

Entrepreneurial Risk-Taking Versus Growth Management: The Case of Premier Technology, Inc.

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On a warm Monday morning in Pocatello, Idaho, Mark Brown surveys the bustling activity in his cramped metal-fabrication shop. As owner and president of Premier Technology, Inc., Mark uses a few moments between cellular phone calls to reflect on the rapid growth of his small company and to consider a few alternatives regarding the future direction of the business. As the temperature and welding smoke begin to rise in the shop he realizes that the heat is on for several critical decisions regarding the management and strategic direction of Premier. He also realizes that despite the early success of his company, the future remains as hazy as the atmosphere in the fabrication shop.

Background

Premier Technology, Inc was formed on July 1, 1997 when Premier Metal Works, Inc. (a company founded in 1996 and co-owned by Mark Brown and Doug Sayer) added a third co-owner, Mike Ryan. Mark Brown is an agricultural engineer who spent 9 years working as a production supervisor, project engineer, and production manager for several food-processing companies and used that experience to develop his own company in 1995: Brown Process and Technology, Inc. Doug Sayer worked for many years as a welder and fabrication manager for several food-processing and metal-works companies. Michael Ryan is an agricultural engineer who worked as a project and plant-engineering manager for several large food processors.

Premier Technology provides machinery-

manufacturing and installation services to the potato-, dairy-, meat-, and beverage-processing industries throughout Idaho, Oregon, Washington, and the surrounding area. Premier provides contractor services of equipment fabrication and installation and the modification of process machinery produced by other companies. Principal customers include Basic American Foods, Lamb Weston, Simplot, Ore-Ida Foods, Nestle, and Golden Valley Meats. Premier designs, fabricates, and installs custom food-processing equipment which improve plant efficiencies. Equipment is manufactured either on-site or at the company headquarters in Pocatello, Idaho. Examples of equipment expertise include both structural black-iron projects and stainless-steel construction of conveyors, tanks, flumes, pump bases, overhead walkways, mixers, and steam- and food-piping systems. Premier also provides project and plant planning and engineering services for the food-processing industry. Currently, installation and repair services account for 80% of Premier's sales and equipment manufacturing accounts for the remaining 20% of sales.

The U.S. food-processing-equipment industry is a \$1.5-billion-per-year market. The potato-processing industry purchases approximately \$350 million of equipment each year. Premier's market share of the potato-processing industry is approximately 2% nationally, but much higher in the Idaho region. Currently, 75% of Premier's sales are to the potato-processing industry. An additional 15% of sales are to the remainder of the food-processing industry (a \$200-million-per-year market) and about 5% of sales are to the beverage industry (a \$500-million-per-year market). The final 5% of Premier's sales are to the mining/chemical/mineral industry, which has an annual demand for processing equipment of about \$500 million per year.

One of Premier's most important products is titled "Batch Pro." Batch Pro is an integrated software/equipment system used for improving mixing processes for dry ingredients and wet batters. Traditionally, most mixing processes occur con-

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tinuously in-line. This process is relatively fast but creates quality-control problems. Premier's Batch Pro system is a software and engineering modification which applies "ladder logic" to mixing processes. Ladder logic is a control algorithm whereby certain specifications must be met before the production process moves on to the next "rung in the ladder."

Batch mixing allows for verification of specifications, which improves product quality. Essentially, in-line mixing systems are converted to batch systems. Although batch mixing systems may initially be slower than in-line systems, Batch Pro greatly increases quality control early in the production process. This reduces downtime and virtually eliminates inaccurate product mixes. For example, most in-line processes are only 91% accurate to stated specifications. Batch Pro systems already operating in food plants have proven to be 99.7% accurate against stated specifications. In wet-mixing applications, Batch Pro can produce mixes which have viscosity specifications within 1 pound of liquid in a 2,000 pound batch. Coupled with less equipment plugging and reduced shearing, resulting production speeds may actually be increased.

In some cases, the installation of a Batch Pro system merely involves software modifications to existing programmable logic control (PLC) systems. In other cases, equipment and engineering changes are required. The end result is a system which greatly reduces labor requirements and increases product quality while maintaining production line-speeds. Batch Pro can be installed in almost any size production plant—from relatively small operations with 500 pounds of dry throughput per hour to plants with 8,000 pounds of dry throughput per hour.

Labor Policies

Premier Technology is a labor-intensive company. Most of their employees are welders and machinists. On average, eight full-time employees work in the business office. The installation component of the business is highly seasonal and runs counter-cyclical to processing of agricultural commodities. Many of their customers run plants three seasons. For example, potato-processing and sugarbeet-processing firms tend to have relatively slow activity during the summer months because potatoes and

sugarbeets are harvested in the fall and are processed by early summer of the following year. Hence, demand for repair and installation services is highest during the summer. Thus the number of welders and machinists can vary from 40 to 85 depending on the time of the year.

Premier concentrates on providing customer service, quality, and productivity. Most of Premier's labor policies are completely different from their competitors'. For example, all welders are required to wear identical uniforms consisting of monogrammed shirts, hats, and Carhartt® overalls. Beards and below-collar-length hair are not allowed for both safety and appearance reasons. Although these policies are very different from those of other companies, the greatest departure from industry norms involves wage structures. Approximately one-third of each welder's compensation is in the form of bonuses (total compensation is about \$15 per hour). Every six weeks, bonuses are paid based upon employee and project performance.

All clients evaluate the work performed by Premier on a form containing questions regarding custom satisfaction with project specifications, quality, timeliness, cleanliness, and budgeted expenditures. Each client ranks these criteria on a scale of 1 to 10. A committee of Premier employees (including welders) use these surveys to determine the quality of work performed and the productivity of the crew involved in each project, and ultimately decides on the level of bonus wages. Bonuses are developed based on the following criteria: 40% customer evaluation, 20% internal quality audit, 20% job safety, and 20% project profitability. Each employee receives the same bonus on a percentage basis which reinforces the team aspect of the business. Therefore, each employee is empowered with a vested interest in satisfying customer needs, which is a reflection of Premier's mission statement: "To develop our people into the leaders of the industry, while providing customers with the highest quality service." On average, Premier employees are higher-paid than those working for Premier's competitors. However, each employee must not only agree to the above conditions but must also submit to random drug testing as a means to enhance worker safety.

Financial Situation and Growth Projections

Tables 1 and 2 provide balance sheets and income statements for 1997 and 1998. Premier's goals include substantial growth over the next several years. Most of this growth will result from capturing market share from competitors and/or diversification strategies rather than from industry expansion. Their goal is to double sales by the year 2001. Throughout this projected growth, their profitability goal is to realize double-digit net returns with respect to sales and gross margins of 38% of total

sales. The average gross margin for this industry is 40%. Premier's gross-margin goal is lower than industry averages because Premier has higher labor costs. However, as a quality-driven company, Premier hopes to capture greater market share in the long run.

Competition

Premier competes against approximately 15 firms in the food-processing-equipment fabrication and installation business. However, few competitors are

Table 1. Premier Technology, Inc. Balance Sheets for December 31, 1997 and 1998.

	1997	1998
Assets		
Current assets		
Cash	50,000	61,000
Accounts receivable	670,000	750,000
Total current assets	720,000	811,000
Property and equipment		
Equipment (net of accum. depreciation)	451,000	520,000
Total property and equipment	451,000	520,000
Other assets		
Note receivable - shareholder	65,000	180,000
Other note receivables	0	310,000
Total other assets	65,000	490,000
Total assets	1,236,000	1,821,000
Liabilities		
Current liabilities		
Operating note payable	100,000	350,000
Accounts payable	300,000	375,000
Accrued payables	75,000	225,000
Current portion of long-term debt	50,000	50,000
Total current liabilities	525,000	1,000,000
Long-term debt (net of current portion)	260,000	550,000
Total liabilities	785,000	1,550,000
Stockholders' equity		
Common stock	300	400
Paid-in capital	75,000	75,600
Retained earnings	375,700	195,000
Total stockholders' equity	451,000	271,000
Total liabilities and stockholders' equity	1,236,000	1,821,000

Note: All figures in \$.

Table 2. Premier Technology, Inc. Income Statements for Years Ending December 31, 1997 and 1998.

	1997	1998
Sales	3,400,000	6,500,000
Cost of sales		
Materials and direct costs	1,300,000	2,050,000
Salaries	1,000,000	3,000,000
Subcontractors	255,000	525,000
Total cost of sales	2,555,000	5,575,000
Gross margin	845,000	925,000
Operating expenses	330,000	710,000
Interest expense	28,000	85,000
Operating income	487,000	130,000
Other income - grant revenue	80,000	0
Net income	567,000	130,000

Note: All figures in \$.

integrated to the extent that they can provide turn-key project management, as Premier does. That is, Premier designs process systems, manufactures or acquires needed equipment, installs systems on-site, and trains plant personnel on system operations. In addition, most competitors are smaller, which limits their ability to compete for large projects.

Premier's turn-key approach was conceived by the owners while they were separately employed by various food-manufacturing companies—the types of companies that Premier services. Their previous employment with these companies provided much insight into the problems faced by those requiring installation and manufacturing services.

Decisions, Decisions, Decisions

Overhead Management

This industry is highly seasonal, and for a few months of the year Premier could keep 125 employees very busy. However, during the slowest months, only 35 to 40 employees are needed. Premier's commitment to quality cannot be met without dedicated, skilled craftsmen, and welders. Such employees are highly recruited by competitors. If Premier is unable to provide these workers with full-year employment, it will be exceedingly difficult to recruit and maintain quality employees.

Geographic Expansion

Premier is a major player in Idaho's food-processing industry. However, Premier's success should make it a viable competitor in other states as well. Concerns regarding geographic expansion include maintaining quality control; managing employees at distant locations; bidding, servicing, and providing training for distant projects; and the costs involved in each of these activities.

Fabrication-Shop Expansion

Manufacturing-space limitations are an immediate concern. Currently, some equipment is manufactured outdoors because of height limitations in the current shop. In addition, cramped shop space allows for the fabrication of only a single project at any point in time. However, various factors unrelated to manufacturing can cause changes in the demands for manufactured equipment. Hence projects are often moved out of the shop to accommodate an urgent need or production-schedule change and then moved back into the shop at a later date. Such movements dramatically reduce product quality, worker productivity, and safety. In addition, Premier's success has provided the opportunity to work on larger-scale projects. Such projects require larger machining equipment and shop space.

Premier proposes to build a 25,000-square-foot manufacturing facility and a 2,000-square-foot office building on 8 acres near Pocatello. The entire project will cost approximately \$1.75 million (Table 3). While a larger facility would be an improvement, the cash flow and financing aspects of such a venture are also critical to the economic viability of the company.

Business Management

Premier's three owners are self-described entrepreneurs/idea people. Each is willing to take risks,

generate new ideas, solve engineering and design problems, fabricate and manufacture equipment, and sell their ideas and services to clients. None of the three is particularly interested in managing the company. However, they are wary of delegating business-management decisions to someone who does not share their values, goals, visions, work ethics, and risk/reward attitudes. Nonetheless, current contractual agreements indicate that total sales will exceed \$12 million in 1999. Therefore, as the business grows a decision must be made to either dedicate one of the owners to business-management issues or to hire a business manager.

Table 3. Estimated Fabrication Shop, Office, and Equipment Costs for Premier Technology, Inc.

Item	Subtotals	Total cost
Land (8.02 acres):		
Total land costs	\$200,000	\$200,000
Building (and construction costs):		
Office building (2,000 sq ft)	250,000	
Shop (25,000 sq ft)	500,500	
Electrical/ventilation	150,500	
Water hookup	5,500	
Sewer hookup/plumbing	10,000	
Permits	3,000	
Parking lot/concrete	75,000	
Landscaping/fencing	45,000	
Total building costs		\$1,039,500
Equipment:		
Accushear	54,200	
Iron worker	19,950	
Cutting table	61,600	
CADD/CAM cutting system	7,950	
Exp series rolls	56,400	
Air compressor	18,500	
Hydraulic press	60,975	
Overhead crane	85,000	
Vertical boring machine	13,680	
Band saw	18,495	
Mill	15,500	
Lathe	24,900	
Weld positioner	8,500	
Hand tools	50,000	
Shipping	15,000	
Total equipment costs		\$510,650
Total costs		\$1,750,150

Future Directions

As his cellular phone buzzes, Mark leaves the noisy fabrication shop to take the incoming call. He clears the production schedule and "time-and-material" additions on a current project as he heads down the hall toward his office. After closing the phone, he slides his office chair to his desk and pencils the following questions onto a yellow legal pad:

1. What is the best way to market Batch Pro systems?
2. Should additional resources be committed to the research and development of new products?
3. How can Premier maintain a quality workforce in a highly seasonal industry? Can Premier continue to pay higher wages than its competitors?
4. Should a new manufacturing/fabrication facility be constructed? If so, how will Premier pay for it?
5. How can Premier increase sales? Is it time for Premier to expand geographically? If so, what is the best management structure for such a venture?
6. Sales doubled from 1997 to 1998. Nonetheless, net income fell substantially between the two years. Why? What can be done to prevent such an occurrence in 1999?
7. Should he concentrate on sales, marketing, and research and development issues and allow (hire) someone else to manage the business aspects of Premier Technology?

As his desk and cell phones ring simultaneously, Mark sighs and wonders how he will find the time to respond to these critical questions.

Teaching Notes and Comments from the President

This case is an example of a small business experiencing growing pains. Students should be able to understand two main issues upon completion of the case. First, a firm's competitive advantage is often built around human assets—in this case, the labor force. Second, increased sales are clearly needed to offset higher labor costs. There are different options to "grow this business." Higher labor costs, however, can still result in success if higher productivity and value are delivered. At the end of the case, students should be able to understand the options that an entrepreneur has in an expanding business and the different options that must be considered in growing a business.

Premier Technology is a partnership based in Idaho. It sells custom ready products to food-manufacturing firms in the Pacific Northwest. It has one unique feature relative to its competition: its labor force. Mark Brown, the partner and subject of this case, employs his engineers and welders throughout the year. His competition uses their welders as needed. Mark's welders have a dress code and a bonus system that is unique in this industry. Consequently, his labor force has developed a reputation for greater productivity than the competition, which has helped him gain new sales.

Comments from the CEO and updated balance sheets and income statements are included in the teaching note to help students track the results of

decisions made in 1999.

The case is most suitable for one 75-minute class. Students likely need a week to work in teams and complete the following assignment questions:

1. What is the best way to market Batch Pro systems?

The best approach to marketing Batch Pro systems should include a general discussion of "place," "product," "price," and "promotion." BatchPro is an integrated software/equipment system which is used for improving mixing processes for dry ingredients and wet batters. Traditionally, most mixing processes occur continuously in-line which is relatively fast but create tremendous quality-control problems. Premier's Batch Pro system is a software and engineering modification which applies "ladder logic" to mixing processes. Batch mixing allows for verification of specifications, which improves product quality. Essentially, in-line mixing systems are converted to batch systems.

Place: it is obvious that Mark can show customers onsite what BatchPro does.

Product: the features of Batch Pro include an innovative mixing design that can also be shown to customers. Although a batch-mixing system may initially be slower than in-line systems, Batch Pro greatly increases quality control early in the production system which reduces downtime and vir-

tually eliminates inaccurate product mixes—Batch Pro has almost 100% accuracy.

Price: Batch Pro costs less because it reduces the incidence of poor batches and can improve productivity. In some cases, the installation of a Batch Pro system merely involves software modifications to existing programmable logic control (PLC) systems. In other cases, equipment and engineering changes are required. The end result is a system that greatly reduces labor requirements and increases product quality while maintaining production line-speeds.

Promotion in this industry is heavily based on one-on-one sales. But advertising in key trade journals and trade shows is also important to attract other customers. An Internet site will also generate some calls. However, it is important in all cases that the sales force follows up.

2. Should additional resources be committed to the research and development of new products?

Maintaining (but not increasing R&D) at this time appears to be a rational decision. The issue of increased R&D is important but probably not critical, provided all the bugs of Batch Pro systems are worked out. Premier should focus on marketing their integrated systems and fabrication abilities coupled with their key advantage, Batch Pro, to existing and new customers. They have had a lot of startup costs; now they need to generate returns. Because repeat business is critical for reducing seasonality, there does not appear to be a good rationale for dramatically increasing R&D at this time. Premier has several good products with excellent market potential. Now is the time to sell them.

3. How can Premier maintain a quality workforce in a highly seasonal industry? Can Premier continue to pay higher wages than its competitors?

Maintaining labor quality and employing workers full-time is a core competency for Premier. There appears to be enough new growth that they can justify the compensation, especially in a region where competent labor may be in short supply. Mark noted, "Labor is our core competency . . . drug testing, short hair, uniforms . . . make our employees stand out. It also builds a positive image. Safety is our number-one goal. Although making our employees aware of that fact helps keep insur-

ance costs low, it is more important for us to eliminate injuries to our workers." Thus maintaining the labor force is important because it also helps him "weed out" the less-productive employees and keep the ones he wants. But the bottom line remains: Premier has to grow the company through increased sales.

The innovative bonus scheme has been modified. Most employees had difficulty waiting for bonuses. In addition, although employees were better-paid than their peers in the industry, they became discouraged because they had not received pay increases that they had come to expect from other employers. Thus Premier has adopted a more traditional payroll system in which small quarterly and annual bonuses are paid based upon the evaluation procedures noted in the case.

4. Should a new manufacturing/fabrication facility be constructed? If so, how will Premier pay for it?

It is pretty clear that investment in a new building is needed, rather than R&D or other uses for capital at the present time. The addition of a new fabrication building will reduce sales seasonality. A new building would also be a good investment. In fact, a new fabrication has been built and is already in need of expansion. The new facility is reducing seasonality and improving quality control as Premier gravitates from an "installation" company to a "manufacturing" company. Premier financed the facility through local Rural Development Grant programs and retained earnings.

5. How can Premier grow sales? Is it time for Premier to expand geographically? If so, what is the best management structure for such a venture?

Clearly, a new building, full-time labor force, and new products like Batch Pro can improve sales through greater productivity and new business. Students will clearly pick up on that. But expansion into new markets is also an option. It is important for Premier to diversify their markets. Premier has saturated the potato-processing industry. Batch Pro can be used in a variety of restaurants and food-processing plants beyond Premier's current geographic boundaries. The new building will allow for in-house fabrication. A highly trained labor force could be empowered to work on their own at other sites without a great deal of guidance. Con-

sequently, branch offices have been established in Boise and Twin Falls, ID. More importantly, the potato-processing industry currently represents a minor proportion of total sales. The majority of Premier's sales are currently generated by the mining, chemical, and nuclear industries.

Students might also suggest global geographic expansion. Geographic expansion in the U.S. is currently occurring. Mark noted "Being global is nice, but we think we are better off expanding regionally and building out from there." Historically, European food processors have concentrated on

quality. In addition, many of these processors are relatively small. As the European Community continues to integrate trade and currency issues, food-processing companies are likely to consolidate. Quality concerns and consolidation are likely to increase the demand for food-processing equipment. International markets provide a number of language, technical, and logistic barriers. Premier's competitive advantage is technical knowledge and service. Global markets may not provide a good opportunity, because companies can 'copy' the technology. Mark Brown noted to the class that

Table 4. Premier Technology, Inc. Balance Sheets for December 31, 1999 and 2000.

	1999	2000
Assets		
Current assets		
Cash	10,000	25,000
Accounts receivable	2,900,000	2,475,000
Total current assets	2,910,000	2,500,000
Property and equipment		
Equipment (net of accum. depreciation)	720,000	1,000,000
Total property and equipment	720,000	1,000,000
Other assets		
Note receivable - shareholder	120,000	235,000
Other note receivables	150,000	280,000
Total other assets	270,000	515,000
Total assets	3,900,000	4,015,000
Liabilities		
Current liabilities		
Operating note payable	819,000	1,500,000
Accounts payable	1,000,000	300,000
Accrued payables	1,015,000	600,000
Current portion of long-term debt	85,000	100,000
Total current liabilities	2,919,000	2,500,000
Long term debt (net of current portion)	630,000	750,000
Total liabilities	3,549,000	3,250,000
Stockholders' equity		
Common stock	400	400
Paid-in capital	75,600	75,600
Retained earnings	275,000	689,000
Total stockholders' equity	351,000	765,000
Total liabilities and stockholders' equity	3,900,000	4,015,000

Note: All figures in \$.

"The problem is, once we do the job, then their engineers will take everything apart and copy it." A better approach is to consider a joint venture with an international firm and license the technology. Nonetheless, Premier engineers recently supervised the installation of Batch Pro systems in Belgium and Holland as a "beta" test for the feasibility of additional ventures. In each case, local contractors were used to perform the installations.

6. Sales doubled from 1997 to 1998. Nonetheless, net income fell substantially between the two years? Why? What can be done to prevent such an occurrence in 1999?

Sales doubled between 1997 and 1998, yet net income declined; gross sales margins were 16.7% in 1997 and only 2% in 1998. Reasons included higher interest and general/administrative expenses. Note that cost of goods sold was 75% of sales in 1997 and 86% in 1998 due to salaries tripling while everything else generally doubled. Note the seasonality in short-term borrowing. Much of the poor net-income performance of 1998 was anticipated, given the rapid expansion of the company and working-capital requirements.

Tables 4 and 5 provide updated financial statements which reflect the investment in the new manufacturing facility and continued growth. Obviously, accounts receivable remain a large prob-

lem, and cash-flow problems persist. Perhaps some short-term debt should be refinanced into longer-term debt. In addition, Mark notes that they will probably not expand beyond the current 140 employees. If additional workers are needed, Premier will likely issue subcontracts.

Thus the partnership may need more capital to fuel expansion. Stock shares could be issued but would likely be greeted with dampened enthusiasm due to relatively low earnings in 1998. Employee ownership through an ESOP might be a possibility. However, most of Premier's labor force consists of welders and machinists who tend to be independent and not interested in long-term capital investment in companies. As Mark notes "Giving employees ownership is a good idea but wouldn't generate enough money to make a dent in our debt. Plus, we would have to reorganize the structure of the company and have additional legal costs to deal with. Our welders don't own stock in any companies; why would they buy ours?" The development of a limited liability partnership is a possibility. Although Premier's culture and labor force are much different from their competition, a merger/acquisition/joint venture with a customer who requires Premier's services is a possibility.

7. Should Mark concentrate on sales, marketing, and research-and-development issues, and

Table 5. Premier Technology, Inc. Income Statements For Years Ending December 31, 1999 and 2000.

	1999	2000
Sales	11,000,000	13,000,000
Cost of sales		
Materials and direct costs	5,520,000	4,300,000
Salaries	3,900,000	4,000,000
Subcontractors	80,000	1,000,000
Total cost of sales	9,500,000	9,300,000
Gross margin	1,500,000	3,700,000
Operating expenses	1,150,000	3,140,000
Interest expense	100,000	60,000
Operating income	250,000	500,000
Other income - grant revenue	0	0
Net income	250,000	500,000

Note: All figures in \$.

allow (hire) someone else to manage the business aspects of Premier Technology?

It is difficult to know if a full-time CEO is needed. Entrepreneurs are notoriously reticent about hiring a CEO other than themselves, especially as the company is growing. The financial information suggests that their receivables may be a problem (that is, their customers may be slow in payment).

Clearly, increased sales are needed, and someone has to do that. When asked about hiring a CEO, Mark grudgingly responded "You would have to ask me that! We did hire a CEO, but that experiment lasted only five months." When prodded to explain why things did not work out, he responded, "Let's just say that our visions for this company were not compatible."