Providing Vision and Leadership for the Future of the HVAC and Sheet Metal Industry

DECISION-MAKING FRAMEWORK FOR NEW MARKET OPPORTUNITIES: EXPERIENCES FROM SHEET METAL & HVAC CONTRACTORS

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Prepared By:

Mounir El Asmar, Ph.D.
Jera Sullivan, Ph.D.
Kenneth Sullivan, Ph.D.

Arizona State University

Experiences From Sheet Metal & HVAC Contractors

Most company leaders make market entry decisions once or twice in their careers; not enough to build experience. This document helps overcome this issue by allowing us to learn from the experiences of other sheet metal and HVAC contractors that have made such decisions. This document relates directly to the *New Horizons Foundation's 10-Step Decision Making Framework for New Market Opportunities*. In fact, reading the below stories will help you complete the aforementioned Framework's "Step 4: Review experiences of others."

The following are actual stories from sheet metal & HVAC contractors who have entered new markets. The names of the companies have been changed to maintain confidentiality. The stories are organized as follows: *A.1 Add HVAC Service*; *A.2 Add a Trade*; *A.3 Geographical Expansion*; *A.4 New Market Sector*; and *A.5 New Process*.

A.1 Add HVAC Service

A.1.1 The Service Advantage

Leaders at Accredited Mechanical, a full mechanical contracting firm, began to wonder how the company could gain an advantage by offering HVAC service capabilities. Service contracting appealed to the leaders because it would mean they could take more control of their own system start-ups, warranty equipment, and prioritization of staff. The family leadership team does not have a formal plan for adding markets such as HVAC service, but they try to do what makes the most sense for the company at the time. The benefits of having more control by adding service along with the higher margins, availability of work, and reputation with their current customer network, made sense.

To get started, Accredited needed to invest in a service vehicle, new equipment, and the hiring of a service manager. Scheduling the first few service jobs was completed very carefully to ensure that the key personnel were available to take on the work. As the demand for Accredited's service technicians grew, hiring was ramped up. Though the leadership team took the time to interview each technician, there was still quite a bit of turnover in the beginning trying to find the people who best fit in the new department.

Service differed from Accredited's traditional work because the demand was less predictable due to weather, and the invoices for service fell under a high level of scrutiny that required more follow-up and support. However, Accredited quickly learned to adapt to these market differences to develop a successful service offering to its customers.

A.1.2 Handing the Baton

Even in the most aligned companies, individuals in leadership roles may have a different vision for the company's future. Times of ownership transition are often accompanied by strategic decisions that shift the company's focus toward the vision of the new owner. When completed strategically, these shifts can benefit the company by expanding its reach in new directions, as Sheet Commander Inc. learned.

Sheet Commander was traditionally a sheet metal contractor, but the new company owner believed offering HVAC service would greatly enhance the outlook of the business. Seizing the ownership transition opportunity, when changes are expected, they added a service division.

Leadership recognized that not providing service meant allowing a competitor to Sheet Commander's sheet metal business come in to perform this work, and at the same time, form a relationship with their customers. The recognition of adding service came from within the company, but when it came time to work out the

specific details, Sheet Commander consulted with their peer group of contractors. The peer group is spread out geographically, meets twice each year, and communicates between meetings through email. Using this email list, Sheet Commander was able to gather knowledge from experienced service providers about market growth, staff needs, and a variety of other details.

The service division at Sheet Commander started small, with one technician. Over the past seven years, the department added six more technicians, a service manager, and a service dispatcher. Sales volumes now account for 10-20% of the company revenues. However, this growth did not come without complication. Service requires a different mindset than Sheet Commander's traditional sheet metal work when it comes to invoicing, accounting, and job cost tracking. Even today, the accounting system at Sheet Commander is set up to more efficiently track large projects that invoice monthly. Sheet Commander continues to work out solutions to these accounting differences to reduce their invoice time as much as possible and deal with the large number of low dollar tickets that a service department produces. Planning is also a challenge for a service department. Unlike larger construction projects that can be planned for in advance, service staff need to be more reactive to whenever the phone happens to ring. This uncertainty is a challenge at times for a company that is used to more structure.

Though there are challenges to adding an HVAC service department, Sheet Commander has found the benefits to be well worth it. The company feels more able to support and retain customers, not just for their service offerings, but for their sheet metal side as well. Looking back, the service division was a successful endeavor for Sheet Commander. Although, if they had the chance, company leaders may have set things up differently, creating a new company for HVAC service, or at least setting up a different accounting system.

A.1.3 The Ongoing Need

Avid Mechanical regularly fields calls about HVAC systems that have unexplained issues. For many years, diagnosing these issues meant hiring a balancer to help inspect the existing system. Balancing service for the purpose of diagnosing issues became an ongoing need for Avid. As the need continued to arise over and over again, Avid grew an interest in bringing this service in-house. The intention would never be to bid testing and balancing work, but rather, to have a balance technician available internally to more quickly and cost effectively serve their customers. Then, Avid would also have the ability to provide owners direct balancing work.

When strategic decisions about market entry arise, Avid is diligent about conducting a cost/benefit assessment. Although the cost of providing test and balance service (a vehicle and about $10,000 of equipment) was not considered a major investment for the company, they stayed true to their process. Looking beyond just dollars, Avid identified two major obstacles to their success: (1) ensuring their existing subcontractors would still provide quality test and balance quotes for their plan and spec work, and (2) finding the right person to build the new service around. *More on "finding the right champion" is covered under Step 6.*

First, the president of Avid personally called many of the company's current test and balance subcontractors. He openly and honestly explained what the company intended by hiring a balancer internally. He assured each subcontractor that if Avid asked them for a quote, they would absolutely be hiring out that work, and the company would stay true to their word and never waiver. Because Avid maintained a reputation for being upfront and honest, the other testing and balancing subcontractors believed their word.

The second hurdle was finding the right balance technician for the job, and that took a while. Avid was looking for not only a technically qualified and certified balance technician, but also someone who was good with customers. After much searching, Avid found the person they felt the balancing department could be built around. When the technician was identified, the new department became its own brand.

An accounting major, Avid's president saw to it that the department's books were set up in a clean and distinguishable way from the onset. To ensure that the business makes sense, it is important to be able to capture the gross profit level and identify what the overhead of running the new department is worth. Avid has been able to track this measures from day one of starting internal testing and balancing, and they have been able to adjust and correct as needed because of that.

After purposeful and controlled growth, the test and balance service currently provides Avid a significant and steady business line. Looking back, the new testing and balancing department could have grown faster with the quicker addition of support personnel. The conservative approach taken by Avid might have delayed the hiring of a project estimator/manager by approximately a year, but in the end, Avid is fully satisfied with the test and balance service. Now, after three years, test and balance has grown from sustaining one employee to sustaining seven employees.

A.2 Add a Trade

A.2.1 Targeted Market

The decision to add a mechanical trade at Les Muller & Sons was provoked by a suggestion from an interested contractor. The appeal of the suggestion laid in the ability to create project opportunities in the light commercial market, which required mechanical capabilities. Together, the president, vice president, and senior project managers discussed the decision.

At that time, the company was less analytic than it is today. However, factors such as start-up costs, equipment costs, and one- and five-year income projections were considered as part of the decision process. Most of the market information came from the potential leader of the new mechanical department, a trusted friend who worked well with Muller & Sons in the past, and who had worked in the mechanical industry for many years.

Two alternatives were considered: (1) adding mechanical contracting as a new trade to the company by hiring labor and buying equipment; or (2) subcontracting the mechanical piece for light commercial project opportunities. After approximately three months of analysis and deliberation, the decision was made to introduce a mechanical component to the company. The biggest apprehension from management was that mechanical contractors in Muller & Sons' current markets, Industrial and Healthcare, would see this as a competitive move. They assured their regular working partners that the move was solely to enter the light commercial market and the company would not be impacted in their traditional projects.

The decision was made to bring in the mechanical contractor, but the additional trade did not last. In less than two years, Muller & Sons decided to pull out of the mechanical side of the industry. Looking back, the new mechanical department was not well supported by sales and marketing, which potentially occurred out of fear to look aggressive in the eyes of allied mechanical contractors. Also, the strictly sheet metal company, until that point, did not fully understand the challenges in the mechanical market, especially perpetual payment delays. If faced with the same decision today, the company would likely conduct a more thorough market analysis for itself, not relying solely on the future champion of the department. The management group would have benefited greatly from learning about the new trade for themselves and likely would not have chosen to enter the new market.

A.2.2 Systematic Seconds

Previously, the Kongtiao board of directors had asked their management team to present a thorough business plan for adding a testing and balancing department. The comprehensive plan provided the board with confidence in the new department, and successful implementation of the plan led to increased company profits.

Due to its success, the business plan approach was used again when Kongtiao was considering adding a fire and life safety department. This attempt at writing a business plan was not as thorough as the first time management employed this technique. Managers were less familiar with the fire and life safety market than they were when analyzing the testing and balancing market. Their uncertainty was also met with a more volatile, difficult to understand market environment. All of this fluctuation made the business planning process more difficult and eventually lead to a less comprehensive, thorough analysis.

Still, enough evidence of a potential market opportunity existed in the variables that were analyzed to convince the board to move forward with adding the new fire and life safety department. Since its creation, the department has stagnated, not draining the company, but also not producing the profits that were expected. Though the business plan approach had worked for the same company, in fact, the same individuals, in the past, this market was different and did not yield the same effect from the analysis technique.

A.2.3 Labor Risk Mitigation

Family owned and run, Hint Heating & Air Conditioning, had been considering a way to hedge the liability of being a union only business, which was recently emphasized by the peer group and industry associations to which Hint belongs. During this time, a weatherization specialist approached a leader at Hint asking her to buy his business. The specialist loved to sell products and services but did not enjoy the management role that came along with owning a business.

Hint's guiding philosophy over its 70+ years as a residential HVAC contractor has been to make a difference in the lives of its customers. Weatherization provided an opportunity to provide the customers with a valuable service and add a non-union component to hedge the company's labor risk.

The core management team at Hint, consisting of four individuals, considered the opportunity to capitalize on the champion's experience and personality fit. Weatherization had great margins, a low level of competition in the area, and little overhead cost. Hint also saw a benefit in the cross referral opportunity. Shortly thereafter, Hint initiated a Limited Liability Company for weatherization services.

The choice to move forward with an LLC protected the thriving Hint organization from some liability concerns, but there were unforeseen accounting and database complexities. The ability to recognize two separate entities in the current accounting system was impossible. If it were not for a company manager, trained in accounting and computer science, this oversight could have been devastating for Hint. Fortunately, the manager was able to resolve the issue in-house without a major monetary cost to the company, though it did take a toll on the manager's time. Never again will Hint launch a new business venture without first fully testing all of the affected systems.

A.2.4 Creating Bonds

When a relationship with the electrician on a project went sour in 2009, a customer suggested a replacement that quickly turned into a trusted partner in business. Over the next couple of years, this same electrician was brought on for several subcontracting commitments. The electrician performed well and fit in well with the forward thinking, improvement-based culture of mechanical contractor Kurtis Cox Corporation. By late 2012, discussions had started about bringing the electrician onboard to start a new electrical department for KCC.

Discussions leading up to the decision to add the electrical department circled around cost factors such as budget, overhead, operations costs, and acceptance of the idea by both the customer and other construction industry members. No other direct competitor offered the entire mechanical/electrical/plumbing package that KCC was proposing, so it was important to ensure the community would accept a full MEP contactor. It was just as important that the electrician would be able and willing to give up the autonomy of owning his own business for the opportunity to grow within a larger corporation. Comfort and clear understanding of the implications are imperative when the entire department hinges on one man's expertise.

In late 2013, the electrical partner and one other employee gave up their small business and started working for KCC. The intention was to start with a $500,000 sales goal for the first year, but quick success and efficiencies recognized by the company and clients multiplied the $500,000 target by four. KCC had about $2 million in electrical work in the first year. With a solid reputation in the mechanical and plumbing trades, the electrical department had a quick start. The ability to provide a full MEP package was more marketable that KCC ever imagined. Now, the concern is reigning in the growth to allow the department a solid foundation.

A.2.5 Quest for Control

LIFT Sheet Metal saw the addition of plumbing capabilities as a way to gain more control over project schedules and cash flows. The move from a typically third tier sheet metal subcontractor to a second tier plumbing subcontractor would reduce the three-month payment lag by a full month, providing more timely compensation for all work. Also, the ability to schedule both the plumbing and sheet metal tasks would give LIFT a higher level of control over activities on the project site.

Since two partners left in the early 1990's, the family ownership that remained has held an ongoing dialog about LIFT's strategic direction. The addition of plumbing seemed to provide several benefits to the company, and the owners decided that moving forward with two relatively small plumbing contracts was a good way to learn about the trade in a low-risk situation.

LIFT's location, near the border of two union districts, required agreements with two different locals. The plumbers' unions in the area are regulated more rigorously than the sheet metal unions. Threats of fines and removal of labor from projects is not uncommon from the local plumbers' unions. Work boundaries are strictly enforced and contractors are not able to choose the plumbers they would prefer to employ.

The cultural differences between sheet metal workers and plumbers in the area do not stop at the union hall doors. Underground plumbing work requires extra attention because fixing an improper installation is difficult and can be very costly. The additional attention required in the plumbing trade has created a much slower, more meticulous culture. As a sheet metal contractor, LIFT found out quickly that they would need to provide more oversight than originally anticipated to keep the plumbing crews working at an acceptable pace to meet the schedule. Also, there is an additional uncertainty that must be accounted for when taking on plumbing work because the contractor cannot choose their plumber. After completing two plumbing projects, LIFT found that the personality and culture fit to be poor with one contractor, but good with the other. Unfortunately, LIFT must estimate productivity for their bid package before a plumber is assigned to the project.

Because of the unforeseen nuances of working with the local plumbers' unions, LIFT has decided to withdraw from both locals. However, this does not mean they have given up on the plumbing trade. Learning from experience, LIFT is now considering other alternatives for entering the plumbing market, including hiring an experienced plumber and looking into other non-union options.

A.2.6 Emerging Market

Fire and life safety provided a low cost, low competition opportunity for Val Campbell Mechanical to expand its service offerings. After learning that fire departments were unsure about how to handle calls related to inspection of fire and smoke control equipment, management at Val Campbell investigated what it would take for their company to be able to address this need.

The Val Campbell team found that the International Training Institute (iTi) would provide courses for level one and two technicians in Fire Life Safety. Also, the local Joint Apprenticeship and Training Committee (JATC) provided Fire Life Safety contractor certification programs. After a relatively small investment of time and the cost of training and certification, the company could properly serve this new and growing industry.

The costs were worth the potential opportunity in the eyes of Val Campbell's managers, as the pressures continue to mount for more regulation of fire protection equipment in local government and permitting agencies. Once certified, risk is low, as fire life safety service is generally paid on a time and materials basis. The additional service offering also provides Val Campbell the opportunity to network with new customers and inform them about the other services offered by the company. These benefits have proven the investment worthwhile for Val Campbell.

A.2.7 The Effective Business Plan

For about 40 years, Glover Corporation had maintained a staff member to perform testing and balancing services for customers, but the company did not do any competitive bidding for these services. Around 2009, a past employee approached Glover with the suggestion to expand into this new market.

The owner, president, vice president, and board of directors considered the proposition. At the request of Glover's board of directors, a formal business plan was developed around the idea of entering the testing and balancing market. This business plan included financial projections, reasons for entry, staff availability, start-up costs, equipment costs, green building and energy saving trends, competition, growth timeframe, and targeted growth. Testing and balancing was a market the company was familiar with and one where the well-established reputation of Glover would serve them well.

After careful consideration of the market through the development of a thorough business plan, the decision was made to enter into competitive bidding for testing and balancing services. The entire decision process took approximately six months including the plan development, but has been worth the effort. Testing and balancing has proven to be a successful addition to the company for the past five years.

A.2.8 Company Character

R.W. White Mechanical is very clear about the values the company holds. Before any significant changes are made, the company's core purpose and core values are reviewed. The idea to add a piping division, brought about by attending a construction organization's seminar, was intriguing for leadership at R.W. White and seemed to fit into, and even enhance, the company's core values.

The market that R.W. White generally serves was faced with a huge and sudden need for piping contractors. The standards for the piping industry are very different than those of sheet metal, which was seen as a large risk by R.W. White leaders who had never before done business as a piping contractor. To ensure that the risks and opportunities were fully considered, the president at R.W. White thought through a series of decision-making steps he had developed over his years of experience. First, he fully considered why the company might want to enter or not enter the piping industry. He considered which jobs the company might seek out for piping work and reviewed the equipment and materials that would be needed to complete those jobs. He fully outlined all of the opportunities and obstacles that he could think of and considered how the company's knowledge and experience could help overcome the obstacles. A plan was developed to bid, finance and supply the work, along with the resources needed, and ultimately the plan was implemented and was a big success for R.W. White. Throughout the process, R.W. White used a continuous improvement method to understand what was going right and what could have been improved as they entered the new market.

This systematic approach to major company decisions, which starts with a review and careful consideration of the company values, has served R.W. White well for many years in the industry. As the president considers his retirement, his main concern is maintaining the emphasis on the values the company has held for so long. A decision-making structure documents how the core values should be used to lead decision-making at R.W. White for years to come, sustaining the purpose and vision that had always been a defining part of the company.

A.2.9 Resolved to Success

After a rocky start, the plumbing and piping division at Rural Sheet Metal has flourished and became the company's largest trade. Predominantly a sheet metal contractor, Rural hired a highly adept project manager with a piping background. The manager was expected to transfer his skillset from piping to sheet metal. However, he maintained an interest in plumbing and piping work and wanted to continue some work in this field.

Rural satisfied the project manager's interest by slowly stepping into the new trade. The transition to adding a plumbing and piping trade was suddenly accelerated when a piping contractor, unfortunately, went bankrupt during a job. At this point, there were about seven sheet metal contractors that traveled regionally in Rural's geographical area. However, there were only two or three plumbing and piping contractors to cover the same region. Having a piping contractor bankrupt put Rural in a tough spot; they had the choice to either sell out the remaining work as one big lump or stick with the project and learn from the experience. The decision to stick with the project meant accepting a big loss, but one with many valuable lessons.

Recognizing that plumbing and piping was a commodity in the region inspired Rural's leadership to commit to adding the trade to its arsenal. There were two main barriers to entering the piping side of the construction business. First, each job takes approximately 2.5 to 3 times more pipefitters than sheet metal workers. In other words, more people are needed to complete the job. Additionally, pipefitters require more training and practice before being considered proficient at their trade. Although these barriers were tough to cross, Rural got through by keeping a positive attitude, especially with their employees, and maintaining an unwavering commitment to adding the new plumbing and piping capability, while learning from experience along the way.

The commitment to the new division hit a road bump when the project manager decided to leave Rural. After a lot of consideration, the leadership group at Rural brought in a very talented manager to lead the plumbing and piping division. The saving attribute of this new leader was his trust in the vision of the company. He wholeheartedly followed the plan for the division and his trust in the leadership served the division well.

Sticking with the plumbing and piping division through all of the trials and tribulations was worthwhile for Rural. Not only is the division the current largest within the company; Rural rose to be the largest piping contractor in its union area in just five years.

A.2.10 Bottom Up Idea Creation

As Marrow Sheet Metal has grown, they have established a systematic method for generating ideas from within. Staff have regular meetings with their division. Additionally, Marrow has established groups for specific processes, such as talent management and business development, that are made up of individuals from a variety of areas in the company. It was through one of the process groups that a new project manager with an industrial background suggested taking on some industrial projects.

Within the multidisciplinary group, the idea gained traction. Industrial projects were attractive because they are typically contracted based on time and materials, rather than lump sum. Marrow was also interested in diversifying from purely ductwork to flatten out some of the peaks and valleys they had experienced within the market. Now, with an experienced staff member, industrial work became a viable option.

Using their established system, the idea to add industrial projects was first brought to the senior staff team. From there, each senior team member pitched the idea to the staff within their division. Only after gaining acceptance throughout the staff level was the idea proposed to company leadership. This bottom-up method promotes buy-in throughout the larger sheet metal company, which has proven to help Marrow implement innovations in the past. At the leadership level, the idea made strategic sense and the decision was made to move forward and bid industrial work.

As the idea to add an industrial division moved through the company, staff members and company leadership were encouraged to ask tough questions about the idea's viability. As each question was raised, staff were tasked with developing answers and truly thinking through any foreseeable issues. Armed with input and experience from all levels, the industrial division was added without any setbacks.

At the time of this writing, the industrial division at Marrow is still new. Company leaders have chosen to grow the division slowly. Initially, bidding has been a challenge because the company typically uses historical data to develop their estimates. Without a history, they do not have this type of data for the industrial sector. As Marrow gains knowledge of the industrial market, they plan to grow that new side of the business.

A.2.11 Merging Cultures

Voyage Mechanical, primarily a sheet metal contractor, had been performing a significant portion of their business with a single mechanical contractor. Relationships between individuals within the two companies grew as a result. When a couple of individuals from the mechanical contractor understood that Voyage was excited about developing their own piping capabilities, discussions started between them and the leadership at Voyage.

Historically, it has been difficult for the sheet metal and piping trades to work together. Cultural differences between the two trades tend to clash at every level within organizations. During discussions, the group talked about getting the sheet metal and a new piping department to work together to optimize both service offerings.

Voyage felt good about their ability to harmonize the trades within their organization and eventually hired three individuals from the mechanical company to start their piping effort. The mechanical company made it clear they were upset at Voyage for recruiting their employees. A bridge had been burnt between the two companies that had traditionally worked together.

Shortly after joining Voyage, it was revealed that the harmonious, efficient working situation that had been envisioned was not easy to create. Instead of both sides making concessions to work together, the departments carried on with business as usual creating morale issues within the organization. The commitments to perform mostly negotiated work and bring over key customers was more difficult than anticipated for the new piping leaders, so they started getting a large portion of low bid school contracts.

After looking through the numbers, Voyage executives conferred with other sheet metal & HVAC contractors piping departments. The other contractors confirmed Voyage's suspicions: the margins were far too low to make money. Tensions rose when Voyage told the piping project managers they could not take on more school projects. Soon after, all three leaders from the piping department left Voyage. Without expertise in the piping field, Voyage was left to cope as best as it possibly could and try not to make the bad situation a fatal one for the company.

Looking back, Voyage moved forward with the piping department with little upfront planning and structuring. The start-up costs were significant after signing bonuses and investment in additional space to house the piping department. Voyage has learned hard lessons from this situation. In the future, the Voyage leadership will supplement their gut instincts with hard facts, considerable planning, and a more structured assessment of the risks involved.

A.2.12 Customizing Value

Communicating orders from the field to the shop is not as easy as it sounds. Innovate Sheet Metal employees spent hours on the phone trying to make sense of orders that were incomplete and difficult to interpret. Fed up with this current state of practice, Innovate worked with a local programming company to develop a web based ordering system that is easy to use, simple to understand, and that effectively communicates orders from the field to the shop without ever having to pick up a telephone.

The technology worked so well in-house, saving 15% in direct cost in the first year, that top management saw the opportunity to market the new technology to other sheet metal contractors in desperate need of an efficient ordering system.

Innovate teamed up with their programmer and started a new company to sell their ordering system. Soon, a vision for the new company started to develop. Putting customers first was very important because the main weakness of the competing providers was their lack of service and limited knowledge about industry operations. This is where the new company would outmatch those currently selling construction ordering software. The biggest risk the new company would face was standing out of the crowd of current providers that have regularly fallen short of customer expectations. Measures were taken to help instill confidence and trust from the customers including guaranteeing the results with a built-in Return On Investment (ROI) calculator.

In the beginning, the new software company was guided solely by yearly budgets and targets. Now, it has its own strategic plan, independent of the sheet metal construction company. Admittedly, the new company has changed direction regularly, but the strategic plan is always referred to and either adapted to match the changes, or left intact and the changes were abandoned.

Since very little was known about costs in the software market, the new company proceeded slowly in its growth. A small scope would start the process, then, analysis of financial documents and profit would indicate if the company is ready for the next step. If so, they would try a small increase in scope. Growth continues in this fashion today as the ordering technology gains popularity in the sheet metal industry.

A.3 Geographical Expansion

A.3.1 Following the Customer

A highly successful subcontracting job prompted the project owner to approach Braun & Saunders Mechanical about working on another project outside of their home state. Previously, leadership at Braun & Saunders had discussed expanding into the neighboring state and this offer gave them the opportunity to seriously consider doing just that.

A trusted project manager within the company showed a sincere interest in taking on the challenge of leading projects in the new region. It was understood that operations in the new market would have less oversight and support from the parent company than traditional projects completed by Braun & Saunders, simply due to distance The leaders of the potential project would have to make the project their own, and this interested project manager was willing to take on the challenge.

In addition to who would lead the project, the president and the CEO at Braun & Saunders discussed several other factors when considering the new market. They looked at potential profits, support from the bonding company and the bank, the cultural and personality fit, the construction community's response, commitment from the area labor union, and treatment from potential subcontractors. Suppliers would not be an issue, as Braun & Saunders planned to work with manufacturers that they have always worked with. After brainstorming all the potential factors the company leaders could come up with, the viability of the move seemed to hold up.

After discussions with the potential new leader, the decision was made to expand geographically and accept the owner's request to take the project outside of Braun & Saunders' typical geographical bounds.

When Braun & Saunders expanded in 2005, the operation was highly project-focused. As customers in the area noticed the productivity, safety, and quality coming from Braun & Saunders' crews and began requesting the sheet metal contractor for their own jobs, the project-focused group of employees transformed into a highly profitable branch office.

The branch office continued to build a reputation and expand until the Great Recession took its toll, leveling off work in late 2009 and 2010. After deliberation, Braun & Saunders closed down the branch office in 2012.

Looking back, the economic struggle of the entire country was not a foreseeable event. Braun & Saunders would make the same decision again. The branch office never lost money and, for a while, was a quite profitable arm of the company. The decision to expand and the later decision to pull back were each considered a success.

A.3.2 Focused on Quality

Focused on making a difference in customers' homes and lives, Lowery Home Systems built its reputation of having exceptional knowledge and service by following the values that have shaped all aspects of the company. It was these values instilled in the family leadership team at Lowery, that helped the company through the expansion to an unfamiliar location.

Lowery's home office has been located in a mid-sized U.S. city with a population of approximately 160,000 residents. Though the city provided a large enough housing market to support the company, the low price mentality compelled all contractors to cut out any nonessential costs. Meanwhile, the value-centric philosophy of a nearby community allowed higher prices for high quality work. Providing expertise and the best possible value is of utmost importance to Lowery's leadership team, so the family members leading the company began discussing their potential fit in the geographically accessible value-based market.

The nearby community, only a 40-minute drive away, was undeniably appealing to Lowery, which had always prided itself on the dependability and quality of its service. To test the waters of the new market, Lowery started by focusing on advertising in the area and having calls forwarded to the home shop from a local phone number. However, it quickly became clear that customers in the new location place high importance on supporting local firms in their community. Finding a satellite location in the city would be necessary.

The decision to fully commit by opening a second office would ultimately come from the leadership team with advice from the previous owners, who also are family members. While mulling over the possibilities, this group considered factors such as overhead needs, budgeted sales, equipment availability, area suppliers, and experience.

Fortunate timing allowed Lowery to procure the equipment needed for the new location for a reasonable price from a local auction. With this bit of luck and an anticipated sales figure of $250,000 per year after the first 6-12 months, the management team decided to move forward with opening the new office stipulating a full commitment to the satellite office for at least two years.

Unfortunately, not all parts of the plan fell into place as seamlessly as procuring equipment. The biggest unforeseen challenge was branding the company in a way to simultaneously serve two markets. Logo and informational updates on signs, brochures, invoices and company trucks each tallied extra monetary and time resources beyond what was originally budgeted. Though each change was small, the cumulative effect turned out to be large.

Through this and other challenges, Lowery has maintained its satellite office for five years. The returns to the company sustain the decision to stay, though the profits are not as great as anticipated. The forecasted $250,000 per year in sales was not reached in the first year, but in the fourth year instead. Although there were some unforeseen road bumps, the decision to open the new office would not have been made differently.

A.3.3 Continual Expansion

Since its simple start as a small family business, the Perry Duke Corporation continues to grow and thrive, offering valuable mechanical solutions to an ever-enlarging number of customers. Originally, the metropolitan area in which Perry Duke is located was growing dramatically and with it grew the demand for the construction trades. As it sometimes does in the construction industry, development in the area came to a halt, and management at Perry Duke had to discover different avenues to sustain the growth of the company. Expansion to other geographical areas is one of many growth solutions that management at Perry Duke continually evaluates. Several times in the past, the organization has opened successful branch offices in new geographical locations, and it still continues to look for more opportunities to expand in this way.

A nearby location, just across the state line, provided Perry Duke with a geographical expansion opportunity that was worth further consideration. Managers were looking for an area that exhibited strong union affiliation, was familiar or had high growth potential, and was accessible to leaders traveling in from company headquarters. Because of its proximity to the company headquarters, the nearby location was familiar, easy to visit and it also had a strong union presence. In addition to meeting Perry Duke's minimum requirements, the location offered the opportunity to start with small projects in the market sector where Perry Duke performs best, and with little competition.

After careful consideration, Perry Duke decided to open an office in the nearby location. Management found an affordable storefront location and a competent leader; a knowledgeable, hard-working manager with many years of experience in the area. Planning had been going on for one year when the new location was opened.

After about five years in business, the branch office shut down. Unforeseen challenges arose with the labor and leadership at the new office. Although the manager running the new office was very experienced and knowledgeable, he ultimately was not the right fit. The new office required a more flexible, entrepreneurial person with a talent for sales and marketing. Labor also proved to be more of a challenge than expected with three local unions governing the targeted geographical market. The locals were apprehensive about working with Perry Duke, an unfamiliar contractor, and were very strict with their enforcement of jurisdiction, greatly complicating labor planning.

Perry Duke believed that having a local address would help combat some of the apprehension customers and locals have about working with an unfamiliar contractor. In this case, the local presence was not enough. If they were to try growth into this area again, Perry Duke Corporation would consider expanding by acquiring an established area contractor and build on the strength of existing relationships and area knowledge.

A.3.4 Market Boom

Following a booming energy industry, Gamut Sheet Metal began taking on projects over 300 miles from their home office. The draw to the market was strong because there was more available work than contractors, but labor was scarce. Current staff were not willing to sacrifice the time with their friends and families to travel that far. Getting labor from outside sources to move to a rural area was equally difficult. Although the labor struggles were intense, Gamut took on a couple of small projects in the booming market.

At that time of hyper growth, planning was very difficult. The growth led to chaotic contract terms and a large amount of project delays. After dipping their toes into the energy industry, Gamut has exited that area of growth for a more predictable market closer to home.

Management agrees that there was probably money to be made in the booming environment, but the uncertainty was not something that Gamut was willing to accept at the time. In market entry, market growth is a big factor to consider. However, even when market growth is very strong, availability of labor and contract terms can complicate the decision to enter.

A.3.5 Structured Geographical Assessment

Bolster Mechanical has successfully ventured outside of their traditional geographical area multiple times. Leaders at Bolster attribute their ability to successfully expand to the time and thought put in upfront.

Bolster uses a highly structured approach to geographic market assessment. First, either the company president or one of the three divisional vice-presidents is tasked with conducting the market assessment. This individual calculates all of the foreseeable costs, risks, and benefits to engaging in the new geographic market. After the individual is confident in his or her assessment, the leadership group meets to discuss the potential market.

During the meeting, all of the costs, risks and benefits are further analyzed. The group double checks the numbers in the assessment and adds any missing information. Then, the leaders brainstorm other less obvious impacts of entering a new market, including: extra costs compared to competitors, ability to still get the work even when incurring extra costs, added value brought by the firm, and the ability of the added value to be a differentiator. One factor that has been an issue in the past is determining what resources will be taken away from the rest of the firm by pursuing the more distant job. When expanding geographically, at least one good manager will need to be sent to complete the new work. This manager will have to spend extra time traveling to the jobsite and dealing with the nuances of the new market. This takes away from the time this good manager can spend helping out with other parts of the company. Leaders at Bolster believe this is one of the most important considerations when entering a new geographic area and it is one that is often missed.

Although Bolster has not formalized a strategic plan, leaders within the company are always willing to consider expanding into new markets. However, each new market is heavily analyzed before action is taken. Bolster has learned over time that a diligent, upfront assessment helps to have successful market entry outcomes for the long-term.

A.3.6 Always on the Move

Rife Mechanical is situated in a rural area and regularly has to travel over 200 miles for work. Out of necessity, Rife leaders came up with strategies to assess the ideal locations to pursue. One of these strategies is to bid projects in different areas. Some may tell you to only bid projects that you know you can get, but Rife uses bidding as a way to gather information about different markets. Acknowledging the fact that there is a cost involved with bidding, Rife might conservatively bid projects outside of its traditional work area. Leaders in the company have found this to be an effective method of assessing the competition in that area. Although it goes against conventional advice, it works for them.

Rife has also worked hard to cultivate partnerships with their vendors. By having vendors that they can trust and who trust them, Rife has found another rich source of information about the work being done in a certain region. Having good relationships with vendors expands Rife's industry network and allows them to pull in more information about the status of work in a geographic market.

Rife has also improved their competitive advantage by using prefabrication as a benefit. Rife likes the cost of doing work in their shop. For this reason, they continue to improve their abilities in prefabrication. In certain jobs, this ability to prefabricate gives Rife a considerable advantage.

The main factor Rife looks for in a geographic location is good margins, but this is not the only consideration. Some areas are more hospitable than others to incoming contractors. There are certain areas where getting quality labor is harder than others because of their political situation. The ability to use your own manpower greatly reduces the risk. Vendors can be challenging to secure in certain areas, too. Knowing these challenges before entering the new market, and planning for them, is vital for success.

Rife learned these strategies out of necessity, being a rurally located contractor. These lessons did not always come easy, but Rife tried its best to learn from each bump and bruise along the way. Critical tactics that have facilitated success for Rife include keeping their goals realistic and taking an unwavering stance on decisions once they are made.

A.3.7 Waiting for the Right Opportunity

The local union's work area stretches a nearly two-hour drive from the Rollie Sheet Metal headquarters. Until recently, Rollie hadn't pursued work that far away, although they always thought it would be advantageous to branch out in that direction. When the right opportunity finally presented itself, Rollie was ready.

As a relationship driven company, the first question asked when considering any opportunity is, "Is the client right for us?" Before bidding a job just because the local extended that way, Rollie assessed the client to ensure that the relationship that was formed would be mutually beneficial and long-term. For Rollie, this client-centric approach has become a differentiator when proposing on negotiated design/build or design/assist work.

Not only are owner relationships important, but relationships with general contractors and other subcontractors are also taken seriously at Rollie. The opportunity in the new region allowed the company to establish a lasting relationship with a general contractor whom they had worked with before.

After establishing that the relationships were a fit, Rollie began to consider how it would secure the work. Rollie leaders had to consider the extra costs of their workers traveling approximately two hours to the jobsite and staying in that area during the workweek. They could not have low-bid this project due to these added costs, but because the work was negotiated, Rollie was able to secure the contract based on its solid reputation and the added value its their team could offer.

The flexibility and choice that Rollie provided impressed its customer in the new region. Rollie has been invited to do even more work for this owner and a solid relationship has been formed. This was the ultimate goal in pursuing the initial project. Moving forward, Rollie aims to further improve its reputation in this region.

A.3.8 From the Gut

It seems new relationships are formed on every new project in the construction industry. On a large project, Proper Mechanical worked closely with a project manager from another state and developed a good working relationship. The project manager continually talked about starting his own business. He was a hard-working person who seemed highly capable of running his own shop. Leaders at Proper decided to partner with him, opening a new company in his home state.

The partnership did well in the beginning, getting a lot of low-bid school projects. However, Proper started to get calls from local contractors informing them that their bids were alarmingly low on a lot of the jobs in that area. Time was spent trying to figure out whether or not there was a problem, but it is very difficult to tell where you stand on a project from the estimate. In the end, Proper listened to their intuition, which was telling them there were cracks in the expansion's business practices.

Proper leaders discussed their concerns with two trusted advisors and owners of their other business partnerships during their scheduled biannual meetings. The advisors and fellow owners helped better understand the issues at play from an outside perspective. Sensing significant losses on the horizon, and not wanting consequences to spill over onto Proper's core company, leaders decided it was the right move to sell the expansion.

Negotiations started with a mechanical contractor in the area. Ultimately, the business was sold at essentially no value, but the contractor agreed to take over the facilities and remaining work just a couple of weeks before the tragic attacks of 9/11 in 2001. After 9/11, many businesses changed and an exit at that time would likely have been much more costly.

Also, Proper was fortunate that the project manager, who had been running the operation, still had 'skin in the game' from the original partnership. For this reason, he went to work for the mechanical contractor that bought the business and helped close out the remaining projects. Having someone 'on the ground' with their interests in mind made Proper leaders feel more secure.

The total loss was about $500,000, a significant amount for performing about $7-8 million worth of work each year. Fortunately, the company was able to survive the losses and take many lessons away from the situation. Proper leaders learned that there is a balance between trusting your new project managers and knowing the details of the new market yourself. They also learned the importance of exiting a business when necessary. Looking back, a key indicator of an unfortunate situation was that key relationships were not being formed with customers. Ultimately, getting the customer excited about your work is a crucial step to finding good jobs with fair margins and timely payments. If those relationships are not developing, the business will struggle.

A.4 New Market Sector

A.4.1 Decision to Not Enter

Intrigued by the "HVAC and Sheet Metal Industry Futures Study" published by the New Horizons Foundation (NHF) in 2008, the board at Brandt Richards Mechanical expanded its annual emerging market outlook discussion to include potential strategies for the next decade. An obvious opportunity was imminent as compliance deadlines rapidly approached for public schools in the area. The new-build and retrofit public school markets were on the rise to accommodate the changing legislation, and the board at Brandt Richards had a decision to make; are we in or not? Answering this market entry question would shape the way Brandt Richards conducts its business in the years to come.

Board members, including the company president, vice president, CFO, treasurer, and secretary had many factors to consider; most importantly, the implications of working under the public owner's stringent specifications and requirements. The owner regulates construction of all public school building projects in Brandt Richards' region. All school work is required to use a design-bid-build (DBB) delivery system and, though Brandt Richards does a number of DBB projects each year, it is mostly a design-build company. Also, strict inspection and documentation requirements were unfamiliar to staff, and after discussions with peers, it was clear that learning to work with this school system would be a slow process.

Knowing that working for this potential owner would require a great deal of training and a change in company mindset, the board considered the company's preparedness to deal with these ominous obstacles. They considered internal factors including the company's core competencies and strengths in the industry, the availability of staff and staff experience, the quality of existing relationships in the new market, and external factors of job timeframes, contract requirements, and the looming economic recession soon to hit the construction industry.

Upon deliberation, the board concluded that Brandt Richards was not currently prepared to take on the imminent school projects. To handle the projects well, increased staff specialized in schools were required. Hiring engineers familiar with the school requirements would not be enough, as field staff would need to understand and adhere to the new requirements as well. Current core competencies and strengths of the company did not match up with work in the school market. Brandt Richards is at its best when working on projects with short timeframes, doing retrofits or replacements in a design-build environment, and getting the field work done fast. In direct opposition to these strengths, this school's projects are generally long in duration, completed in a DBB fashion, require specific documentation that Brandt Richards has not worked with previously, and the learning curve is long and steep. Also, no strong relationships existed in this market because company efforts in the past were not focused on schools but directed toward industries that better matched the company's type of work.

The hope that the extra projects might help sustain sales during the forthcoming recession was too uncertain and did not sway the opinion that the company should steer clear of the expanding school construction market. In that 2008 board meeting, the unanimous decision was made; Brandt Richards would not pursue school construction work, with minor exceptions for small, equipment replacement contracts.

Revisited many times since, the decision did not change and employees are whole-heartedly supportive. The company weathered the recession and emerged with little to no lasting damage without school work and without moving away from the company's greatest strengths.

When making market entry decisions, it is easy to get swept up in the numbers game, but Brandt Richards believes that there is more to a decision than financials. Before even discussing the size of market growth, projections and ratios, Brandt Richards assessed its core values and company strategy. These high-level considerations allowed the board to make the right market entry decision before even opening a financial spreadsheet. And, even though enticing opportunities have been considered for discussion, Brandt Richards has stuck with its decision, at least for the time being, and is content with keeping it that way in the future.

A.4.2 An Evolution

Kemp Fischer Sheet Metal has evolved its market offerings over time rather than choosing to make sudden, dramatic changes. Though an excellent provider of HVAC and ductwork systems, Kemp Fischer struggled to stand out as a leader in their markets. Fierce competition had forced margins to become very small, which is difficult for Kemp Fischer, an organization built around providing premium equipment and craftsmanship.

Feeling suffocated by the intense competition, management at Kemp Fischer felt the risk of not adjusting their market offering was greater than the risk of offering services outside of their comfort zone. Instead of confusing their staff by offering only the best quality on some projects while asking them to perform low-bid work on other projects, Kemp Fischer decided to focus on high-end offerings in underserved markets.

Kemp Fischer began to look for small opportunities to offer new services on projects for which they were already bidding. A clear void existed for architectural sheet metal, especially flashing. The architectural and flashing markets would allow Kemp Fischer to generate healthy margins on work that played into their mission to provide exceptional quality of work. It was important to Kemp Fischer to find a specialty craft in which they could rise to the market leader, and it seemed architectural sheet metal was the best route.

Kemp Fischer generally takes small steps when venturing out of their area of expertise. In an effort to reduce the risk of trying something new, Kemp Fischer looks for opportunities to bid on a project mostly in their current market but with a small portion of the work in a new market sector. Another avenue Kemp Fischer uses is when situations come up to offer a new service on a current project. Often a need arises on an ongoing project for which the client is willing to hire a contractor that is currently working for them to fulfill the need, rather than look for a new specialty contractor to provide the service.

In the architectural and flashing markets, Kemp Fischer started small with small projects or small portions of projects and gradually took on more and more work in these sectors. There were some bad experiences in the beginning, but the losses were not devastating because of the projects' limited size. Although risk of taking on a new market sector was high, the opportunity for higher profits offsets this risk, and the risk was quantifiable enough to account for with contingency. After slowly establishing a presence in the architectural market, Kemp Fischer invested in hiring experts and in specialized training. Today, architectural sheet metal makes up most of Kemp Fischer's portfolio of projects. Although the market remains highly successful today, Kemp Fischer knows from experience that competition can infiltrate a market quickly. Current barriers to entry will not hold forever. That is why the organization is continually searching for specialized areas of expertise to grow in small increments. The key is to take a small step into the new market sector and try to understand how your organization can help everyone involved in the project to more successfully complete their jobs.

A.4.3 Using Current Strengths

TUNE Mechanical had always fabricated their own work and found that offering their fabrication capabilities to other contractors was an opportunity to make money while performing work they were already highly skilled at. Fabrication takes place in a controlled environment which makes the work relatively easy to plan and estimate compared to other aspects of mechanical contracting. Also, fabrication service is often paid for on delivery, easing the strain of delay in cash flow generally experienced by second and third tier subcontractors.

In the competitive bidding environment of construction, sometimes getting just the fabrication portion of a contract can greatly impact the company's overall volume as well as increase utilization of the shop. There are few unknowns, so the risk is low. TUNE recognized all of the advantages of offering fabrication services and wanted to find a way to get started. First, the management group needed to compile a thorough list of fabrication services that could be performed. This meant understanding their resources and the staff and equipment availability. Once TUNE understood its own capabilities, it worked with its network to get the word out about what the company could offer. Talking with vendors and other contractors solicited more than enough requests to get the company started in the fabrication market. Since, word of mouth and a little marketing have kept the fabrication service at TUNE running steady, with low risk, highly profitable work.

A.5 New Process

A.5.1 Changing the Standard

Duct fabrication has been a service provided by Sanders Mechanical (on their own projects) for the past 40 to 50 years. Always striving to provide exceptional products and services, Sanders adapted pre-sectioning and prefabrication processes to help managers closely control the productivity and safety of their ductwork fabrication and assembly. Pre-sectioning practices started around year 2000, and in 2009, a state-of-the-art pipe fabrication facility was built so that prefabrication could become a bigger part of what the company does.

These processes allow work that was traditionally built in the field to be completed in a controlled facility. Efficiencies, labor productivity, and safety performance skyrocketed on projects that used prefabrication. Other trades were pleased because the workforce at Sanders could be in and out of an area in a much shorter time, freeing up space for other contractors. Now, approximately 40% of Sanders' assembly work is done in the fabrication facility.

The decision to expand the fabrication facility required the company to conclusively commit to the process. Although prefabrication had to be fought for in the past, it became the rule in 2010. Today, if prefabrication will not be used on a project, staff must go through a process to prove why prefabrication cannot be used, instead of the other way around, as it was for years. After continued efforts and evolution in practices for over 10 years, which led to changing and adopting the new standard procedure, full buy-in has finally been reached.

A.5.2 Diversification

Inefficiencies in the industry caused leadership at Innovate Sheet Metal to build a unique ordering system. Frustrated with foreman on the phone all day, shop workers unable to interpret requests, and two commercial ordering software products that did not fit their needs, Innovate contracted with a local software firm to develop a web-based program that actually fits the needs of the company.

Innovate was looking for a program that would allow its staff in the field to quickly and easily communicate orders to the shop. The company started by implementing commercially available software programs. Two programs were tested, but each only lasted approximately six months before it was obvious that it did not function as advertised. Also, customer support for these programs was nearly nonexistent. In total, approximately 18 months were spent looking for and trying to implement these software programs that just did not fulfill the needs of the industry.

Frustrations grew until the company president decided no more time would be spent with commercially available software; the company was going to design its own web-based ordering system. Before venturing into the new realm of software development, Innovate considered several factors including direct cost savings and savings due to overhead by increasing ease, speed, and accuracy of the ordering process. The company considered the cash that was available at the time and budgeted what they felt was a reasonable amount for the anticipated gains. Budgeting was difficult because the sheet metal company did not have a good idea of what programming entailed and how to estimate for it. In order to manage costs, Innovate decided to start with a small scope and incrementally build the product.

Most importantly, the company president wanted an easy and efficient process for the time savings. By better utilizing employees' time, Innovate could deliver high quality projects without the need for employees to work all day and night, every day of the week. As it turns out, strong leadership support along with well-defined objectives would be the keys to the success of the new program.

Innovate decided to contract with Code Partners based on an existing relationship with the company and its locality. It was important for Innovate to (1) have clearly defined objectives for the ordering system, and (2) be able to fully communicate those objectives to the programmers. Together, the firms worked to build a web-based system to send digital orders that are directly downloaded into the fabrication shop's plasma cutting software. The interface with the field staff needed to be simple, fast, and intuitive; it had to make jobs easier, not more complicated.

Innovate knew that ironclad contracts would be needed to protect the product and ideas from theft by the developer. This risk was addressed by inviting the developer to buy shares of the technology. There would be no reason to steal something they already owned.

In the first year of development, a project manager who was supposed to facilitate the process became a bottleneck for information. It wasn't until the programmers were given direct access to all areas of the company that the staff's real ordering needs were brought to light. Luckily, Innovate recognized the inefficient structure, but only after a year of slow progress.

Acceptance from the staff was not always easy. Clear direction and unwavering support for the program from top management were necessary in the acceptance and use of the final product.

The ordering system was implemented company-wide and along with the overhead efficiencies that have not been measured, the program reduced direct costs by 15% in the first year. Several additional features have been added to the system including a time card, contact information, and pricing capability, and costs have continued to drop company-wide by 26% compared to the pre-software days.

A.5.3 Scaling Back

During the recession, the president of Bayer Mechanical knew that reducing costs was necessary to be able to continue to thrive in the construction industry. Many smaller subcontractors, like Bayer, had accepted the fact that they did not have the working capital to overhaul production using prefabrication, like the largest contractors had done. Still, Bayer's president knew that there were at least some elements of prefabrication that could be scaled to improve productivity in his own shop.

After visiting the shops of competitors and large contractors from other regions, leaders at Bayer Mechanical developed a plan to incorporate prefabrication into their own business practices. The new processes would afford the company higher productivity levels as well as a safer environment, more control of quality, and a marketing tool. Bayer focused its prefabrication on steel first; noticing steel was the most cost effective area to implement prefabrication and the most to gain from increased productivity.

Employees in the field were hesitant to embrace the new way of business for fear that the process would work too well and the amount of work would go down. However, the opposite turned out to be true. Although the nature of their work was changed, Bayer's demand for fieldwork stayed as busy as ever after adopting prefabrication practices.

Prefabrication did require adjustments in the typical business practices at Bayer. Previously, clients paid Bayer when actual work was in place. With prefabrication, this creates a huge delay because a large amount of work is completed before being brought to the jobsite. A new payment arrangement had to be made with clients in order to maintain a reasonable cash flow, which was not always easy. Also, a storage issue was created that needed to be addressed. Bayer worked with clients to store as much as possible of the prefabricated material on site.

The issues faced with prefabrication were minor road bumps relative to the benefits realized by the new process. Leaders knew Bayer would experience some difficulty when attempting to take on a new way of business, but developing solutions to these challenges was part of the experience. Now, prefabrication is the standard method of production at Bayer.