Integrating Systems & Processes to Maximize Growth & Profitability in the Paperboard Packaging Industry

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EXECUTIVE SUMMARY

The packaging industry is facing a myriad of challenges today that is virtually unprecedented in recent times:

- A mature market with very limited growth (1-2% annually)
- Shrinking margins
- Offshore competition and competing alternatives
- Rising costs in all sectors

All of these challenges in an atmosphere of intense pressure to deliver a quality product on time, with zero defects, operating on minimal margins that can be eroded overnight.

While the average size of a packaging company could best be described as small to mid-size the challenges facing them rival those of some of the largest companies in the United States. The number of variables facing small to midsized company is great and in most cases the resources available to manage them is limited. The available information both operational and financial is often times non-existent and in the case where it does exist it's misleading and/or too old to react to.

This whitepaper will concentrate on some of the key challenges facing these small and mid-sized companies and how integrating estimating, pricing, manufacturing, distribution and customer service can lead to profitability, growth and survival. Clearly if a company can know it's true costs, price to the market and deliver a quality product on time, the prospects for long term viability are greatly reduced.

PACKAGING INDUSTRY: BACKGROUND AND CHALLENGES

BACKGROUND

Packaging companies are capital-intensive, consuming large quantities of energy and raw materials. Typically, their production costs devour 70% of the cost of goods sold and nearly all of the remaining 30% goes toward distribution-related activities. Because of recent increases in energy and transportation costs, packaging companies have had to contend with enormous cost pressures. For corrugated producers, margins average a slim 2% to 3% of revenues. According to a new industry profile by Data-monitor, overall demand for packaging will continue over the next five years, but the growth rate will slow significantly (see Figure 1). Slower market growth will increase competition and put more pressures on margins.

To succeed in this environment, packaging companies must overcome a variety of economic, competitive, and regulatory challenges. Specifically, they are struggling with product configuration and pricing complexity, localized market competition, and high customer service demands. This section examines these major challenges in more detail.

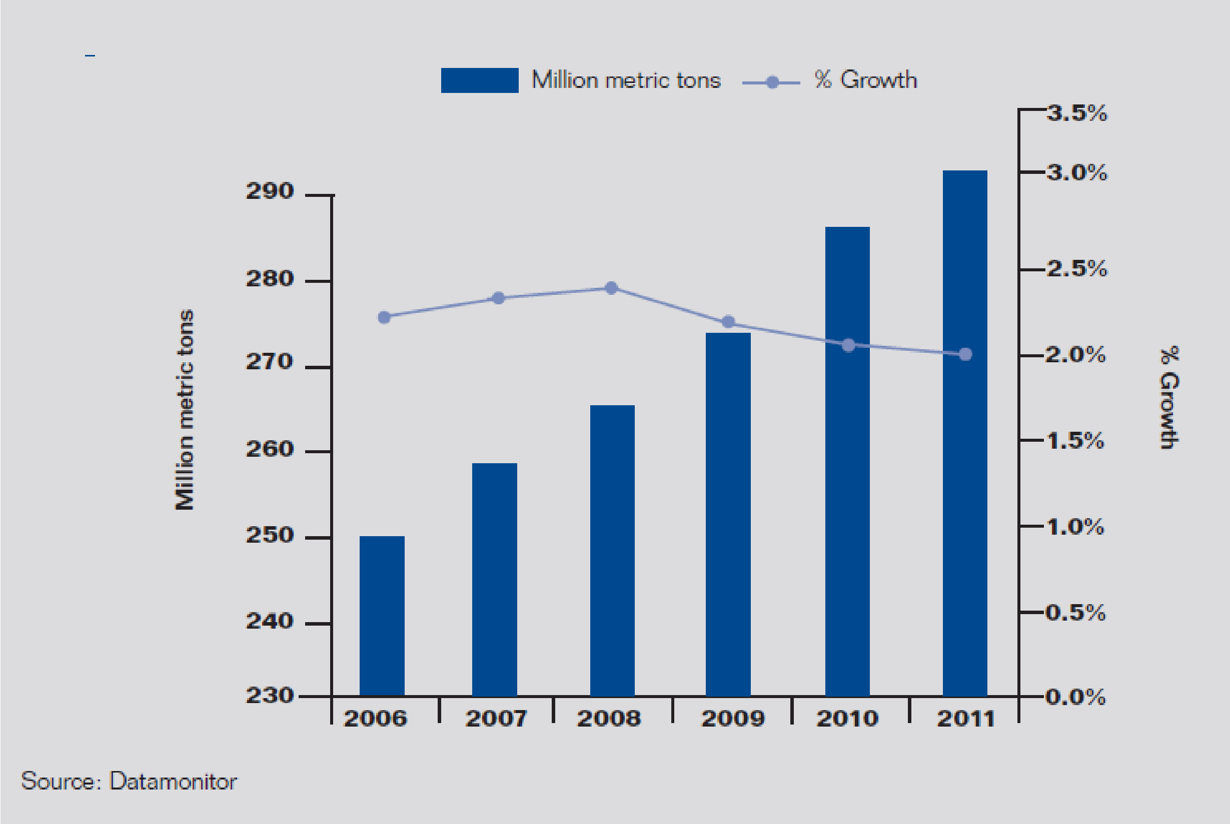

Figure 1: Projected Change in Global Market Volume (in Million Metric Tons) of Containers and Packaging from 2006 to 2011

CHALLENGES

Job cost profitability

The packaging industry has become increasingly competitive and with thin margins, the emphasis is on reducing the overall operating costs. In order to come up with the right product mix, packaging companies need a mechanism to calculate the costs at every stage of the manufacturing process, in a timely and accurate basis. The prescriptive nature of the orders they are dealing with makes this more complex. The costs must be tracked for each individual order to determine whether a customer is profitable or not.

Lack of means to track job cost profitability has resulted in packaging companies being unable to eliminate waste in the production process. This also impacts the companies' strategic decisions such as which segment of the market to target, retention/discontinuation of a product line, and which customer(s) to concentrate on.

Demand for faster turnaround on quotes

With more and more companies adopting the JIT philosophy, the turnaround time for orders has been drastically reduced. The resultant effect is a reduced time to respond to quote requests (in many cases 24 hours or less). Packaging companies are also dealing with enormous pricing complexity as they configure up to several hundred characteristics including type of board, style code, length, width, height, type of flute, type of closure, type of outside print, number of colors, wrapping, and type of die-cutting. With a shortened response time, the estimates are often inaccurate thus leading to an unhappy customer or a shrinking bottom-line. Cementing customer relationships for the long term requires packaging firms to consistently quote, produce and deliver quality products within acceptable time frames – often within a few short days

Lack of operational visibility

Packaging companies need a single consistent view of all of their business operations to manage the complex variables. The dilemma faced by many small and mid-sized companies is that their disparate IT systems either do not talk to each other or they do not talk as frequently as needed. This lack of information flow cripples operational effectiveness. By integrating the manufacturing and distribution operations with the financial, the businesses can get a clear understanding of why products succeed or fail and how to eliminate waste in the process.

BEST PRACTICES LEAD TO SUCCESS

To overcome the challenges of complex product configurations and pricing; faster turnaround time; lack of a single, consistent real time visibility into core business areas; disparate IT systems and increased demands for innovative materials and designs, packaging companies should consider employing industry best practices that help them achieve these objectives:

- Control and analyze operating costs
- Support manufacturing and distribution excellence through the optimum use of material, capacity, and manufacturing assets
- Increase customer satisfaction and loyalty by delivering differentiated products and value-added services

Control operating costs

In today's tough global economic times; a prolonged recession and a continuous demand for competitive quotes, 'Controlling Costs' is the key to profitability, especially for the Packaging Industry where the net margins are razor thin. Controlling costs can lead to a disconnect within various departments. For example, between the plant floor and the sales forcing the sales and plant managers to make split-second decisions without having informed insight into what is best for the customer – and for the company. This is not how best business practices are implemented and applied.

To counter this challenge, most leading companies rely on end-to-end business process integration that lets managers monitor and control sales, manufacturing, warehouse, and transportation activities using a consistent set of operations- and finance-based performance indicators. This integration includes both product data and legacy applications, effectively connecting the top floor to the shop floor. With a clear window into all costs, managers can quickly adjust supply-chain variables and streamline production steps to ensure profitability – even in the midst of fierce local competition. They can also offset the pressure from rising energy and materials costs through more efficient manufacturing flow and they are also able to better sequence production lines to meet aggressive delivery dates. Improved visibility and the insights that result from integrated business and information systems enable companies to make operational decisions in response to customer demands and market changes.

For example, detailed operational visibility gives plant managers insight into current and short-term forecasts so they can avoid overproducing stock items and incurring excessive storage costs. With detailed order information at their fingertips, managers can run jobs with similar specifications concurrently, thus reducing equipment setup times and costs. Even distribution teams can save money by mapping out short, efficient delivery routes that pair and consolidate shipments to get the most out of their fixed – and costly – transportation expenses.

Another best practice employed by successful companies is product costing and profitability analysis. To price a product, packaging manufacturers need to capture and analyze actual costs. This analysis is difficult – even daunting, given the fact that almost no two packaging jobs are identical and that these jobs involve endless combinations of sizes, substrates, designs, and host of other variables. Companies that truly understand, analyze, and apply costs accurately reap substantial rewards. By using mix, volume, and cost analyses to drive scheduling and pricing decisions, a packaging manufacturer can manage product costs and time-to-market as well as accurately price individual orders for maximum profitability.

For example, understanding whether it was a capacity constraint or a rush order that increased costs on a particular job can help a company price similar jobs more accurately – or know when to turn away jobs that will have a negative impact on profitability. Tight integration among core business areas gives sales teams a detailed rundown of all costs associated with an order. This helps them develop quotes with reasonable margins as well as identify which customers are profitable and which are not, so they can adjust their account plans accordingly.

Ensure excellence in manufacturing and distribution

A seamless, smoothly running business may encounter sudden breaks and disruptions:

- Production may be halted midstream to incorporate a new packaging design or a spec change
- A needed raw material is not available
- Production quantities are changed at a moment's notice

Avoiding these disruptions is not always possible, but they can be minimized to ensure customer satisfaction while maintaining adequate margins. Good times or bad times, a booming economy or a global recession, it is vital for packaging companies to maximize their on-time, in-full delivery of orders…all at minimum cost. To do this, they must be able to optimize the use of available materials, production capacity, and transportation systems across the supply-chain network in a seamless manner.

Market leaders and best run businesses rely on a set of **flexible, but integrated business solutions** to support the entire supply-chain management process – including sales, manufacturing, distribution, warehousing, and transportation. With all aspects of the business integrated, packaging producers can quickly reroute production during mechanical down times or accelerate assembly when there is a sudden increase in business. To summarize, a truly flexible yet integrated business that meets client needs, no matter what the circumstances, is key to long term growth and survival.

A challenge to the efficiency of some packaging companies is managing the large number of variables among products and still be able to successfully deliver them---on the agreed to date, at the quoted price and still maintain a level of profitability. A simple way this challenge can be addressed is the use of **variant configuration tools** to determine the optimal configuration of resources required to construct the product. These tools first take in all of the job properties involved in making the product – ranging from box dimensions and paper weight to print specifications – then employing sophisticated modeling functions to help optimize equipment setups, sequence jobs, and balance machine loads.
The result

- **Fewer bottlenecks**
- **Maximum throughput**
- **Overall improvement in asset utilization**

Timely and cost efficient response to customer demands can be handled much more effectively with accurate information on a real time basis and balanced **Inventory Management**. As mentioned earlier, a sizeable investment goes into transportation and distribution costs. This is one of the prime reasons why leading companies implement **Warehouse Management** software. The software helps them to track, store, move goods and materials efficiently while balancing inventory levels with safety stock. In the current era of e-commerce, mobile devices and related technology, warehouse management software further enables such companies with picking and packing, controlling logistics documents, conducting inbound and outbound monitoring; and being able to utilize Radio Frequency Identification (RFID) to expedite warehouse management processes, enhancing the reliability of information about goods stored and moved through various warehouse locations.

Compliance with regulations is a must for all packaging companies. Solutions with **built-in regulatory compliance** functions help ensure that the packaging plant abides by environment control and waste management mandates at all times, minimizing the cost and bad press associated with regulatory violations and penalties.

Build customer satisfaction and loyalty

In the current market of intense competition, customers have the upper hand. Their demands keep rising; be it to use innovative materials and designs and/or custom-shaped boxes, multicolor printing--- all within a short time frame. Add to it the fact that the order type, number, design, specifications etc. can change within a moment's notice. So whether a packaging plant has 50 customers or 500, it is imperative the planning process be flexible enough to handle multiple order changes and still ensure that each shipment arrives on time, every time .

To give customers exactly what they need, precisely when they need it, leading packaging companies use a **comprehensive view of standing orders** that includes turn times, product specifications, and mix options. Their order-fulfillment data is centralized, so manufacturing personnel can quickly determine the materials, equipment capacity, personnel, and storage required to complete jobs on time. They can also track orders as they move through the plant and in case of issues, can alert the right personnel before it becomes a bigger concern.

Successful packaging companies also rely on S**ales Order Management** software to help them provide quotes on new orders quickly and accurately. Using integrated manufacturing processes, these companies can use customer due dates to schedule backward through the supply chain, synchronizing delivery with production schedules. With this type of visibility, they can provide superior customer service through real-time feasibility checks before promising delivery dates. Using such concrete assessments of internal capacity, manufacturers can confidently gauge their ability to deliver in given time frames. An automated sales-order management system also helps them prepare complex quotes that involve complicated printing or innovative designs in a short time with minimal effort.

For their most valuable customers, packaging companies can provide **customer self-service** functions via the Internet. These functions enable order tracking, pricing, account information, and inventory levels. Customers appreciate being able to access these functions and get answers to their questions without having to pick up the phone.

BUSINESS BENEFITS OF PIKPAC SAP® SOLUTION

There is today a solution that addresses the needs of the packaging industry both for today and tomorrow. Next Generation Technology Inc. (NGTech), a leading software solution provider, has teamed with SAP as a channel partner to provide an enterprise software solution, 'PIKPAC SAP® Business All-in-One' for packaging companies.

SAP has 30 years of experience working with companies of all sizes to control costs, improve manufacturing and transportation processes, and increase customer satisfaction. SAP & NGTech understand the best business practices used by successful packaging companies to compete profitably- all combined in an affordable and quickly deliverable package, PIKPAC.

Packaging companies need more than competitive pricing and high-quality products to survive in highly competitive local markets. They also need to provide timely quotes, meet aggressive delivery schedules, and customize products on demand. To keep up with customer demands and remain profitable, they need integrated business processes that connect sales, manufacturing, and accounting systems. PIKPAC can provide this integration.

PIKPAC allows packaging companies to control operational costs, optimize manufacturing and distribution processes, and provide value-added services to increase customer satisfaction – ultimately supporting more profitable margins. PIKPAC seamlessly supports both make-to-stock and make-to-order manufacturing models. This end-to-end business integration provides clear visibility into financial and operational activities across the organization. It also provides the holistic view of business data that enables packaging companies to speed response to customer requests, streamline production, and trim costs.

PIKPAC comes preconfigured with packaging industry best practices and processes. 70-80% of the industry requirements are met out-of-box. As a result, packaging companies can streamline core processes quickly and focus more time on creating and improving market differentiators. Since the solution is pre-configured it can be deployed in just 12-14 weeks thus minimizing the business disruption.

Financing from SAP can make the investment affordable and the payments predictable, so packaging companies get the robust set of applications and services they need at a cost well within their budget.

PLANNING FOR SUCCESS TODAY AND TOMORROW

For packaging companies, finding ways to add value and compete profitably in a localized market is a top priority. However, these companies face a challenging business environment characterized by fierce local competition, extensive product configurations and pricing schedules, and slim margins. Most small and midsize manufacturers face these market realities with inadequate technology infrastructures.

The visibility provided by PIKPAC enables packaging companies to control operational costs, streamline production lines, and optimize product distribution. The solutions also support collaboration with customers and suppliers, so that packaging companies can continually satisfy customer demands for product innovation while maintaining margin requirements. Built-in sophisticated business analytics enables packaging companies to constantly evaluate product profitability – by product type, material, or customer.

With this comprehensive software solution from SAP and NGTech, midsize packaging companies can ensure they have the technology in place today to support tomorrow's profitability goals.

To find out how you can take advantage of the PIKPAC, contact Richard Vincent at richard.vincent@ngtechinc.com or visit us at this Web site: http://www.ngtechinc.com/pikpac.php