

Banneker Industries, Inc.

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Abstract

In recent years, collaborative demand-to-supply management, which strategically supplies products to the market in order to maximize profit, has played a critical role in establishing a sustainable company. However, the sales function and the production function do not always work together for profit optimization. In most cases, the sales function is responsible for maximizing sales. On the other hand, the production function is responsible for minimizing production cost. In the SCM age, this situation causes production of excess inventory as well as long order fulfillment time. For the collaboration of both functions, a strategic demand-to-supply map has been developed. The strategic map consists of a row and a column indicating the demand speed and the smoothing factor for demand forecasting. This paper presents a theory and a planning tool, called *the planner*, for collaborative demand-to-supply management based on the strategic map. *The planner* consists of demand forecasting, aggregate planning, the strategic map, the scheduler, and progressive analysis. The effectiveness of *the planner* is demonstrated with a numerical example. In addition, this paper shows that *the planner* is a useful tool for staff in the sales department and the production department for training or understanding collaborative demand-to-supply management. This paper also presents the potential areas of future research and development of collaborative demand-to-supply management and *the planner*.

Keywords: *collaborative demand-to-supply management, aggregate planning, strategic map, production scheduler, sustainable company, progressive analysis*

1. Introduction

For many years, Cheryl Watkins Snead had been providing value added services for her customers. As President and CEO, she was the driving force behind Banneker Industries, Inc. (Banneker),

a provider of strategic supply chain management (SCM) solutions for her customers. The quality-minded and participative management style of Cheryl converted a failing machine shop into a

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vibrant and innovative SCM company whose core strengths focus on strategic sourcing, and third party (3PL) and fourth party logistics (4PL). Due to downturns in the economy, and a strategic direction of their customers to focus on core competencies, businesses were increasingly outsourcing their routine duties to Banneker. While this has kept Banneker busy and solvent, Cheryl wondered if they were becoming too dependent on their main customer. Cheryl pondered the successes with her business despite the tough economic times, and she looked to the future for opportunities where Banneker could flourish. As a private company, Banneker enjoyed the benefit of choosing a strategic direction without fear of shareholder scrutiny, but the long-term survivability of the company depended on making the right decisions.

2. Cheryl Watkins Snead

From early on in her life, Cheryl Watkins Snead's parents raised her to be financially independent rather than being too dependent on someone else. Cheryl graduated from the University of Massachusetts (UMASS) in 1981 with a B.S. in Mechanical Engineering (BSME). Cheryl was the first African American woman to graduate from UMASS with a BSME. After being interviewed by UMASS alumnae Jack Welch, who was then a Section Manager in the Pittsfield, MA plant of General Electric (GE), Cheryl began her career at GE. In 1987, Cheryl received a Master of Science in Industrial Administration from Purdue University. After a series of promotions and lateral transfers within GE, Cheryl felt that she had hit the glass ceiling. Her most recent transfer was to the Factory Automation Products division of GE-Fanuc, located in Japan.

Cheryl spent six months preparing for the new position and then traveled home for Christmas prior to the move to Japan. While attending a Christmas party with her father, she learned of a Rhode Island machine shop (Peerless Precision) that was created through a non-profit venture in order to provide jobs and training to minorities. The minority owned business was established under a program of skills training, through a network of businesses that empowered

underprivileged people. The idea of creating a business in order to help others receive training and experience fascinated Cheryl. In 1987 Cheryl opted to leave GE for the challenge to work as Vice President of Operations of Peerless Precision, Inc. At Peerless Precision, Cheryl was responsible for everything in the union machine shop except the financial aspects of the company. Not being knowledgeable about the financial side of the business was an oversight that Cheryl later regretted. Business was good while they were making military hardware in support of the Desert Storm effort, but the business could not sustain itself when defense and aerospace contracts started declining. The company went into receivership in 1991, with many defense contracts unfinished. In order to fulfill these orders, and maintain a business, Cheryl decided to buy the assets of the company. After being denied access to capital (she was repeatedly told that a single minority woman could not get a loan for a machine shop and that she could not get a loan for a failed business), she overcame her funding problem by taking on a financial partner. Her intention at the time was to not be too dependent on her financial partner and to buy back her partner's portion of the business after five years. She agreed to the terms (without the use of lawyers or accountants) in 1991 and this was the beginning of Banneker Industries. Cheryl named her company after Benjamin Banneker (1731-1806), the first recognized African American mathematician, astronomer and inventor. Benjamin Banneker created the first American made striking clock, published several almanacs and was influential in the initial design of the nation's capitol.

3. Banneker Industries -

The Machine Shop 1991-1996

Banneker Industries continued to function as a precision machine shop for aerospace and defense oriented components during this time. Some of the employees from Peerless Precision were retained, as well as the machines and other equipment. Though Peerless Precision was a unionized business established to give opportunities and training to minorities and run as a non-profit organization, Banneker Industries was established

as a non-unionized business that was determined to make a profit. This is not to say that Cheryl did not want to provide opportunities to underprivileged people. In order to provide these opportunities over the long-term, Cheryl knew she had to make Banneker Industries financially independent. Her parent's influence on self-dependence had proved invaluable.

In 1994, Banneker Industries strategically decided to market its capabilities through the U.S. Small Business Administration's (SBA) Section 8(a) Business Development Program. The 8(a) Program is the SBA's effort to promote equal access for socially and economically disadvantaged individuals to participate in the business sector. The program allows a business to participate for nine years. The minimum percentage of non-8(a) revenue is required to be 15 percent in the fifth year and increases to 55 percent in the ninth year. Even though the SBA requires their participants to become less dependent on 8(a) revenues, Cheryl was very wary of being too dependent on the program. Aware of the long-term pitfalls of being too dependent on 8(a) contracts, Banneker's amount of business with 8(a) certified contracts never exceeded ten percent.

4. Banneker Industries - The Supply Chain Management Company - 1996

Cheryl became sole owner in 1996 after buying out her partner's share of the business. Revenue was dwindling due to decreasing sales in defense and customer focus on low prices. At this point, Cheryl decided that Banneker Industries could no longer sustain itself as a precision machine shop. After listening to her customers' ever-changing needs, Cheryl made a conscious decision to reinvent the company as a value added service provider, while retaining the Banneker Industries name. Cheryl began diversifying the business into other manufacturing facets including the provision of inventory management, quality control, electronic data interchange, order fulfillment (kitting), assembly and packaging, product marketing, and distribution for both small and large companies, thus allowing them to market themselves as a supply chain management

company. Banneker's clients were outsourcing their routine duties in order to focus on their primary functions and core competencies. At the time, Banneker Industries was the only 8(a) certified business in New England marketing supply chain management services to all agencies of the U.S. Government.

As Banneker changed from a machine shop to a supply chain management company, some employees retired or voluntarily left. The number of employees dropped from thirty five to twenty. These twenty remaining employees (most of them from Peerless Precision), were not a good fit with Cheryl's future vision of Banneker. Cheryl needed people who were flexible and had multiple skill sets. She wanted her employees to be motivated to change and willing to be cross-trained. She could not move forward with the existing employees, yet because Peerless had been founded on the principle of helping others Cheryl could not just fire people because they did not have the newly required skills. Therefore, before transitioning Banneker from a machine shop to a supply chain management company, Cheryl found employment for each of the remaining twenty people at pay rates that were at least equal to their current rates.

While there was a significant amount of risk in transforming Banneker from a manufacturing company to a supply chain services provider, it was also an opportunity to enter a growing market. One of Banneker's biggest customers wanted to outsource a variety of supply chain tasks and their preference was to work with a supplier they already had an existing relationship with. Cheryl knew this customer was looking for a partner who could grow with them and by starting with all new employees Cheryl could ensure that she had the right people in place to both grow with the customer and attract new customers.

5. Roland Snead

Cheryl needed help marketing Banneker as a value added provider of strategic solutions for its customers. She brought on her long time friend Roland Snead as a marketing consultant. Roland understood the business of people, including full-time employees, part-time employees, customers,

suppliers, and business associates. He brought the servicing of people aspect to the business. Cheryl convinced Roland that he could be a part of building Banneker Industries and in 1998 he became Executive Vice President of Banneker. Cheryl and Roland married in 1998.

6. Banneker Industries 2000 - 2004

In 2000, Banneker realized that they needed to develop a solid process and procedural foundation from which to build and expand the business. Cheryl knew that customers wanted high quality services and products every time. In order to ensure repeatability, proper processes needed to be identified and put into established procedures. ISO certification was the tool identified to help them. Banneker then embarked on a journey towards ISO certification. All of Banneker's full-time employees were trained in ISO practices and every employee was trained and certified as an Internal Auditor. Nine months after the start of the journey, they became ISO 9002 certified. Banneker Industries was also recognized as the first supply chain management company to be certified by National Quality Assurance, USA, as well as the first minority and woman owned business in the state of Rhode Island to receive this award.

Banneker Industries' Quality Policy Statement is "Team Banneker is committed to understanding and meeting the needs & expectations of all of our customers, by working together to drive business excellence". Based on this philosophy, they offer many value added services to support the manufacturing, service and distribution processes of their customers. Their marketing approach initiates a customer relationship based on a specific, immediate service need. Banneker then expands their services once they have exceeded their customer's expectations and gained a level of confidence and trust with them. Banneker initially manages the flow of materials, information, and communication between their customer and its suppliers. They then intimately learn their customer's business to better advise them. Quite often, Banneker is the catalyst of change. Because Banneker takes the time to learn and understand a holistic and comprehensive view of their customer's business, they are able to provide innovative and value added solutions. Banneker is a 'One Stop Shop', eliminating coordination and information flow problems throughout the supply chain. Discussing Banneker's abilities, Roland

commented, "The term supply chain is still not categorized as 'One Stop Shop'. It is categorized by areas... warehousing, software, distribution or assembly. What Banneker is doing is combining all of those areas, and offering a 'One Stop Shop Solution'. Supply chain management is so common in those other areas but Banneker is trying to create its own category."

At a small business conference on Capitol Hill that Cheryl attended in 2004, the issue of outsourcing was being debated. She stated, "People tend to have a negative perception of the term outsourcing because they tend to associate outsourcing with jobs going overseas. There are still tremendous cost savings to companies by outsourcing functions that are not their core competencies. What companies don't realize is that US businesses can provide these services just as effectively without going overseas. As a result of this negative connotation, we changed Banneker's tag line from 'your outsourcing solution' to 'your strategic sourcing solution'.

"While the strategy of being an 8(a) certified business proved successful, it also limited Banneker's growth. Some companies viewed Banneker as too small to provide the kind of services that they wanted. In 2003, Banneker graduated from the 8(a) certified program but maintained the MBE/WBE (Minority- and Woman-Owned Business Enterprise) certified business status.

To understand how Banneker is different is to understand how Banneker can service a company's supply chain needs. According to Cheryl, "I think we listen to our customers. People talk about customer service and they talk about quality, but those that truly listen to their customers are about relationships. Quite frankly, if a customer is looking for the lowest price, and that's all they are looking for, we are probably not going to be the best solution for them. If they are looking for someone that is going to work with them, look at how they can improve their business, help them to increase their bottom line, it may not happen overnight, and it takes time, but we want that kind of work. Supply chain management is about strategically changing your business and creating partnerships with those who can add value to your organization. We know more about our customers than they know internally and we share that with them. We say this is what is happening on

this end, do you realize how it is impacting your business? We almost work as consultants for them because it is more about the relationship.”

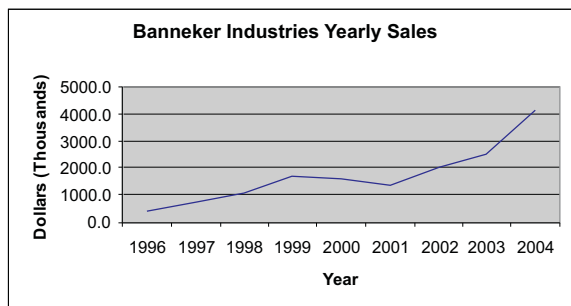
Stephen Payne, Supply Chain Practitioner at Banneker Industries, summed up Banneker’s process with their customers when he stated “It is easy for us to satisfy our customers but hard for us to initially educate them.”

Banneker initially focuses on satisfying the needs of new customers, and they measure this through customer satisfaction metrics. However, as the business relationship develops and Banneker learns more about their customers, the focus shifts to customer success. The objective of customer success is simple to make your customers more successful in their business processes. Exhibit 1 is a depiction of Banneker’s mission statement.

Exhibit 1. Mission Statement Pictorial



Exhibit 2. Yearly Sales-Banneker Industries



As customer service objectives are met, Team Banneker members identify solutions that create customer success. Because business is dynamic and customer needs change, the process from customer satisfaction to customer success repeats. Successful customers mean continued business for Banneker. Although slow at first, business steadily grew for Banneker. Sales increased at an average rate of 68.5% per year from 2001-2004. A chart depicting yearly sales is shown in Exhibit 2.

7. Banneker’s Quest for Quality - Quality Initiatives Undertaken

Banneker’s business is based on communication of quality values and goal alignment with its customers. Working with customers and suppliers on this level requires the services of a talented and dedicated group of employees. Hiring the right people from the beginning is the key to successful customer and supplier relationships. According to Cheryl, “For hiring, we don’t simply ask, for example, for a quality manager or material manager. We ask: ‘Are you a change agent?’ What your skill set or background is, doesn’t really matter. You can always be trained to do a function. It is: ‘Are you about change?’ Everyone that is presently at Banneker is in a different position from when they first started.”

A chart depicting the number of employees at Banneker Industries is provided in Exhibit 3. The number of full-time employees did not exceed ten through 2001. Banneker does employ temporary contract workers when necessary to fulfill higher demand periods. An advertisement for a job posting at Banneker is provided in Exhibit 4.

Exhibit 3. Number of Employees at Banneker Industries

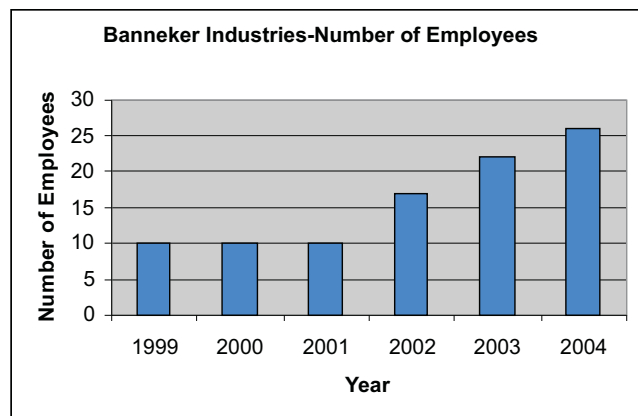


Exhibit 4. Change Agent Ad

ARE YOU A CHANGE AGENT? A dynamic and innovative Northern Rhode Island based Supply Chain Management Company is looking for CHANGE AGENTS in a variety of fields including; Office Administration, Operations (Warehousing, Production & Distribution) and Quality. Energetic, creative, continual improvement focused Team Players should only apply. Knowledge of ISO Standards and Six Sigma preferred, but not required. Send resumes (by mail or e-mail) or come by to complete an application at: Banneker Industries, Inc.

Cheryl and Roland realized early in their careers that results are driven by quality-minded team-based employees that are empowered to make change. Stephen Payne comments, "Creating quality is what makes money. Being socially responsible drives us. Being able to empower people both internally and externally is so important. As a result it also makes our job so much easier."

In addition to being ISO certified, all employees are certified as Six Sigma specialists. Employees are all considered to be part of "Team Banneker" as team-based approaches to planning and solving problems are frequently practiced. The importance of internal customers is a quality initiative that has far-reaching implications. Knowing how to please and add value for internal customers creates an attitude of continual improvement and a quality minded awareness that translates to Banneker's external customers. Cheryl states, "The concept of internal customers is important to every one of us at Banneker. Each of our team members treats each other the way they think their external customer wants to be treated. Besides courtesy and respect, our employees try to anticipate their internal customers' needs and continually add more value through every interaction. I guess what we are doing is practicing for the external customer. This attitude of continual improvement adds to the total quality package that we provide to our customers, both internal and external."

8. Diversity at Banneker

Banneker has evolved due to their ability to bring together and implement ideas from a cross section of people (both customers and employees). Their

inclusive culture is further exemplified through a quote by Benjamin Banneker: "The color of the skin is in no way connected with the strength of the mind or intellectual powers." At Banneker, diversity is part of the culture and individual philosophy of each member of Team Banneker. According to Roland, "Diversity has often, depending on what industry you are in, been viewed as a negative rather than a positive. I like contention. I like to have a room filled with different people and different ideas and concepts. Diversity brings to the table people with unique ideas and you use that opportunity to view or draw from different ideas and strengths of the company. If you do not get a diverse thought process, your ability to include, or ability to expand, is somewhat limited by the process that you have in front of you. Diversity gives you a much broader perspective, and a broader opportunity, to enhance your capabilities. You still have to hire the right people or talent set. To have a truly diverse environment, you have to have an open environment." He further states, "The whole thing with diversity is stepping out of your comfort zone, but that is also what continual improvement is, stepping out of your comfort zone in order to see change. People need to make the analogy that there is no difference between a continual improvement program, or a Six Sigma program, and a diversity program. They are all really the same thing. It's doing things differently and learning from the process."

9. The Market and Competition

At one time, supply chain management was synonymous with manufacturing support and easy to control. All production of an item was done by the original equipment manufacturer (OEM). Raw materials to produce goods would come into the factory; labor, systems and processes to manufacture those goods would all reside within the facility; ending with a finished product ready for the customer and then shipped out of the facility. As times have changed and businesses have looked at ways to reduce their costs, manufacturing has become decentralized and now may be done in various locations (both locally and globally) requiring material and services for each particular part of the

project. Once all of the subcomponents or assemblies are completed, they must then come together at a centralized location (usually the OEM) to be assembled, inspected, packaged, and eventually shipped. Shipping today is no longer to one end-customer, but can be to another manufacturer, distribution center, business to business (B2B), retailer, or residential household.

As times have changed for manufacturing, so has the management of the supply chain. SCM today includes managing the flow of materials through the manufacturing process, including raw materials, work in process, and finished goods. Also included is the management of the associated distribution channels, such as retailers, distributors, manufacturers, and third parties. More importantly, along with the physical management of goods is the management of the data associated with those goods. Many companies have transitioned from what used to be the procurement department to the SCM department, overseeing this material and data flow. This shift results in many suppliers and subcontractors doing so many tasks that the process becomes more difficult to control. This is where an opportunity exists. As stated by M. MacDonald, "Plan, source, make and move are the main components of supply chain management. Anything that has to do with any of these functions as a raw material travels through the pipeline on its way to becoming a finished good in the end user's hand, is part of the supply chain. The goal is to integrate all those activities into a singular focus for the ultimate customer."¹

The opportunity to go to one or a limited number of sources to manage both the material and data flow is of value to any supply chain manager. A 'One Stop Shop' solution that understands the manufacturing and distribution processes allows the customer to then focus on their core competency and outsource the project management of the supply chain to a third party.

As major corporations look to become more efficient with their operations, they find that outsourcing portions of their manufacturing support to reputable smaller businesses is a cost effective alternative. Additionally, small businesses with the need to get new products to the market often lack the

necessary manufacturing, service and distribution expertise. They may need an operation that can convert their idea from concept to reality. Banneker Industries serves both small and large companies as a supply chain management provider. Banneker provides customers with value added outsourcing solutions to complete their manufacturing, service and distribution processes.

In addition to Banneker's reputation as a supply chain management company, it is also known as a third party logistics (3PL) provider. This method of doing business is rapidly evolving. The trend is for providers to become more involved in planning, optimization, and process management. It is not uncommon to find management of 3PLs being furnished by another provider, known as a Lead Logistics Manager or 4PL. According to Cheryl, "Banneker Industries has been involved with supply chain management since 1996. They were doing it long before major distribution companies considered it a strategic necessity for their business. Banneker is doing supply chain management from a machining background—we are coming from manufacturing and moving into service and distribution. Because of our background, we have a lot more expertise in terms of understanding manufacturing and are able to better support a customer when compared to a distribution company. Banneker's niche is that we are process driven, not product driven. Therefore, we are able to span across various industries— aerospace, healthcare, information technology, consumer goods."

10. Growth Options

Banneker's Main Customer

In 1991, one of Banneker's main customers was a Fortune 500 company whose main business stemmed from U.S. defense contracts. From 1991-1996, this customer used Banneker for its machine shop abilities and for warehousing of raw stock. As the relationship grew, so did the amount of business. From 1997-2000, this customer expanded Banneker's supply chain responsibilities to include raw stock procurement, inspection and testing, and distribution. In 2000, this customer introduced Banneker to other defense and aerospace contractors in an effort to create linkages

among the customer’s supply base. In 2001, this customer sponsored 50 percent of Banneker’s Aerospace Industries Association (AIA) membership in the Supplier Management Council. In 2002, Banneker attended customer sponsored conferences on supplier relationships and received customer sponsored training in leadership and lean/agile practices. In 2003, Banneker participated in customer sponsored conferences and forums, and a Mentor-Protégé agreement was signed with the U.S. Department of Defense. In 2004, Banneker received the 2004 Supplier of the Year Award from this primary customer. A chart depicting revenue from Banneker’s primary customer is shown in Exhibit 5 and a chart depicting this customer revenue as a percentage of total sales is shown in Exhibit 6.

In 2004, 69 percent of Banneker’s business came from this customer, down from 85 percent in 2001. Another point to consider was that even though there had been substantial revenue growth, net income had

Exhibit 5. Revenue from Main Customer

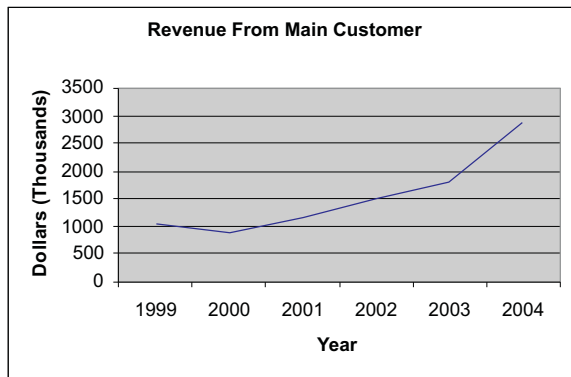


Exhibit 6. Main Customer Revenue as a Percentage of Total Sales

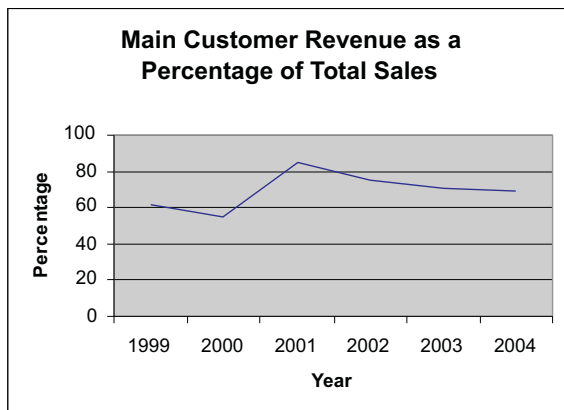
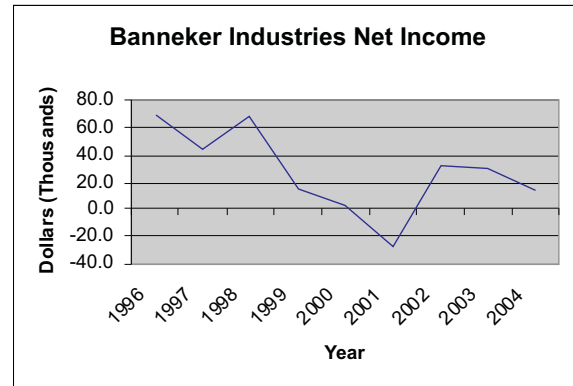


Exhibit 7. Banneker Industries Net Income



declined as shown in Exhibit 7. However, this can be explained by the reinvestment of cash into capital investments including technology, material handling, equipment, facilities and employee training. Banneker felt that these investments were necessary in order to grow a supply chain management company.

Cheryl had much to consider. As Banneker exceeded their main customer’s expectations, they were rewarded with additional contracts. This kept them too busy to look for other customers. Their main customer was also guiding Cheryl on how to grow and develop Banneker Industries. Thus, it was easier to continue developing the relationship with their mentoring customer than to find new customers and begin fostering new relationships with each of them. While diversifying and becoming less dependent on one customer was important, there was an established relationship and a certain level of security with this customer. Cheryl pondered the possibility of reducing their business with her mentoring customer in order to find new business contracts with other customers and diversify. As much as she enjoyed the mutually beneficial partnership, she feared Banneker was becoming too dependent on their main customer.

The WIBS Group - Collaboration

In order to position themselves for growth through larger contracts, Banneker started considering joining forces with three other minority-owned businesses which were also experiencing similar growth problems. This collaboration of four diversified

businesses, to be named The WIBS Group, would specialize in various aspects of supply chain management and third party logistics, collectively adding value to larger contracts/contractors. Cheryl explains, "There are supply chain service providers who are good at one or two of the supply chain categories (warehousing, logistics, software, distribution, assembly, etc...) but nobody does all of them. For a major customer, like a Fortune 100, they have to go to a different supplier for each one of these. If they only had to deal with one strategic partner, then they could go with all of their business to one supplier. That is part of why we are considering doing The WIBS Group. As good as we are in certain areas; the other three partners help us to complete the whole value added supply chain. We hope to add more value at less cost. Together we are truly a 'One Stop Shop' solution."

The four businesses making up The WIBS Group would be:

- Westside Warehouse, Inc. - Provider of inbound management, freight forwarding outsourced logistics, and supply chain coordination.
- Intelligent Systems International - Provider of web-integrated supply chain software and services, web-based applications and productivity tools, and supply chain consulting.
- Banneker Industries - Provider of supply chain services and 3PL services.
- Supply Chain Return Solutions - Provider of reverse logistics, electronic warranty and repair services.

On November 18, 2004, Cheryl Watkins Snead was the keynote speaker at the Brown Forum for Enterprise. During her presentation on creating business models, she stated, "A good business has to be about more than an idea or product. It has to be about adding value to the customer. Therefore, the focus of the model is not 'How do I sell my product or service to the customers?,' but 'How do I show my customers that this product or service will add value to them?' Today's customers want solutions. Solutions are developed by understanding customers' needs, building relationships, and communication. Therefore each of us, as entrepreneurs, must position our companies to be a 'One Stop Shop' of that solution. Then, the next thing you must be thinking is: 'If I only

have one product or service, how do I multiply them?' Well, it either comes from acquisition or, what is more financially appealing, collaboration—finding another business product and/or service that compliments what you offer to add greater value to your customer."

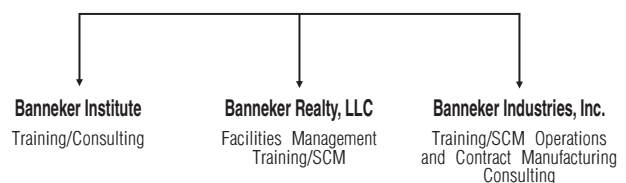
The idea of collaboration with three other companies was appealing to Cheryl. As a whole, they collectively presented more value and solutions to potential customers. To make this work, agreements would have to be established for rewarding the company that found the business opportunity, sharing profits and expenses, and an exit strategy when one or all of the four companies became much bigger. Cheryl was willing to lead the collaboration, but she was not sure if the other three companies shared her work ethic and goals for long term success.

Growth through the Banneker Model

Banneker was also considering the possibility of opening several satellite warehouses throughout the United States. These sites could be selected based upon key customer locations or geographically chosen for potential business opportunities. The proposed model, named The Banneker Model, would allow Banneker Industries to utilize its: 1) training capabilities to develop a skilled workforce that will be educated and trained in supply chain management services, as well as contract manufacturing; 2) facilities management capabilities to buy/lease and manage facilities that Banneker Industries will use for both training and operations; and 3) management and operations expertise to provide both supply chain management and contract manufacturing services that would be outsourced by Banneker's strategic partner(s). The Banneker Model is shown in Exhibit 8.

This philanthropic concept promotes the educational side of Banneker Industries through

Exhibit 8. The Banneker Model



Banneker Institute. The proposed plan is to develop business sites in under-serviced markets and to raise the standard of living for lower income and undereducated populations. Cheryl explains, "In The Banneker Model, there will be a training subsidiary to train under-served people or under-served markets. We would actually develop that piece of Banneker to train people in the industry of supply chain management. We envision Banneker Industries to be the profit arm of the business, the business side, but there needs to be a training or a non-profit arm. This plan allows Banneker to create relationships all over the world. Good companies must have a vision. It is part of our vision, and dream, for Banneker Industries to be much more than just bricks and mortar. We must continue to be about people. Development of people that may not have the opportunity; and we may be talking about a city like Detroit, an inner city, where many jobs involve repetitive tasks like assembly work at lower wages. They could be exposed to multitasking, team building and understanding process flow, which is supply chain management. Despite all this dreaming, our focus is now. There is an underutilized workforce that we could definitely tap into and given the industry of supply chain management, the market is here now."

Although similar in concept to that of Peerless Precision, The Banneker Model would be a for-profit business. Cheryl gave up a career with GE in order to work with a business that was focused on helping underprivileged people receive training and experience. She wondered if the time was right to implement The Banneker Model. She also wondered if a simpler form of expansion would be more attainable and right for her company. Satellite warehouses, without implementing The Banneker Model, could be opened up in strategic areas in order to expand Banneker's business. The Banneker Model provides the plan for how Cheryl envisions Banneker's future. She is not sure if she has the resources, or the proper timing, to implement The Banneker Model at this point in time.

11. What to Do?

Cheryl has proven to be a charismatic and capable leader. She has transitioned a non-profit commodity supplier into a process-driven supply chain company

that has the attention of many companies, both competitors and customers. Her dedicated staff, Team Banneker, is committed to lean principles and value added activities that benefit their customers, suppliers and Banneker internally. Even with proven workforce success and numerous awards, from industry and associations, Cheryl is not sure that the current path is right for the future. Should she encourage or discourage her dependence on her main customer? Should she collaborate with the WIBS Group? Should she implement The Banneker Model? All of these options have both risks and rewards associated with them. What strategic path is best for Banneker in order to satisfy their customers, employees and goals for Banneker Industries? To execute any of these options, Cheryl will need capital. How should she proceed with finding funding? The idea of being dependent on a financial partner or being beholden to stockholders is not one that Cheryl relishes. Cheryl is also concerned that Banneker might not be able to retain its culture. She wondered if she was doing too much and how she would continue to motivate her employees to see the vision through if Banneker expanded. She also wonders if Team Banneker is empowered enough to expand on her vision without her day-to-day involvement.

Cheryl knows that Banneker Industries will need to be leaner, more flexible and more in tune with their customers in order to succeed in the coming years. Cheryl has the imagination and vision to see the direction of supply chain management and the progress that has to be made with her customers and Team Banneker. She must now decide what decisions will be best for the future of Banneker Industries.

Discussion Questions

1. Assess the steps used by Banneker to transform itself into a supplier of value added supply chain management services.
2. Should Banneker stay with their one-primary-customer arrangement or try to expand their customer base in order to diversify? Why or why not? Should there be a maximum percentage of business that comes from one customer?
3. Should Banneker merge with the three other businesses? What are the advantages and disadvantages of this consortium? What should their exit strategy be?

4. Should Banneker develop the philanthropic or educational side of The Banneker Model? Is this philanthropic side of The Banneker Model feasible?
5. Should Banneker expand to satellite sites and not use The Banneker Model?

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