internal production and human assets. Simplistically, they break down into five major options of operation.

- **Option 1: Invest**
- **Option 2: Incrementally Invest**
- **Option 3: Operate Existing Assets**
- **Option 4: Mothball**
- **Option 5: Abandon/Shut down**

All five are guided by the longer term business strategy for coming out of the downturn rapidly coupled with the near term imperative to survive. In each of the descriptions below we will talk about the implication on the firm’s internal assets in the first paragraph. The second paragraph will extend that approach to the complex, two dimensional (vertical and horizontal), end to end, multi-owned asset that is the Supply Chain.

Option 1: Invest in new assets – Think of this as counter-cyclical investment in significant projects. It is rare, but for a few companies with strong financial condition and promising major investment opportunities, it is a choice that can lead to competitive advantage because competitors cannot afford to invest. In the broader oil and gas industry, past examples might include some of the new fracking technologies that were developed in geographies and were reapplied in other geographies where fracking later emerged when market prices made it attractive (think North Dakota); or oil majors’ decisions to go ahead with some exploration and drilling projects even while postponing or suspending the vast majority of their projects. The point is that there may be some assets worth exploiting, especially in a depletion business. (Perhaps an example of this in Alberta would be Exxon Mobil’s recently announced Kearl oil sands expansion project.)

Lack of Recovery Plan Slows US Housing Industry Recovery -- Case Example

Most major construction firms serving the US housing industry cut costs fast and furiously when the Great Recession of 2008 slammed them. Then, as the economy began to rebound, they found themselves with shortages of skilled labor and sub-contractors lacking capacity when building opportunities emerged due to the large number of sub-contractor bankruptcies and labor career changes in that industry. Those shortages severely hampered the housing rebound.

However, innovative companies like privately held Project Frog bucked this trend by going outside the box and working closely with its Value Chain (E2E) from customers through suppliers. (GE invested over \$22M in this prefab building company, among INC Magazines top green building companies with a 468% growth from 2010 to 2013). The company started in 2006 – just in time for the Great Recession – and still managed to grow.

They changed the game by creating prefab designs and relying on a set of extremely capable supplier partners including Bosch/Rexroth (metal elements), YKK (windows), K-Tect (wall systems), Ahlborn (tools), Loisos+Ubbelohde (architects) and Erie (custom high performance facades) and strong customers (ranging from health care provider clinics, schools, etc.)

According to their former CEO, (a 20 year oil and gas veteran with BP) “Affordability is really number one. Speed is number two. Everyone gets excited about green construction, but we have to hit on cost first, or we're out of the game. “ She went on to say they work with great manufacturing partners – i.e. those suppliers mentioned above.

Supply as a Strategic Asset

At the Supply Chain level, this kind of asset represents a huge opportunity for those that have the deep pockets to afford it. Why? It is more than just about long-term owner profit. In a downturn, these rare Mega-Projects can be an instrumental lifeline for both vertical and horizontal Supply Chains. *Vertically* they provide work for the owner's Supply Chain – that means cash flow to insure *survival* of contractors (large and small) *in this part of the world*, sophisticated labor skill sets, capacity and infrastructure that will be necessary when the eventual upturn begins. Typically these projects in a downturn require more intense owner/contractor collaboration to deal with the need to deliver on time and on budget given the complexity of the technology and geography involved⁷. Just as importantly, *horizontally* the survival of a major project *supports numerous industries necessary* for the oil and gas industry operations at large, not just the Mega-Project's. Moreover, this is the ideal time to implement new technologies and new operational improvement processes that will yield massive results during the upturn.

Option 2: Incrementally Invest in existing assets – Think of this as investments in debottlenecking, cost savings, yield improvements and incremental new assets that share adjacent infrastructure at lower capital costs than a new project. This represents a real opportunity to deliver value without the full cost of new investment. It includes incremental capacity increases; yield increases; waste reduction; and efficiency/cost effectiveness projects, new innovation, and productivity improvements that lower cost structure. Net: this option targets *cost savings and lowering the overall breakeven point for a company's investment portfolio*.

These projects provide some of the same benefits to the Supply Chain strategic asset as the rare Mega-Projects above. What's more, in a depletion business like oil and gas, they sustain the longer term survival of the business at much more incremental investment level. Unlike a Mega-Project, this asset strategy will not protect the majority of the owner's Supply Chain participants because its size and scope are far less. However, if there is broader industry participation and joint planning in this kind of strategy, because of lower investment level and use of existing infrastructure, it allows more projects to occur. *Vertically* it allows *the most critical suppliers to get some business* and in consultation and collaboration with other members of the proximate chain, *protect and improve the most critical skills, assets and infrastructure of the chain, albeit at reduced capacity*. Those skills and assets will be critical in a turnaround.

Using market intelligence is important for the companies who mount these kinds of projects. Utilizing strategic supplier analysis and value chain mapping seeks to understand which suppliers are supporting their competitors as well. The goal is not to kill the competitor's supplier but rather to look first at the health of the supplier industry as a whole. If the entire industry gravitates to a single supplier, it leaves an unhealthy supplier industry when the recovery comes. It will be important to *spread the business* to more than one or two players – particularly among the small skill trades that support project and maintenance services, so that adequate numbers of quality suppliers survive. Again, collaboration that goes beyond simple owner-driven cost reduction will look broadly across the members of the owners' industry chain to determine ways to spread out the smaller pie to the *horizontal* chain so more companies make it to the other side of the downturn – a true network effect.

⁷ See Jergeas & Lynch, *Future Path of Mega Projects* White Paper

Supply as a Strategic Asset

Option 3: Operate existing assets – Think of this as the *cash flow lifeblood* during the crisis, as well as a focus for *cost reduction*. Without cash, businesses (especially small ones) simply can't survive. Deciding which assets to run, how fast to run them, which customers will use what is produced, and how to run the assets effectively and efficiently leads to *cost savings* and a *lower breakeven point*. Working collaboratively in the application of advanced productivity and innovation methodologies --such as lean management⁸, theory of constraints techniques⁹, working with suppliers/service providers to drive total cost of ownership, value analysis and traditional cost savings projects -- are essential to obtain substantially lower breakeven points.

The focus of this option is on delivering product at a lower cost than before, so that when the upturn occurs, the entire value chain is truly productive: Responsive/Reliable, Innovative, Speedy, Integrated, & Synergistic (RISES) – poised to produce extremely high profit for all contributors in the value chain.

In a downturn overall output is less than during a typical market; thus severe streamlining of value chain operations in a downturn *takes more effort* than the typical “demand lower prices” approach. Moreover, because scale of operations is reduced, standard economy-of-scale approaches don't work universally. In addition, traditional cost reduction via competitive bidding or negotiation must be carefully considered because many suppliers, on the financial ropes, will low-ball their bids on their way to bankruptcy or cut corners in ways that create latent issues in quality, schedule and service.

This approach is geared specifically to strategic asset management as a multi-pronged initiative:

- Collaboratively engaging the supply base across more than just one tier
- Mutually agreed upon objectives for the definition and creation of value in the chain
- Taking non-value cost out (using lean techniques) out of the entire value chain,
- Better communicating needs and make the delivery of those needs more cost effective (total cost of ownership and value analysis),
- Eliminating some suppliers so their volume can be consolidated into those chosen to continue remain (again across multiple tiers of the chain), and
- Process or cost innovation that enables the same product/service delivery with less expense.

This strategic value initiative requires careful evaluation of suppliers so the right players remain on the team, including: performance history, relationship fit, alignment to the need for reduced cost, commitment to excellence and innovation, and willingness to communicate openly on financial and operational realities. These become key criteria for which suppliers stay and which go. Transparency across multiple tiers is another criterion so that owners have visibility and understanding of their suppliers' suppliers to insure cost reduction is achieved along with reliable operating capacity, good quality and service deep into the chain.

⁸An auto industry standard – the Toyota Production System is based on it

⁹ See Eli Goldratt's book, *The Goal*, which elucidates the Theory of Constraints & five principle steps:

1. Identify. Identify the bottleneck of the system.
2. Exploit. Exploit this bottleneck, making its throughput efficient by changing processes, equipment maintenance procedures, training, policies, etc.
3. Subordinate: Subordinate the throughput of all other work centers to this work center.
4. Elevate. Invest in this work center to increase its throughput - add equipment, manpower, etc.
5. Inertia. Start the process over on the line to determine the new bottleneck.

Supply as a Strategic Asset

Option 4: Mothball assets of value, *to be recommissioned after the upturn* – Think of this as stopping the use of some assets whose breakeven is too far above the current market price, but early in a rebound at an incrementally higher price, would be some of the first production assets brought back on line. While the previous three assets options represent the “save/protect” side of strategic asset management in a crisis, the mothballing option (and the one that follows) represent the “cut” side of asset management. These assets have long term value producing potential but short term value damaging cost structure – plus in a downturn you may not have customers that need the output. The challenge becomes mothballing the asset in ways that:

- a) Minimize the cost to stop and maintain the asset,
- b) Sustain asset condition so that re-start is not too onerous, and
- c) Fit the strategic ramp up plan when the market comes back.

Typically this is one of the painful options for the Supply Chain. Parts of the chain will be shut down, so business will be lost, but with an eye toward sustaining those parts of the chain (suppliers) that need to be protected by including them in the asset investment and operation strategies. Often the recommissioning process, including time and money, is actually more expensive than keeping the asset operational at minimal levels. Here again, upfront *communication, transparency and collaboration* are vital because the strategy is: quickly cut supplier business to save money while leaving a door open for future cooperation – a difficult task when taking business away from suppliers. A breakthrough approach in horizontal collaboration is to find a “home” for an eliminated supplier with another customer, enabling survival so that they may return when market conditions warrant.

Option 5: Shut down or sell assets – Think of this as eliminating non-value adding assets. These are either assets for which your future-focused strategy sees no probable use in the foreseeable future or assets that add no value today (often in the admin/overhead chain especially) and should have been eliminated earlier. They typically fall into three categories:

- Long term assets whose output are seen as unnecessary (too expensive to make competitive),
- Assets not needed for long term supply in the industry you see emerging from the downturn, or
- Assets that simply do not deliver enough value to justify their continued existence (boom times often lead to inefficiencies hidden by easy cash and profit that only become visible in tough times).

Similar to mothballing, the challenge is shutting down with minimal cost, but it also includes disposal – sale (unlikely), salvage, partial redeployment and long term liability management.

These Supply Chains are being eliminated. They represent cost savings and assets that the owner does not anticipate ever using again. The Important part of this option is to make the cuts with some level of empathy – it is a tough choice, but to survive, one that must be made. The same visibility into these

Strategic Cost Cutting is a Different Game – It Focuses on Value Flow

Cutting costs in the strategic game is not simply a “hack and slash” approach, but rather one where members of the value chain *jointly and mutually address to costs of doing business and find ways to work more efficiently together to keep each other above break-even during the down times*. The objective is not to just to cut costs, but to *build a strong foundation for the future* when prices rebound.

Supply as a Strategic Asset

suppliers' Supply Chains and understanding whether they are important to other asset strategies holds true, just like it does in the mothball option.

Ultimately however, suppliers that currently support the shut down or mothballed assets will probably have a higher long term attrition rate. Often shutting down an asset is never as simple as just walking away. Discontinued or mothballed operations are not free, so the suppliers that support decommissioning these assets need to be set up to be both effective and extremely efficient so costs are absolutely minimized until the owner can get out from under ownership of the asset (an abandoned mine has some costs and even in the unlikely scenario that it is sold, closing on the sale will not be cost free either).

If any of the suppliers in the discontinued chain are truly exceptional performers, consider helping a superior supplier reconfigure themselves into a valued contributor in a place where their value can make a difference in the future. Toyota has done this with its excellent suppliers when a technology in which the supplier was proficient became obsolete.

Supplier Development

While Japanese companies invest a great deal in guiding and developing their supplier and value chain partners, historically North American companies have been very transactional with suppliers, expecting suppliers to get into strategic and operational alignment automatically or be cut.

The best supplier development programs typically have a long term time horizon with a multi-dimensional focus on:

- Improved Competitive Position, Value Creation & Competitive Advantage
- Cost Cutting using Lean & Reduction of Non-Value Added work
- Development of Innovation for speed, integration, and new value
- Systems Integration
- Joint Supplier Alliance governance, forums, and top management council meetings to assure alignment across multiple suppliers and the owner
- Frequent capability training, Best Practices Sharing and new competency development/training
- Reliability and Quality, and continuous improvement programs
- Frequent Performance Reviews and Health Checks on Collaboration, Trust and Teamwork
- Metrics of Joint Success that align with individual company success metrics

Supply as a Strategic Asset

Maximizing Shared Value in the Chain

The idea of Supply Chain as a strategic asset gives rise to the strategy of maximizing the flow of value, end-to-end in the entire chain. To flow value, the interaction between each value producer is optimized when there is alignment, communication, coordination, and collaborative innovation occurring within and between the companies in the chain.

In this respect, a company does not “own” its Supply Chain, it “shares” it mutually with others. Let us explain: You don’t own a supplier, just as they don’t own you as a customer – the seller/customer interaction is a “relationship” that generates shared interaction which then becomes shared value.

In the “battle of value chains,” the chain that creates the most value (and least inefficiency) and flows this value quickly and effectively to the final customer, will win the competitive battle.

In this way, the Strategic Assets of the Value Chain, are best experienced as, indeed, a “Shared Asset,” and should be treated as such.

The idea of Shared Assets is not new, and not unique. We can learn a lot about how to treat the Value Chain as a Shared Asset from these other examples such as these:

- House Ownership: many homes are owned jointly by husband and wife.
- Condominiums: condos are based on owners sharing large areas in common with other owners
- Highways: as a driver, you share the road with others.
- Municipalities: as a taxpayer you share ownership of common municipal land, such as parks.
- Utilities: you share the output of water and electricity

In each case, there are *rules of engagement* as well as laws that regulate the fair use and mutual sustainability and safety of these shared assets.

Whenever shared assets and value come into play, it should give rise to the importance of collaboration, trust, sharing risks, sharing rewards, sharing costs, and shared responsibility for future sustainability.

Shared Value in Strategic Asset Management means the relationship is a two-way street: the strategic supplier takes responsibility for making/keeping the customer thriving and competitive. Similarly, the customer takes reasonable responsibility for keeping their strategic suppliers whole during downtimes by selective and intelligent cost and relationship management.

For these reasons, if the Value Chain is truly a *strategic asset*, then the interaction should be designed to maximize the greatest value for long term sustainability.

Supply as a Strategic Asset

Measuring Results

In a real downturn, cutting costing should accomplish two objectives: *survival* and being *poised to take maximum advantage of the future upturn*. When thinking about the Supply Chain as a strategic asset in a business crisis, two types of metrics are crucial:

1. **Leading Indicators** – key indices and factors for success that, when achieved, will contribute to core financial results,
2. **Financial Measurements** that all senior executives acknowledge as essential.

1. Leading Indicators

Inherently financial metrics are *lagging* indicators of success, demonstrated what happened months past. Survival strategies require fast results. Using tools such as Lean, Theory or Constraints, Total Cost of Ownership, etc. will yield key metrics that are *leading* indicators that will soon result in producing financial performance.

Some examples of Leading Indicators are increases in speed of throughput in the chain, increases in supplier contributions to removal of non-value added work, or increased supplier on-site visits to improve the way their product or services perform in the field, to name a few.¹⁰

2. Financial Metrics:

At a time when internal layoffs are underway, inventing a new way to measure is simply too burdensome to the organization that remains behind to manage the crisis. The best option is to use existing measurements that can be reapplied to the Supply Chain asset. In the oil and gas industry, the logical choice is *Return on Capital Employed, ROCE* (Revenue minus all costs including taxes and royalties over all capital invested.)

As a refresher, recall that ROCE is driven by several factors – product asset quality (oil and gas quality), market commodity prices (revenue), government regulatory and tax costs, management and headcount, capital costs, and operating expenses including maintenance. Too often, oil and gas companies believe that they have limited or no control over these elements, with the major exception of management and headcount (hence layoffs to resize is a key tactic). However, that perspective is simply not correct when the asset being measured is the Supply Chain – all three kinds (operating, project and admin/overhead). With the exception of market prices, all the others can be addressed by the collaboration of the players in the chain.

This is especially true for operating costs (where the chain can deliver lean, innovative or synergistic joint cost of ownership reduction) and capital expense (through better collaborative planning, problem solving, shared infrastructure and asset use, and risk management). Even regulatory and tax costs can be lowered by collaboration between chain members in creating

¹⁰ See our White Paper on Value Maximization which contains a section on How to Cut Costs without Killing Your Supplier

Supply as a Strategic Asset

better operational processes and lobbying efforts that engage multiple firms from multiple tiers, not just the owners. This is a survival issue for everyone involved and working together across the chain provides the best opportunity to increase financially measurable results (revenue increases and cost reductions or avoidance).

When measuring the Supply Chain as an asset, people often go into the high weeds trying to measure the value chain as a whole asset! Trying to figure out the asset base of the entire chain and the aggregate profit (revenue minus all costs) of the chain – all those entities with all those owners – is a fool's errand. (For example, use of Supply Chain measures such as EVA – Economic Value Added – runs into the same problem.) The best way to measure is for each company to measure its own results focusing on the results for its business relative to the current base.

Net: we are looking at the traditional monetary value measures (revenue increases or cost reductions) relative to the base period for an individual company that leverages its Supply Chain to drive improvement. If it doesn't translate to something the Chief Financial Officer can measure, its value will not be recognized, especially during the stress of a downturn. In other words, when everyone is stressed out trying to survive, only introduce new ideas that will clearly turn the tide; don't confuse the issues.

Supply Chain executives often clash with Finance because SC likes to count two kinds of cost savings:

- **True cost reductions** that usually show up in the Operate Existing Assets, Mothball and Abandon/Shut down options (Options 3-5 above). The true cost reductions eventually show up in Cost of Goods Sold and Overhead accounts (after going through the cost accounting system which can impact timing but not amount so much).
- **Cost Avoidance** which measures money you didn't spend but would have if you hadn't made changes to your approach. This is huge in project management (Invest and Incrementally Invest – options 1 & 2). The problem is that cost avoidance represents savings that Finance can't find and therefore does not trust. That in turn affects the credibility of Supply Chain organizations.

Cost avoidance is very important in the Capital Project and the maintenance aspects of the Ongoing Production Chain so in depth discussion with Finance to explore how these kinds of savings show up in the ROCE calculation is important. Based on published estimates of oil sands cost to produce,¹¹ the capital return burden can add over 25% to the operational cost to extract oil making the breakeven higher. Cost avoidance can dramatically impact that financial factor – a 20% cost avoidance on the capital project drops 5% off that 25% escalator, lowering the breakeven – despite being a savings that does not directly show up as a balance sheet reduction.

These kinds of discussions improve credibility and help to measure the value of the Supply Chain Asset's financial contribution.

¹¹ Energy Trends Insider, The Cost of Production and Energy Return of Oil Sands, Robert Rapier, December 9, 2013

Supply as a Strategic Asset

Measuring Asset Value -- Longer Term

Unfortunately, many companies simply continue to apply their “crisis measures” into the future when the crisis has ended and the recovery begun. When the boom times return, all the lessons learned, along with all the ideas that should have been implemented but weren’t in the downturn, are quickly forgotten in the press to get more production out. So the traditional measurement systems get a free pass into the future.

Do not do that!!! Unquestionably, it is necessary to continue measuring cost savings (reduction and avoidance) and the traditional financial measures. However, when viewing the Supply Chain as a Strategic Asset, more sophisticated measures need to be developed. It is not okay to decide that a recovery absolves Supply Chain executives from the need to incorporate additional measurements.

Some of the better and most accepted ways to measure are:

1. **Value Stream Mapping:** this methodology is the foundation of Lean Supply Chains, enabling each member of the chain to determine what activities actually add value, and where the non-value added activities clog up the system. Activities can be measured in terms of time, cost, labor usage, waste, or other relevant variables. Most managers are astounded to find that often an entire end-to-end Value Chain contains 90% or more of non-value added time, and more than half of the functions do not add value either; they just clog up the value flow. Making just small improvements in removal of non-value added waste can produce very positive impacts on flow and cost of goods and profitability in the chain.
2. **Competitive Advantage Optimization:** While the aim of Value Stream Mapping is first the elimination of non-value added work and then continuous value improvement, it is typically not a strategic methodology. On the other hand, Competitive Advantage Optimization seeks to push collaborative innovation, value improvement, next generation technology, common platforms, and cross-functional integration into the value chain. Value *exchange*, such as middle-man and broker functions, are replaced in favor of high value *transformations*, such as use of software, new technologies, robotics, and systems integration.¹² These measures are particularly powerful when multiple entities in the chain join together to study the processes that cross company boundaries – often waste occurs in the seams between organizations and includes some “soft” measures of the human side like trust, mutual problem solving, among others.

In this way, if each company in the value chain is creating/optimizing value that produces maximum competitive advantage, and the chain is collaborative and integrated, the entire Value Chain will most likely be both profitable and sustainable – what’s necessary to win the “Battle of Value Chains.”

Risk Management

The primary purposes of Risk Management is either *Revenue Protection or Cost Avoidance* – preventing a cost before it happens, keeping it off the P&L or avoiding a missed order or customer disappointment

¹² See our White Paper on Value Maximization, specifically the Value Stairway and Value Pathways for more detail.

Supply as a Strategic Asset

due to production outages. When viewed through the lens of strategic Value Chains, it becomes evident that traditional Supply Chain management perspectives about risk can be dramatically improved.

- **Myopic:** Traditional risk management thinking about suppliers fails to look past tier one. The Boeing 787 Dreamliner case (see Figure 9: Boeing Fails to Understand Value Chain Dynamics) illustrates how traditional SCM *single tier upstream focus* failed to understand and integrate the nuances of an entire *value* chain, with horrible results. The same problem has manifested continually in oil and gas industry boom and bust cycles. A myopic view during a downturn fails to embrace the impact of waterfall effect of indiscriminate cost cutting on the entire value chain, making it triply difficult to recover during the upturn.
- **Legalistic:** The first task of a lawyer is to “protect their client.” Too often, taken to the extreme, contracts and their attendant negotiations, become adversarial and antagonistic. This can easily short-circuit any chance of building a *collaborative, high trust operating relation that must be the foundation stone* to address complexity, ambiguity, and uncertainty that is inevitable in a rapidly changing, fast-moving world. What’s more, this level of collaboration is necessary to foster high levels of innovation and removal of non-value added work necessary to sustain profitability. Adversarial negotiations undermine cooperation after the deal is signed – it is simple human nature.
- **Transactional:** Traditional SCM risk is focused tactically and transactionally, while Value Chain Risk is significantly different, embracing strategic issues, such as competitiveness and value creation, integration and interface management, innovation of both new technologies and new processes, alignment of rewards and metrics, speed of flow, and sharing of risks and rewards.

For the large part, these ideas are missing in Risk Management models, resulting in flawed decision-making opening the flood-gates of unforeseen financial losses, in both capital construction and operations.

Value Proposition

Shifting from traditional SCM to Strategic Value Chain Leadership -- embracing supply in a more strategic, holistic manner -- has enormous benefit, particularly for first movers.

Based on experience and illuminating cases from other industries, it is reasonable to expect that 25-35% cost reductions in the value chain, while at the same time gaining major improvements in productivity, innovation, and competitive advantage.

In addition, there are major positive impacts of managing the Supply Chain as a strategic asset on ROCE, specifically: cost reduction, cost avoidance (that reduces capital burden on extraction cost), innovations that increase recoverable reserves and extend the life of the project and increase potential revenue from projects, all create a clear value proposition to adopt this vital and impactful system of thinking.

Supply as a Strategic Asset

Conclusion

Fundamentally, this White Paper is not about better Supply Chain Management (SCM), it is about a dramatic evolutionary shift to a *new level of thinking, operating, and measuring success*, which we refer to as Strategic Value Chain Leadership (SVCL).

The decision to manage the Supply Chain as the strategic asset becomes the first step in this metamorphosis.

This is not a “spectator sport.” It requires a team on the playing field with an end-to-end vision, a strategic view of how competitive advantage is created, the ability to create collaborative alliances among suppliers and excellent execution. It needs proactive leadership and the willingness to advance into new territory.

While SVCL is both a different mind-set and skill-set from traditional SCM, it is the next evolutionary step required to create sustainable value now, and for the future. Traditional Supply Chain Management skills do not become obsolete; they are embraced and transformed in the new strategic role.

When Supply/Value Chains are clearly seen as a strategic asset for the firm, this type of leadership becomes vital in the development and delivery of the overall business strategy. But in a severe downturn this is particularly visible and essential to both survival and post-downturn recovery.

The Supply Challenge

Each year, Gartner evaluates the best run Supply Chains in North America.¹³ Only 2 companies earned the “Masters” title: Apple and P&G, having scored in the top 5 listing for at least 7 of the last 10 years.

Not a single company from the energy industry even made it into the top 25 in the last five years. This is not just ironic; it’s not good business, especially given the inordinately large portion of corporate expenses devoted to Supply Chain in the energy industry.

If the Canadian Energy Industry seeks to restore its financial footing in the era of low-cost oil, certainly a sea-change in its Supply Chain management strategy is one pivotal place to gain leverage.

¹³ <http://www.gartner.com/technology/supply-chain/top25.jsp>