CONTEMPORARY INDUSTRIAL INNOVATION:
THE CHANGE OF EXPERIENCE
OR THE EXPERIENCE OF CHANGE

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Abstract

This project will discuss a company’s history and the fit between the organizational form and the demands placed on the organization given the competitive landscape. This is followed by an exploration of the proposed strategic direction to grow the company in response to the competitive environment. The competitive landscape is understood through a strategic analysis of the wood products industry and the required evolution of behaviors and practices to support the new organizational form. The analysis will draw upon the author’s personal experiences within the company in administrative, human resource and manufacturing operations management roles and will make use of theoretical models in the areas of organizational structure, strategy, and leadership.

**Keywords:** change strategies; enterprise resource planning; organizational structure analysis

**Subject Terms:** organizational change; industrial organizational; management leadership
To individuals who demonstrate the courage to initiate change in themselves, for the greater good, despite personal interests.
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| **Glossary** |
|------------------|--------------------------------------------------|
| **Demand Planning** | The products, goods or services that the customers request from the company. |
| **Supply** | The products, goods or services that the company sells to the customer in response to their demand signal. |
| **Value Chain** | The functions within a company that add value to the goods and services that the organization sells to the customer for which it receives payment. |
| **Supply Chain Management** | Supply chain management is where there is an automated integration of demands from customers to the requirements from suppliers through the calculation of the enterprise resource planning system. Supply chain management provides the ability to quickly translate demands from the market to the supplier requirements, and the goal is to minimize the amount of inventory in the supply chain, improve the agility of each link in the chain, and improve the profitability of all partners in the supply chain. |
| 1) | Supply chain management requires a competitive infrastructure. |
| 2) | World-wide global logistics network must be leveraged. |
| 3) | Supply and demand must be synchronized. |
| 4) | Performance of all supply chain partners must be measured globally. |
| **ERP** | Enterprise Resource planning = integrated software systems |
1 Introduction

The objective of this project is to identify opportunities to positively influence change in a wood products organization, to achieve a more competitive, effective and efficient organization than it currently is. The company will be unnamed for reasons of confidentiality and competitiveness.

To avoid missing critical stages in the evolution of the organization, this analysis will explore the various levels of development that have taken place, and seek to understand outstanding issues in order to evolve to the next appropriate life cycle.

Companies fail to see that many clues to their future success lie within their own organizations and their evolving states of development. Moreover, the inability of management to understand its organization development problems can result in a company becoming “frozen” in its present stage of evolution, or ultimately, in failure, regardless of market opportunities (Greiner, 1972).

This project will uncover such “clues to future success” as we review and analyze the company’s history and the fit between the organizational form and the demands placed on the organization given the competitive landscape. This includes an exploration of the proposed strategic direction to grow the company in response to the competitive environment. The competitive landscape will be understood through a strategic analysis of the wood products industry and the required evolution of behaviors and practices to support the company strategy. The analysis will draw significantly upon the author’s twenty four years of personal experiences within the company in administrative, human resource and manufacturing operations management roles as well as observations from peers, superiors and subordinates. The data on current firm operations contained within
is drawn from the author's direct exposure to the data and operations of the organization. As such, there is the possibility of author bias when examining the organization under question. Therefore, to temper possible bias, the analysis will also make use of theoretical models in the areas of organizational structure, strategy, and leadership.

This project will demonstrate that the current structural form of the organization is not aligned with the necessary form that the organization must take in order to remain competitive. The competitive forces demand an agile, entrepreneurial, innovative mindset and form which is inconsistent with a highly regulated, structured environment.

A description of the company and prior changes are explored in the second chapter to provide an understanding of what will need to be avoided or initiated in the future. A survey of the organization's maturity to date is critical. De Brabandere writes “To face up to the future – let alone the present – you can learn from the past” (De Brabandere 2005). This historical focus will be developed from an application of life cycle stages as described by Robert E. Quinn and Kim Cameron and presented in a format utilizing the Central Concepts of an Organization Structure model presented by Nitin Nohria.

This is followed by a strategic analysis of the industry environment in order to understand the drivers for change. Chapter Three will conclude that the organizational form that was considered suitable in prior life cycle stages is no longer appropriate given the competitive challenges the company is facing.

Chapter Four offers a summary interpretation of the worldviews in action at various life cycle stages based on the application of the Wexler Wheel methodology and will demonstrate the need for a balanced representation of all worldviews going forward.
Chapter Five focuses on the need for additional change to accommodate greater levels of integration, followed by a recommended approach to change management.
2 STRUCTURAL ANALYSIS

2.1 Structural History

The foundation of this century-old forest products company was based on one man’s vision of forestry operations, and manufacturing of the product. Early innovation and formation is consistent with the majority of organization models in that they all start with an entrepreneurial stage (Quinn and Cameron, 1983).

Although ownership of the company is public, over the years it was led by various family members or individuals with close family ties until the late 1980’s. Internally, family and company loyalty were valued, and central controls were put in place to govern operating practices. This life cycle stage is similar to the “collectivity stage” in that it served to garner cohesion and commitment (Quinn & Cameron, 1983). As the company continued to grow in size, it was necessary to introduce common procedures and work practices to provide leaders with consistent or similar data and information to make decisions. Consequently, the organization developed significant formalization and command-and-control processes – what Wexler describes as a Regulatory Worldview (Wexler, 2006; Quinn & Cameron, 1983). The development of common procedures allowed the entrepreneurial leaders to quickly view information from a variety of sources without having to decipher the information first. It also served to provide boundaries for behavior given the sheer distance between sites and minimal leadership intervention.

Through the years, in addition to wood products, the company expanded into related forest product segments and support service organizations including pulp, paper and
packaging, recycling, transportation and real estate. Rather than innovate on their own, the company chose to expand by purchasing divisions or competitor companies that were innovative. Due to the phenomenal growth, additional rules, policies and procedures were implemented to govern the activities of each of the divisions. Hence, the propensity to bring each of the new acquisitions into the "family" by introducing them to the "company way" of doing things, served to diminish the effectiveness of the very innovative leadership qualities they were seeking to gain from the external purchase.

This life cycle stage is considered the structure and adaptation stage of domain expansion and decentralization (Quinn and Cameron, 1983).

It is now a global organization, manufacturing products for various applications with operations predominantly located in North America, employing over 40,000 people.

The company is currently made up of five separate businesses; pulp, paper and packaging, wood products, shipping, real estate and timberlands. Each business is a stand alone business with end-to-end profitability calculations, supported by central functions and has maintained its own sourcing strategy and unique processes for raw materials, systems, sales and transportation. The performance measurement dynamic and pay incentives vary for each leader, which motivated business leaders to optimize their own portion of business, sometimes at the expense of overall company profitability.

The sales pie chart is offered to provide a sense of the percent of total sales for each segment as it relates to the enterprise. This is to be interpreted in context with the asset base employed. While the wood products group represents only 18% of the asset base, it provides almost 40% of the total sales. The result suggests that the wood products
business is profitable, but it is to be noted that the industry is cyclical in nature and the results shown are those achieved at the top of the wood products cycle in 2005. It is very difficult to convey a sense of urgency to change when presented with record profits.

Figure 2.1: Percent of Total Sales 2005

![Pie chart showing percentage of total sales by category.]

Data source: Company

Figure 2.2: Enterprise Asset Base Employed 2005

![Pie chart showing asset base employed by category.]

Data source: Company

2.1.1 Wood Products Structural History

For the purposes of this paper, focus will be placed on the wood products organization starting with a description of the organizational structure.
The majority of growth and change in the wood products group was similar to that of the pulp and paper business between the years 1950 and 1980 where firms "forged a corporate strategy of expansion and diversification" and

... the adoption of a diversified and multidivisional corporate structure by the leading firms completed one line of technological evolution in the industry, and subsequently directed large scale firms to attain competitive advantage through economies of scale and industry leadership (Toivanen, 2003).

In the early 1980's, the management style was often very paternalistic and the cultural era would be best categorized as a "clan culture" (Cameron and Quinn, 1999). This evolved to a participative approach where divisional leaders and individuals within were asked to think for themselves, but senior management could not understand why they were not successful. They constantly encouraged stretch goals, sought input and participation, but were disappointed in the result. The leader had changed, and along with him, the leadership style had moved from highly controlling to extreme flexibility, but the vast majority of people working in the business had not. The majority of individuals in the firm had either been recruited or hired because of their fit with older values: loyalty, family reverence, procedures, control, standard operating practices, etc, and were unclear how to operate in a more dynamic and learning-focused environment.

Family transfers and promotions were discouraged, resulting in poor employee morale for those with family ties. Promotions were based on networking and personal preferences, as well as a "similar to me" bias.

The leader was frustrated with the lack of success. The issue was that other leaders and middle management still held beliefs that were consistent with the "command and
control” style and did not appear to know how to make change to a more participative style. Leaning toward adhocracy, this era was considered very flexible but ultimately ineffective in measuring up to desired company metrics (Cameron and Quinn, 1999).

The mid 1990’s to early 2000’s brought a renewed interest in process-oriented leadership. Policies, procedures, reliable methods, rules, structure and consistency were again introduced. Performance expectations were documented and employees were coached and trained on how to problem solve. Leaders were promoted or chosen on the basis of assessment, aptitudes, merit and educational discipline. Leaders and employees were provided education on principles, values and moral conduct while decisions were made on the basis of facts and data. Individuals were not only given instruction on the work they were to perform, but also how to behave within the work environment.

There were pockets of teamwork being developed between layers of management. This meant that although relationships were being created, participants met with feelings of trepidation and skepticism. The turnover was very low and consequently individuals with a long sense of history had observed the various styles of management, the conflict in leadership beliefs and the resulting confusion. In some cases, mutual goals and formal rules were being developed, but this was not the case in all divisions.

Leadership was very inconsistent in terms of holding people accountable to the principles and values. Leaders were not all “on-board,” and not all believed in the company direction, so individuals were treated differentially depending on the leaders’ beliefs. Leadership gathered in cliques, or small groups developed, based on familiar beliefs.

Although the organization style in this era focused on the hierarchy culture (Cameron and
Quinn, 1999), it may also be viewed as a clash between leaders with differing and conflicting strategic worldviews. In Chapter Four, this point will be examined in more detail.

The most recent change in leadership presents a style that is almost a single-minded focus on profits and business results. This is due in part to the declining health of the industry. Results are all about profit and cash flow and are demanded on the basis of key metrics, initiatives and projects. Job security is as good as the most recent result (usually monthly) and the success or failure in one’s projects. Costs are controlled and units are expected to replicate and implement practices that were instrumental in producing better results elsewhere (regardless of the culture, work systems, products, equipment differences or practices in place locally). Emphasis is on digitizing human resource activities and employee services, payroll, benefits, and service awards. This resulted in associates feeling disenfranchised, less appreciated and overworked.

Most of the above changes were intentional and strategically driven, based on work systems (organizational capabilities), or linked to raw material and technology, but some were reactive, based on current issues or unforeseen events from external sources. Each event has contributed to a change in the organizational structure, but more importantly the differing strategic goals, principles have created internal conflict and rancor amongst leaders and middle managers. Not all changes or related dynamics had been managed successfully.

The comments and perceptions of employees within the business would suggest that the rate of change has increased in the last ten year period. In fact, it is evident that change
had been occurring all along, but possibly could be considered more evolutionary from 1980 to 2003 and more revolutionary in the last few years.

The change in leadership style has heavily influenced the organization structure and the working relationships within. The issues surfaced in this paper and evident within the company would indicate that the company had been suffering from organizational fitness maladies as a result of ineffective communication and unclear expectations as evidenced in almost all of the central concepts of an organizational structure.

When the new leader assumed the reins of leadership, he, and other senior leaders made sweeping changes that put in motion a chain of events that would significantly alter the way business was conducted.

The Wood Products group has combined five separate businesses into one, with the intent to service the structural frame building market as a single entity. In doing so, the complete structure of the organization has been designed to reflect a market driven supply chain, focusing on the experiences the customer demands, with a focus on differentiating the business from competitors. The Group will do this on the basis of providing valued experiences to customers, and providing complementary products that will enable the customers to have a one source supplier for their building needs. Supply chain management relies heavily on automated messaging systems to integrate demands from customers, materials from suppliers and coordinate transportation services. As noted by Reeds, this presents a “bias emphasizing the ascendance and importance of the role of information technology, and in particular, the implementation of robust production planning and control software” (Reeds, 2000).
The new leader is a very results focused individual who, along with other senior leaders, opted to create an integrated working environment for planning and control complete with documented internal processes.

It is not clear whether the discussions relating to financial returns for the raw material owned by the company, actually spawned the concept of implementing an integrated sales and operations planning process or vice versa (Palmatier, 2003). In any event, in order to optimize the fiber resource and ultimately the financial return for raw material, each segment was required to re-define their supply chains with their customer in mind, based on what products and services they would purchase.

Planning and control for the enterprise is based on integrated end-to-end supply chain activities. When the restructuring occurred, it affected each segment differently.

2.2 Organization Structure

The structure of the company was consistent with a “matrix form” in that it included aspects of both the functional form and the division form (Nohria, 1991). Individuals optimized for the sake of their division versus the enterprise, but they also used centralized support services to capture economies of scale. Enterprise or corporate influence in terms of standard practices and centers of expertise are over-laid with the divisional form based on product output (Nohria, 1991).

The level of redundancy that was removed when the Company moved to centralized resources was staggering. The change enabled the business to centralize the common resources, reduce costs and provide more efficient services. There are concerns as to
whether or not the functions are as effective as they had once been. They are clearly not as value added in that a “one size fits all” solution is typical and less expensive, but may not be as effective as a specialized or tailored solution.

Corporate groups (Human Resources, IT, Finance, Procurement, Raw Material, Transportation) provide a centralized service and report directly into the functional business group. This has enabled cost savings as well as consistency of services, practices and economies of scale.

Four of the Major Business Segments (Pulp, Containerboard & Packaging, Wood Products, and Timberlands) have organized their work processes and organization structure to reflect a market back approach to doing business.

The Wood Products organization is now a Hybrid organization in that both divisional and functional structures are implemented simultaneously (Nohria, 1991), but it does imply that there would be a balanced approach to both.

The move to a Network Organization is required, but will be dependent on an integrated and coordinated approach to Supply Chain Management.
Although each of the leads will continue to report to the Senior Vice President of Wood Products, they will all work differently within the structure and will operate with one sales system.

### 2.2.1 Division of Labor

The division of labor was originally made on the basis of product output. The wood products business consisted of five separate divisions, and similar to the company divisions, each maintained its own independent business structure and end to end profitability calculations; Lumber, Oriented Strand Board, Engineered Wood, Veneer/Plywood, and the Distribution group.
The Lumber, Structure Wood and Plywood/Veneer manufacturing groups were all “product-out” or “make to stock” focused. Key performance measurements included safety, volume throughput, cost, quality and recovery. Product-out simply meant that they took the raw material, processed it, and depending on the breakdown equipment, produced a final product, regardless of what was being sold, and put it “in stock” or “on the shelf” to be sold (Palmatier, 2003).

The Engineered and Sales & Distribution group had a “market-back” focus and were entrepreneurial in nature. The process was essentially assembly or delivery of components with a sell first perspective (Palmatier, 2003). Key measurements included safety, margin, throughput or turnover, customer satisfaction and innovation. The Engineered group was experienced by others as being very confident, detached and focused on margins.

2.2.1.1 Product Input

Although the enterprise had a Timberlands Department, which one would assume sourced the manufacturing units with raw material (logs, chips, etc.) this was not always the case.

During the “Quality in Action” years, the company initiated a customer concept within the businesses that suggested that the recipient of services or products was deemed the customer, whether internal or external. The premise was that the individual would understand the requirements of the next-in-line customer and perform the necessary actions to satisfy those requirements. If the product did not meet the specifications, the customer had the right to refuse the product or service. In some cases, where leaders or
the middle managers were proactive, they would define the requirements or specifications, and collectively determine a win/win situation. Solutions were dialogue based, and people were inspired to work together to resolve issues. Where conflict existed, some units simply stopped utilizing the service and identified their own source while others tried to elevate the issue for resolution. For the managers that stopped utilizing the service, there was clearly a winner and a loser in the outcome. Support was sporadic, in that some middle managers were conflict avoidant or simply dropped the issue as it was not within their scope of responsibility.

This gave some recipients of raw material more power, but exacerbated the frustrations of those that tried to resolve the issue or root cause without support. Clearly the standard operating procedures were not in place or interpreted uniformly across the organization. Eventually, each division had their own sourcing strategy with only a portion of raw material purchased through the Timberlands department. They also sourced from outside of the company with in-house or local external buyers. The result was that buyers would sometimes bid against each other to source the same customer.

The segregation of duties and ownership/accountability for raw material was not clear. This lack of ownership and accountability created discord that continued for many years. The leaders of the Timberlands organization typically sought input, public opinion, or worked for consensus when solving public issues. Internally however, this was not the case. Communications were top down, documentation was very controlled and systematic, and hierarchy was clearly established based on credentials and position.
Another issue that served to consume energy and resources was the subject of business-to-business transfers. In some cases, the inputs to one division were the outputs from another which were handled as transfers. These products were transacted on a transfer pricing basis. The arguments that ensued over timing of pricing and the ownership of transportation costs were never ending. The standard practices were left up to the individual department or division for interpretation or application. Management support for individuals with the fortitude to challenge the status quo was minimal or inconsistent at best.

2.2.1.2 Manufacturing

Each of the manufacturing divisions had specialized technical knowledge relative to their product output and the actual manufacturing of the product. The focus of manufacturing is clearly process driven with standard operating procedures in place. Leaders of the manufacturing facilities are typically policy driven.

Manufacturing is broken into major process areas starting with the initial breakdown of rough product, value-added activities (drying, treatment), finishing and shipping. These are typically accomplished in an in-line system with specific applied tasks. The applied tasks are repetitive in nature and tend to become monotonous over time. Change oriented individuals would experience extreme frustration in this environment as it is very regulated and constant.

Initially, support services (HR & Finance) provided fill-in, back up or assistance to the unit leadership members where required. Their differing viewpoints created inconsistencies in the application of policies and procedures. Later, support services
were centralized in order to capture economies of scope. When resources were removed from the individual units, the leadership members at the manufacturing units not only lost members of their team, they also assumed the spill-over workload that the support services were no longer providing at the units.

Supervision of the operating in-line tasks were completed by exempt status employees, on a per shift basis. Leadership supervisory roles are interchangeable, with a high degree of horizontal integration. Individuals often share roles or provided vacation relief for one another. Involvement in committee work, application of central resource policies and mill focus initiatives provided an opportunity for work diversity. The workload demands on the front line leaders increased significantly due to reductions in numbers of leadership people and drivers to improve safety, environmental practices, work efficiencies, and reduce costs. This highly-structured, rule-oriented, hierarchal environment is typical of company manufacturing facilities.

In-line tasks are performed by non-exempt hourly paid personnel. Jobs are highly defined and pertain to a specific activity, area and function. Depending on the work system, monotony is broken by job rotation or flexibility in tasks. Some in-line roles require minimal training or skill based on current technology. Recent changes in manufacturing technology have highlighted the need for increased learning capacity to accommodate in-depth training and knowledge/skills required to perform tasks.

Maintenance functions are performed by skilled trades-people, or professional individuals. Millwrights, Electricians, Mechanics and Pipe Fitters are examples of specialized tasks within the non-exempt workforce. Roles similar to Process Control and
Project Engineers are functions that are highly specialized and narrow in focus. These positions have been added to the leadership team rotation to provide them with varied work and the supervisors with some relief, with minimal success. By virtue of including them in the leadership rotation, their intrinsic motivation for experimental work may have been diluted.

2.2.1.3 Support Services

Safety considerations are paramount in the organization and are included in every job responsibility; for the safety of themselves as well as others. A corporate overseer group was initially designed to audit safety processes throughout the organization, but also served as a consulting group or central service to assist units in the development of safe methods or practice.

Safety administrators are located in each of the manufacturing units, but significant expectations are in place for every leader to demonstrate, improve, recognize and reward safe practices. Once again, rules, processes and audits are the driving force behind the safety regulations.

Human Resources, which included performance management, compensation (pension & benefits), training and industrial relations were provided on a regional or local level and typically assigned to the business with support at each of the units. The focus was on internal systems and typically led by individuals that embodied a cohesive, yet flexible structure and would readjust their applications based on new entrants. A few of the acquisitions included the benefit of specialized work systems or working dynamics. In order to preserve the systems and people, the company was very generous in both
maintaining some of the special benefits and the payroll levels as well as providing a
lucrative payout structure for benefits they were unable to retain. This flexibility of
benefits for some and not for all served to create a significant wedge between the
individuals in the legacy operations and those in the newly acquired operations.

In early 2000, the support groups were organized into centers of expertise, and enabled
by technology. The benefits are essentially menu driven and are coordinated centrally as
is the payroll division. Centralizing these functions meant that some businesses had to
relinquish control and/or user privileges while others gained in some areas, but all are
now based on standard operating practices. An effort was made to arrive at benefits that
were comparable to competitor organizations. The result produced a sense of
appreciation and gratitude from those that received an increase, while the individuals
receiving a reduction were angry and somewhat hostile in that they felt they had earned
or were due the benefit. The individuals in the Sales & Marketing group and Research &
Development are disillusioned by this change as there appears to be no distinction of
rewards between individuals that produce results from those that do not. Each business
continues to maintain distinct pay-grades within the salary structure which equates to a
pay hierarchy and serves to minimize movement between businesses.

The industrial relations and performance management processes are centralized functions
that have been coordinated on a regional basis, and in spite of very standardized
processes in place throughout the enterprise, they are subject to the latest entrant or
negotiation and therefore the applications differ somewhat between divisions and regions.
Leaders in both the human resource function and the safety function are concerned for the well-being of employees and work to reach favorable results for all parties. The altruistic management style in this area conflicts with the Sales and Marketing leader viewpoint that rewards should be provided to those who produce results.

Over the years, Information Technology has evolved from a unit-based resource, to a centralized organization with emphasis recently placed on outsourcing or contracting out systems support. When the move was made to out-source the services, the existing employees in this group were offered positions with the contract provider. All personal computers have been standardized, cataloged and equipped with standard operating environments and all are linked to a mainframe environment with simultaneous real-time upgrade capability.

The current structure is a central center of expertise with contracted agreements for local service. There are however, many special systems in place: three separate systems used for sales, four separate systems in place for maintenance and two systems in place for finance.

As systems mature and they become mainstream functions, the individuals within the business adopt the process and create standard operating procedures, policies and strict rules around use. The specialized functions within the information technology group are knowledge based and loosely structured.

Finance is also a central support function that has evolved over the years. Initially, each division completed data entry and analysis with the results provided to a roll-up at the central office. Later, this was modified to have the data entered centrally, a unit analysis
of the data, then a roll-up occurred. Most recently data collection and entry, region analysis and roll up were centralized. Modifications to the general ledger system and the finance organization have been made on a frequent basis, with major re-structuring in the last few years to accommodate an enterprise financial system for the general ledger. The central system is located at the corporate headquarters building, which resulted in substantial consolidation of roles, training, and movement of staff. The finance group thrives on structure, rules, and formal authority. Strict controls are in place relating to the finance general ledger system, investment strategies and segregation of duties based on generally accepted accounting principles and the Sarbanes Oxley audit requirements.

At one time, procurement was a decentralized function completed at each of the units. This was modified to reflect a semi-central function when a purchasing improvement effort was put in place to capitalize on scale and pricing efficiencies. The central resource evolved from managing high cost items only to the establishment of negotiated agreements for common purchases. The leaders of each business embraced the change presented by the support function leaders because it met their most fundamental need – profit.

When the change was made, the impact to local suppliers and unit personnel was hard-hitting in that they both lost considerable positional power and influence. The purchasing function is now delegated to the unit for routine purchases within a written contract, and is typically triggered by manual systems.

Although there are many contributors, capital funding is largely based on the size of the asset base and is governed by the investment direction strategy established by the senior
leadership team. The allocation of funds within each business was assigned on a regional basis. This enabled funding bias for pet projects versus an assessment or evaluation of the greatest return.

The graph below (Figure 2.4) indicates the recent expenditures relative to the asset base.

**Figure 2.4: Consolidated Assets and Expenditures**

![Consolidated Assets & Expenditures Graph](image)

Data source: Company

During the period of process improvement and drive for efficiencies, the capital planning process was modified. A process to achieve capital effectiveness was initiated wherein all requests for capital were put through rigorous evaluation criteria which ultimately measured their return on investment and their ability to satisfy production, safety or environmental constraints. This process reduced personal bias. Strategies were funded based on internal rate of return and net present value and were managed centrally. This is once again consistent with the application of rules, and controls and does not allow for the swift action of an innovative mindset.
2.2.1.4 Sales

For Lumber, Structure Wood, and Engineered Wood, the sales activities were completed within each business with internal sales people. They focused primarily on mill direct sales based on car-load or truck-load orders, although they also dealt with smaller orders and transactional business. These products (as well as competitor and complimentary products) were also sold through a stand alone Sales and Distribution business.

The Sales and Distribution group took advantage of spot sales, less than full car-load or truck load orders, and speculative buying and selling. These are all attributes that are consistent with individuals motivated to show profitability. All internal products sold through the Sales and Distribution business involved paper transactions based on transfer pricing. For the Plywood business, sales were accomplished almost exclusively through the Sales and Distribution business.

Sales and Marketing are measured on their ability to obtain revenues where all individuals competed for the same market dollar. The ensuing chaos and confusion may have been created due to the imposition of rules and procedures on this sales environment, but also because the mind set was focused on the next sale versus evaluating the inefficiencies of the prior sales.

Each sales force was calling on the customers, often with similar or substitute products and sometimes competing against each other on price. Sales geographies were established within each of the groups, but they did not align and would often overlap causing friction. Customers established buying groups or associations and purchased in both full rail-car or truck load as well as individual orders. This meant they dealt with
different individuals based on the size of their order. The basis for volume discounts or pricing arrangements were blurred and the finance group, or leaders were frustrated by the lack of procedures and rules.

Sales and distribution groups were not always aware of marketing strategies or product availability and the marketing department did not appear to understand the limitations or constraints faced by the manufacturing group. To compound issues, customers were forced to deal with a different sales person and receive a different invoice for each product line they purchased. Customers were frustrated and wanted a simpler sales concept.

The turmoil created conflict issues for the manufacturing groups as well. There was no hierarchy established for customer take-away, which meant that the first sale in, was the first out, with minimal relevance placed on long term strategy and customer alliances. The confusion served to create chaos for our sales people, our customers, the marketing groups, manufacturing units and the transportation departments.

**Summary of issues with respect to Division of Labor:** The division of labor was not clearly defined. There was overlap in many areas, and gaps in others. Accountability was not clear and performance was managed inconsistently. Employees did not know what to expect in terms of management support when trying to resolve issues.

**2.2.1.5 Recent changes to Division of Labor**

Inputs start with the customer in mind, rather than the raw material. This means that each functional business must have an over-arching strategy and work to determine what
products must be made relative to the customer demand (volume, specifications and price).

Marketing and Sales are separate functions, performed centrally for all three manufacturing technologies, and a Supply Chain Management group was created to manage end-to-end processes with an emphasis on the horizontal integration of business processes and outsourcing of non-strategic critical functions and processes.

This change is consistent with a Network structure where groups of “knowledge workers” may act as individual contributors or be part of a cluster depending on the expertise (Nohria, 1991).

2.2.1.5.1 Marketing and New Product Development
Marketing is responsible for research and development, the complete product list, and phase in and phase out of all products. The marketing focus is strategic in nature with a horizon of 4 – 24 months out (or greater).

2.2.1.5.2 Sales
Sales are tactical and short term in nature with the focus for execution in the 0 – 3 month time frame. The focus for sales is on solution selling versus single product line sales.

2.2.1.5.3 Manufacturing
The manufacturing groups are re-organized by technology in three separate categories; Lumber, Strand & Veneer. There is also a supply source for outside purchase items that would complement or supplement the internal supply.
Raw material is organized as a one source supply for the entire enterprise. The profit hierarchy was established to ensure that company profitability came before individual business profitability. The next level of profitability is defined at the business level, then strategy level, and so on. End-to-end profitability is now defined from the raw material to the customer versus at the technology unit.

Manufacturing cost and transfer pricing is used to define profitability and viability at the unit level, and is pre-determined on a set date, based on market value. All finished goods inventory is the responsibility and accountability of the sales divisions.

Division of labor at the technology unit level remains unchanged with respect to production and maintenance tasks.

**2.2.1.5.4 Support Services**

Support Services (Human Resources, Information Technology, Safety, Environmental, and Finance) are core resources that would continue to be provided by a central organization for the enterprise.

Engineering Services and Suppliers (Procurement) become supports to the manufacturing process, which includes the raw material (Timberlands).

Each of the above noted functions are very specialized and require significant coordination to avoid silo behavior and the development of disparate goals. A supply chain organization was put in place to orchestrate the various activities and coordinate the monthly review process.
2.2.2 Coordination Mechanisms

Standard practices were in place across the enterprise. Some of the processes were considered franchise processes and were non-negotiable in terms of their standard application across all businesses, strategic planning and investment direction setting, people and leadership, process to achieve capital effectiveness, and the purchasing improvement effort.

Other processes that offered standardization, but were open to interpretation and modified application in each business were safety, process reliability, work systems, diversity and citizenship. Leaving the interpretation open to various styles of management would serve to compound the lack of standardization rather than enhance it bringing the juxtaposition of the Sales and Marketing group and the Finance and Manufacturing leaders to the forefront:

- Finance and Manufacturing may possibly create more rules, processes and rigid application.
- Sales and Marketing may not be concerned with the standardization, other than to save time, but would apply their logic for each circumstance.
- Human Resources may seek consensus on the best approach, and would continue to modify on the basis of new entrants.
- Research and Development would appreciate the process, but would forget how it was applied previously, so internal application of the process would vary based on the length of time between applications.

Coordination between departments or businesses was encouraged but not managed. Some businesses and regions maintained strict controls on all processes, with documented procedures for exception handling, while other areas were left to their own devices and interpretation.
Leadership was encouraged to follow process, including protocol for dealing with outages, or if none existed, they were encouraged to create the process. This meant that those leaders with a pre-disposition of creating rules, created more rules.

The issue was with the individuals responsible for holding people accountable once an outage occurred, not in determining whether or not a circumstance was outside of protocol.

Management was inconsistent in the manner in which they held people accountable and based on the differing styles noted, combined with personal bias, resulted in the inconsistent practices listed below.

a) Finance and Manufacturing leaders were concerned with adherence to rules and procedures, and processes.

b) Sales and Marketing leaders would recognize profit before process.

c) Human Resource leaders were concerned with fairness and equity in application.

d) Research, development, and engineering leaders were fearful of accountability due to the experimental nature of their roles.

2.2.2.1 Product Input

Raw material (timberlands) originally reported up through the manufacturing business, and was involved in daily discussions relating to the supply of raw material. This later changed when a timberlands organization was established. The timberlands divisions were providers of raw material to the units, but were not held accountable at the site level despite quality specifications. Coordination of the raw material (volume and quality) was
based on formal communication between the departments which focused on cut
strategies, standard procedures and low cost.

Communication of non-routine items or issues had been completed on an as-needed
basis. This meant "as-needed" was left to the interpretation of the individuals involved.
If one of the individuals was conflict avoidant, the issue would not be resolved. This
would ultimately create more tension in the system.

2.2.2.2 Manufacturing

Communication between manufacturing technologies occurred at quarterly or bi-annual
networking meetings. Sharing of information was not orchestrated or planned. The leads
were focused on their own technology. Information may have been shared on an
informal basis which meant that no formal process was in place to elevate issues.
Individuals or groups may have inadvertently been absent from the information pipeline,
which created a perception that if you were not part of the "old boys club," you were not
in the loop in the latest decision making or information sharing.

Within each manufacturing division, the coordination mechanisms included cross-
functional improvement teams. The teams were instituted by the leader to assist in the
rapid replication of best practices across all sites. The goal was to quickly capture the
low cost benefits across the system. The goal was communicated by the leader, and it
was up to the manufacturing leaders to implement it. The four cross-functional teams
included disciplines in the area of Safety, Utilization, Value, Productivity and Cost. Each
team consisted of individuals from sister manufacturing units (of like technology) within
the region as well as leaders from other regions. Often, indifferent individuals were
appointed to the teams. The lack of commitment from reluctant team members resulted in inefficient meetings that were ultimately considered time wasters. Success with these teams was differential by region and often associated with the number of resources available to perform the workload, but it clearly lacked process which every team struggled to understand. The outcome was that the manufacturing and finance leaders struggled without a documented process to follow.

Both the individual mill management members and the individuals on the team were measured on their ability to replicate the best practices, but the weight placed on this measurement was not significant enough to encourage individuals or leadership to expand their horizons beyond their own scope or manufacturing environment.

Initially there was minimal strategic direction for the teams, and they often found themselves undermining the other. Teams focusing on recovery improvements would negatively impact the results of the productivity improvement team, and so on. This is consistent with an internal conflict example presented in Nike where they

...offered performance incentives to its procurement teams based on price, quality and delivery times. This standard industry practice undermined Nike’s many positive efforts to comply with its own code of conduct; it had the unintended effect of actively encouraging its buyers to circumvent code compliance to hit targets and secure bonuses (Zadek, 2004).

Monthly and quarterly meetings were held with the managers to review the status. Leaders would typically provide an update of processes, or adherence to rules, and provide lagging indicators of success, when in fact the business leader was looking for evidence of potential savings, or evidence of proactive initiatives that would indicate where future savings could be captured. The result was that the business leader would
leave frustrated because he did not see evidence of future savings and the manufacturing leader would also leave frustrated because, despite his best efforts and work to implement processes, he felt as though he had failed.

There was minimal coordination and coaching between groups and the same was true at the regional level. This meant that the leaders coached their direct reports which equated to the same processes being communicated differently month after month, with the same frustrating end result.

Daily or weekly operating meetings were scheduled at the tactical or unit level, with communication left to the individual supervisory staff. Formal documentation of daily meetings varied by leader, but if in place, assisted those who were not present during the meeting.

Where common practices existed for the entire plant (Safety, Labor, Environmental, Finance (Budget), or Customer Impacts (Product), all front line and superintendent level leadership were expected to contribute and participate in the process development and supervision of activities.

The production superintendent and the maintenance superintendent coordinated and prioritized the mill production with the maintenance/repair activities. In some cases the business was bound by a collective agreement between the association and the Union local representative.

The mill production line had very strict rules of order when changing stock or amending production orders. The product line-up was based on maximum throughput and minimal
effort calculations. This is consistent with the principles of scientific management (Taylor, 1916).

The expectations and procedures for monthly labor/management committee meetings and safety committee meetings were documented and routine in nature.

Expectations in terms of training periods and safety practices for each task were documented and reviewed annually. Budgets were based on projected annual production and maintenance plans with monthly reporting completed on an exception basis of not meeting or exceeding plan targets. Individuals at various levels did not have the authority to perform work outside of the approved annual plan.

2.2.2.3 Support Services
Initially, when the central support services were put in place, the coordination of independent activities was not performed well. In their zeal to establish legitimacy through common practices, each support service initiated activities that required resources and change at the units. Often, individuals were being asked to provide the same data or similar reports to many different resource groups. In an effort to reduce the demands placed on each plant, regional groups would establish priorities and push back on requests with a caveat that the resource groups work with each other to minimize the demands on manufacturing units.

The wood products lead team met on regular basis to understand the independent activities of each of the support services. This evolved to include coordination of services and establishing priority status on requests.
The Safety audit criteria that was established by the central corporate group to evaluate safety systems across all businesses was re-vamped to provide units with stringent guidelines for the development of policies and practices that would equate to a robust safety system. The work was coordinated at the unit level, while the audits, policies and procedures were controlled centrally.

As with Safety, Human Resources were also controlled centrally. Coordination of benefits, pensions, compensation (including investment options) are managed electronically with a central help desk available to provide assistance. Exceptions are managed by central resource providers.

Labor negotiations are site or region specific with central resources to complete the bargaining process and documentation. Implementation of the contract is completed on a site by site basis with central resources to assist with grievance handling (based on the documented procedures).

Standard hiring practices were established, along with performance measurement guidelines. Central resources were provided to coordinate the activities, but the hiring decisions were made by each hiring manager.

Information Technology as it pertains to personal computers is provided through electronic filing of issues with a contract service provider. Every effort was made to resolve issues via a central resource. If they were unable to resolve the issue, a regional contract representative was provided to resolve issues.
For system information technology issues, there are many stand alone systems in place. The management of each of the current systems is very controlled, with immediate messaging and communication when issues arise, but the systems are not linked and do not communicate easily with each other.

Finance and purchasing was a centralized function that is very tightly controlled. A regional financial representative was in place to ensure fiscal responsibility of all transactions, with minimal activity performed at the sites. Information flow from this source was guarded with segregation of duties clearly understood and coordinated.

Capital Spending was coordinated at the business level, but based on the investment direction strategy defined by the wood products leadership team.

2.2.2.4 Sales

The sales organizations within each of the manufacturing divisions and that of sales and distribution had minimal contact with each other. Information sharing may have occurred at the wood products leadership team level, but did not filter to the tactical level for individual sales groups.

Coordination of information between sales and manufacturing was typically completed once per year at the time of annual planning. Other communication or coordination was sporadic in nature and typically hi-lighted when errors, claims or issues occurred.
Summary of issues with respect to Coordination Mechanisms: Lack of coordination or communication between divisions, often with competing and conflicting goals and performance measures, contributed to rancor amongst groups.

The product out mentality prompted divisive behaviors that would serve to undermine all areas of the business. Timberlands provided raw material that did not meet specifications, manufacturing often produced products that were not selling, and Sales did not know what product would be available to sell. To compound issues, central resources were all pushing individual initiatives for data, metrics and improvements at the business units without consideration for competing priorities.

The divisions were duplicating efforts with stand alone Marketing, Sales, and Raw Material departments and competing with each other for product lines, scarce resources and materials.

Resources at the tactical level were over-loaded, and stressed with multiple pulls for action and results.

2.2.2.5 Recent Changes in Coordination Mechanisms

Review meetings for each area have been initiated and management from all functions are required to attend. The meetings are scheduled one year in advance and are conducted in the same sequence on a monthly basis. The process culminates in a management review meeting where decisions are made in the best interest of the company, not necessarily coincident with the best interests of the business or departments within. Assumptions at each stage of the process are documented and communicated monthly.
Marketing and Sales combine to discuss strategic and tactical issues, they are used to collectively provide an unconstrained forecast of sales in terms of volume and price. Inputs to this process include economic outlooks based on key indicators (housing starts by geography), market penetration, inventory levels and location, and transportation.

The demand signal is segregated into product families and provided to the specific technology group.

Each supply division (Lumber, Strand and Veneer), and the specialty products group take the information from sales and determine whether they are able to supply the product, and at what cost. The expectation is that the supply organization answers in the affirmative, and defines the cost to produce based on a rough cut formula. Inputs to the supply organization include operating hours, engineering, maintenance, raw material, and product supplies.

In the financial review step, the sales volume and price are then compared to the supply volume and cost to determine financial viability and to determine whether the plan is balanced.

The next step in the process is called the reconciliation stage where leaders are challenged to ensure they have taken the steps to satisfy any imbalance and to ensure they made decisions within their control. It is also a process check to ensure that the direction is consistent with the over-arching strategy.

This culminates in a management meeting where the objective is to assess the demand and supply balance over the next 24 months; review key decisions made during the
review steps, make decisions that exceed individual authority and ultimately approve the monthly sales and operating plan. This is consistent with the Network format in that top management executives provide broad oversight and strategic direction for the above named groups.

The minutes of the meeting and the approved plan are then communicated via the Supply Chain Director (or their delegates) back to each leader. The leader cascades the information back to their organization for execution (ripple effect).

Installing system technology (SAP) would automate coordination mechanisms such that automatic messaging would take place rather than relying on individuals within each technology and function to communicate the requirements. In addition, replacing several information systems with one integrated system will force common practices and enable operation as one company, with one data base, with the ultimate objective of reducing costs. This will be discussed further in Chapter Five.

2.2.3 The Distribution of Decision Rights

With corporate goals explicitly defined, each division identified stand alone measures to accomplish the goals. Because there was minimal coordination between the units, conflicting measures were not elevated or discussed.

The performance metrics were modified for each business and then cascaded through each of the units, which further served to encourage silo behavior as each unit was measured on its own performance and not that of the entire business.
2.2.3.1 Product Input

The discord between timberlands and manufacturing was exacerbated by conflicting basic business drivers and performance measurements. Although both divisions presented the guise of working together, the reality was that the timberlands division was focused on meeting the utilization standards based on forestry regulations and showing a profit, while the manufacturing group was intent on meeting throughput and quality targets and also showing a profit.

The utilization standards impacted the species and volume cut based on “priority wood” status. An example of priority wood is “Beetle Kill” wood that has been infested by Mountain Pine Beetle and must be harvested to avoid the risk of increased infestation. Another example would be the press to process burnt wood resulting from forest fires.

These interdependent actions are examples of an “Open-System Strategy” and “Bounded Rationality of a Newer Tradition, where “interdependence of organization and environment are as inevitable or natural, and as adaptive or functional” and that “this requirement involved replacing the maximum-efficiency criterion with one of satisfactory accomplishment, decision making now involving satisficing rather than maximizing” (Thompson, 2003). The above noted description relative to open system applies to this company due to the complexity of the segments within each business and the sheer number of businesses. One of the issues this company constantly struggles with is helping employees cope with uncertainty which could relate to cyclical markets, timber supplies, changing demographics.
2.2.3.2 Manufacturing

Planning had been completed on an annual basis, from a product out perspective. The manufacturing units ran flat out to maximize throughput, recovery, and volume in an effort to minimize unit cost. In the finishing process, the push for higher value products and daily shipments was based on what sold on a short term basis. Production projections were made on the basis of stretch targets, historical product mix and anticipated hours of work. Product output did not match the sales demand and production volume trumped customer satisfaction in performance metrics.

2.2.3.3 Support Services

Performance measures and end-to-end profitability impacted system optimization at the segment level. Although the performance measurement process was under the umbrella of human resources, this process did not include coordination methodology. An issue which complicated the wood products group further was that the divisions (with competing product lines), held common customers, but the information technology systems could not be linked. The customers were becoming increasingly frustrated with the company’s inability to act as a single supplier.

The distribution of decision rights was governed by the hierarchal structure on a top down basis. In other words, the Senior Vice President of the business had a formal financial level of authority which he cascaded down to a lesser degree, to the Vice President, then to the Region Manager, and eventually to the Unit Manager level, and so on. The financial approval levels referred to a value of measure for formal decision making.
Decisions on capital spending projects were brought forward by each manufacturing site, with veto authority exercised by the regional managers.

2.2.3.4 Sales

An example of conflicting measures between a manufacturing group and their internal sales division was demonstrated when lumber facilities would focus on a product out mentality (throughput), and sales would focus on market driven mentality (committed sales).

Example:

- The mills would produce 2” X 8” product rather than 2” X 4” because they could get twice as much volume in the same time period.
- Customers were buying 2” X 4” product, while 2” X 8” product was left sitting in inventory.
- Most mills had the option of splitting the product to 2” X 4” which was in greater demand, but didn’t want to impact production volume.
- The result was increased finished goods inventory in 2” X 8” stock and stock-outs for customers demanding a 2” X 4” product.

In spite of attempts to establish contract business, product stability was not present in the volume output mentality. The result was either an inability to service the contract business on an ongoing basis or force the sales group to sell the finished product on a short term opportunity basis.
Another example was the measure of year end inventory:

**Example:**

- The goal of all businesses was to have minimal inventory at year end.
- Rather than build for the seasonal take-away of product, the Sales & Marketing group stopped placing orders or pre-positioning inventory into the marketplace so that they could have minimal inventory on the books at year end.
- The manufacturing units stopped producing because there were no sales, and so that they did not build inventory.
- Both divisions met their inventory target for year end, but they also didn’t have the product to sell when the building season opened. Managing the disparate values and goals of each group was not orchestrated.

Each group was focused on achieving the performance metrics set out and agreed to with the business Senior Vice President. A drawback was that the performance measurement system was tied to the annual planning process and was not fluid enough to change with economic or other conditions. There were conflicting measures in place, but no decision making criteria. This prompted individuals to be self serving rather than make the appropriate decision for the business. Hence, where the measurement of inventory was impacted (positively or negatively), the individuals involved would make a decision that would place them in the best light relative to their performance goals, or where they were being “held accountable”, versus the optimal decision for the business.
Summary of issues with respect to the Distribution of Decision Rights: Cross-functional teams were ineffective. Teams were not given adequate authority, guidance or clarity in function and measurement. Conflicting values and performance measurements encouraged silo behavior. Disparate values and goals were not managed.

Veto power within a region or division created distrust and acrimonious relationships as well as de-motivating leaders.

There was inconsistent application or interpretation of standardized processes as well as lack of support or commitment from management to address issues to resolution. This resulted in underperformance and low morale as a result of non-support.

2.2.3.5 Recent Changes to the Distribution of Decision Rights

A formal decision making process was put in place for the entire business. At each step in the process, individuals closest to the work are asked to make decisions within their control and within their organizational boundaries.

Marketing is responsible for and owns the product list. Phase in and phase out of products, marketing strategies and pricing and bundling of branded products.

The Sales division is responsible for and owns all finished goods inventory (whether located at the manufacturing unit, in a warehouse or in the pipeline.)

Manufacturing divisions own the technical process to create the product and are accountable for efficiencies within the process, and the cost to produce.
Supply Chain director is responsible to ensure each step in the process is coordinated, completed and that assumptions and decisions are documented. Individuals from each step in the process are involved in the other steps to ensure clarity and ease of issue resolution.

Support services own their own processes and coordinate activities based on timing and availability within the approved plans. They are involved in the management review meetings, complete with visibility into the supply chain, so that they stay connected to each portion of the business and provide resources that are consistent with the needs of the supply chain and the enterprise. Their involvement is also to ensure compliance with enterprise processes, identify resources where assistance may be required and to proactively work to resolve issues within each supply chain.

Roles and responsibilities expected of leadership team and key managers include discipline, rigor and preparedness for monthly meetings. They also need to develop a discipline of “bumping up” as few issues as possible – work them lower in the organization, make decisions and effectively communicate the decisions (multi-level).

The majority of decisions are expected to be made within each of the process steps. Items that meet the following criteria are elevated to the Management Review meeting.

- Outside existing delegation of authority
- Decisions that commit the organization beyond one calendar year that require a higher level of approval. i.e. Investment direction setting, or capital
- Impact of decision on other segments, functions or the business as a whole
- Company reputation
- Rare decisions
In addition to the above, primary performance metrics have been put in place to ensure compliance to the above plan. Marketing and sales are held accountable to the accuracy of the demand plan, while the manufacturing facilities and specialty products divisions are held accountable to the accuracy of the supply plan.

Within each of the divisions, there are performance metrics to understand the state of the business and to stimulate improvements, but all measures align with the strategy and the sales and operating plans.

These changes are consistent with the Network organization structure in that decision rights are pushed as far down as possible. An assumption of the Network organization structure is that information technology is expected to be in place to support decisions being made by he knowledge workers, instead of managers higher up in the organization. The information technology is not yet in place. This is a gap that will be addressed in recommended actions in Chapter Five.

### 2.2.4 Organization Boundaries

The organizational boundaries were defined as they pertained to the individual product lines or services, excluding the central functions. If the issue/influence was outside of the business, then the Senior Vice President would determine suitability for interaction and scope of responsibility. As an example, transportation issues that pertained to the lumber business were managed by the transportation group, but the leaders within lumber were involved in the relevant discussions and agreement of actions.
Organizational boundaries were also blurred as evidenced in Section 2.2.1 referring to The Division of Labor. Each of the divisions within the wood products business exercised different determination as to what resources, skills and products should be sourced externally versus internally.

2.2.4.1 Product Input

Manufacturing operations exercised some veto power relative to the choice of raw material provider they utilized. There was minimal analysis put toward understanding the cost of outsourcing raw material which was inconsistent with the assumption that decisions were made on the basis of data rationality.

2.2.4.2 Manufacturing

Operations were provided freedoms to outsource portions of the manufacturing process as well as some of the raw material. Typically, mills governed by labor agreements, had fewer rights based on contracting out clauses, but those that had effective working relationships with the bargaining group were provided greater latitude. Mills that operated outside of a collective agreement had the ability to contract out work, or projects without restriction, provided it was within their scope of responsibility (usually defined as operations within the mill gates).

The hourly production or maintenance employees had formal veto power through the Union labor committee, but no formal financial authority. The formal financial level of accountability referred to expenses, cost of lost production, downtime, maintenance overtime, property damage or repairs. In dealings with the non-exempt employees, the formal level of authority of the unit manager was to abide by the labor contract.
Although this varied by region leader, the arrangements made beyond the scope of the contract were to be negotiated and approved by the membership as well as the Region Manager or Vice President of the business.

Any activities/costs that exceeded the annual budget were also to be approved by the Vice President of the business. Formal financial authority was cascaded to the superintendent level, then the front line foreman in terms of their personal scope of responsibility.

2.2.4.3 Support Services

Support Services are centralized organizations and they apply to all enterprise functions. The businesses did not have the authority to contract out these services or to provide alternate services of like or similar nature.

Procurement was an area that was centralized, but loose in terms of controls. The units were provided options to purchase externally if conditions were not met by the current supplier. Each unit however, had to meet the intent of the purchasing organization and that was to create value and establish controls for the organization in the form of costs, safety, and maximizing on supplier resources. Any purchase agreements made outside of the normal channels were evaluated to ensure compliance with legal and regulatory bodies, as well as internal ethical standards.

Coordination with public affairs on media relations or public communication was essential. A spokesperson for each geographical area was identified, and all external communications were to be funneled through the source.
2.2.4.4 Sales

As noted earlier, the manufacturing groups maintained their own sales forces while there was a stand alone sales and distribution division within the business. The sales and distribution division sold not only the products manufactured within the business, but also those of competitor firms and products that would be considered substitute products.

The sales department was the major liaison between the unit and the customer. If noteworthy specifications were required, mill personnel were involved to the extent that cost implications and viability could be established. Sales would balance cost with demand, and establish commitment levels. Customer relationships were with the sales personnel rather than the manufacturing unit. The units were not aware of customer issues until the issue resulted in claim or dissolution of the relationship. Nor were the units provided positive feedback about their products. This created a sense of disconnect between the customer and the individuals making the product.

Summary of issues with respect to Organizational Boundaries: The confusion in the Distribution of Labor affected boundaries with Timberlands and Manufacturing as well as with Manufacturing Direct Sales and Sales & Distribution.

Customer relationships were with the Sales personnel and not the Manufacturing units. Manufacturing units were unaware of levels of satisfaction from the customer. This created a sense of disenfranchisement for the customer as well as the manufacturing group.

Clear boundaries established by central functions, but implemented differentially by region.
2.2.4.5 Recent Changes to Organizational Boundaries

Some influences are beyond the control of the business or each area within the business. Individuals are encouraged to problem solve at the lowest appropriate level in the organization, but are expected to follow designed protocol.

Three specific examples are interaction with the Timberlands, Transportation or Procurement Divisions. These are separate organizations within the enterprise that can directly influence the outcome of the plan. Joint procedures and communication protocol have been developed with each one. The protocol includes a time criteria when decisions are locked in, and only under specific special circumstance and with joint communication are changes allowed.

Organizational boundaries will blur in terms of internal versus external relationships. This will require real time interaction with customers and vendors. At present, information technology in place does not allow for this. In the network organization, everyone in the firm is expected to deal with the environment.

2.2.5 The Informal Structure

The changes to central from decentralized resources meant that informal structures and alliances were constantly changing. It not only contributed to a sense of loss for individuals remaining at the units, but negatively affected productivity and morale.

The informal structure was largely based on the networks and the relationship that individuals had with each other, both internal and external.
The effectiveness of the organizational processes were assessed as adding value and then amended to be more efficient (using fewer people, at a reduced cost), which in turn have resulted in some efficient but ineffective processes. The owners of each of these processes are highly influential in determining success or failure, and had significant control over changes. Alliances formed with these individuals proved to influence the decision making.

Divisions that offered to pilot the programs or changes were more likely to have greater influence in the outcome than those that were late entries. Another significant internal contributor to individual or unit success is the administrative network. Often these individuals are over-looked due to their formal status, but their link to positional power is very significant.

**Summary of issues with respect to the Informal Structure:**
The consolidation of resources and move to central locations created a sense of loss for individuals remaining in the firm. It was also a source of trepidation and angst for individuals arriving in a new environment. Productivity and morale were negatively affected.

The business leader was results focused, and conversations with individuals at all levels were relating to the financial results. Interestingly, the individual operated with a profit margin mindset, managing an environment functioning with considerable rules and processes. Individuals of like or similar disposition were valued over those that demonstrated a skill set that was more open to behavioral understanding. This VP maintained relationships from prior work roles and was able to exert control based on his
relationships and positional power. He made it a habit to share the expectations and opinions of the shareholders or members of the investment community during quarterly discussions and displayed very little sense of play or networking in the form of sponsorship of sports, recreation activities and tournaments.

His perceived allegiance to leaders that he had worked with in the past was a significant topic of discussion. This resulted in an informal structure where those leaders held more perceived power than those in positions of formal authority. Some individuals aligned themselves with the leaders holding informal power and were later rewarded for their allegiance.

Alliances with key individuals proved beneficial in influencing outcome or direction. Differing cultures in place due to acquisitions created cliques or informal groups of power.

2.2.5.1 Recent Changes to the Informal Structure

The informal structure and prior alliances were barriers to success. Shortly after the new leader was put in place, it became very apparent that he had no allegiance to any particular individual and in fact treated all leaders with the same personal disregard. He asked direct, pointed questions and challenged individuals in an open environment. This behavior created a tense, uncomfortable working situation that prompted a few leaders to voluntarily resign their position and either transfer to another business segment or leave the Company.
A network organization assumes greater dependence on the informal structure and on individual’s ability to mobilize resources based on personal ties. Individuals operating with positional power may have difficulty in the new environment.

### 2.2.6 The Political Structure

The Political Structure was possibly the most significant in terms of informal power and its influence on the business.

The available capital is tightly controlled by the management team. Due to the scarcity of capital, the hurdle rate for return on investment used in the process to achieve capital effectiveness is extremely high. One of the inputs to funding levels is the size of the asset base, which is skewed to the Pulp and Containerboard divisions which are asset intensive. Therefore, in order to manipulate funding of capital projects, tying safety or environmental implications to projects had greater chance of success.

The local external political environment is impacted by public pressures and citizenship values. Interaction and involvement in governmental relations and public policies was an expectation of the business Vice President role or the geographic leader.

In the early years, the units could contribute/fund local activities. In recent years the citizenship component is managed through the corporate public affairs group and while the units may provide input, the decisions are made at the corporate or regional level.

From a day to day, functional standpoint, safety, environmental and labor issues are managed at each unit, but are sensitive in nature so have a higher profile. Corporate governance over strategic goals and direction are very clear.
The informal structure did not always align to the formal structure and hierarchy. Individuals that held significant informal power were often individuals that presented an understanding of both sides of an issue, and were fairly balanced or controlled.

**Summary of issues with respect to the Political Structure:** Capital planning hierarchy was filtered by Safety and Environmental projects as well as return on asset. This created an environment where leaders would present capital projects under the guise of safety or environmental issues in order to obtain funding.

**2.2.6.1 Recent Changes to the Political Structure**

In addition to changing the organization structure, a fundamental shift in culture is required. Moving from three distinct cultures to one (Table 2.2).

Table 2.1: Varying Cultures

<table>
<thead>
<tr>
<th></th>
<th>Entrepreneurial</th>
<th>Communitarian</th>
<th>Regulatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers</td>
<td>Builders</td>
<td>Dealers</td>
<td>3rd Party Distributors</td>
</tr>
<tr>
<td>Strategy</td>
<td>Market Driven</td>
<td>Quality (Value)</td>
<td>Product Out</td>
</tr>
<tr>
<td>Expertise</td>
<td>Product Experts (Specialized)</td>
<td>Process Experts</td>
<td>Project Experts</td>
</tr>
<tr>
<td>Engineering</td>
<td>Innovators</td>
<td>Shoppers</td>
<td>Tried and True Standard Products and equipment</td>
</tr>
<tr>
<td>Dealing Internally</td>
<td>No = Try again</td>
<td>No = Maybe</td>
<td>No = NO</td>
</tr>
<tr>
<td>Decision Making</td>
<td>Entrepreneurial – Every leader decides</td>
<td>Consensus – Everyone decides</td>
<td>Command and Control – One leader decides</td>
</tr>
<tr>
<td>Communication</td>
<td>Guarded</td>
<td>Open</td>
<td>Controlled</td>
</tr>
</tbody>
</table>

Data source: Author

Instead of being a collection of three distinct cultures and allowing individual freedoms, one new culture would be created.
The core of the new culture is closely aligned to that of the Entrepreneurial Worldview, which is aligned with the new leader, but also includes elements of the Regulatory Worldview in terms of providing a structure and systems. A full analysis of the present, past, and ideal future cultural worldview for the organization will be presented in Chapter Four.

### 2.2.7 The Legitimate Basis of Authority

The legitimate basis of authority is placed on the basis of the business function. There are five businesses within the company and reverence typically follows revenue, but the pecking order of individuals within each division follows a traditional hierarchy. The specialized skill areas, Legal, Forestry, Accounting, Engineering and Economics have formal professional legitimacy.
The formal structure starts with the Senior Vice President of the wood products business and his relationship with each of the Vice Presidents and their direct reports.

Other sources of informal power were recognized in the larger community base and were individuals that were held in high esteem; clergy, mayors or council, environmental leaders, elders, or individual business leaders. There were some instances where individuals of significant wealth or star status, were able to influence public opinion on cutting strategies by appealing to public emotions. The vast majority of external influence of informal power came from those appealing to a better world or community building.

Summary of issues with respect to the Legitimate Basis of Authority: Positional power or star status had the ability to influence public opinion.

2.2.7.1 Recent Changes to the Legitimate Basis of Authority

The new management style is business metric focused, personal relationships in place or are being established are with those in positions of formal power and authority. The leader recognizes the informal structure, but does not acknowledge it. This has resulted in disassociation, confusion and disorientation as well as feelings of loss, which has served to both motivate and de-motivate leadership and hourly employees.

The authority exercised above is based on the perception of the role and the ability to command the actions of others on the basis of formal authority versus informal personal power.
The new leader is demanding of participation and action, while the leaders in each of the divisions are somewhat different. The leader of the marketing group exudes charisma and knowledge while the leader of Sales not only has significant expertise and knowledge, but understands how to translate the theoretical direction into actionable steps.

The Manufacturing leads are process oriented individuals, with the exception of one very practical and applied leader who demonstrates empathy toward the unit leadership function, but is also able to clearly communicate expectations and achieve results.

The network organization will focus on knowledge rather than position when referring to the distribution of decision rights.

2.3 Summary of Organization Structure

The company has progressed through each of the life cycle stages: entrepreneurial stage, collectivity stage, formalization and control stage, and the structure elaboration and adaptation stage (Quinn and Cameron, 1983).

The dominant leadership styles present in the formation of each of the stages was appropriate given the maturity of the business and the systems within it, at the time. There is significant evidence of innovation and growth in the beginning, as well as structure, hierarchy and systems thinking throughout the processes described. In each of the life cycle stages, there are notable areas where it is essential to the health of the organization that they all co-existed, hence the evolution of the Matrix organization. Context and balance is the key to avoid the over-reliance or excessive influence of a
particular leader. There is a glaring void with respect to the influence of the research and
development leaders, which may be the constructive tool for renewal and re-birth of this
aging business.

In spite of the positive aspects of the above noted integrated system with sales and
operations planning, the key to success is in coordination. This lack of coordination
coupled with the ability to influence while being influenced by others leads to what
Standford’s Hau Lee refers to as The Bullwhip Effect. (Lee, 1997)

The problem turns out to be one of coordination. Suppliers, manufacturers, sales people, and customers have their own, often
incomplete, understanding of what real demand is. Each group has control
over only a part of the supply chain, but each group can influence the
entire chain by ordering too much or too little. Further, each group is
influenced by decisions that others are making (Bean, 2006).

Coordination is more than just communication. It is providing individuals with visibility
into the system and with information (upstream and downstream) that will affect the
outcome of their decision.

Overall, one structure and one business aligned to create value as a whole, has essentially
removed the silo mentality and transfer pricing issues. Performance measurements and
incentive programs have been put in place to support this approach versus undermine it.
Continued effort must be placed on uncovering behaviors that are inconsistent with the
overall approach.

Having separate meetings for New Product Reviews, Demand and each Supply
technology gives an opportunity to have the appropriate individuals closest to the work,
present at the meeting to provide insight on short term and emerging longer term issues.
The burden of accountability shifts to the pre-work completed at each step in the process. Individuals need to be aware that it is their responsibility to expose shortfalls and make issues visible at the pre-work stage. The follow up or actions planned should be visible in the Sales and Operations planning process. The lead team needs to focus on managing exceptions and looking at contingency plans for +/- 15 to 20% change in demand, ramp up or ramp down.

Leaders must learn to motivate employees, encourage participation and create an environment where associates are not afraid to speak up, and do so constructively. The planning process does not guarantee good decisions. It just provides information and visibility so that decisions can be made. A systematic approach does not take the place of good leadership.

Accountability must be evident at every level. The process is intended to highlight issues and bring them to the forefront. It does not solve the problems.

The alignment and coordination between groups and the synchronization of activities are the most important aspects of an integrated system. As discussed earlier, the gap with respect to information technology to make information available to support decisions as well as provide real-time information to those upstream and downstream in the Supply Chain needs to be addressed in order to provide those responsible with the tools to perform their work.
3 ENVIRONMENTAL ANALYSIS

In addition to understanding the past, it is important to understand the direction of the competition and external environment before moving forward. The following industry brief will demonstrate that major competitor companies are targeting the North American market with various differentiation strategies.

3.1 Description of Industry

The businesses within the Wood Products Industry are those that use wood as a raw material input to processing, in the form of logs in various stem lengths, wood chips, peeled (veneer), or that involve processing of by-product materials. Processing includes, initial breakdown of the raw material in round log form by sawing, chipping, or slicing and may include finishing, in the form of drying, planning, treating, shaping or laminating. Based on the manufacturing process used, the primary product, fall-down or by-product varies significantly as does the end use.

Products include Dimension Lumber (boards, studs, posts, poles, ties and solid beams or cants), Engineered Products (component products which include plywood, trusses, floors, wallboard, and laminated beams), and Panels (pressboard, strand-board, chipboard, and bark-board) made of chips, bark, and sawdust. Chips, bark and sawdust are also considered a by-product of production which are used as an input for Pulp and Paper mills, in the form of raw material or used as an energy fuel source.
The majority of the global demand for forest products is consumed in the United States, Japan and Europe. Wood construction is predominant in U.S., Canada, and Australia which have 95% of homes made with wood construction, Japan is second at 50%, followed by the UK at 20%, with all other countries below 10%. Countries that are showing some signs of increased consumption are in China, and Latin America although the growth is extremely slow, and not significant enough to alter foreseeable global consumption rates. Although economic growth has been a record high in the U.S., it is expected to slow in 2006.

North America is the largest user, consuming approximately 62% of the wood products produced, with Japan following at 21%. The wood market includes construction and appearance grade products. The overall demand is influenced by consumer confidence, interest and currency rates. Significant demand indicators are single and multi-family housing starts which represent 40% of the volume consumed. The global demand for wood framed construction in 2003 equaled 3.654 million units. The demand was expected to peak with the economic cycle in 2004 at slightly higher levels but has continued to show growth through 2005. It is expected to drop slightly (by approximately 60 million units) at the end of 2006, ending at closer to 2003 levels in the US, but declining in Japan and Europe (Wood Markets, 2006).

### 3.1.1 Housing Starts

The expected drop in housing starts may be impacted by labor shortages, transportation costs, rising energy costs and higher interest rates. In March of 2006, U.S. single family
housing starts dropped 8% to 1.96 million units, while the multi-family units increased by 16%, to 0.37 million units.

**Figure 3.1: North American Housing Starts**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Housing Starts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>2,000,000</td>
</tr>
<tr>
<td>2004</td>
<td>2,300,000</td>
</tr>
<tr>
<td>2005</td>
<td>2,350,000</td>
</tr>
<tr>
<td>2006</td>
<td>2,200,000</td>
</tr>
<tr>
<td>2007</td>
<td>2,100,000</td>
</tr>
</tbody>
</table>

Source: Author

### 3.1.2 Labor Shortage

Both the wood products manufacturing process as well as the end use home building and construction business rely heavily on physical labor and skilled tradespeople.

The following chart outlines expected labor force supply and labor force demand from 2002 to 2030.

**Figure 3.2: US Labor Demand versus Supply**

By 2010, the number of workers between the ages 35 and 44 years will show decline across the globe.

Table 3.1  Declining Number of Workers

<table>
<thead>
<tr>
<th>Country</th>
<th>Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>10%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>19%</td>
</tr>
<tr>
<td>Germany</td>
<td>27%</td>
</tr>
<tr>
<td>Italy</td>
<td>9%</td>
</tr>
<tr>
<td>Japan</td>
<td>10%</td>
</tr>
<tr>
<td>China</td>
<td>8%</td>
</tr>
</tbody>
</table>


3.1.3 Rising Energy Costs

Energy Use in American Homes – increased cost of energy will prompt more energy efficient homes.

Table 3.2  Estimated Energy Consumption and Emissions

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2005</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Homes</td>
<td>105</td>
<td>111</td>
<td>117</td>
</tr>
<tr>
<td>Total Energy Consumption (quads)</td>
<td>20.4</td>
<td>21.6</td>
<td>22.8</td>
</tr>
<tr>
<td>Natural Gas Consumption (quads)</td>
<td>5.1</td>
<td>5.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Total Carbon Emissions (mmtce)</td>
<td>317</td>
<td>329</td>
<td>352</td>
</tr>
</tbody>
</table>

Source: EIA Annual Energy Outlook 2003

Crude oil showed an 81% increase from 2000 to 2005, more recently, the price of WTI Crude Oil ($/Barrel) continues to rise, as does the price of Natural Gas.
Table 3.3  Price of Crude Oil and Natural Gas

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td>WTI Crude Oil</td>
<td>49.77</td>
<td>53.05</td>
</tr>
<tr>
<td>Natural Gas, Ntl</td>
<td>5.70</td>
<td>6.20</td>
</tr>
<tr>
<td>Wellhead Price $/MCF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data source: Company

3.1.4 Interest Rates

Interest rates show a steady increase through 2006 which serves to erode affordability. Based on Moody BAA forecast, expect interest rates to continue to rise through 2008, and then start a slight decline in 2009 and 2010.

Table 3.4  U.S. Interest Rates

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td>U.S. Mortgage Interest rates 30 year fixed (%)</td>
<td>5.80</td>
<td>5.60</td>
</tr>
<tr>
<td>U.S. Mortgage Interest rates 1-Year Treasury ARM (%)</td>
<td>4.2</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Data source: Company

3.1.5 Other Impacts

Other impacts include the trend increase in average square footage per home (U.S average home size went from 2,295 sf in 2001 to 2,330 sf in 2005, with 1 in 8 homes exceeding 3,500 sf) as well as a growing shortage of residential land which may equate to greater numbers of housing units per acre of land. Demand signals based on repair and remodel (R & R) activities (home improvement) has typically been a secondary indicator, and is more focused on appearance grade products. This sector represents 30% of all lumber consumed in the US, and 40% in Canada. The driver for repair and remodel is
aging homes, requiring update and repair with approximately 78% of existing homes in the U.S. being greater than 16 years old.

The Asian countries, in general, are showing nominal increase in demand, while the European regions are showing modest increase. The primary type of construction used in European regions has been concrete masonry, or stone. They are becoming more self sufficient in lumber production which will equate to lower exports from Canada and the U.S. Impacts to global transfer include currency exchange rates, duties or penalties and GDP within each country.

3.2 Production/Supply

3.2.1 Lumber

Lumber consumption for North America in 2000 was 53.9 billion board feet (bf) (127.2 million m3) which increased to 65.1 billion bf (156 million m3) in 2005. The total world production in the year 2005 was 185 billion bf (315 million m3).

The top twenty-two producers (2005) contributed 25% or 47 billion bf (79.4 million m3) of the global production. Eight of the top twenty-two producers were from the U.S.A (Weyerhaeuser, International Paper, Georgia Pacific, Sierra Pacific, Hampton Affiliates, Simpson Lumber, Simpson Timber, and Bowater); another eight were from Canada (Canfor, West Fraser, Tolko, Abitibi-Consolidated, Tembec, Interfor, Domtar, and Buchanan Lumber); three were from Finland (Stora-Enso Timber, Metsalitto, and UPM-Kymmene); and finally one each from Germany (Klausner Group), Chile (Arauco), and Sweden (Setra Group). Of the top ten, only six firms had retained or bettered their
position from 2003 ranking. Three notable improvements in ranking were 1) Tolko (Canada) moving from 17\textsuperscript{th} rank in 2003 to 8\textsuperscript{th} place in 2004, and further improvement to 6\textsuperscript{th} place in 2006. 2) Klausner Group (Germany moved from 20\textsuperscript{th} rank in 2003, to 13\textsuperscript{th} in 2004 and then 12\textsuperscript{th} in 2005, while 3) Simpson Lumber (USA) moved from 16\textsuperscript{th} rank in 2003 down to 18\textsuperscript{th} in 2004 and up again to 14\textsuperscript{th} in 2005. All firms have similar product lines, with very little difference.

Six firms averaged greater than 200 million bf output per mill. Recent industry trends have been to re-size, re-engineer and re-structure, most operating with a “fix, sell or close” mindset to be the lowest cost producer in a market that is over-supplied. This has resulted in mergers, acquisitions, divestments, closures, and upgrades. Total U.S. and Canada lumber producers are producing more output with fewer mills. Canadian mills were hard hit with the counter-vail duties and anti-dumping duties, a rising Canadian dollar and high stumpage fees. The result was forced closure of 12 mills in 2005, effectively removing 815 million bf from supply, and a further five mills will close in 2006, removing an additional 650 million bf. The industry is cyclical in nature (typically 7 years), and when the prices are down, cash-even manufacturing with low cost producers typically serves to naturally weed out high cost producers. Cost reduction included closing inefficient mills, and expanding production in lower cost, state of the art facilities. In addition, companies that are closer (geographically and figuratively) to their market place, or have an integrated supply chain typically fare better in the downturn. Focus is on end-to-end supply chain initiatives (complete with transportation), significant contract business and lean manufacturing.
3.2.2 Engineered Wood

An emerging product line is from the Engineered Wood technology group which includes I-Joists, Glulam beams, and Laminated Veneer Lumber (LVL). The global I-Joist market produced and consumed primarily in North America (98%) has quadrupled over the last 10 year period from approximately 1.9 million m$^3$ to 7.5 million m$^3$ in 2005. The strength properties of northern species make this a very lucrative market for Canadian producers.

Glulam beams are produced in many countries but primarily in the US, Germany and Japan, with 30%, 24%, and 20% respectively. Although not as dramatic as the I-Joist, this market has also shown an increase in production from 1.75 million m$^3$ in 1995 to 3.25 million m$^3$ in 2005. All producing countries are maintaining market share as the production increases.

Laminated Veneer Lumber started off with a bang and then demonstrated average growth for a period in the late 90's, but has shown significant growth since 2000, with production increasing from 58 million $^\text{ft}^3$ to 72 million $^\text{ft}^3$ in 2003. This product is largely produced in North America, Asia Pacific and Europe. All three producing regions have maintained their market share, but interestingly the end use application in each region varies. In North America, 61% of the product is used for I-Joists, while in Asia Pacific it is only 9%, and in Europe less than 1%, due to the preference for masonry, stone or concrete construction. For the Beams and Headers, North American use is 30%, Europe at 17%, and Asia Pacific is 9%. The end use application in Europe is mainly for concrete form work, bracing, roof construction and roof trusses and equates to 82% of total use. The Asia Pacific countries use 79% of the product for non-structural
appearance applications. This market has significant flexibility and is expected to grow throughout the next decade.

3.2.3 Structural Panels

Structural Panels (Plywood and Orient Strand Board (OSB)), typically used for sheathing purposes (where strength is required), has served to displace each other in the marketplace. The cost to produce OSB is much lower and therefore served to cannibalize the U.S. plywood production. The North American demand for sheathing was expected to increase by 12.5% from 2002 to 2005, and in fact increased by 13% over that period, with demand in 2006 to increase another 4%. Demand exceeded supply through 2005, which prompted growth of new entrants and new capacity. Seven new mills are coming on-stream by mid 2006, and will serve to provide an over-supply condition. In North America the top 10 OSB producers provide 90% of all capacity. North American production of both Plywood and OSB has increased from 33 million sf to 44 million sf in 2006, with Canadian producers capturing greater share of production, increasing by 38%. The demand for OSB will continue to grow, but may be moving to a commodity product rather than specialty, due to the anticipated over-supply conditions. Global consumption of wood based panel products is expected to be 220 to 240 million m3 by 2010.

3.3 Strategic Fit – Generic Strategies

Organizations compete on the continuum shown in the following table. Companies that are focused on a cost based strategy are typically not innovative and tend to purchase research and development. They are typically more vulnerable to globalization issues
which may make them less viable. The arrows indicate which direction the company is moving, based on the recent strategic changes.

Table 3.5 Strategic Fit and Generic Strategies

<table>
<thead>
<tr>
<th>STRATEGIC FIT - GENERIC STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Based</td>
</tr>
<tr>
<td>Low Cost / Adequate Quality</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product Strategy</th>
<th>Rapid Follower</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>R &amp; D Expenses</td>
<td>Low R &amp; D</td>
<td>High R &amp; D</td>
</tr>
<tr>
<td>Structure</td>
<td>Centralized</td>
<td>Decentralized</td>
</tr>
<tr>
<td>Decision Making</td>
<td>Less Autonomy</td>
<td>Autonomy</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Economies of Scale</td>
<td>Economies of Scope / Flexible</td>
</tr>
<tr>
<td>Labor</td>
<td>Mass Production</td>
<td>Highly Skilled / Flexible</td>
</tr>
<tr>
<td>Marketing</td>
<td>Comparative / Push</td>
<td>High Cost / Pioneering/Pull</td>
</tr>
<tr>
<td>Risk Profile</td>
<td>Low-Risk</td>
<td>High-Risk</td>
</tr>
<tr>
<td>Capital Structure</td>
<td>Leveraged</td>
<td>Conservative</td>
</tr>
</tbody>
</table>

Adapted from Ed Bukszar course notes – BUS 607 Business Strategy, April 20-22, June 1-3, 2006, Segal Graduate School of Business.

3.3.1 Product Strategy

Innovation with respect to new product development is targeted more directly at the engineered product area, typically in response to code changes (Japan) or natural disaster implications (earthquake, tornado or hurricane) for strength properties. More recently, product innovation is being addressed by responding directly to customer end use application in building (components, reduced waste and building expense). There are few innovators in the wood products industry; rather, the companies tend to be rapid followers. The Lumber market is a mature market with few innovations, as is the OSB market, but the Engineered product market is growing with new product design which may serve to cannibalize the existing lumber frame construction.
3.3.2 Research and Development Expenses

Manufacturing groups are in pursuit of efficiencies in use (maximizing recovery) of raw material both in the form of reduced fiber consumption and utilizing a portion of the raw material that was previously considered a waste product. Drivers for R & D are typically prompted by safety, environmental implications, or pursuit of cost savings on labor, energy or other resources. In-house improvements or secrets, typically communicated via trade magazines, sales personnel or Wood Technology clinics are usually nominal and short-lived as the industry demonstrates effective copycat techniques. Because the industry has ready access, it is easily replicated and therefore not a competitive advantage. The early movers are the winners with new technology. It is typical of companies to participate in industry associations (Forintek, American Wood Council) or University research groups to focus on sawing, drying, or planing research and engineering. The application of science or technology is often introduced by a vendor or purchased at industry trade-shows (eg; COE Newnes McGehee - sensor technology innovations such as x-ray, microwave and machine vision for automated lumber grading applications). Companies that do not upgrade are typically the highest cost producers, which are forced to close in market downturns.

3.3.3 Structure

Structure in the larger companies has been moving to flatter organizations with fewer levels of hierarchy, but traditional values reign supreme. This has changed to reflect value or supply chains that more closely provide end to end profitability controls. More recently, there has been significant re-structuring of major competitor companies to
reflect linear supply chain management from a central location. Support services (human resources, finance, public affairs, and IT) are typically central. This is in part to capture economies of scope and scale, but also to maintain standardized management, reporting and information systems. This may, in part, be an answer to ensure compliance to Generally Accepted Accounting Principles (GAAP), which is widely accepted in the global marketplace, while it is also a cost reduction strategy.

3.3.4 Decision Making

In large organizations where business management is central and focuses on strategic initiatives (customers, product lines, modal selection and suppliers), the manufacturing technology units are able to focus resources and energy toward the tactical execution of the strategy and delivering on commitments made. Autonomy in decision making for the technology groups comes in the form of managing the tactical issues (quality, cost and throughput). The supply chain (up and down) is managed for them. For smaller organizations, there is more latitude in decision making relative to customers, suppliers and products, but this also creates a resource constraint for the reduced level of staffing typically in place.

3.3.5 Manufacturing

The focus in manufacturing is scale operations with optimum throughput, log sorts, ribbon feeding, optimized flow with variable speed, optimized breakdown equipment including chip N Saws, complete with lumber sorter technologies. While scale is achievable in Lumber and panel products, it is more difficult in the manufacture of engineered products. Changes in manufacturing technology have enabled greater
recovery, throughput and mechanical advantages. The majority of companies are focusing on lean manufacturing techniques (labor inputs, cycle times, and work in process) as part of the continuous improvement strategy.

### 3.3.6 Labor

Labor costs are significant in Canada, Europe, and United States and with the changing demographics (retirement of baby boomers), labor will become even scarcer. The pressures of global competition are suppressing wage increases in Canada, with average settlements of 2.5% in 2006, down from previous levels, but continuing a trend of modest increases. Skilled trades-people are in notable short supply at the present date, and it is increasingly more difficult to retain talent within the industry when competitor industries are prepared to pay considerably more in wages, and can offer substantially more growth potential (Oil & Gas, Mining and Construction), or perceived quality of life improvements. Asia and Latin America wages are significantly lower, with fewer labor laws or agreements to content with.

Technology changes focused on labor reduction (Lumber grade optimizers) are gaining popularity and acceptance throughout the industry.

### 3.3.7 Marketing

The market driven strategy was initially introduced in Scandinavian countries where the scarce raw material was not cut until an order was placed. This market driven, pull culture is in direct conflict with a scale operation, push manufacturing environment. Some of the large competitors have moved in this direction. Smaller firms remain
focused on a “push” strategy to maintain their manufacturing cost structure, but inventory
turns are suffering. Marketing groups are focusing on value or delivery propositions and
developing committed sales contracts. With the specialty or engineered products, it is
fairly typical to see sales expertise at industry trade shows or directly linked to customers.

3.3.8 Risk Profile

The wood products industry is largely dependent upon housing starts (in regions where
wood is used as structural frame), interest rates and general economic conditions. The
single largest predictor is the US single and multi-family housing starts. Should this
market drop or falter, the industry as a whole, will suffer. The impacts of the currency
exchange rate compared to the U.S. $, will cause significant issue for any country
wishing to export to the U.S. Government control and regulation have the ability to
constrain investment or provide access or limitations to trade.

3.3.9 Capital Structure

Industry beta rates indicate that companies tend to be more leveraged than conservative
which is consistent with tax calculation benefits. Equity is typically evident in the
smaller, family owned firms, but most large companies are leveraged, or take on more
debt when consolidating or merging.

3.4 Factors Shaping Competitive Strategy

The following table is central to an industry analysis in that each factor discusses all
variables that will impact the industry and will help to capture the trend of the industry
moving forward.
Table 3.6 Factors Shaping Competitive Strategy

<table>
<thead>
<tr>
<th>Threat of New Entrants (Low)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Moderate to high fixed cost</td>
</tr>
<tr>
<td>- Decreasing margins</td>
</tr>
<tr>
<td>- Slow market decline (Housing starts drop from 2.2 to 1.6 million/year)</td>
</tr>
<tr>
<td>- Mergers, acquisitions are creating scope, while introduction of new mills and new technology is creating scale (combining technologies)</td>
</tr>
<tr>
<td>+ High returns on OSB products have prompted new entrants</td>
</tr>
<tr>
<td>- Brand identity with Engineered products</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bargaining Power of Buyers / Suppliers (Medium but Low Long Term)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Raw material is abundant, but region specific</td>
</tr>
<tr>
<td>+/- Labour is expensive in NA, but inexpensive in Latin America and Asia</td>
</tr>
<tr>
<td>+ Skilled tradespeople are difficult to keep in industry</td>
</tr>
<tr>
<td>+ Effective Leadership will migrate based on $, or quality of life improvements</td>
</tr>
<tr>
<td>+ Brokers use commodity based pricing</td>
</tr>
<tr>
<td>+ Transportation shortages</td>
</tr>
<tr>
<td>- Suppliers want committed volumes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rivalry Among Existing Competitors (High – Intense)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Over-supply in market</td>
</tr>
<tr>
<td>+ Focus on Cost Control (being the lowest cost producer)</td>
</tr>
<tr>
<td>+ Raiding of effective leadership skills</td>
</tr>
<tr>
<td>+ Merging, closures</td>
</tr>
<tr>
<td>+ Lumber tariffs, duty fees create</td>
</tr>
<tr>
<td>+ Cannibalization of existing products</td>
</tr>
<tr>
<td>+ Greater versatility / diversity at each site. (portable chippers, cut in two, dipping or drying)</td>
</tr>
<tr>
<td>+ Exit costs are high</td>
</tr>
<tr>
<td>+ Switching costs are low</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Threat of Substitute Product / Service (Medium)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Plastic products (siding)</td>
</tr>
<tr>
<td>+ Steel Studs</td>
</tr>
<tr>
<td>+ Concrete siding (Hardie)</td>
</tr>
<tr>
<td>+ Cannibalization of existing products (beams)</td>
</tr>
<tr>
<td>+ Switching costs are low</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bargaining Power of Customers (High)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Low product cost</td>
</tr>
<tr>
<td>+ High quality specifications</td>
</tr>
<tr>
<td>+ Low switching costs</td>
</tr>
<tr>
<td>- Some brand loyalty</td>
</tr>
<tr>
<td>- Help them reduce their costs / waste, just in time delivery</td>
</tr>
<tr>
<td>+ Large customers allow for greater volume / scale in manufacturing, but have greater bargaining power</td>
</tr>
<tr>
<td>+ Builders want construction services (panelization, prefab)</td>
</tr>
<tr>
<td>+ Builders and end users will create demand and will influence purchasing</td>
</tr>
<tr>
<td>+ Over supply in world market</td>
</tr>
</tbody>
</table>
3.4.1 Rivalry

Rivalry amongst competitors is intense. The vast majority of product is commodity based lumber and/or panel board with an over-supply in the global market place. Focus on being the lowest cost producer is the predominant theme which equates to competition for the lowest cost raw material, leadership skills, technology/equipment, and transportation which ultimately translates into an increased demand for these products/services which serves to drive up the cost.

However, the U.S. Government has effectively limited access to the U.S. industry by virtue of the Softwood Lumber agreement, which serves to reduce rivalry. The framework for the softwood lumber agreement between U.S.A. and Canada will serve as closure notice to Canadian manufacturers that are unable to support the export tax and volume restraints into the U.S.A. without alternative global customers.

Innovations in wood products tend to cannibalize or erode existing products. (i.e. Plywood vs Orient Strand board, or Engineered walls (which equate to fewer pcs per wall) vs #2 & Btr frame construction).

In an effort to obtain scale or scope production, mergers, consolidations and acquisitions are taking place at a rapid pace. The larger firms are getting larger and maximizing their size, capitalizing on economies of scale and scope in product line, marketing, sales, administration and research and development.

Companies are divesting of peripheral interests and focusing on Wood Products, which means greater focus on flexibility in product manipulation to achieve customer satisfaction. (i.e. Cut-in-two capability, dipping, drying, and precision end trimming).
3.4.2 Buyer/Supplier Power

Raw Material Supplier Power is Medium at present, but low in the long term. Raw material fiber shortages are region specific and include North America and Asia. The natural global supply is abundant in Russia, Northern Europe and Latin America. Natural forests have been the primary source of raw material to the tune of ~65%.

Approximately 35% of the world's roundwood supply is from plantations. The trend to increase global roundwood plantations in the southern hemisphere is expected to continue, and will increase to approximately 44% by 2020 which will serve to reduce the dependency on Natural forests, that are experiencing competing demands with conservation and conversions to urban development.

Beetle infestation and insect plights have created an immediate over-supply of harvest timber in Canada and Northern U.S. regions. The harvesting window is very short, which has created a short-term surplus. The 2009 projection of infested timber is greater than 600 million m3, which is three times the annual harvest for Canada. The increased global wood supply will cause firms to exit Canada and the Northern U.S. to re-locate closer to the fiber basket in the long term. Another source of supplier power is with the Transportation available to get product to market. Due to the nature of the product, there are only three main transportation modes; rail, truck or marine. There is a serious shortage of rail cars, and trucks which has increased cost, but has also forced greater utilization of truck miles, backhaul opportunities and logistics management. Labor costs in Canada, Europe and United States are very high. These are largely unionized workers who are under the governance of a contract. Labor in Latin America and the Asian regions is inexpensive in comparison, and consist of individuals that are prepared to work
under adverse conditions. In spite of the threat of closures that are imminent due to high
costs, unionized labor in North America and Europe are not scaling back on demands.
This is exacerbated by the fact that the Oil and Gas Industry is booming, and a shortage
of skilled labor is upon us. The increased pressure for skills includes global pressures for
talent, and the rapid pace of technological change, combined with the aging population.
The median global age is projected to rise by 11 years to 37 while specifically the
average is lower in China at 31.8, and India 24.4, with Pakistan the lowest at 19.4 years.

3.4.3 Buyer Power of Customers

Buyer power of customers is very high for lumber and panel products due to the over-
supply in the global market. It is a little lower for engineered products, as these are
typically branded and are less accessible.

Customers are demonstrating this by elevating their demands for lower cost, increased
quality and just-in-time delivery. There is some brand loyalty for engineered products
but typically, for the majority of products, switching costs are very low which results in
ease of movement. End use customers are able to influence the purchase significantly.
Companies that offer convenience of use, reduced time on the job, reduced waste are
gaining market share by assisting their customers in cost reduction. China is possibly the
largest emerging market, but rather than purchase finished product, they are choosing to
import raw material and manufacture the finished product in China. Japan Housing
Quality Assurance Law is creating a greater demand on kiln-dried, and engineered
products.
3.4.4 Threat of New Entrants

Threat of new entrants is low, but this is due to low profit margins, not due to high entry costs. In fact, Gateway Forest Products recently built a new commodity lumber mill from the ground up for 10% of what it would typically cost to build a new mill at a price of ~$40 to 50 million. Product profit margin is typically a significant driver for new entrants. The pricing forecast for all products is expected to decline, so the threat of new entrants is low due the over supply condition and low profit margins in lumber products.

Table 3.7 Recent Pricing of Products

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td>OSB 7/16&quot;</td>
<td>364</td>
<td>304</td>
</tr>
<tr>
<td>Plywood 1/2&quot;</td>
<td>355</td>
<td>344</td>
</tr>
<tr>
<td>SYP</td>
<td>393</td>
<td>432</td>
</tr>
<tr>
<td>D Fir</td>
<td>366</td>
<td>367</td>
</tr>
</tbody>
</table>

Data source: Random Lengths

For OSB, the threat of entrants has been high and is based on the margins that product has been enjoying. The onset of the new facilities will create an over-supply condition for OSB products. The slow decline in housing starts and wood consumption, combined with lower margins will force higher cost companies out of the business, and the remaining facilities will be low cost producers with significant investment in new technologies.

3.4.5 Threat of Substitute Products

Alternative wood and non-wood products are making inroads at the expense of conventional lumber, but at present they are not significant. Wood exterior walls have declined by approximately 10% over the last 10 year period, being substituted equally by
Concrete and Steel construction. Plastic products, and steel studs are both derived from expensive natural resources which are not considered an economical threat at this time. Should the price of oil and gas, or mining resources decline, then these products are valid threats.

More important is the emerging internal threat of cannibalization and product substitutes. Engineered wood products are being designed to effectively reduce the reliance on lumber studs, as are finger jointed products substituting solid sawn products. Glulam beams are effectively replacing timbers and wide products from solid sawn lumber. And the emergence of the Orient strand board has served to reduce plywood consumption.

3.5 Overall Assessment of the Attractiveness of the Industry, at Present and Evolving

Wood Products is a mature market for North America. Based on the expected decline in the U.S. Housing starts, and deceleration of the U.S. economic growth, anticipate a downturn in U.S. lumber consumption. Wood Products are gaining in popularity in non-traditional regions, but due to raw material supply in Russia and Northern Europe, anticipate that China will be a net importer of raw material rather than finished products. Manufacture of finished products will occur in-country. Expansion of manufacturing into Latin America is evident, due to available raw material, reduced cost of labor, and emerging wood frame market with increased economic growth. The aging demographics coupled with the shortage of urban land, would indicate that the average size of home in U.S. may start to shrink, rather than grow, and may be replaced by a greater number of multi-family units. Rivalry is high and customers have significant power. Mergers and
consolidations will continue to take place, with higher cost producers exiting the market, but adding increased emphasis on those remaining to stay up to date with emerging technologies to address and supply customer needs. A similar trend will hold true for customers in all segments; New Residential (Builders and Integrators), Repair and remodel (Home improvement warehouses), Commercial, Industrial and Export, in that they will experience consolidations and mergers to capitalize on scale and scope of operations. The cycle is vicious, in that this will promote increased demands on manufacturers.

3.6 Summary of key issues firms face in the industry

The obvious issue is an over-supply in the market place, and the ability to retain profit margin, either through product development, or cost control. Firms will need to segregate the business into two separate strategies. The engineered products group has significant potential in a variety of applications. A differentiator strategy should be in place for firms in this arena. End use options of engineered products in U.S.A. could mirror that in Japan or Europe, while the reverse is also true, therefore marketing initiatives to educate customers in non-traditional applications is beneficial. For lumber and panel products which are commodity priced products, the cost control strategy would apply where scale is attainable.

Over the longer term, firms will need to re-locate closer to the raw material source with end to end supply chain management being critical to ensure product is transported to customers on a just-in time basis. Expected labor shortage from 2006 and beyond means that employers will need to focus on improving employment strategies to attract and
retain diverse talent. The labor shortage will also prompt growth in areas of new technology to reduce dependency on labor. The labor shortage will cause concerns for customers, which will translate into demands to suppliers for products that will help them reduce workplace time, and inefficiencies in construction. An industry cluster would work well for this issue. In addition, firms will need to integrate with industries that are also catering to their customer segment. Establish partnerships with energy efficient resources or create alliances to bundle products. An example of this is Home Performance with Energy Star. Bundling products in order to provide a whole house solution that caters to energy cost issues as well as utilization issues. Firms will need to ensure they carry a full product line, (or outsource/partner to ensure full product line availability) with maximum outlets or points of distribution to ensure customer convenience and availability.

Finally, firms need to deliver on what they commit to. They need to be predictable, and innovative, but also be able to demonstrate financial and performance stability. In addition, they will need to stay informed and in touch with customers, and their competition.

The competitive issues for the manufacturing groups stress cost control, efficiency and quality of work. All of these are best suited to a functional organization form, which allows for economies of scale, but does not foster coordination between departments or segments which limits their overall effectiveness. Due to the consolidation and growth in the industry, the functional form is not suitable going forward.
The Divisional structure is better suited to deal with the uncertainties in the market, and allows for swift action and the qualities of innovation. It does not however, allow for economies of scale, which are critical for the size of industry leaders moving forward.

The evolution to a Matrix Form was effective for companies with an internal focus of efficiency and cost control, but also allowed them to react to the customer demands. This form is somewhat limiting as it relies on a balance of both the functional and divisional forms of authority as well as a collaborative approach required to solve issues. This balance is very difficult to manage and the scales are often tipped based on the individual leader style.

As the industry moves forward, it is essential for companies to adopt The Network Form which will allow them to manage the end to end issues in their supply chain. Boundaries between internal and external groups are being blurred with the emphasis on mergers, partnerships and strategic alliances. The emergence of solution selling and bundling are also examples of this. All aspects of the supply chain are subject to uncertainty, and need to be focused on delivering value to members of the supply chain. Interaction, coordination and communication need to be done on a real time basis that is both swift and agile. The emergence of electronic messaging and inter-connectivity to the external environment (customers and vendors) is rapidly becoming an advantage for the first movers. This increased need for rapid coordination is driving for a flatter organization, resulting in decisions being made at the appropriate level and all actions being strategically motivated. The reliance on knowledge versus positional power will prove to energize those that have been overlooked in the past. The informal structure will increase in status as networking will be critical to maintain access to resources. The fluidity of a
network structure will allow companies to be more adaptable to environmental influences.
4 CONFLICTING CULTURAL WORLDVIEWS

4.1 Wexler Wheel

In this chapter we will explore several applications of the Wexler model to recognize various worldviews demonstrated by leaders and groups within the firm. The model portrays four very specific worldviews: Entrepreneurial, Regulatory, Communitarian and Network.

Figure 4.1: Wexler Worldviews

On the vertical axis, both the Entrepreneurial and the Regulatory worldviews represent a style that is more controlling in nature, while the opposite is true for the Communitarian and Network worldviews, demonstrating tendencies toward flexibility. On the horizontal
axis, the Entrepreneurial and Network Worldviews focus on the external environment while the Regulatory and Communitarian Worldviews focus on the internal environment.

While it is not uncommon for individuals to display aspects of more than one Worldview, especially those in a neighboring worldview, it is uncommon for each of the Worldviews to behave consistent with the opposing presentation.

The entrepreneurial stage introduced by Quinn and Cameron, 1993 is represented in the combination of two worldviews presented by Wexler, 2006: the Network Worldview and the Entrepreneurial Worldview. "Knowledge" leaders within the Network Worldview push boundaries and try new options. Typically, they learn by their mistakes and are more willing to make decisions under conditions of uncertainty. The "Buccaneer" leaders within the Entrepreneurial Worldview are largely focused on external factors, the competitive environment and seek to control the source of revenue. They are typically early moves imitating success and learning is action based. "Where individuals deem value in something, they will seek to control it" (Wexler, 2006). The founder of this company epitomized the Entrepreneurial worldview with his actions.

The Regulatory Worldview leader seeks to minimize errors by following disciplined, rule-based procedures. For the most part, individuals focused on maintaining the family business and controlling the systems would be viewed as Regulatory Worldview leadership, in that they were focused on the "built to last" story.

Although there were pockets of flexibility in the form of research and development and participative problem solving, the driving force of the organization see-sawed between the two worldviews; Entrepreneurial and Regulatory.
Leaders of each business typically personify the Entrepreneurial Worldview in that they are focused on maximizing profit for their part of the business, which was evident in the issues resulting from conflicting performance measures.

Interestingly, the individuals that report to business leads in manufacturing or technologies are typically individuals that hold the Regulatory Worldview. They are focused on reliability improvements, risk aversion and reducing costs.

The leaders of the central functions are typically those that deal with a variety of businesses, and the myriad of reporting systems. Focusing on standardized systems allows these individuals to compare and contrast data much more readily. As a result, central functions (finance, information technology and human resources) typically hold the respective worldviews of Regulatory, Network or Communitarian.

The finance leaders are concerned with maintaining strict adherence to financial rules. With the application of generally accepted accounting principles/rules, and the emergence of Sarbanes Oxley financial rules, companies are forced to standardize and maintain consistency and controls over business processes. This served to bolster the power of the “Bureaucratic” leader of the Regulatory Worldview, which resulted in even more structure.

The human resource group is also focused on internal controls relating to pay and reward structures, benefits and performance management guidelines. They are motivated by reasons of fairness and cooperation with each business, but typically modify their approach with each new entrant. These are expressed in policies and procedures which are applied to each of the businesses, but to varying degrees across the business.
Rapid expansion and diversification, technology changes and global competition created change in all aspects of the company. Economies of scale drove the need for greater centralized purchasing and standardized services, providing credibility and control to the leaders holding the Regulatory Worldview.

The company had a division responsible for research and development. This division was relatively small and not aligned with any particular business or end-use customer. They were given the latitude to come up with new ideas, but then were restricted by extended analysis and the bureaucracy of the process to achieve capital effectiveness put in place by the leaders with a more Regulatory Worldview. Technology came in the form of innovative solutions provided by external sources, but often the analysis and approval process was lengthy, which meant that installation was often too late to capture the early mover benefit. The Network Worldview is in direct conflict with the Regulatory Worldview in that the network view thrives on change, in fact, actively seeks it, while the Regulatory Worldview is risk adverse and prone to paralysis by analysis.

The “Participative” leader (Communitarian Worldview) represented a win-win solution which is a polarized view of that of a “Buccaneer” leader (Entrepreneurial Worldview) where a distinct winner emerges. The leaders of the Regulatory Worldview were expressing concerns that there was no process, no plan and no accountability with the participative leadership style.

An observation that is very typical of leaders operating in the Regulatory Worldview is that the greater the structure, the more control leaders have.
The market culture is dominating the current period, which could also be considered a clash between the worldviews of the Regulatory versus the Entrepreneurial worldviews.

4.1 Basic Model

Change means different things, depending on the context. This company is very large, and has a history of being both bureaucratic and controlling. In addition, the description of role hierarchy and vertical integration lead to a conclusion that there are not many voices involved in making key decisions. The company is operating with a Regulatory Worldview that is tempered with an Entrepreneurial Worldview, in that money talks.

The revenue stream (margin) for engineered products has recently surpassed that of the lumber division which places the entrepreneurial group in a position of positional power relative to the other products. Recent pressures from the investment community and shareholders have shifted the focus from system maintenance to that of competition. The leaders are experimenting with their own creative destruction when defining the new look of the company, but are also investing in an ERP system that imposes structure. When an investment in structure is made, a slowdown is inevitable. Initiating this change during the down cycle of the market takes advantage of a decrease in production levels.

4.1.2 Stories

Over the years, the style of leadership has moved from family, to family members and then to external leadership with strong ties to the financial community. Operating in the Regulatory Worldview, the original leadership would be categorized as bureaucratic leaders focusing on process, stability and loyalty. Recently, the leadership style has evolved to that of a Buccaneer as in the Entrepreneurial Worldview, where people are
considered resources and the organization is just an investment. This may be a short term perspective given the recent decline in the market.

The push toward cross-functional improvement teams and linking systems internally would indicate that the internal direction is to maintain the structure and systems, but to do so in an environment that is faster to react than typically evidenced in a larger firm.

Lack of capital funding and investment in manufacturing technology would indicate the opposite is true. Funding for product innovation and streamlining businesses suggest that competition is fierce and that the struggle in the market is continuous. Once again, the functional imperatives would suggest that the business remains in the Regulatory Worldview, but is moving in the direction of an Entrepreneurial Worldview.

4.1.3 Basic Plot Structures

On the continuum of Control versus Flexibility, the instrumental leaders in this company are clearly control oriented, but it is much more difficult to assess the placement of leadership on the continuum of Maintenance Systems (Inward), closely linked to the Bureaucratic Leader versus the Competition (Outward) which is closely linked to the Buccaneer Leader. The quest for greater achievement and reliability are clearly evident as is the struggle for wealth, power and control. Therefore, based on the external influences at work pressing the need to achieve greater returns, and the ethical values of the company expressed by the leaders, the basic plot structure of the instrumental leaders is that of the Regulatory Worldview in that the leaders are concerned for the longer term viability of the business.
4.1.4 "The Good" Leadership Positions

In the Regulatory Worldview, the leaders are the trusted creators of the system. They are focused on process and reliability and they are also seeking loyalty in their workers. The job comes before the person and people are replaceable – at a cost. This worldview was overlaid by that of a Participative Worldview in the early 1990's, where leaders were encouraged to seek input, and develop teams from within, and create a cooperative working environment. Asking the Regulatory worldview leaders to move in this direction was tantamount to a wolf in sheep’s clothing.

The leaders were not replaced, and the working environment remained that of a stable system working to reduce bottlenecks and mistakes. By merely asking leaders to lead differently, the initiative was set up for failure. Individuals did not know how to think for themselves in the new environment, and in fact were rewarded in the past for maintaining the status quo.

Care must be taken when educating and recruiting to ensure leaders understand the goals, measurements and values of the new culture and that they seek to understand, respect and draw upon the differences expressed from other Worldviews.

4.1.5 Leadership Stories: Genre

For individuals working in a Regulatory Worldview environment, work is continuous, sometimes monotonous and change involves changing the rules on paper. Change is often viewed as a disturbance or inconvenience and individuals are reluctant to change without good reason. Often “good reason” is based on the perception of the individual. Not making mistakes is valued. This is consistent with the original genre of the Wood
Products business but inconsistent with the Communitarian Worldview, or that of a Participative Leader of the newest genre where the work environment is highly responsive and mistakes are considered learning experiences. This begs the question; can a leopard change its spots?

4.1.6 Four Organizational Cultures

The over-arching culture operating within the manufacturing divisions of the Wood Products business reflect that of an administrative organization. The structure remains hierarchal, with positions that precede people, but the culture within the Sales and Marketing functions closely mirror that of the Entrepreneurial Worldview in that they are seeking players that can sell strategically and produce results. There are pockets of Participative leaders or clan cultures, but the basic values of this group are not valued by control-seeking Regulatory Worldview leaders.

4.1.7 The Kaleidoscope of Time: The Four Leadership Stories

The very small segment of leaders in Research and Development demonstrate interest in both evaluating the past and exploring for future designs while the Sales and Marketing groups are clearly in the present, in that their interests lie in maximizing profits and making the sales. The Manufacturing and Logging units are data driven and focused on making rational decisions that are process related and the Forestry group is more interested in a co-operative existence with renewable resources being the key. All four frames are represented in the perspective of time and outlook, and each provides value given their individual perspective.
4.1.8 Accountability in Different Management Stories

Performance Measures are heavily skewed toward meeting Demand Forecasting or Supply Commitments. They are measures that were agreed to by the leadership team, with performance levels that were defined by industry standards (ABCD Checklist, Wight, 2000). The definition includes what was to be measured, followed by stringent rules around how to measure and precisely how to report against the tolerances provided. “Do what you said you would do!” Standard operating practices are in place and are expected to be followed. The step that is missing is defining what action to take if the measured performance falls below or is beyond the specific tolerance.

These measures are very consistent with the views held by Regulatory Worldview leaders and are markedly different that those of an Entrepreneurial Worldview where market accountability and money management are key.

4.1.9 Creativity

This is one of the cornerstones of the new organizational structure. Interestingly, the Regulatory Worldview organization facilitates critical thinking (data rational) versus creative thinking (brainstorming) in that, individuals must work within the existing system’s rationality to solve problems or generate ideas. This is in direct conflict with the Entrepreneurial Worldview concept of early movers being rewarded and thinking outside of the box.

The new organization has put an “Innovators” program in place, where an issue is presented and individuals are invited to try to resolve the issue. The reward system is based on cash value for a specific number of points an individual amasses. Points are
distributed for the original idea, and if individuals work to support or build on it, they are also provided points.

It is interesting to realize that the issue to be solved is controlled, which is consistent with the Regulatory Worldview, while the concept of building on the ideas of others is clearly in the Entrepreneurial Worldview. The Entrepreneurial Worldview is present if the proposed solution generates income. “While gathering information, entrepreneurs can also be “planting seeds” – leaving the kernel of an idea behind and letting it germinate and blossom so that it begins to float around the system from many sources other than the originator” (Kantor, 1983).

4.2 Summary of Issues

The organization has experienced a tremendous amount of change in the last few years. Not all of the change was planned which has been viewed as a negative experience by many, as the majority of individuals in the business operate in a personal Regulatory Worldview.

Within each business was a combination of legacy operations and manufacturing units that had either merged with or had been the result of an acquisition from various competitor firms. Each merger or acquisition brought with it its own culture and identity, and depending on the receptivity and style of the leader, the strongest culture emerged. Refer to the table 2.1 regarding Varying Cultures to view the differences.

In some cases, the cultures would compliment the existing organization, but often the cultures would clash due to differing views held by the respective leaders. The perceived
differences, skill set or personal egos would drive the behavior of the rest of the team. Competition and disparate values would serve to undermine their ability to focus on the goals of the organization.

Although the current leader is entrepreneurial in style, the principles of a bureaucratic structure are all present in the new organization and are governed by an internal continuous improvement process. The minimal presence of the Network Worldview in the new organization should be cause for concern as it relates to the generation of new ideas, new products and renewal of the business. The presence of all Worldviews is essential to maintain a balanced approach to enable business growth and the infrastructure required to maintain the health of the organization.

The emphasis on the need for better coordination and communication between departments, segments and individuals, regardless of their individual worldview perspective is critical to ensure successful delivery of all aspects of the value proposition. This will serve to bolster the need for greater structure and reliance on systems.
5 CHANGE STRATEGIES

5.1 The Need for MORE Change

As expressed in Chapter Three, moving to an Organizational Network structure allows
the company to respond to environmental impacts in an innovative, proactive, and
managed manner.

Re-structuring the business based on the recent changes reflects a Network structure and
is supportive of a market driven supply chain. This was only the first wave of change
required, but it was an essential first step to integrate the business to answer the challenge
of becoming nimble and agile. The explanation of the new organization, the structure
and the interdependencies need to be understood by all members in the organization so
that they are able to share customer related data and impacts very quickly. A nimble
organization uses information and makes decisions in real time, and does not have the
luxury of waiting for data.

Real time coordination and integration are essential components of a Network
Organization form which is answered, in part, by an enterprise resource system. In this
chapter we will explore aspects of an ERP system and elements of integration and
communication in relation to the central concepts as well as explore the changes required
to prepare this organization for the next life cycle.
5.1.1 Enterprise Resource Planning

This project will explore what an ERP system is, identify the pitfalls, as well as evaluate an ERP system with the central concepts of an Organization Structure (Nohria, 1991).

An ERP (Enterprise Resource Planning) system is in essence, an integrative mechanism, connecting diverse departments through a shared database and compatible software modules. It is impossible to get the full benefits of an ERP system without having integrated processes (Hammer and Stanton, 1999).

Davenport, 1998, presents that the heart of an enterprise system is the central database, drawing data and feeding data into a series of application software modules which support a diverse number of company processes. It is the use of a single database that dramatically stream-lines the flow of information through a business.

ERP systems work in real time and are continuously updating data to provide users with the latest information. The “real time” information to connect business areas to one-another, such as sales and production planning are essentially what is needed in this company. They are global systems that are capable of overcoming language and monetary exchange barriers and are highly compatible with e-commerce and e-communications.

The benefits associated with an ERP system, as expressed by Gowigati, Benoit, Grenier, Benoit, are many:

- Clerical efficiency & effectiveness
- Reductions in overhead costs
- Timely, accurate and consistent information to manage the business
- Resources aligned to business functions as we know them
• Seamless integration of all information flowing through a company
• Reduced cost of maintaining legacy systems
• When new data is entered, related information is automatically updated
• The system performs the transactions
• Able to use internet technologies

The enterprise systems bring cross-functional business processes to the forefront and allow information to be shared horizontally, between functions and business units; and vertically, from the front-line to the strategic levels:

• The ERP – enabled business processes and data are standardized and normalized.
• Organizational boundaries dissolve
• Independent business units are integrated
• Jobs broaden via expanded information access
• Jobs are redefined and new jobs are created
• The availability of information brings more empowerment to the front line constituencies in that people closer to the work are making decisions. The rigidity of the standardized system may create frustration in terms of what data is to be collected.

The change to a single enterprise resource planning system is the second wave of change required. By virtue of changing the organization with ERP in mind, the company has minimized the extent to which the organization needs to be further adjusted to fit the ERP system versus the extent to which the ERP system can be adjusted to fit the organization (Van Stijn and Wensley, 2001).

There are essentially two sources of user resistance: Perceived Risk – Can I do this? or Habit. “Inertia translates to reinvention” (Sheth, 1981). Users choose to use technology to preserve the status quo (e.g., they still use paper as opposed to using the Network system of ERP). Re-invention lets them use ERP despite their limited user knowledge
and problems with technology (e.g., they use cheat sheets to enable them to perform tasks).

The user resistance needs to be dealt with proactively rather than reactively by top management. Top management needs to analyze the sources of resistance and create plans to overcome them.

Resistance can come from concerns like computer literacy, pride (technology replacing work), job security and change in job scope, fear of being able to perform in the new environment, giving up power and authority.

An enterprise system imposes its own logic on a company’s strategy, organization and culture. It pushes companies toward generic processes, even when customized approaches may be a competitive advantage. This is very consistent with a Regulatory Worldview in that the structure itself is extremely rigid. It also holds true that the implementation of an ERP system will initially draw on resources and reduce productivity rather than enhance it.

There are many examples of sad stories and implementation failures.
Table 5.1: Examples of Implementation Failures:

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fox Meyer Drug</td>
<td>$5 billion pharmaceutical company recently filed for bankruptcy. (Al-Mashari and Aairi 2000), Chen 2001</td>
</tr>
<tr>
<td>Dell Computer</td>
<td>System was too rigid for their expanding global operations (Trunick 1999)</td>
</tr>
<tr>
<td>Applied Materials</td>
<td>Overwhelmed by organization changes (Davenport, 1998)</td>
</tr>
<tr>
<td>Mobil Equipment</td>
<td>Abandoned after hundreds of millions spent. (Davenport, 1998)</td>
</tr>
<tr>
<td>Dow Chemicals</td>
<td>7 yrs, half billion dollars on mainframe-based enterprise (SAP R/2), now starting over on client-server version (SAP R/3) (Davenport, 1998)</td>
</tr>
<tr>
<td>Hewlett Packard</td>
<td>Tried to replace 250 systems. Loss of $110 Million in 3 years versus a planned return on investment of 35%. (Songini, 2005)</td>
</tr>
<tr>
<td>Hershey</td>
<td>19% drop in 3rd quarter profits and 29% increase in inventory. “Hershey foods missed shipping their products during Halloween season in 1999.” (Grossman, &amp; Walsh, 2004 and Millman 2004)</td>
</tr>
</tbody>
</table>

While it is important to understand the failures, it is also important to understand the benefits and success stories. Only 15% of the ERP stories reach the “success” category, but the benefits are very impressive. In a demand driven environment where customer satisfaction measures trump production, the examples of benefits closely relate to those satisfaction measures.
Table 5.2: Examples of Successes

<table>
<thead>
<tr>
<th>Organization</th>
<th>Successes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autodesk</td>
<td>Ships 98% of orders within 24 hours (Davenport, 1998)</td>
</tr>
<tr>
<td>IBM’s Storage System</td>
<td>Re-pricing products from 5 days to 5 minutes; Ship replacement parts 22 days to 3 days; Credit check from 20 minutes to 3 seconds. (Davenport, 1998)</td>
</tr>
<tr>
<td>Fujitsu Microelectronics</td>
<td>Reduced cycle time to fill orders 18 days to 1.5 days; Close financial books – 8 days to 4 days. (Davenport, 1998)</td>
</tr>
<tr>
<td>Bombardier</td>
<td>Pursued a business transformation – spent time on management change framework focusing on change leadership, organization alignment, deployment readiness and communication. (Gowigati, Benoit, Grenier, Benoit, 2001)</td>
</tr>
<tr>
<td>Pratt &amp; Whitney</td>
<td>Top Management involvement, redesigned the organization, clear measurement system established. (Tchokoque, Bareil, Duguay, 2005)</td>
</tr>
</tbody>
</table>

5.2 Evaluation of ERP and Central Concepts of Organizational Structures

Table 5.3 (below) is an adaptation of the Central Concepts and Basic Forms of Organizations as presented by Nohria and was created to evaluate how an ERP system might fit into the central concepts of organizational structure (Nohria, 1991).

This table does not suggest that ERP is a form of itself, but rather intended to discuss the seven central concepts in relation to ERP.
Table 5.3: Comparison of Central Concepts of Organizational Structures

<table>
<thead>
<tr>
<th></th>
<th>ERP</th>
<th>Functional</th>
<th>Divisional</th>
<th>Matrix</th>
<th>Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division of Labour</td>
<td>Process driven</td>
<td>Function driven</td>
<td>Region / Product driven</td>
<td>Inputs / Outputs</td>
<td>Knowledge</td>
</tr>
<tr>
<td>Coordination</td>
<td>Cross functional</td>
<td>Hierarchal</td>
<td>Division GM &amp; Staff</td>
<td>Dual Reporting</td>
<td>Cross Functional Teams</td>
</tr>
<tr>
<td>Decision Rights</td>
<td>Well defined,</td>
<td>Highly Centralized</td>
<td>Strategy and Execution are separation</td>
<td>Shared</td>
<td>Highly Centralized</td>
</tr>
<tr>
<td>Boundaries</td>
<td>Well defined with</td>
<td>Core / periphery</td>
<td>Internal / external markets</td>
<td>Multiple interfaces</td>
<td>Porous &amp; changing</td>
</tr>
<tr>
<td></td>
<td>external environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>while internal are</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>defined with multiple</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>interface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance of</td>
<td>High in influence ERP</td>
<td>Low</td>
<td>Modest</td>
<td>Considerable</td>
<td>High</td>
</tr>
<tr>
<td>Informal Structure</td>
<td>ignores this</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Politics</td>
<td>ERP does not formally recognize</td>
<td>Interfunctional</td>
<td>Corporate division &amp; Inter-divisions</td>
<td>Along matrix dimensions</td>
<td>Shifting coalitions</td>
</tr>
<tr>
<td>Basis of Authority</td>
<td>Basis of authority is process driven</td>
<td>Positional &amp; functional expertise</td>
<td>General Management responsibility &amp; resources</td>
<td>Negotiating skills &amp; Resources</td>
<td>Knowledge &amp; Resources</td>
</tr>
</tbody>
</table>

Data source: Adapted from Nitin Nohria, 1991

5.2.1 Division of Labor

ERP is organized around business processes, which cut across business functions and divisions (Hammer and Stanton, 1999).

The implications are that the division of labor and job scope could look very different (Markus, Tanis, and van Fenema, 2000).

Issue is with “user resistance”, which management needs to analyze and implement plans to overcome (Sheth, 1981). This could result in unpleasantness, because it threatens individual’s positional authority and comfort zones. Hammer sites that one of the biggest sources of user resistance is from top management. It is rarely line workers who impede the transformation. Once they see their jobs will become broader and more interesting,
they are generally eager to get on board. Rather, the biggest source of resistance is usually with senior functional executives, division heads, and other members of the top management team. Those senior executives will often either resent what they see as a loss of autonomy and power or be uncomfortable with the new, collaborative managerial style. If allowed, their resistance will permeate the remainder of the organization and accelerate downfall in implementation. It is not uncommon to have one quarter or even one half of the senior team leave during changeover.

5.2.2 Coordination Mechanisms

Cross functional coordination increases. Participants in any given process may originate from a variety of areas or functions.

There is an increased level of formality in the rules, procedures and data standardization. In other words, the system is much more inflexible, the rules are such that you cannot proceed without following the rules, which is consistent with the Regulatory Worldview. Integration is more difficult if issues are exceptional versus routine and if the knowledge is not easily codified. The result is an add-on known as customized software which limits automatic upgrading. This issue may be mitigated with maximum user input in the process design stage.

5.2.3 Distribution of Decision Rights

Distribution of Decision Rights is well defined. Power shifts from functional head to the process manager. Decision rights are being dissolved and power is being transferred. This results in conflict due to conflicting measurements and goals. Typically, individuals
are forced to relinquish authority. This creates losers and winners in the change. To support coordinated decision making, information needs to flow vertically and horizontally. More significantly, it needs to flow to the individuals who have the best information to make decisions, and those who have goal congruent performance measurements.

5.2.4 Organizational Boundaries

Boundaries are well defined with the external environment while internal boundaries are defined with multiple interfacing. The implications are that information is readily available and accessible, which eases decision making. This equates to reduced face to face interaction and potentially inflexible to changes in environment. In other words, you are locked into the system. To overcome these issues, processes should be designed to be flexible enough to accommodate a changing environment. Establish a core concept of common information shared by everyone but permit other information, (for example, on customers) to be collected, stored and controlled locally (Davenport, 1998).

5.2.5 The Informal Structure

The Informal Structure is of high importance to the Process Manager. The implications are that of informal influence and getting things done by persuasion versus formal authority. Concern is with individuals circumventing the processes, so process owners require critical influencing skills (Hammer and Stanton, 1999).
5.2.6 The Political Structure

ERP does not recognize the political structure. The implication is that political lines will be blurred, and that interpersonal relationships will be of greater importance.

Groups or individuals with incompatible or opposing interests engaging in political activity (using information technology), could be circumventing the process (Robey and Boudreau, 1999).

5.2.7 Legitimate Basis of Authority

ERP is well defined in terms of access and formal authority. This means that individuals are provided access based on their role, position and mapped segregation of duties. Power and authority are at stake when expert authority and others that are granted legitimacy based on knowledge are ignored by individuals of positional power (Hultman, 1979).

Here it is critical to have individuals with positional power lead the change effort.

5.3 Organizational Form

ERP has the best fit with the Matrix Structure from a regulatory and rule driven perspective. But the Network organization structure is reliant upon an integrated system—and it is imperative that boundaries between the organization and the customers and vendors are blurred.
5.3.1 ERP and Organizational Fit

ERP is a costly undertaking that requires strategic justification such as “one face to the customer,” lower costs and increased market share. Its successful implementation depends on strategy and task execution and can significantly enhance or even provide process structure as well as integrated communication methods. In order to avoid becoming one of the sad stories as noted above, it will require a mindset that is open to change and new ways of doing business. Individuals at all levels will need to understand, and support the deployment timelines and activities.

On the flip side, organizational memory and culture are not factors that the ERP recognizes. It is essentially this gap that needs to be addressed in the recommendations moving forward, with absolute commitment from top management.

5.4 Change Strategies

This company is large and old, and the challenge is to become agile and innovative. The company has demonstrated a very effective ability to “adapt” to changing situations. The new direction is asking the leaders to tap into their innovator skills, and not merely adapt to the new environment, but become the “disturbers of the system” (Cheese, 2004).

Managing this vast business requires policies, rules, procedures and roles. This requires the presence of the Regulatory Worldview. In an effort to capture economies of scale and replication of best practices, the corporate group has identified “one-company” approaches to support services, capital investment criteria and reporting processes. The corporate controls, policies and practices are created with some consideration for business specific issues, but largely based on a “one size fits all” recommendation.
Consequently, they are not always fully understood or supported. Implementation is expected with existing or fewer resources. “Headquarters wants tighter oversight while divisional managers try to evade corporate controls” (Bolman & Deal, 1997).

The business has clearly adopted a “shamrock” organization form with three clusters of people: the core group of managers, the skilled workforce and contract workers (Handy, 1993 as quoted in Bolman & Deal, 1997). The leadership members lead their departments and manage their day to day work, complete with influences from all of the support services. Rather than feel empowered they feel overworked and that change is far too rapid (Bolman & Deal, 1997).

Some years ago the industry may have been viewed as a stable, mature business, but the current environment is very uncertain. This uncertainly, impacts of globalization, and shareholder expectations are just some of the issues begging for processes and integration. The business has responded, and has developed processes as expected, but has not added human capacity to execute. The opposite is also true. There are so many people tangled up in red tape, that creativity is being suffocated.

Most people are overloaded either through the sheer volume of work or by their work habits. Some individuals lack creativity while others view the structure as inflexible and some have a preference to work outside of the expectations. They are all operating within their own Worldview.

The leadership team displays emotional intelligence in the form of self-awareness. They display a sense of humor and acknowledge personal limitations. They are self-regulating, being both honest and open to change as well as self-motivating. The group is extremely
achievement oriented, and optimistic in the face of adversity. Although this group recognizes the issues, there is still a tendency to focus on getting business results at the expense of empathy toward people and the change they are experiencing.

One of the cornerstones for success is that change is led by a committed leadership team. Based on statistics provided by The Diagonal Group, 11% of failures are due to lack of leadership commitment, 21% to cultural barriers, 23% to obstruction of middle management and 37% due to failure to achieve employee commitment. The following list is of the top ten factors for a project success or lack of equate to failure (Standish Group, and Whittle, 2006).

1. User involvement
2. Executive management support
3. Clear statement of requirements
4. Proper planning
5. Realistic Expectations
6. Smaller project milestones
7. Competent staff
8. Ownership
9. Clear vision and objectives
10. Focused, hard working staff

To manage against failure, Whittle suggests the use of stakeholder mapping. Managing the dynamics of change includes knowing who has the power, using it, addressing resistance, provide a base for change and engage people at the appropriate level. It also includes managing expectations in terms of addressing what the individuals expect of you, and what you can expect from the individual.
5.4.1 The Type of Change Required

The type of change is both transitional and transformational, in that the structure has changed, the business processes have been redefined, and the technology is changing, but it also requires a significant change in behavior and culture.

The fundamental reason for change of the business strategy is survival in an over-supplied industry. Customers are the driving force behind the technological change as well. There are many options available to customers and in order to retain the market share, the company has to obtain visibility into end to end transactions to enable oversight and just in time management.

The business practices are new, as is the technology, but they are based on benchmark applications and proven methodology. The risk lies with the business strategy and the mindset of leaders required to successfully execute against it. Continuous evolution and improvement of processes is not only required, but essential in re-creating the workplace.

The recent organization change and handling of it are similar to that recommended by William Bridges in his 3 Phase approach to change.

**Phase 1**

**Ending**

Bridges posits that it is essential people understand the business as they know it, is coming to an end. This theory is supported in an article written by Linder around leadership imperatives. "The leader’s role is to ensure that people in the organization recognize that the old ways have come to a stop. The reason for stopping must be compelling and proximate so the employees have no doubt that the results are worth the effort." (Linder, 2004).
The "ending" of the prior organization was celebrated in a company wide forum which included all leaders in the Wood Products organization. Divisions and leaders were acknowledged for their prior contributions and were publicly lauded for their assistance in creating the future direction.

**Phase 2**

**Neutral Zone**

The announcement of the new organization leads were made, complete with a description of the sales and operations process steps. Working teams were announced at the same time, with provisions to add a few leaders to participate in the review process and/or contribute as a team member to establish the new business practices. Timelines were provided, and all leads were advised that the review process would end on a specific time period, and the new practices would be introduced and tested, refined and redesigned over a four month time frame. At completion of the four month period, the processes were put in place, and are continually reviewed on a monthly basis, and refined if necessary.

A transition team was put in place with members located in every location across the organization. Weekly and then monthly communication calls were put in place to highlight issues. Immediate feedback was provided and the transition leads disbanded after six months. This is also consistent with a Network environment in that
clusters come together to solve issues and then disband when the usefulness has expired.

**Phase 3**

**New Beginning**

The new start was established as the first day of January when the process was deemed appropriate enough to apply in a formal way. The actual beginning was the day the working teams started to create the new processes and procedures. Communicating the new beginning occurred when the processes were revealed in a face to face meeting with each region that included a description of how the change would affect them.

The concern with this approach was that the systems were still being refined, and the Sales and Marketing divisions had moved on to the next customer. This is very consistent with their Entrepreneurial Worldview.

### 5.4.2 Education

Bridges recommended approach moving into the software technology change is a combination of the Rational Empirical and the Normative-Re-educative Approaches. These approaches need to be balanced with observations from Schien and Kotter.

**Rational Empirical**

The Rational Empirical approach is persuasive in nature and provides individuals with clarity of leadership vision, the derived benefits versus cost, the reason for change and the plan to achieve the future state.
Bridges model is fairly consistent with the above approach, but includes a fourth element a) the purpose behind the change, b) a picture of how the new organization will look and feel, c) a step by step plan of how to get there and d) a part to play in the outcome.

Schein cautions that when creating the motivation to change, communication must be credible and compelling, but too much urgency can create a sense of panic and hope dissipates. Kotter agrees that a sense of urgency must be established, but there is also error in not establishing a great enough sense of urgency. Caution must be exercised to obtain the correct balance.

**Normative Reeducation**
The normative reeducation approach can help people understand their resistance, acknowledge the reason, and then seek their assistance in overcoming it. Schein recommends that positive role models be put in place, reduce learning anxiety, and provide formal training (Schein, 2004).

### 5.4.3 Test the assumption of committed leadership.

Based on the Standish report, 11% of all projects fail due to Lack of Leadership Commitment and a further 23% fail due to obstruction of middle management (Whittle, 2006). An understanding of what this commitment requires and what it means to every Worldview needs to be clear. Individuals also need to understand the different views of individuals and not only respect their paradigm, value it.
5.5  Recommended approach to Change Management

Incorporate the Three Phase model presented by Bridges in preparing employees for change. This change management approach applies to the business practices as well as the software implementation. Both aspects of the change will be deployed in four stages across the enterprise, and it is important to introduce the change to those units affected in each deployment stage on a just in time basis.

In addition to the Three Phase model, institute a change process which includes the following elements:

5.5.1  Prepare the Leaders

Equip the leaders with tools and skills to accelerate implementation and capture the business benefits of the investment. They are also experiencing a change (Champlin, 2006).

Key Topics:

- How to lead business process transformation: The changing role of process owners and business leaders.
- How to manage trade-offs between process standardization and variation-customization
- Business and enterprise team assessments: Key obstacles & barriers to accelerating change.
- Personal leadership action planning: Define what it will take to accelerate implementation
- Follow up.

Some leaders do not have the skill or ability to recognize or deal with toxic emotions and often create them themselves (Frost, 2004). The leadership group needs to be able to recognize and manage toxic signs in the workplace: Intention (Malice); Incompetence
(Weak or Inadequate skills); Infidelity (betrayal); Insensitivity (Emotionally unintelligent), Intrusion (Unhealthy balance); Institutional forces (Corporate agendas); and Inevitability.

This step includes their role in helping employees understand what the change will mean to them. They also need to acknowledge that individuals are learning, and that there may be a drop in performance before individuals feel comfortable and competent.

5.5.2 Assess for Corporate Readiness.

The individuals in the organization have expressed dissatisfaction with the status quo. They are burdened with work, and are seeking a way out. Re-defining roles during this change is opportune, but it is imperative that resources are evaluated and skills for new roles are understood. Challenge the human potential to ensure there is enough bandwidth in the organization to implement the change.

Remove any competing initiatives or distractions. This will serve to focus the attention of the individuals, and give them a sense of control over their workload.

It is also important to understand what would constitute a failure. Leaders need to know when to pull away from the project if it is not going as expected. Periodic assessments should be put in place to avoid both project escalation and de-escalation issues (Keil and Robey, 1999).
5.5.3 Generate Commitment

Provide individuals with an opportunity to recognize their own learning style, and build-in tolerances for acceptance. Using Kolb’s Model of Experiential learning as an example; provide a trial and error period for the individuals who require concrete experience. Once the individuals feel it is safe, involve them in training the individuals who require reflection; allow time for the individual to reflect and analyze if a reflective observation is important; provide examples of current practices that are similar to establish a logical pattern for the theorist, or help him identify a pattern, and give the pragmatist benchmark information and practical experience to establish tried and true methodology. Help the individual understand the goal and they may establish their own best practice.

5.5.4 Communicate and Coordinate Information and People

Coordinate and communicate the activities so that all parties understand the events, timelines and expectations. This should be complete with progress reports and changes.

5.5.5 Choose the First Site for Implementation with Care

Ensure leaders are committed, the site is ready, and equipment is in place. Choose a site that will be capable of establishing itself as a winner. Plan and design the deployment and change required.
5.5.6 Support the Change - Challenge the prevailing organizational wisdom

Create “power knowledge” environments where individuals performing the work are educating others learning the new task or process.

Utilize the innovators site to pose issues or concerns and have others within the organization address the concern.

5.5.7 Monitor Progress - Establish a Recognition System

The system should be robust enough to provide rewards throughout the project. Concern that individual participation or commitment will wane mid project are real. Enthusiasm for expected results and acknowledgement of efforts is key to success. A contingency plan should be put in place to replace leaders in the middle of the project if their participation or enthusiasm wanes. Recognize small victories. This serves to reinforce as well as to “refreeze” the new state (Schein, 2004). Kotter cautions not to declare victory too soon, but to consolidate improvements and provide still more change. This is equivalent to re-freezing.

Specifically, the next step is to arrange a group meeting with the regional and unit managers to review the vision of the future state and the expected changes. The objective of the meeting will be to review the costs and benefits, activities and timeline of the expected change, understand the risks and create a plan to remove the barriers or mitigate the risks. The participants should not only identify the risks associated with the change, but should be instrumental in developing the action plan for improvement. Conduct a
readiness assessment with the participants, and collectively identify the gap and put together an action plan to eliminate the gap. The readiness assessment needs to include items that question their understanding of the change, and their commitment to success.

If there are leaders that are not proponing the new direction, then further understanding may be required. However, if leaders do not accept the new direction, then they will become barriers to success and will need to be quickly identified and removed.

Generating commitment starts with the leadership group. These individuals need to cascade the information in such a manner that they also generate commitment. An action plan needs to be created to communicate to the next level in the organization and so on, but also to capture concerns, feedback and improvement opportunities.

Deployment sites should be chosen on the basis of readiness criteria. The site readiness assessment needs to include an evaluation of leadership commitment, necessary hardware or software, and the receptivity of staff and employees to learn new processes and accept the changes.

Deployment timeline and activities need to be understood and accepted by the receiving unit. This includes success factors and recognition.

## 5.6 Conclusion

If you don't like something change it; if you can't change it, change the way you think about it (Mary Engelbreit).

Change is occurring every day in all aspects of the Wood Products segment. There are ample signals that the industry is in trouble and a new organization form has to emerge.
The senior leaders demonstrated the fortitude to look internally and identify the malaise that exists. They have instituted changes that are far reaching and irreversible in order to sustain a future for the company (Senge, 1990).

The new company logo and trinkets do not compensate for the loss that individuals feel when the individual next to them no longer has a place in the company. Change is much deeper than a re-organization or software install would imply, but an individual’s acceptance of change provides for resilience.

Fear of the unknown attacks the very heart of our comfort zone, whether it affects our perception of self and business, knowledge and skill requirements, economics or status loss, involves risk or a disruption of social relationships.

Some individuals thrive on change, chaos even, while others just want to bury their head in the old way of doing things. In fact, it is acceptance of the ideas of others that create the desire to venture out and try something new on your own. Change begets change.

No matter what your Worldview, acceptance is only a matter of demonstrating resilience and creating change within. This thesis can be viewed either as a glimpse into the experiences of change, or the changes of experience.
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