

Fast-Track Profit Models: *More Powerful Due-Diligence Process for Mergers and Acquisitions*

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In this article, we push the limits of conventional thinking about acquisition due-diligence by introducing a new capability of fast-track profit modeling. We demonstrate how to quickly build an accurate operational model for assessing the attractiveness of a company being considered for an acquisition. This is accomplished by leveraging a new costing methodology called Time-Driven Activity-Based Costing.¹ Using a Time-Driven model during the due diligence process, we will show through three examples in this article how a prospective buyer can identify where profit opportunities exist, how they can be captured, their cost and impact, and whether the organization has the resource capacity to execute. While it may seem difficult to build an activity-based costing² (ABC) profitability model of a company not yet owned, acquirers often can start from an existing industry profit model template³ and feed it actual transaction data obtained from the prospective target. This enables the potential purchaser to identify profit opportunities in advance of an acquisition.

RATIONALE FOR A FAST-TRACK PROFIT MODEL DURING DUE DILIGENCE

Fast-track profit modeling extends the value of the traditional due diligence process, which today relies on high-level financial statements, market comparables, and qualitative

reviews to assess valuation, risk, cultural fit, and organizational capabilities. Due diligence must occur within a short time window, typically one to two months, for the potential buyer to negotiate a letter of intent (LOI). In addition, buyers have limited access to acquisition targets, and don't want an expensive investigation process for a transaction that five times out of six is not consummated.⁴ But such a high-level, imprecise due diligence process cannot identify where opportunities exist for rapid profit turnarounds. Acquirers typically do not have the time or resources to dissect the performance of the business by individual SKUs and individual customers.

These obstacles can be overcome by building a fast-track Time-Driven ABC model that gives approximate visibility to the profit performance of the target's individual SKUs, customers, market segments, and channels. (For those of you do not know what Time-Driven Activity-Based Costing (TDABC) is, we have included a summary in the back of this article.) The TDABC model also enables a potential buyer to create differentiation from other potential acquirers. Acquisition teams today assemble pitch books to boast prominent industry veterans, industry partnerships/alliances, prior deal track record, deal structure, and financing arrangements. But this traditional private equity pitch has become increasingly commoditized as competition intensifies over a limited supply of deals and distinctions among

acquirers fade.⁵ From the perspective of the acquiree, whoever pays the highest multiple of EBITDA or cash flow typically wins. From the perspective of the acquirer, however, six things matter: 1) good management team; 2) favorable industry dynamics; 3) easy cost cutting; 4) image makeover; 5) low acquisition multiple; and 6) opportunities for up-sell or cross-sell of the new entity. According to the Boston Consulting Group, “the acquirer needs to take an all-encompassing view of the value that might be created or lost in a prospective transaction.”⁶ Having a deeper understanding of profitability drivers expands the analysis from how high a multiple of existing EBITDA to pay, to how much the acquirer can quickly increase the target’s EBITDA by taking actions to transform unprofitable operations into profitable ones. In this way, profit enhancements become a stronger driver of value than changes in multiples, though the profit enhancement does not rule out an increase in the EBITDA multiple in the eventual re-sale of the company.

The feasibility of building a fast-track profit model of a target, in advance of an actual acquisition, is facilitated by the following factors:

1. *Enterprise-wide, profit model* templates already exist for a variety of industries. These templates, which can be easily customized to represent the actual processes performed by a business, from sales to assembly to delivery, provide the framework for estimating the revenue, cost, and profitability of individual product lines, SKUs, and customers.
2. *Transaction data* for existing operations are readily available. Most companies run their business with ERP systems, and have staff experienced with downloading data from the customer, order header, order detail, and product files.
3. *Activity-based costing software* can integrate the potential acquiree’s order, product and customer data into the cost and profitability templates. Accurate and detailed profitability models can now be built in days instead of months. The models highlight which specific customers, sales representatives, contracts, products, services, and vendors are losing money, and quantify the profit opportunities from transforming unprofitable products, vendors, and customers into profitable ones.

In the remainder of this article, we present three case studies that document the development of the

methodology for applying TDABC models to private equity transactions.

Case Study #1: Developing a Fast-Track Profit Model at Pioneer Controls

In 2002, the Pioneer Controls Company (disguised), a distributor of industrial controls devices, was in deep trouble. An overly aggressive acquisition strategy in the 1990s had left the company with plummeting net income and \$14 million of debt. The company was defaulting on its loan covenants and in serious jeopardy of losing key vendors. The company approached Oak Forest Ventures, a boutique private equity firm focused on distribution turnarounds, about a potential buyout.

The private equity team soon realized that Pioneer Controls’ leadership had focused too narrowly on growing top line revenue in anticipation of an IPO. The company had over-paid for its seven recent acquisitions, without regard to the strategic fit of any, and now had operational redundancies and inadequate controls. By not properly managing the integration process, Pioneer Controls had not realized any synergies from its larger scale. It now had too many branches, too many sales representatives, too much over-servicing of customers and vendors, and too much autonomy at the branch level. The outcomes from the flawed acquisition and post-acquisition processes had primarily been increased debt and decreased profitability.

After meeting with Pioneer Controls’ management team, Oak Forest decided, as part of its due diligence process, to use Acorn Systems’ software to build a Time-Driven Activity-Based Costing model of Pioneer Controls’ operations that it could use to assess the potential for profit enhancements.

Step 1: Build the profit model. Acorn Systems gave Oak Forest access to an existing activity template for an industrial controls distribution company. The project team matched the template to each department of Pioneer Controls’ 30 dispersed facilities. The team gathered readily available information from the company about headcount, square footage, and salaries. It then studied the standard time equations from the industry template and validated that they made sense, adapting them when necessary. The team completed this initial model setup and validation in two days.

Step 2: Load the Data. The team downloaded one month’s general ledger data from Pioneer Controls’ JD

Edwards system. It also prepared three critical transaction files—customer master, order header, and order detail file—for the same monthly period. This data access and setup took three days to perform.

Step 3: Review the Findings. The team ran Pioneer Controls’ monthly data on the Acorn Time-Driven ABC software system. The run time was six minutes. After validating the data, and encouraged with the ease and speed of running the model, the project team requested, received, and ran five more periods of monthly data. The team then spent two days analyzing the six months of cost and profitability data, exploring the specific areas of profit opportunity among Pioneer Controls’ seven operating divisions, 37 branches, 98 sales representatives, 4,500 customers, 400 vendors, and its business policies.

The Oak Forest due diligence team wanted to identify the biggest profit opportunities up front and determine which ones could be easily executed to reverse the profit decline and start to pay off the debt. For example, Exhibit 1 shows the distribution of profits earned across the core company and its recent acquisitions. Each of the newly-acquired companies was unprofitable.

Exhibit 2 shows the current losses and profit opportunities in branches, sales representatives, customers, processes, and policies.

The detailed profit model not only identified the buckets of opportunity, it also highlighted the specific root causes. It gave Oak Forest an action plan to consolidate the branches, sales force, and departments to eliminate losses and generate profits, actions that collectively would boost

EXHIBIT 1
Pioneer Control’s Monthly Post-Acquisition Performance

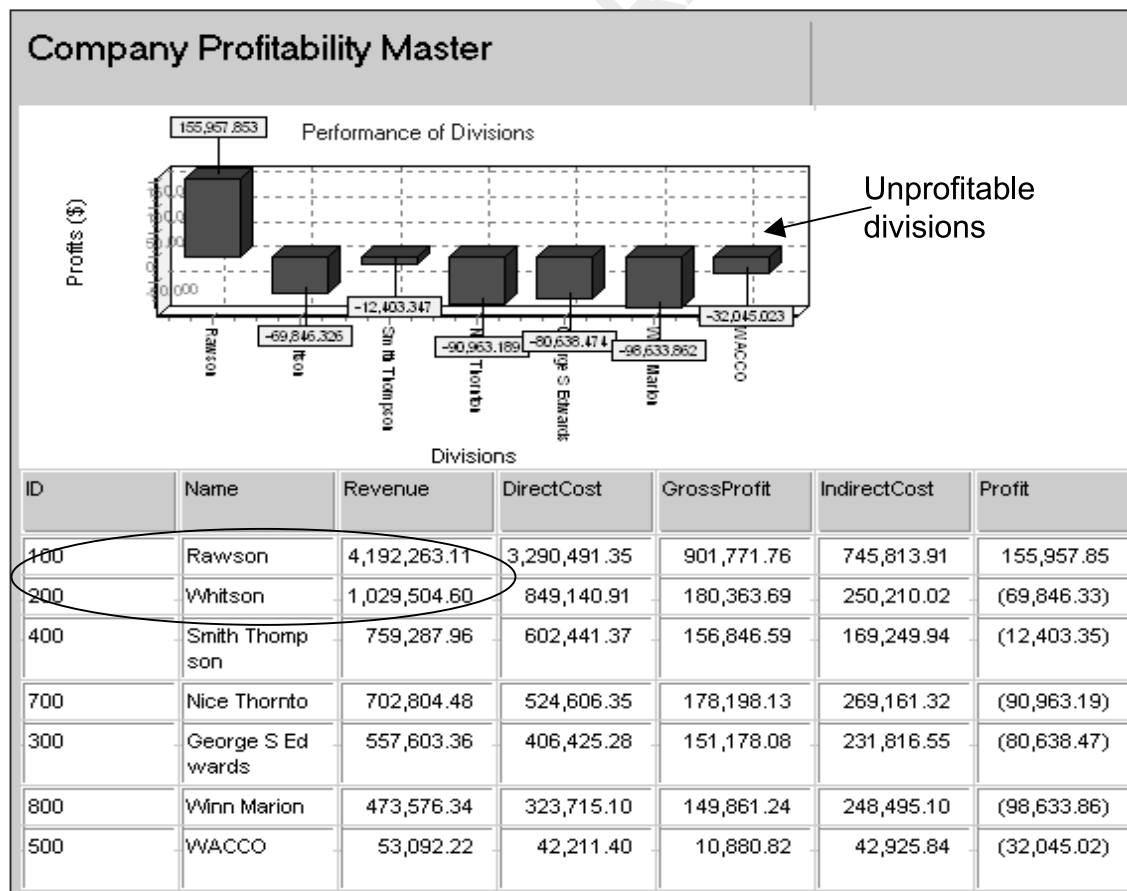


EXHIBIT 2

Value Identified at Pioneer Controls

Area	Key Findings	Annual Profit Impact
Branches	50% unprofitable	\$2.6 MM increase
Sales force	70% unprofitable	\$1 MM increase
Customers	60% unprofitable	\$1 MM increase
Redundant Processes	Inside Sales, Customer Service, Inventory	\$1 MM increase
Business Policies	Minimum order size, rush orders, restocking, inter-company transfers	\$0.8 MM increase
Total		\$6.4 MM increase

Pioneer Controls' EBITDA from \$1 to \$7 million. Based on this analysis, Oak Ventures offered a purchase price higher than other potential acquirers. The profit turnaround model also enabled the private equity team to attract lenders, such as GE Capital, and other equity partners to participate in the financing. The forecasted increase in EBITDA would lead to higher interest coverage, increase the amount of debt that the new company could support, and thereby reduce the equity that Oak Ventures would have to contribute. Finally, the profit opportunities also attracted management candidates to help lead the turnaround.

After acquisition, the company implemented many of the changes identified during the due diligence process. EBITDA soon increased by more than \$4 million and Pioneer Controls' management now believes that more can be captured. In summer 2006, Pioneer Controls launched a project to update the original Time-Driven ABC model to highlight new opportunities.

Case Study #2: The Fast-Track Profit Model Approach Validated at Fairmont Company

In May 2005, Questor Management Company, a private equity firm, approached Acorn Systems about

analyzing the profitability of a large retail company, Fairmont (disguised name), that was being auctioned off by a leading investment bank. Fairmont was one of the world's oldest retail companies, with several well-known brands and hundreds of stores. After a period of declining profitability, triggered by global competition, Fairmont had been acquired by an American conglomerate in the late 1980s. The conglomerate, now faced with declining profitability in its other businesses, decided to shed its non-strategic, under-performing Fairmont division.

Questor Management sought "companies with performance opportunities, ranging from corporate divestitures, to under-performing and troubled companies," and Fairmont was just the type of company it was looking to acquire and turn around. The first cut, which Questor survived, reduced the number of potential acquirers from 12 to 5. The investment bank asked these five finalists to submit their offer prices by June 27, 2005.

Fairmont had⁴ over 20,000 SKUs, numerous channels, and thousand of customers. Questor was particularly concerned about the explosion in SKUs and product lines. "It seemed that the business was growing out of control ... lines were added without regard to profitability in order to achieve revenue growth," said Kevin Prokop, a Questor Director.

Questor agreed to work with Acorn software and a consultant to build a fast-track profit model if it could acquire the following information:

1. A general ledger
2. Headcount and salaries by department
3. Product SKU and customer data
4. General business information such as distribution and sales channels, and operating policies.

The information trickled out gradually from the investment bank. Initially, Questor received only a high-level profit and loss statement, listing major expense buckets that were not broken out by departments. Soon, however, the Questor/Acorn team received a file that identified each employee, including salary, department, and position. The team could now approximate the fully loaded costs of each department. While this information could be used to calculate departmental performance metrics, such as shipping cost per order, the team could still not drive costs down to individual SKUs.

Repeated requests for the product file finally struck gold on June 3 when the investment bank sent a detailed SKU file that included five years of dollar and unit sales data, price, cost, category information, and inventory levels. Upon receiving these data, the team fast-tracked the model to deliver results by the June 15 deadline.

Step 1: Build the model structure. The team assembled the critical files and data in several days. By June 9, it had built the entire model structure for Fairmont around 30 core departments (see Exhibit 3), including time equations that could drive departmental process costs down to all SKUs.

Step 2: Load data. To calculate SKU profitability, only two files needed to be loaded, a general ledger file and the SKU file. The team loaded the data in three hours on June 10.

Step 1: Run model and review findings. Running the model took place on Friday, June 10, and again on Monday, June 13, after making revisions. The findings (see Exhibit 4) surprised even the experienced Questor partners. Over 80% of the SKUs were unprofitable, losing

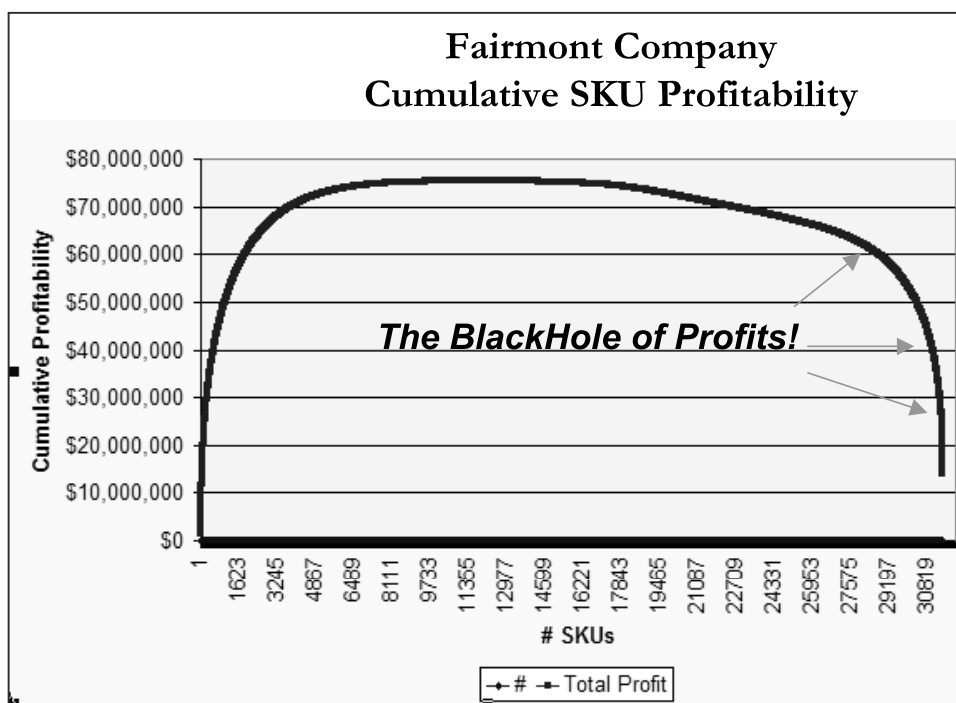
EXHIBIT 3

Fairmont Departments and Processes

Core Department	Fully loaded cost
Product Manufacturing	\$ 64,525,119
Selling	49,810,376
Marketing/Advertising/Creativity	15,602,778
Product Development	13,467,378
Infrastructure Support	9,317,472
Business Technology	9,095,990
Customer Service	6,253,866
Accounting and Finance	5,760,851
Executive	4,471,422
Distribution and Picking	3,743,724

EXHIBIT 4

Cumulative Profitability by SKU at Fairmont (SKUs Ranked from Most to Least Profitable Along Horizontal Axis)



in aggregate over \$60 million. The losses on these SKUs represented 480% of the current profits of \$13 million. The team could see immediately that by consolidating inventory, re-pricing, and changing service levels, it could create at least \$15 million in near-term profit improvements.

Armed with these findings, Questor increased its offer for Fairmont from \$150 million to \$180 million. The fast-track model allowed Questor to bid more because it gave the firm visibility into, and confidence in, the future profit improvement potential. Unfortunately, this offer was not enough to win the deal. Within the field of eight bidders, Questor came in second to a strategic buyer. Without a clear path of profit improvements, as would be provided by the Profit Model, the winner may have a difficult time justifying the purchase price, which represented a significant premium over the value implied by historical financial results.

Case Study #3: Outpacing the Competition at Wayland Foods

Phoenix Capital (disguised name), another leading buy-out fund, also was impressed with the concept of a

fast-track profit model leveraging Time-Driven Activity-Based Costing in the bidding process. The firm realized that detailed profit improvement information could give a bidder more confidence to raise the offer price. Phoenix was interested in selling Wayland Foods (WF disguised), the distribution division of Belmont Foods (disguised), a large food manufacturer that it owned. Oak Forest and its partner Ramex Inc. would employ TDABC to build a profit model to evaluate the opportunity. WF had become a non-core asset, and the sale would provide capital to fund additional food acquisitions. Oak Forest used a standardized process:

- Oak Forest sent data requirements for WF division (March 2006) [two hours to prepare and send]
- Within a month, Belmont sent the data files for CY2005 (April 2006) [one day for Belmont to prepare, two hours for Oak Forest to review]
- Oak Forest customized a grocery distribution TDABC template [two days]
- Oak Forest loaded data and ran TDABC model for 2005 data [one day]
- Oak Forest reviewed findings [one day]

In just five days of actual work, spread over a several-week period, the Oak Forest team created a detailed analysis of profit improvement opportunities at WF. The findings suggested significant headcount reduction opportunities. This was a result of a number of departments (e.g., warehouse, long haul) having excess capacity (see Exhibit 5).

Exhibit 6 shows the expected gains, derived from the fast-track time-driven profit model for the three post-acquisition years.

Exhibit 7 shows the specific and detailed actions Oak Forest anticipated taking to realize the potential \$7 million in profit improvements. These actions were based on a model of profitability by customer ship-to, order, vendor, and SKU.

Exhibit 8 illustrates the value of knowing the profit improvement up front. With a minimum profit improvement of \$2.5 million, \$15 million of additional value would be created.

Oak Forest felt confident using this data to raise its bid to \$15 million. Phoenix felt that the Oak Forest bid was attractive for several other reasons:

Greater likelihood of long term success. WF was Belmont's largest customer. Therefore Phoenix, Belmont's owner, had an interest in the viability and longevity of WF.

Phoenix wanted the buyer to have a plan for WF to grow profitably. It now knew that Oak Forest, through its TDABC model, had developed a plan for immediate post-acquisition actions.

Operational Buy-In. Phoenix believed that WF personnel would buy into the profit-enhancing opportunities, since the people could visualize the changes needed and collaborate to implement and benefit from them.

In December 2006, the offer from Oak Forests/Ramex was accepted. It immediately set its acquisition team to work on implementing the post-acquisition strategy to capture the profit opportunities revealed during the due diligence process. The deal eventually closed in February 2007. The management team of the new company, Countryside Foods, benefited from the profit model that had been built in the spring of 2006. The time-driven ABC model had been updated with new numbers, and the team identified several departments operating with excess capacity. This became the basis for an initial headcount reduction that increased EBITDA by over \$1.5 million annually. Countryside put new policies (e.g., minimum order size) and procedures (e.g., product returns) in place to optimize order profitability. It provided key data to effectively negotiate with

EXHIBIT 5

Utilizing Fast-Track Model for Resource Reduction

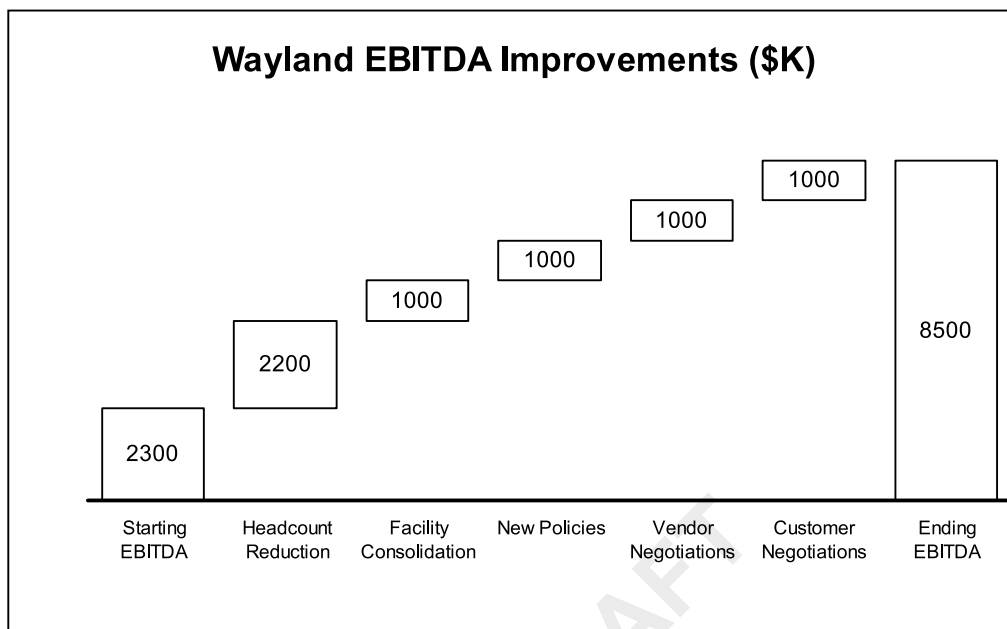
- Leverage the TDABC model to identify excess capacity
- Example:
 - Focused on top 10, highest cost processes (Long Haul, Picking)
 - Model calculated excess capacity and implied cost savings
 - Opportunity for just the top 10 equated to over \$3 MM per year
 - Additional \$3 MM per year for the other processes

Biggest opportunity is associated with the warehouse

Process	FTEs Available	FTEs Used	FTEs Idle	FTE Utilization	Capacity Rate	Actual Rate	Capacity Cost	Actual Cost	Excess Capacity Cost	Annual Cost Oppty
Driver Long Haul DLD1 Process	36	34.86	1.14	97%	1.21	1.25	422657.43	436,530.86	\$ 13,873	\$ 166,481
WHSE Emp										\$ 2,183,890
I Picker_DLD2_Process	24	3.96	20.04	17%	0.91	5.5	36005.78	217,996.64	\$ 181,991	
Driver Short Haul DLD1 Process	11	20.39	-9.39	185%	1.15	0.62	233582.96	126,001.00	\$ (107,582)	
WHSE Emp										
I Loader_DLD2_Process	8	4.32	3.68	54%	0.84	1.56	36382.29	67,394.11	\$ 31,012	\$ 372,142
Inventory Control Ad_Inventory DLD2_Process	1	0.79	0.21	79%	6.68	8.43	52978.57	66,824.64	\$ 13,846	\$ 166,153
Senior Acct_Senior Acct Shared_DLD1_Process	6	6.42	-0.42	107%	0.91	0.85	58561.6	54,696.39	\$ (3,865)	\$ (46,383)
WHSE Emp										
I Receiver_DLD2_Process	4	2.58	1.42	64%	1.12	1.73	28766.53	44,658.12	\$ 15,892	\$ 190,699
WHSE Emp I_Pack-Out_DLD2_Process	5	4.32	0.68	86%	0.88	1.01	37811.33	43,775.78	\$ 5,964	\$ 71,573
SRep_Route SRep_GR1_Process	2	3.3	-1.3	165%	2.04	1.24	67318.61	40,852.48	\$ (26,466)	
Buyer_Buyer_DLD1_Process	3	4.03	-1.03	134%	1.21	0.9	48658.2	36,183.16	\$ (12,475)	
TOTAL ANNUAL SAVINGS :										\$ 3,104,556

EXHIBIT 6

Opportunities Identified at Wayland Foods



key vendors (e.g., Orval Kent) to assure fresher product and increased marketing support. And it set into motion a facility consolidation and truck re-routing plan that enabled additional reductions in headcount with minimal operational impact. At the time of the writing of this chapter, Countryside Foods had doubled its EBITDA (on an annualized basis).

THE GENERAL TDABC DUE DILIGENCE PROCESS

The examples of Pioneer Controls, Fairmont, and Wayland Foods illustrate the feasibility and the power of building a fast-track profit model during the due diligence process. Armed with this information, a private equity firm can learn in advance about the profit opportunities in currently unprofitable or break-even products, customers, facilities, sales representatives, and vendors. The firm can explore whether a particular product could be re-priced, an unprofitable regional sales office or distribution center shut down, or an unprofitable customer relationship renegotiated. For example, large differences in profitability among different SKUs within the same product family lead to questions about the drivers of the

cost variation, and whether the problem should be solved by process improvements (in handling and producing small orders), re-pricing, or SKU consolidation.

The general approach for building a TDABC model during due diligence and how it affects an acquisition strategy is summarized in Exhibit 9.

Implement the Strategy

The third process step in Exhibit 9, when the acquirer has won the bidding competition for the target company, is the most critical. The acquirer must work with the company management to implement a profit turnaround strategy. Having already built a high-level profitability model considerably expedites the turnaround process. All changes occur within a factual model of underlying causes that have led to losses in operations in the past. The acquirer and the acquired company should be on the same page about the economics of current operations and this should build buy-in for the changes that are needed. The data-driven profitability model creates a shared understanding around the need for change and agreement on where changes are most urgent, as well as the action steps—process improvements, product rationalization, customer

EXHIBIT 7

The Value Capture Roadmap at Wayland Foods

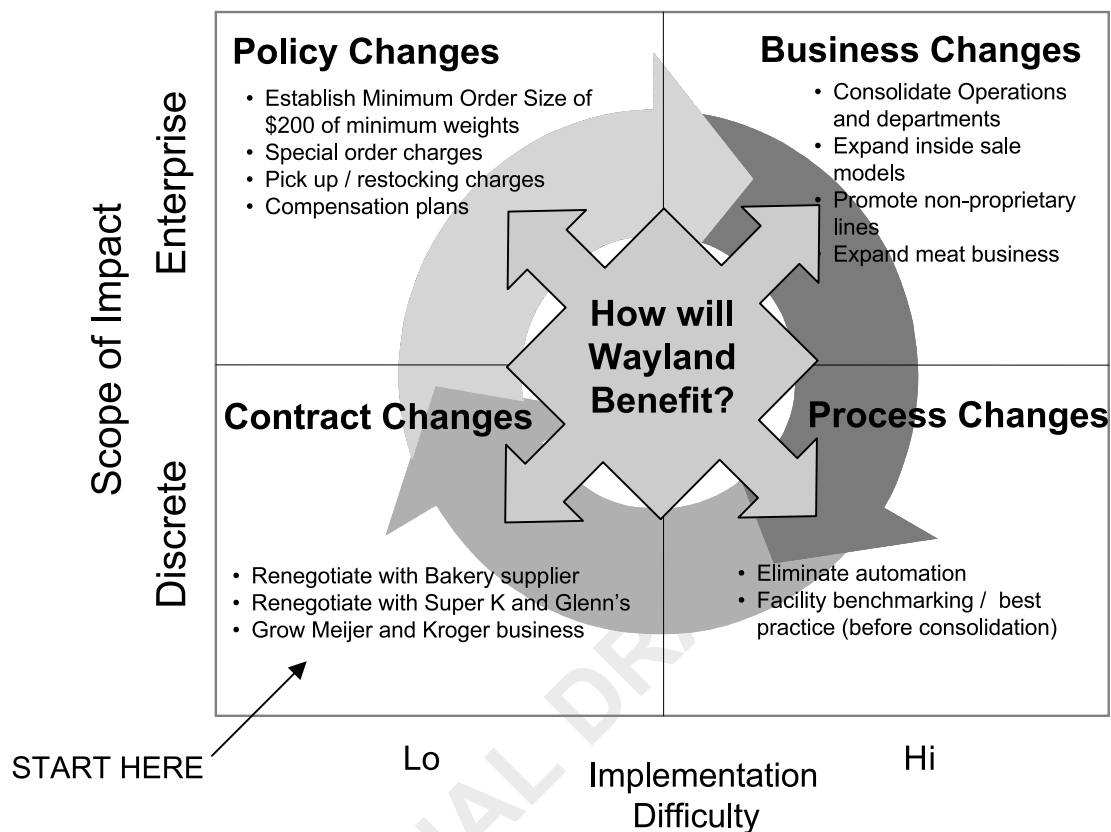


EXHIBIT 8

Impact on Deal Economics for Daily Provisions

Current valuation:

EBITDA:	\$3.3 M (FY 2005)
EBITDA Multiple:	6x
\$3.3 M * (6) = \$19.8 million	

Adjusted valuation

Current EBITDA:	\$3.3 MM
1 High improvement:	+ 7.4 MM \$10.7 MM
2 Medium improvement:	+ 3.5 MM \$ 6.8 MM
3 Low improvement:	+ 2.5 MM \$ 5.8 MM

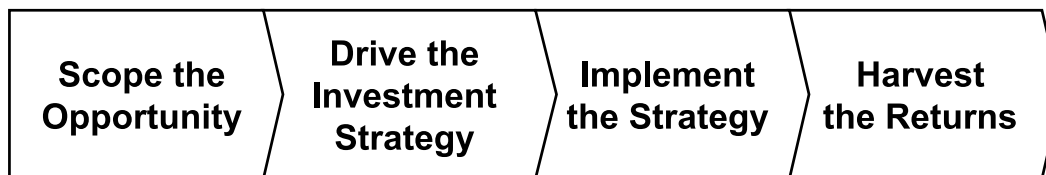
EBITDA Multiple: 6x

1 High Value Created:	+ \$44.4 MM
2 Medium Value Created:	+ \$21.0 MM
3 Low Value Created:	+ \$15.0 MM

Profit enhancement impact !!!

EXHIBIT 9

Fast Track Profit Model for Acquisition Process



Purpose	Target industries & companies that benefit most from the profit model approach	Leverage team experience to expedite and properly structure acquisition	Expedite company profit improvements by leveraging expertise	Accelerate and expand exit opportunity potential to achieve superior investor returns
Actions	<ul style="list-style-type: none"> • Screen industries based on market & <u>investment attractiveness</u> • Screen industries based on <u>strategic fit</u> with profit model methodology • Build a profit model to identify profit potential in advance of acquisition 	<ul style="list-style-type: none"> • Perform additional due-diligence with the profit model • Raise and structure capital to effect transaction • Devise management incentives to drive operational changes • Align key stakeholder interests around profit enhancement 	<ul style="list-style-type: none"> • Install Acorn's <u>proprietary profit management software</u> to identify and capture profit improvements • Actively participate with management team to capture value and improve operations • Institutionalize profit management across organization • Document and report performance enhancement 	<ul style="list-style-type: none"> • Establish company as leader in profitability and operational performance, promoting the company's track record of successful execution • Cultivate relationships with multiple exit channels - industry consolidators, brokers, banks, private equity firms

renegotiation—that are most likely to transform unprofitable operations into profitable ones. In this way, both the acquiring group and the management of the operating company have ownership in the solution.

Typically transformations in one or two key areas—products, vendors, processes, regions, or customers—will be truly decisive in the profit turnaround. These one or two areas then can be monitored and measured regularly to track the company's progress and ensure that it stays focused on meeting its objectives.

Harvest the Returns

In the fourth step, the company develops and installs a detailed Time-Driven ABC profit model for its operations. The model will track changes in the profitability of different product lines, segments, channels, customers, and geographies as the company implements the profit turnaround strategy, and as its competitive environment evolves. These dynamic forces create new circumstances for transforming unprofitable operations into profitable ones, and the company needs to continually track the

next generation of profit improvement opportunities. All these contribute to continual profit (EBITDA) enhancements, eventually enabling the acquirer to position the company for resale to a more permanent owner or for a public offering.

SUMMARY

A fast-track profit model, exploiting the simplicity and power of Time-Driven ABC, provides acquirers with a powerful new tool for the due diligence process. Advances in industry templates, information technology, and the TDABC innovation itself now enable an acquirer to identify key issues, questions, and levers for profit turnarounds. It allows the acquirer to develop a holistic value creation plan based on the profit improvement opportunity and the ease of capturing that opportunity. If the private equity firm wins the bidding contest, the profit model becomes a way of managing the turnaround company and aligning company management to the required actions. It helps to build support for change and supports the execution of the strategy as articulated in the value

creation plan, eventually preparing the company for resale and exit. In short, building, analyzing, and implementing a fast-track profit model approach becomes a consistent thread running throughout the life cycle of a private equity firm's portfolio company, ensuring real and targeted value creation for the private equity firm and its partners.

WHAT IS TIME-DRIVEN ACTIVITY-BASED COSTING?

The purpose of this section is to review the new Time-Driven costing approach that makes Fast-Track Profit Modeling possible. Most business executives are familiar with activity-based costing (ABC). This is a method of allocating indirect expenses (e.g., sales, marketing, distribution, and shares services) to customers and products to generate a view of their "true" profitability. This is accomplished by methodically driving the general ledger expenses to the activities a company performs (e.g., sales calls, order quotation, order entry, order assembly, billing, collections). Then these fully loaded expenses (which should equal the total expenses in the general ledger) are driven to all of the customers and products. Some activities relate to customers (e.g., sales calls), while other activities relate to products. Sounds perfectly logical—but try to implement this for a company with 12 facilities and 500 employees, who serve 10,000 customers, offer 10,000 products, and process 1 million orders every month, with a total of 50 million line items.

The conventional ABC approach requires a practitioner to conduct surveys of every employee every period (e.g., month) to determine how much time they spent on each activity. Unfortunately, each employee needs to sort through dozens of activities for his final selection. This is an extremely time-consuming process, riddled with subjectivity. After all, how many people are going to remember how they split their time in the previous period across 20 activities? And how much do you want to bet that their time actually will add up to 100%? They are not likely to report idle time. So it is not just a bear to implement, but it is inherently inaccurate. Organizational buy-in is not likely.

In 1997, we came up with a new approach (which we now call Time-Driven Activity-Based Costing) out of the necessity to deliver within one month the profitability information of three portfolio companies of three different private equity firms. In order to fast-track building the model, we realized that most departments spend 100% of

their time on one process (which is an aggregation of the conventional activities). For example, the inside sales department spends 100% of its time processing orders, which includes time spent on the following process steps/activities: customer set-up, entering line items, quoting, and order confirmation. Instead of asking an individual inside sales representative how he splits his time, we instead ask the department how much time it takes to complete each step (on average). These process steps help form a time equation. Exhibit 10 displays a typical order process.

If we follow the logic train, we can begin to form a time equation.

Inside Sales Time = Order entry time + New account set-up time + Quoting time + Order Confirmation Time

= [Receive Order + Enter order] + New Acct[Account Set Up] + Quote[Identify Need + Contact Vendor + Quote Price] + [Confirm Order]

= [2 min + 2 min*(# Line items)] + New Acct[5 min] + Quote[1 min + Contact vendor(5 min) + 5 min*(# Line Items)] + [1 min]

The output of the equation is the estimated time for a specific order. In this example, the drivers of each order (e.g., # Line Items, New Account) can be found in the existing transaction files of the company's ERP (which is easy to get if you ask for the complete transaction file, as we do). When this simple calculation is run across all of the orders, the company has an estimate of the capacity utilized. Assume that, after weekends, holidays, and vacation time, each employee works about 20 days per month, and, after breaks and training time, has 6 1/2 hours per day available for productive work, or a total of 130 hours per month. If the inside sales department has, say, six employees, it has a practical capacity of 780 hours (46,800 minutes) available to process incoming orders.

Other benefits of this approach include:

- *More accurate.* First, you are using actual transaction data. This enables management to see the profitability of every customer, product, vendors, sales representative, line item, order,...Second, it is easy to incorporate process complexity into a time equation. All you do is add new drivers to an existing equation (e.g., rush order flags, which take an additional 10 minutes to process). A conventional ABC

EXHIBIT 10
Inside Sales Process (Example)

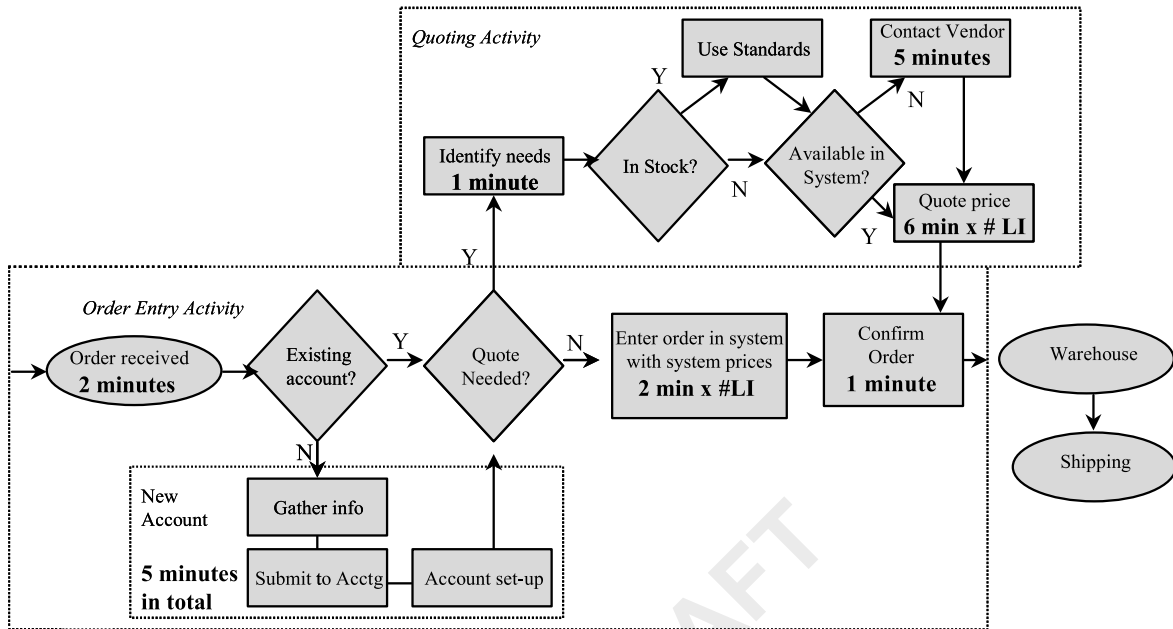


EXHIBIT 11
Comparison of Conventional ABC Model and the Fast-Track Profit Model

	Conventional ABC Model	Fast Track Approach (Time-Driven ABC enabled)
Model structure	•Interview Human Resources & department heads (2 weeks)	•Leverage TDABC industry template •Customize for one facility and replicate (w/ some customization) across enterprise (2 days)
Import and Drive General Ledger (GL) expenses to Departments	•Meet with Finance to access, load, and drive each GL line •Gather department data (e.g., headcount, square footage) (2 weeks)	•Request departmentalized GL and load data •Drive to core departments (1 day)
Drive Dept \$ to Activities	•Interview 2-3 employees per department to determine the 3 core activities (3 weeks)	•One process per department •Use template •Keep processes order specific (when possible) (1 hour)
Drive Activity \$ to Cost Objects	•Create 3-5 cost objects •Create accurate process time equations (2 weeks)	•Drive process costs to line items / orders •Simple equations (2 days)
Run model	•Import 3-5 cost object files •Exhaustive analysis (2 weeks)	•Import transaction data (e.g., invoice detail file) •Validate twice •High level analysis (2 days)
	3 - 4 months	1 - 2 weeks

model requires additional activities, which results in more interviewing, and expands the model (which further slows it down).

- *No routine surveys.* Once a process is defined for each department and the time equation is built, the transaction data is automatically fed into the algorithm every period. Interviews are not required to update the model because most processes rarely change.
- *The model will reconcile with financials.* Actual GL expenses can be automatically loaded into the Time-Driven model every month, driven to departments (and their processes), and then driven to all customers, orders, line items, or products on the proportion of the time they took of the total.
- *Identification of inefficient steps.* In building the process time equation, management can see what steps are consuming an inordinate amount of time (e.g., five minutes to quote each line item).
- *Ease of rolling out.* Process equations can be applied to other locations. For example, it is likely that the inside sales process is consistent across facilities within a division. As a result, it is faster to build an enterprise-wide model (see Exhibit 11).
- *Predictive analysis.* Once you have a model, a practitioner can modify assumptions, or feed new transaction data through it to estimate the impact on time spent, the cost, and the resulting profitability. For the purposes of this article, we call the usage of Time-Driven ABC to predict the profitability of a potential acquisition Fast-Track Profit Modeling.

ENDNOTES

The following article is an adaptation of a white paper written by Steven Anderson and Kevin Prokop, "Acquiring Profit Opportunities: Rethinking M&A," (Houston: Acorn Systems, July 2005). This white paper was adapted to become Chapter 6, in Robert S. Kaplan and Steven R. Anderson, *Time-Driven Activity-Based Costing: A Simpler and More Powerful Path to Higher Profits* (Boston MA: Harvard Business School Press, 2007).

¹For a more complete explanation of this new approach, please read the above book *Time-Driven Activity-Based Costing: A Simpler and More Powerful to Higher Profits*.

²For more information on ABC and Time-Driven ABC, please review note at the end of this article.

³At the time of the writing of this article, Time-Driven ABC has grown in popularity. Hundreds of companies have implemented it, and dozens of consultancies (e.g., KSA, D&T, IBM Global Services) are skilled at building these models. Acorn Systems (www.acornsys.com) alone has ABC model templates for dozens of industries.

⁴Authors surveyed 10 private equity firms: on average 16% of LOIs resulted in a closed acquisition.

⁵According to John Curran of the Corporate Board, over the past 10 years, over \$445 billion of capital has flowed into private equity funds. However, the ratio of uninvested capital/equity invested was over 15.

⁶Kees Cools, Kermit King, Chris Neenan, Mike Tsusaka. Boston Consulting Group. *Growing Through Acquisitions*. May 2004.

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