
This thesis builds upon several theoretical ideas. The first of which is the anthropologists’ transition into the corporate context and the particular type of skills and value that someone with anthropological training can bring to operations management. As anthropology is relatively new and unfamiliar to corporations, anthropologists are often hired without explicit knowledge of how they will address organizational problems. Frequently, this incremental relationship building between the anthropologist and the organization leads to shifting project goals which come only after the anthropologist is able to reveal initial findings to someone who has the power to grant the anthropologist further access to employees and company information. This refocusing comes from a building of trust that is crucially important for the anthropologist’s ability to identify social issues, which is the anthropologist’s expertise. In order to develop the context of this project the following paragraphs will explain in more detail and expand into particular cases in which anthropologists have helped organizations to identify and manage social, organizational problems. As a relationship needs to be built between the anthropologist and the organization, here I argue that there needs to be continual relationship building between anthropological, design, and management theories to optimally solve organizational problems.
Copyright 2014

by

Shane D. Pahl
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION OF APPLIED THESIS PROJECT</td>
<td>1</td>
</tr>
<tr>
<td>CONTEXT OF WORK</td>
<td>4</td>
</tr>
<tr>
<td>PROJECT DESIGN</td>
<td>16</td>
</tr>
<tr>
<td>DATA COLLECTION AND ANALYSIS</td>
<td>18</td>
</tr>
<tr>
<td>DESCRIPTION OF DELIVERABLES</td>
<td>22</td>
</tr>
<tr>
<td>FINDINGS</td>
<td>24</td>
</tr>
<tr>
<td>CONSEQUENCES OF LOOSE ORGANIZATIONAL STRUCTURE</td>
<td>27</td>
</tr>
<tr>
<td>RECOMMENDATIONS</td>
<td>49</td>
</tr>
<tr>
<td>DISCUSSION AND PERSONAL REFLECTION OF APPLIED THESIS</td>
<td>52</td>
</tr>
<tr>
<td>APPENDIX PRODUCT PORTAL PROTOTYPE</td>
<td>54</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>61</td>
</tr>
</tbody>
</table>
DESCRIPTION OF APPLIED THESIS PROJECT

About the Company

ABCO HVACR Supply + Solutions has become the largest full line distributor of heating, ventilation, air conditioning (HVAC) and refrigeration systems and supplies in the Northeast United States, providing comprehensive product solutions and educational services to contractors, engineers, architects and developers. Established in the New York City in 1949, ABCO has expanded to seventeen facilities from Washington, D.C. to Boston, Massachusetts. With a mission that is driven by the ability to provide the best customer service in the industry, ABCO as they have been able to develop and maintain a niche advantage over their competitors by offering a more extensive inventory, more extensive delivery capabilities, and a wide variety of training and educational programs for its customers. This mission has proven to work successfully for ABCO to maintain consistent growth; though, more recently conversation has developed internally about the state of the company’s operations and operations management, the focus of which has been to find a solution to more effectively manage inventory by implementing a digital warehouse management system (WMS) that will replace the current system. The current system consists of a combination of predominately two programs: an enterprise resource planning (ERP) program called SX.e and an internally developed search query language (SQL) program called Phocas which stores all sales information. As ABCO moves towards the implementation of a WMS, there is recognition by executives that such a system will affect both operations and operations management. As the implementation of the WMS is the focal point of the organization change conversation, ABCO has begun to seek individuals who have the technical and experiential knowledge of organizational change
management. One of those individuals which they sought out that had this knowledge was the assistant general manager of distribution.

Development of Internships

In March 2013, I contacted the assistant general manager of distribution for an informational interview. This contact was established through a mutual friend who had mentioned that ABCO was beginning to discuss major organizational change. It was explained to me that the company sought to implement a warehouse management system that would help the company to better manage its inventory, and that this would be a major operation and investment. In the interview I expressed my interest in organizational change management and the need for a company with which to do my research. Shortly thereafter I was notified that an internship program was being developed by an executive committee in order to identify areas of the greatest need within the company.

Applied Thesis Project Objectives

ABCO would ultimately develop three internship projects. The three positions were product management, warehouse management and sales management internships. The project that would become my applied thesis was called the product management internship. The following paragraph describes the project objectives of the product management internship as proposed by ABCO:

The Product Management Intern will analyze the process in which ABCO incorporates new products into its product offering, evaluating the process from initial introduction of the product to the shelf. Following this analysis, the individual will work with the Product
Management and Inventory teams to standardize the process and write a formal procedure for implementing the process. Additionally, the individual will be responsible for creating a New Product Portal on ABCO’s intranet to facilitate the communication of product information to the internal teams named above. In addition to the product management and purchasing teams, the intern will work closely with the Marketing department to accomplish this portion of the project (ABCO Supply + Solutions Careers: April, 2013).

The above stated project objectives would undergo a transformation as the research was carried out. As described in the theoretical context of work, projects such as these commonly experience a refocusing, particularly when organizations are not familiar with anthropological research. This research will address the following research questions: 1) What is the process of new product introduction and evaluation and 2) what should the design be of a new product portal. Together, the answers to the research questions and design recommendations constitute the projects deliverables which were 1) a description of the process of new product introduction and evaluation, and 2) design recommendations for a new product portal. These deliverables were presented to ABCO as a power point presentation and a written report. The following section identifies the theoretical context of this applied thesis. The theoretical context seeks to explain the major precautions and suggestions that are stressed in organizational change management in regards to the specific instance of a warehouse management system implementation, and further explains how anthropological, design, and management theory work together to advise successful management of organizational change.
CONTEXT OF WORK

This thesis builds upon several theoretical ideas. The first of which is the anthropologists’ transition into the corporate context and the particular type of skills and value that someone with anthropological training can bring to operations management. As anthropology is relatively new and unfamiliar to corporations, anthropologists are often hired without explicit knowledge of how they will address organizational problems. Frequently, this incremental relationship building between the anthropologist and the organization leads to shifting project goals which come only after the anthropologist is able to reveal initial findings to someone who has the power to grant the anthropologist further access to employees and company information. This refocusing comes from a building of trust that is crucially important for the anthropologist’s ability to identify social issues, which is the anthropologist’s expertise. In order to develop the context of this project the following paragraphs explain in more detail and expand into particular cases in which anthropologists have helped organizations to identify and manage social, organizational problems. As a relationship needs to be built between the anthropologist and the organization, here I argue that there needs to be continual relationship building between anthropological, design, and management theories to optimally solve organizational problems.

Organizational Anthropology

Anthropologists had once been known only as explorers of exotic lands who studied indigenous tribes; increasingly, anthropologists are shifting that paradigm as they have the opportunity to study large and “global organizations that need to understand how they, their stakeholders, suppliers, and customers function in a fast-moving globalizing world” (B. Jordan with M. Lambert: 2010:96). The types of populations that anthropologist are studying is rapidly
growing, and the anthropological theories and methods grow along with them as organizations seek to address these global problems. The same theoretical and methodological tools used to study foreign cultures, often referred to in a simplified form as ethnography, can be used by anthropologists to not only study foreign cultures, but also organizations within the anthropologist’s own culture. Specifically, doing research within an organization on its processes is not an unfamiliar task for anthropologists. While the anthropological approach differs from management, addressing issues such as how to make the process of getting work done more efficiently has become a common task for anthropologists (A. Jordan 2013).

As anthropology continues to build a home within organizational research, the value of anthropologists are becoming more ubiquitous and organizations are increasingly seeking ethnographic research to enhance their strategic management and operations efforts (Cefkin 2010:2). As this project has proven, research within an organization is a process in and of its self. While organizations are becoming more familiar with anthropologists in the corporate workplace, there is still often times a bit of mystery as to what exactly an anthropologist does and what an anthropologist can offer that makes someone with that particular training unique and worth the investment. When a company is new to ethnographic research, it is going to take time, trust, and results before the organization can fully appreciate the insights anthropologists can deliver. While it is completely fair that companies take this soft stepped approach into ethnographic exploration, this may initially lead to a weakening of the richness of ethnographic data that anthropologists can yield. For an anthropologist, not having the ability to take photos and record observations of work practices may restrict some of the best insights ethnographic research can offer (B. Jordan with M. Lambert 2010:102). Not only is it important for anthropologists to understand the tasks that employees are responsible for, but to see what it is that they actually do
and to follow up with questions about the task to compare the prescribed task to the actual performance. Photos and videos add to the gravity of work process issues by capturing data that reveal social barriers to work process that may otherwise go unnoticed.

As can be the case in traditional anthropological research, anthropologists may continue to develop and redefine research goals after the project has been approved. This flexibility works in the interest of both the anthropologist and the organization because of an “implicit acknowledgement of a lack of shared understanding and a equally implicit belief that, over time, greater understanding will emerge” (B. Jordan with M. Lambert 2010:100). One significant benefit of doing research within an organization is that you may be reporting to a supervisor who has the ability to change your position in a way to allow you access to the ethnographic data you are trying to obtain, so long as you can present it in a way in which it explains the limitations that were caused by particular restrictions (B. Jordan with M. Lambert 2010:102). In the development of trust between the anthropologist and the supervisor, the anthropologist may be able to make a strong argument for things such as photos of work process and its relevance in providing the organization with the best possible data. To further explain instances of the data that anthropological research can provide, the next step in the development of this theoretical context examines instances in which anthropological research has contributed to organizational issues.

Anthropologists in Organizations: Managing Partnerships and Conflict in Work Groups

The necessity for understanding work process is important in large, multi-sited organizations and understanding human interaction in work process is what anthropologists are good at doing (Darrouzet et al 2010:62). While it is impossible to fully understand all of the factors that go into any one process or action, there are ways in which anthropologists can
conceptualize those factors that may seem too complicated to fit neatly into a flow chart. It is the positioning of the anthropologist to bring to attention social factors that are involved in work process that go beyond task definition that has become valuable to management and organizational change. Anthropologists approach organizations with the knowledge that each organization has its own internal social system with its own set of rules and customs affecting and limiting the behavior of people within the organization (Gardner 1978:246). The role of the anthropologist then can help to define and make known the social factors that affect work process. One of the ways in which they can do this is through a type of cultural enunciation:

Cultural enunciation is about a local, societal group’s strategies and practices for “finding the right expression” to identify for themselves and others what is going on, what has gone on, and what is going to happen at any given time. (Darrouzet et al 2010:90)

By enunciating the cultural, social factors that affect work process, there can begin to be a more holistic understanding for the complexity of any given process, and that processes include an understanding of both the organizational structure and group behavior (A. Jordan 2013:21-22). From both business management and anthropological theory it is apparent that understanding the relationships between work groups or niches plays an important role in work process. Mariette Baba and Elizabeth Briody contributed to the understanding of organizational growth and the relationships between these niches through Baba’s theoretical framework of ecological analysis of work group subcultures and their response to change, and Briody’s work on the management of partnerships and conflict within organizations (Baba 1995; Briody 2013; Trotter et al. 2008).

By understanding what boundaries exist amongst work groups, anthropologists can help organizations manage organizational partnerships and change by predicting conflict (Baba 1995; Briody 2013; Trotter et al. 2008). As both Baba and Briody have unveiled, conflict occurs when
there is ambiguity and lack of clarity in a particular process. This ambiguity is met when organizations fail to recognize both formal and informal boundaries between work groups. Theses boundaries are negotiated through partnerships both within and between workgroups to form informal boundaries or relationships, so when organizations plan for change based on formal boundaries and partnerships there is bound to be resistance and conflict (Baba 1995; Briody 2013; Trotter et al. 2008). Baba specifically mentions that it is important to understand change management at the local level; within the small group of product managers at ABCO there is a significant amount of diversity in gender, age, and education. Within the anthropology of organizational change management, it is noted that management often fails to appreciate the amount of diversity within workgroups; the results become ineffective change management because “all work groups alike [by] ‘ramming change down their throats’ or sending them all to the same training program” (Baba 1995:230). As my project not only deals with defining formal boundaries but organizational change focused on future use of new technology, it is important to recognize the formal and informal boundaries, the partnerships, the diversity, and plan for the appropriate training in addition to change management. Implementing a new system will change the way in which employees get work done, and changing they way in which they get work done may also affect with whom they work. “It is [therefore] critical for the organizational leadership to plan carefully for how the partnership will work, not just what the partnership is expected to do” (Briody 2013). The following section turns to discuss two different models for the design and usability of technology.
Designing Usability

As the second deliverable of my project was to facilitate the development of a product portal on the company’s website, it was necessary to consider the factors which make the designing of a product typically a success or a failure. *The Handbook of Usability Testing: How to Plan, Design, and Conduct Effective Tests* lists five reasons why products are hard to use: a) development focuses on the machine or system, b) target audiences change and adapt, c) designing usable products is difficult, d) team specialists don’t always work in integrated ways, and e) design and implementation don’t always match (Rubin and Chisnell 2008). Not only are products hard to use if the research and development experiences one of the five reasons listed above, but designing products that are easy to use is typically much more costly; the reason for this being that the designing of easy-to-use products often uses iterative development rather than waterfall development. “Iterative development works by continual refinement through trial and error. Rather than trying to create a perfect vision from the beginning, iterative development hones in on the target, refining its focus and improving the product until it has reached its goal” (Goodman et al. 2012:30). Waterfall development on the other hand conducts all of the research upfront and evaluates after the product is finalized. By using the waterfall method a product may be much cheaper to produce, but if there are issues they are typically very costly to change (Goodman et al. 2012). As my project unfolded it became apparent that there were several doubts about the design and usability amongst ABCO executives. It was also revealed that a waterfall development of the design was the intended method for both the WMS and the product portal. As design recommendations for a product portal was one of my deliverables, understanding theses perceptions and the tradeoffs between the two design approaches was
critically important for making the defense for the use of iterative design development, and how it would provide the most useful service to ABCO and its customers.

Improving Business Process

Doing ethnographic research in an organization does not explicitly require an anthropology degree; however, it does typically include a “strong background in anthropological methods, theories and a conceptual approaches, but is decidedly much more than a graft of academic ethnography onto business contexts” (B. Jordan 2013:7). It is thus critically important for researchers to not only understand how to ethnographically interpret process, but to also understand how corporations approach and analyze process. Within management theory, understanding the fundamentals of process is considered key to being able to effectively manage and improve any process (Bozarth and Handfield 2013).

As organizations grow they tend to develop more and more formalized operations in management. To do so requires understanding the definition of processes. From Introductory Operations and Supply Chain Management, we know that processes are “a set of logically related tasks or activities performed to achieve a defined business outcome” (Bozarth and Handfield 2013:74). Processes enable an organization to measure and improve performance. A typical way of describing the relationships that are involved in business process is done through business process mapping (BPM), graphically represented as process flowcharts. Process flowcharts enable organizations to visualize the process through very simple graphic illustrations. Developing process flowcharts can be difficult and requires a detailed explanation:

Because of the level of detail required, process flowcharts can quickly become overly complex or wander off the track unless a conscious effort is made to maintain focus.
Some useful rules for maintaining this focus include: Identify the entity that will serve as the focal point, identify clear boundaries and starting and ending points, keep it simple…most people developing process maps for the first time tend to put in too much detail. There are no simple rules of thumb for avoiding this trap, other than to ask whether the additional detail is important to understanding the process and whether it is worth the added complexity. (Bozarth and Handfield 2013:77)

This explanation is valuable for understanding how operations managers seek to define related tasks and establish the relationship between tasks in a process flowchart.

At ABCO, my project included mapping the tasks related to product introduction, but it was also necessary to understand who was involved and what role their interaction played in the process. To represent the interaction of individuals through a process map, it would be illustrated as a swim lane process map. “Swim lane process maps graphically arrange the process steps so that the user can see who is responsible for each step” (Bozarth and Handfield 2013:80).

Formulating the appropriate process however plays into a larger theoretical picture of ideas of business optimization, which can be found within such theories as decision theory;

the collection of axiomatic models of uncertainty and risk and utility theory, that prescribe the optimal choice of an option from an array of options, in which optimality is defined by the underlying models and the choice is dictated by an explicit rule, usually some variant of maximization of (subjective) expected utility. (Beach and Lipshitz 1996:21)

This, of course, is an appropriate theoretical framework for making decisions within businesses because it uses mathematically calculated probability to project the best decision. This is a principle that ideally would guide decisions throughout an organization. As businesses are often
faced with uncertainty surrounding their decisions, it is important to attempt to calculate the probability of the best possible outcome. For example, a marketing manager may have experience that guides him in constructing the appropriate marketing strategy, but there are factors that will still be beyond his control. In this case, decision theory and decision trees can help a marketing manager select the marketing mix that maximizes the chance of the highest possible payoff (Newman 1971:4). Business process mapping and decision trees are two kinds of models that can help businesses to improve business process by identifying the specific tasks that need to take place and to understand which decision is in the best interest of the company. When working with a company that has yet to establish these metrics and formal processes, it is important to understand “the people stuff, the knowledge flow, communication problems” (B. Jordan with M. Lambert 2010:99). Within those social relationships can be found a set of informal rules and processes. Identification and articulation of these informal rules and processes is where anthropologists are well prepared to help organizations understand social factors that will influence the effective development and use of formalized business process. An organizations decision to employ an anthropologists will occur when the organization desires a more holistic understanding of itself, as Bridgette Jordan states in describing one of her clients, “they felt that a more holistic look at the factory might provide people- and work practice-centered data regarding the flow of information and materials” (B. Jordan with M. Lambert 2010:99). When the time calls for it, Anthropologists are excellent at fleshing out the less measureable social factors that contribute to the effective execution of work process. Using the findings of the anthropologist to guide the design of products to get work done, and the development of formal business process will ultimately provide the company with assurance that the process adaptation will be successful.
Warehouse Management System (WMS) Implementation

In addition to understanding the role of process, as ABCO seeks to use projects such as this applied thesis to better prepare them for a WMS installation, it was decidedly necessary to understand what factors were considered vital to the success and failures of WMS implementations. In an article titled “Surviving a WMS Implementation” a consultant describes a site visit in which he does a checkup on an implementation, post-installation. He reports that “in about three minutes [he] could see that people weren’t using the WMS the way [they] designed it. ‘There was a new manager, and he told me his job was to get orders out the door, not to enter data into a computer (Anonymous Oct 2002).’” The article then goes on to explain that the new manager was quickly replaced. This article raises an important question about understanding not only the tasks which employees are responsible for, but also an understanding for the social context of the manager’s inability to complete his task. The article mentions the example above as a cautionary tale for the importance of developing training programs for new hires and putting an extra emphasis on the importance of providing as much training as possible (Anonymous, Oct 2002). When examining the manager’s lack of success, it begs the question as to whether or not the manager was successfully trained. Within anthropological theory, Laura Nader’s concept of missing links in her article Missing Links provides a theoretical framing for analyzing process. She explains that history cannot simply be examined or understood only by catalysts or events that are deemed significant (Nader 2002). Instead, there is much to be appreciated about the context of events. She argues that individuals, rather than policy are perceived to be responsible for advancement (Nader 2002). With Laura Nader’s concept missing links, an organization could analyze their training programs equally to their employees’ performance.
Throughout the literature on WMS implementations it seems that relatively few people are terminated, in fact, one article reported that while it may take two fewer people to do the same process, those two workers were usually transferred to different areas of the business (Morton 2009). Typically an implementation of a WMS occurs because of growth in the company’s business, and a WMS allows the company to grow and service more customers, more efficiently (Gripman 1997; Morton 2009). The literature mentions that post WMS implementation, what was once the responsibility of the product picker ultimately moves up the warehouse hierarchy to the operators and managers. Depending on the organizational structure of the warehouse, the operator or manager becomes responsible for scanning or recording the intake of products. Before WMS implementation, the picker had been responsible for recording the stocking of the product, and if the product were misplaced, the picker would have been liable for the missing product until it was recovered (Gripman 1997, Morton 2009). The gravity of this example was realized during my thesis research with ABCO as the misplacing of products was a common occurrence, and in the case of product management this is a significant issue.

While it is apparent that the purchase of WMS is done in order to enable an organization to track inventory more efficiently, there are several factors to consider in the planning of a WMS implementation such as determining the proper system, project manager, implementation team, project plan, consulting company, budget and schedule (Gurin 1999, Anonymous Dec 1998, Anonymous Oct 2002). Having the right system, the right plan, and the right team to implement can make or break a project. In fact, the WMS literature supports the idea that the planning of an implementation was the ultimate indicator for the success or failure of the project (Morton 2009, Gripman 1997, Anonymous Dec 1998, Anonymous Oct 2002, Gurin 1999). Specifically within the planning stage one article surveyed 200 warehouses reported that 61%
said the training programs in place were the most important factor in the success of their implementations, and that hiring a third party consulting team doubled a projects chance for having a highly successful implementation (Gurin 1999).

How Anthropology Benefits from Design and Business Theory

Just as in previous research on work groups and managing conflict within an organization, my project demonstrated that knowledge of anthropology, design, and management theory prove to be useful in predicting current organizational factors which conflict with projected models of organization. Combining company data, future management models, and observations of current operations prove to be the most critical factors for success in this research. It was by comparing these alternative models that workarounds were identified (B. Jordan with M. Lambert 2010:122). By comparing the formal organization and workarounds, it was possible to identify the factors that lead to workarounds, and the organizational values that governed those behaviors. The following sections explain the project design detailing the forming of the particular project plan and research methodologies used to collect data.
PROJECT DESIGN

Project Plan

In May of 2013 I had two formal interviews with ABCO via Skype. The first was with the Director of Recruitment and Employee Development (DRED), and the second was with the DRED, the executive vice president (EVP), vice president of operations (VPO), and the senior vice president (SVP) who was to become my site sponsor. Over these two interviews we discussed the project and the questions which the executive committee had deemed to be the most important. I proposed that their questions be used verbatim in formal, semi-structured interviews with key stakeholders in the process of product management. Below are the questions which the executive committee sought to answer.

Executive Committee’s Questions

1. What happens when a new product is introduced to ABCO?
2. Who gives approval to purchase the item?
3. Who determines how much of each item should be purchased?
4. Who determines pricing?
5. How is a new product offering communicated to Purchasing and Inventory Staff?
6. How is a new product offering communicated to Branch Staff?
7. How is a new product offering communicated to Sales Staff?
8. What product information should be obtained from the vendor?
9. What information must be communicated to internal teams?
10. What is the evaluation process after the product has been on board?
The project timeline above represents the final project plan as it was carried out. It visually demonstrates the major research activities divided by weeks. Most importantly, it shows that my research project was not linear in the sense that data were collected, analyzed, and reported. Instead, this image helps depict nonlinearity in that it was necessary to seek out multiple forms of data to both triangulate and further develop the final analysis. This is best represented by weeks 6/24 – 6/28 and 7/22 – 7/26 where both participation and observation were used to triangulate data retrieved from interviewing.
DATA COLLECTION AND ANALYSIS

Archival Research

As this project set out to understand the process of new product introduction, it was necessary to receive training on the software programs that product managers used in order to execute the tasks required of them for product management. The three programs that product managers use are called Phocas, SX Enterprise (SX.e), and Microsoft Excel. Phocas is an internally developed Structured Query Language (SQL) program that retains sales data of each product across all branches. SX.e is an enterprise resource planning (ERP) program that is used to manage product inventory, shipping, and payment information. Microsoft Excel is used to analyze sales data that is stored in Phocas. ABCO also utilizes an intranet website to internally communicate product information and programs. In addition to digital information management programs, archival research included the review of physical pieces of manufacturer product materials and marketing brochures available to both customers and the organization (Schensul et al. 1999:201-229).

Field Site Selection

ABCO has a total of eighteen facilities geographically distributed along the eastern seaboard from the Boston to the Washington D.C. area. Due to time and travel constraints, three facilities were selected for this study. The three facilities included: Long Island City, Manhattan, and Middle Village. Those three facilities were selected because they each represent a unique entity of ABCOs business. Long Island City, also known as the main or headquarters includes a sales facility, and all corporate offices. Middle Village or the DC, an abbreviation of distribution center, functions as both a warehouse and a distribution center for the entire selection of product
offerings. The Manhattan branch is representative of the fifteen remaining branches in that its primary function is a sales facility.

Participant Observation

As a fulltime employee of ABCO, participation in company events and observations were a part of each and everyday. Arranged activities of participation and observation included: a tour of the bay (which is a colloquial reference to a particular storage bay in the DC), observation of a purchasing meeting, a tour of small parts, participation filling an order in small parts, and observations at the Manhattan branch. Some of activities included on-the-spot, informal interviews.

Field Notes and Data Management

Possibly one of the most important methods for anthropologists is note taking and data management. For this particular project collecting field notes was absolutely crucial do to the quick timeline and amount of information that needed triangulation. Due to my position as a full time employee / researcher I was able to collect a tremendous amount of textual data. When I was not attending meetings or collecting data, I was able to remove myself to one of three office spaces that I occupied throughout my research. I used a program called Evernote to record and code all of my field notes. Every day was dated and included of a log of daily activities, a summary of activities, and a personal reflection that included task objectives for the following weekday.
Informal Interviews

Informal interviewing played a key role in validating research findings and developing the scope of the project. As the summer months are the busiest months for ABCO, product managers frequently travel to other branches, and primarily being based out of a different branch than that of the product managers, it was difficult for me to procure a substantial amount of time to interview the product managers on the process of product introduction. Unexpectedly, this became a very positive influence on the research design as I had to seek out several other perspectives to triangulate the process and ultimately lead to a much more comprehensive understanding of product management from its inception to the branch shelf as I interviewed numerous individuals throughout the organization.

Semi-Structured Interviews

Semi-structured interviews were used to gather information about the current process of product introduction. The executive vice president (EVP) selected these seven participants: six product managers, and one senior vice president (SVP). The interviews were scheduled by me though Microsoft Outlook. Six of the seven interviews were conducted in-person at the Long Island City branch. One interview was conducted via teleconference. All interviews used the same interview schedule and each interviewee was asked the same questions. The average interview time was 37 minutes 34 seconds, with the longest being 1 hour 20 minutes 12 seconds and the shortest being 15 minutes 36 seconds. The longest interview was conducted with the SVP who was also my site sponsor, and the shortest interview was via teleconference.

Each interview made use of an interview schedule which asked all seven participants the same questions provided by the executive committee. Analysis was done by transcribing via
Microsoft Word and then hand coding. The analysis focused on comparison of responses in order to develop an understanding for the current process of product introduction and evaluation, as well as product portal design recommendations and emergent themes. The emergent themes will be represented in the findings along with the two project deliverables.
DESCRIPTION OF DELIVERABLES

The deliverables of this project are 1) a description of the process of new product introduction and evaluation, and 2) design recommendations for a product portal. These deliverables were presented in a PowerPoint presentation given to several executives and associate staff, as well as written report submitted to the Director of Recruitment and Employee Development.

In the words of an executive, I have “opened a door that has never been open before.” As stated above, ABCO and I began this venture with a shared understanding of the project goals, but with a great amount of flexibility in how to achieve them. Numerous meetings between various executives and myself afforded a time and place to discuss my anthropological insights, and apply them to ABCO's current and desired model of business practice. As I was a full-time employee through the duration of my project, the deliverables given to ABCO in a PowerPoint presentation and written report do not include the many conversations held between myself and staff which generated a contextual understanding of the company’s current organizational culture. I believe that these conversations or factors developed a context for the deliverables, and that it is necessary to explain them as a way to demonstrate the context that gives evidence for the claims made in this project, and justify the recommendations.

In order to find these organizational cultural factors, I needed research flexibility that would allow for the development of a much more holistic understanding of product management. To understand the complex relationships that exist within ABCO, the research needed to understand the company’s values necessitated participation and observation of several events such as meetings, purchasing, product storage, distribution, marketing, and communication. By researching how these activities interacted it allowed for a more thorough understanding of the
current organizational culture and how it conflicts with future organizational goals. The following findings describe the values that shape ABCO’s organizational culture and the consequences of those values.
FINDINGS

The ABCO organizational culture is one that places 1) a strong emphasis on sales and 2) maintaining family values. The consequence of these organizational attributes is a loose organizational structure that poses inevitable ideological conflict in the company’s effort to change its system of operations. The executive level of ABCO is very aware of industry standards. They are also aware of how ABCO differs from them. This isn’t to say that the way that ABCO does business is any better or worse than industry standards, ABCO has simply embraced what has made it thrive: a focus on never being too busy to help a customer. A sales-focused mantra means that the bottom line of the company is to always make a sale, and has remained the focus of the company throughout the company’s existence. When speaking with executives in the company about ABCO’s history, they will commonly refer to the 1980’s when most other companies in their industry began to focus on developing their operations management, and switching from a paper to digital systems. This point in the company’s history when ABCO deviated from the path the industry standards is responsible for the company’s success and current organizational growing pains.

In an informal interview that I was told that ABCO “is a family business, even if not everyone is a part of the same family.” On numerous occasions through conversations I discover familial connections between employees, and that most employees had either been with the company or intended to stay with the company for a long time. Evidence of the emphasis on sales and family values culture is exemplified in the following quote:

So the young guy who started out in the warehouse, he moved to the counter, learned how to be a branch manager who can operate a 10 or 15 million dollar facility through shear determination and knowledge of the products.
Due to ABCOs emphasis on sales and family values, an employee who is successful in sales will be promoted as a means to reward them for their loyalty and sales success. However, regard to whether or not those employees are fully prepared for their new role as far as training and skill set is not a primary focus.

As ABCO has grown, the additional branches that have opened up over the past 65 years have been operated as franchises. This mode of operation is closely tied to the sales emphasis and family values. It is critically important to understand how these values affect the current process of decision-making, and how decision-making will be a very important factor for ABCO to address in the future. Among the major changes that have begun to happen within ABCO is what has been described as a building up of the corporate infrastructure. This means pulling back the power of the individual branches to make decision and placing that responsibility in the hands of members of the corporate headquarters. To help facilitate the transition of operations from a franchise model to a central corporate model, the position of director of recruitment and employee development was created. This director has been taking steps towards developing policy and programs that will enable employees’ skillsets to develop along with their upward movement in the company, but it is not directly addressing the movement of power away from the branches. Because of the current state of transition, a lot of the decision making power is still in the hands of the sales branches, where employees are promoted and may not have the technical training they need. Below a quote from an executive is provided describing the issues that have resulted due to the current system of promotion that does not include appropriate technical training:

So, when you don’t have those, what are the things that happen? You get poor inventory management, generally. You probably get poor administrative practices cause you don’t
understand how important that the administrative side is – what allows us to understand
our business electronically through the computer system. If you don’t administer your
sales properly, it’s hard to manage the inventory.

As the system currently stands, individuals are promoted by their ability to sell. Not having the
proper technical knowledge to manage inventory and operations perpetuates the emphasis on
sales and family values, which devalues job specialization and obfuscates individual job
responsibilities. In its current operation, ABCO is continuing to build the power infrastructure of
the corporate headquarters, but not addressing the organizational values that continue to supply
power to the individual branches. If ABCO intends to pull the power of decision-making away
from the branches, it will need to not merely build corporate infrastructure, but acknowledge that
organizational values act as a barrier to taking over the full responsibility of decision-making,
and that they will need to address not only training but how they will define the roles of the
individuals from whom they are giving and taking the power of decision-making.
CONSEQUENCES OF LOOSE ORGANIZATIONAL STRUCTURE

Lack of Policy and Procedure

Lack of policy and procedure obfuscates clarity of job responsibilities and leads to employee frustration. One of the major questions and eventual themes of this project became policy and procedure. Because of the transition from the franchise to the corporate model and the loose organizational structure, there is still a lot of power of decision making in a lot of hands throughout the company. This of course made the task of pinning down decision makers very difficult. During my interviews when I asked questions such as who makes the final decision I would often be provided with multiple people and possibilities depending on circumstance. This lack of clarity expands far beyond merely the corporate offices. For example, I found out that pickers at the DC who had expressed concern over poor lighting and airflow did not know to whom to voice their concerns. I further confirmed with management that there is no specific procedure in place to respond to these requests. Another example is that a manager expressed he would like to order new chairs for the DC dinning area, but did not know how to authorize a request and feared violating Union policy. And finally is discussed much further in the description of the process of new product introduction and evaluation, many of the decisions to purchase new products exist at the branch level. Examples such as these are important to recognize because the job titles and responsibilities of those who hold them may or may not be very good at describing the roles which those individuals actually play in the organization.

The Bay

The bay demonstrates that individuals within ABCO have made efforts to make changes that would enable the company to increase organizational efficiency, but with little support
company wide and resistance to change the small victories are short lived. On my first day as an employee at ABCO I was given a tour of the Distribution Center (DC). Included in this tour was a visit to isle 4, bay 1 which is also referred to colloquially as the bay. This area of shelving in the DC is a project that was organized by the assistant general manager of distribution, the person with whom I did my informational interview. The intention was to organize the shelf in such a way that the fastest moving products, designated A products were located on the shelves closest to the ground. A products are products that typically sell at least once every 30 days, B products sell once between 31 and 180 days, C products sell once every 181 days to 18 months, and finally D products have not sold in over 18 months. Several executives would later inform me that products that haven’t sold in over 18 months are industry wide considered dead products. Due to the company’s philosophy these products will be retained because it is very important that ABCO be known as the company that always has hard to find products that others will not have. This is a niche part of the market that ABCO can service, and they promote this as a niche service that they can offer that their competitors cannot. The organization of the bay was intended to emulate the type of organization that would be typical of a warehouse that was optimized for a warehouse management system, and was done to prove to the company that this type of organization was possible and would be beneficial. The belief is that this optimized organization is much more efficient than other variations because it puts the fastest moving products closer to the floor and closer to the front of the DC, and thus they are subsequently more efficient to retrieve. In regards to the process of product management this observation was significant because every product that the company offers is available in at minimum safety stock quantities at the DC and it also serves as the company’s warehouse. Safety stock means that there will always be a reserve quantity of products available at the DC, and even if there is a
request for the product at a branch, a customer will have to wait until the manufacturer delivers more product to the DC in order to maintain the company’s minimum requirement for that product. Because all manufacturers must deliver their products to the DC and never to a branch, every single product offered by ABCO must be stored and available at the DC at any given time. This means that for a company that has continued to grow in its product offering since it’s inception, and has never discontinued a product offering that wasn’t discontinued by the manufacturer or banned due to regulatory prohibitions, the DC has become a very crowded place. The bay is a very appropriate metaphor for the battle between the company’s current organizational culture and the strain of current operations. Many acknowledge that change needs to happen but are also overwhelmed by it and the realization of how complex and far-reaching that change to the current model of operations will need to be.

Meetings at ABCO

Meetings at ABCO are poorly organized and there is inconsistent knowledge of the software programs which causes inventory errors. The following example of a purchasing meeting at ABCO headquarters demonstrates this problem. The Purchasing meeting of June 11th produced a great amount of information about the way in which the Product Managers work together. This was my first face-to-face meeting with the SVP, Walt Patton, who served as my site sponsor. Walt is known throughout the company as the head of purchasing, though his title does not reflect this.

While this meeting is called The Purchasing Meeting, I would find out that these meetings are used to discuss a much broader range of company issues. The meeting began by discussing the Statin Island Branch. In this discussion it was explained that SX.e was not
functioning properly, and specifically, it was not automatically printing sales tickets. This issue relates to the building up of the corporate infrastructure and moving away from franchise-like operations, and responsibility for managing inventory. To do this they’ve had to plug every branch into their inventory management system, however, individuals at the branches frequently using the system do not have the appropriate training to do so.

Not only was this meeting beneficial for understanding the types of issues that the company is working through, but the way in which meetings are conducted and how issues are resolved. Because Walt serves as the head of purchasing, he schedules and facilitates the meetings. In regards to the sales tickets not printing properly, an executive proposed a suspicion that it is not that the system isn’t printing tickets, but that pickers, or the individuals responsible for retrieving the product from the shelves were throwing out the tickets. As was explained by the executive, the motivation for doing this would be to be able to leave work when their shift is over. If an employee has a stack of tickets of parts they need to retrieve and it is close to the time that their shift is over, they are expected by the company to finish retrieving all of the products listed on the tickets before they go. They of course will get paid for the time that they are working, but the executive suggested that he believed the issue was not a technical one, but that the employees value their time and will simply throw the tickets in the garbage. He further explained that it would be easy for them to do this because tickets are not tracked or assigned to individuals, and until someone confirms in SX.e that the order has been filled, that the ticket will automatically reproduce each morning. The conclusion of the executive’s speculation was to insist that measurements needed to be put in place to ensure accountability of the tickets that are handled by pickers. This demonstrated to me that there are major issues of accountability with
both the technical and physical systems for product management which spanned across the company.

The final point of discussion addressed how there are some employees who have limited knowledge of the SX.e system. An example that was provided included requests for products or changes to inventory that are not universally recognizable. The point was made that the system is underutilized and that this inconsistent use is problematic for the company. The inclusion of all of this information is relevant to understanding the totality of all that is included in Purchasing Meetings at ABCO. There were many more topics included in this meeting that were not mentioned here as they were not of crucial importance, though I believe the organization and the points demonstrated were significant to understanding operations. Throughout my time at ABCO the organization of meetings was a repeated point of scrutiny amongst some product managers and other executives, such as the use of mobile phones during meetings which was viewed as distracting and disrespectful. The need for a reorganization and structure of meetings would ultimately become one the most critical recommendations of this project as it both affects current operations and will be affected by any changes made to operations.

Product Distinction

There is no formal distinction between new products and supersede products making the appropriation of marketing efforts difficult to determine. For anonymity purposes the company below has been given the pseudonym Climate Systems. The end of the purchasing meeting came about upon the arrival of a sales representative from Climate Systems. ABCO is a company that purchases products from manufacturers and then sells those products to contractors. While I was unable to discover exactly how many products enter the company as a result of sales pitches by
manufacturers sales representatives, it is believed that it is by far the most predominate method for a product to enter the company. There is also a very important distinction to be made in regards to new products. The company believes in two types of new products: 1) new to the industry and/or ABCO, 2) new as in supersede of a previously existing product that ABCO offers. The new product that the manufacturers representative was proposing was new to ABCO. And the primary method for a new product to enter the company also refers to new to the industry/and or ABCO. This particular day the representative was demonstrating a programmable motor, which can be reprogrammed up to 100 times. As the representative was explaining the process by which the motor gets programmed he was interrupted by an executive who said; “I don’t care about the process, I just want to see you program the motor.” The sales representative responded by saying that he wasn’t able to do that, but there is a specific website that provides instructions on how to program the motor. The significance of this insight connects to the product information resources that are available to ABCO employees and ABCO customers. As a part of the product management process, it would become necessary to understand both how the product is classified internally and how product information and resources like this website are communicated to internal teams and then ultimately to customers.

Employees are Unaware of the Total Count of New Products Introduced Annually

Employees are unaware of the total count of new products introduced annually; the current coding system causes confusion. During the purchasing meeting I asked if there was a process by which customers could make product recommendations, to which I was told there is no formal process and that within the company there are major reservations about ordering a product that is not guaranteed to sell. If the customer is known to generate substantial revenue
for ABCO, there is the possibility that they will “test it out” by ordering small quantities to ensure that the product will in fact be purchased. After asking which department would handle new product recommendations, it was explained that it would likely be sales or marketing because account managers are not really available; “they’re always out and about.” Additionally, I was told that the introduction of new products is extremely rare. After conducting an analysis of the company’s sales data I found the following:

New Product Introductions

Table 2. *Spreadsheet displaying the total of stock and non-stock products introduced annually.*

<table>
<thead>
<tr>
<th>Year</th>
<th>Stock Products</th>
<th>Non-Stock Products</th>
<th>Total New Prod.</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ytd 6/24/2013</em></td>
<td>98</td>
<td>134</td>
<td>232</td>
</tr>
<tr>
<td>2012</td>
<td>215</td>
<td>258</td>
<td>473</td>
</tr>
<tr>
<td>2011</td>
<td>226</td>
<td>223</td>
<td>449</td>
</tr>
<tr>
<td>2010</td>
<td>225</td>
<td>196</td>
<td>421</td>
</tr>
</tbody>
</table>

*year to date (ytd). The numbers reported only include products recorded as of 6/24/2013.

This data was later corroborated with an executive. Though I never was able to reach a definitive answer as to why there are seemingly a tremendous number of new products that enter the company each year, there seems to be an assumption that the non-stock products tend to be special orders for particular customers and that supersede products may be included in the stock products but coded as entirely new products. This data and the questions raised by this data developed a conversation about switching the way in which products are coded into ABCOs digital system. This includes both the designation of an item as a new product and its particular code. The way ABCO currently codes products into their system is by using the manufacturers’ product number. This could also explain why there are such a large number or “new products.” It might be the case that a supersede product shows up in the database as new products because
their product number changes, when as far as the company is concerned it’s really the same product.

Inconsistent Product Storage

Issues exist with inconsistent product storage, and inconsistent product coding, and leading to shipping errors. The Distribution Center has four general categories for the organization of its product varieties: gas, damaged, inventory, and small parts. The section called small parts is actually a very small space relative to the entire warehouse, but its products yield approximately 60 to 70% of the company’s annual revenue. While the rest of the pickers are very hard to talk to because they operate heavy machinery such as cherry pickers and forklifts, there is always someone in small parts to talk to. In fact, I spent the majority of my downtime in between interviews, meetings, and formal observations in the small parts section of the warehouse.

Being able to work in small parts was beneficial to understanding what it takes to be a picker in the warehouse. I experienced first hand receiving a ticket and attempting to find the product. As it was once described to me, the DC “is like your mom’s kitchen, you just know where everything is.” I also discovered that there is no formal training program for new employees. As was the case with me, I had to follow individuals who had been working in the warehouse long enough to just know where everything was. Once all of the items are gathered for the specific order, the products are then checked again by a second picker who loads them into a bin which will be delivered to the front of the warehouse and checked a third time before it is loaded onto a truck to be delivered to a branch. Even though every small parts order is checked three times, errors do occur such as shipping the wrong item, too much of an item, and/or missing items. As I personally experienced, sometimes product numbers on parts would not
exactly match the number specified on the sheet. I would come to find out that the first error may occur with whoever is the first to program the new product number into SX.e. The control of this step is very loose as this can be any number of individuals at either the branches or the headquarters. The error and issues arise with the programming of the Manufacturer’s number into the system because a number may be 0-123A, but entered into the system as 123A, dropping the 0. This inconsistency can contribute to confusion and incorrect orders. So much like the learned skill of knowing where products are specifically located, there is sometimes also the learned skill of knowing which products are the specified products on the order ticket, as occasionally the numbers do not match. This mismatch of numbers reaffirmed points that had been made previously that 1) the company would benefit from creating an “ABCO number” for every product, 2) the SX.e system is underutilized and 3) some individuals make changes to the system that are unrecognizable to others. A very powerful example of how these unrecognizable changes impact the business is that one morning it was believed that 3,058 feet of copper was missing. Ultimately it was discovered that someone who was unfamiliar with the system inappropriately allocated copper tubing by the pieces rather than the footage.

Product Information is Poorly Organized at Sales Branches

At the Manhattan branch, the sales counter is directly in front of the main entrance and continues along to the right and then bends to form a 90-degree angle, continuing onward towards a glass wall that reveals office space. There are a number of gentlemen either sitting on stools or standing along the counter. I would come to learn that the counter tends to stay very busy until about 10:00 am. Above the counter there is a giant sign hanging from the ceiling that says “Will Call” with an arrow pointing around to the far right side of the counter. Before going
to check in with the branch manager I wanted to see if I could quickly figure how the sales
counter is utilized. While I was waiting, a gentleman approached me from over my shoulder and
asked if I “was will call.” I told him “well, not exactly” and he stepped around me and
approached a small red ticket dispenser that I had not noticed amongst a collage of signage
advertising products. Both along the counter and along the walls there were signs, product
displays, and brochures stacked on top of each other. When I discussed my observations of the
clutter and seeming disorganization of the branch at one of my executive meetings, it was
mentioned to me that this was something that had recently become a topic of interest at ABCO
which furthered the conversation of product information management.

The afore mentioned consequences of ABCOs loose organizational structure provide
context for the complexity of bringing clarity to process management within ABCO. Now that
that I have provided an overview of the major organizational findings and subsequent
consequences of those findings; I will now discuss the projects deliverables.

Deliverable 1: New Product Introduction and Evaluation Process

What I have discovered about the process of new product introduction is that there is a
tremendous amount of variability in who is involved in the process of new product introduction,
and the amount of information that is appropriate to obtain for each product. More specifically,
this is to say that in addition to product managers, “senior teams,” a fluid term used to represent
those who are involved in the decision-making process. The term senior teams describes the
influence that individuals both within the headquarters and sale branches can have on the
decision-making process, and is significant for understanding how a loose organizational
structure affects the decision-making process. This term was discovered in response to the research question, “who gives approval to purchase the item” as demonstrated below:

If I have to spend more than $25,000 on an initial stock order, the senior team has to make that decision – all take ownership of it, you know?

By prodding further I discovered the fluidity of this term and its responsibilities as it relates to employees job titles.

Interviewer: So at the branch level, is there a particular position or person that’s making that decision?

Interviewee: Hopefully it would be the senior person in the branch, and depending on the location that senior person may have a different title. It might be the branch manager, it might be the sales account manager—it might even be the engineer.

This discovery was paramount in both understanding the current process for new product introduction and evaluation and making recommendations for the future. The second most significant finding about the process of new product introduction and evaluation was the use of the term “new product.” The use of the term new product hereafter will refer to a product that is new to the industry and/or ABCO. While there is variability, I’ve found that there is a general but consistent process that occurs, and that is what I’ve outlined and will call the new product introduction and evaluation process.

In my determination, there are generally five different phases that occur in the process of new product introduction. I developed the phase names as a way to better explain the process: 1) Product Approval, 2) Product Information, 3) Product Introduction, 4) Product Launch, and 5) Product Evaluation. By defining the process and all of its steps with a universal language, it will enable the company to move through the process of new product introduction with clarity and
efficiency. The following outline represents the synthesis of multiple, independent interviews. While it offers an interpretation of the current product introduction and evaluation process, it would be of great benefit to the company if this outline was scrutinized and put into a particular vocabulary that satisfies all of those who are involved in the process. This could be done by conducting a focus group in which those deemed appropriate can evaluate the outline and make amendments where necessary. This outline will be most effective when it has such support. It also would then be necessary to clearly articulate the process to all those involved though a process map.

The following quote is representative of product managements view on the current process of product introduction:

Our product introduction process is really not well defined…sometimes the process might take longer because there’s not the structure that I think would benefit us if we had a very formal introduction process.

Mindful of the great variety of conditions in which any given product may enter the company, this formal outline needs to focus on asking what the most universal questions are that need to be answered in order to swiftly identify, communicate, and distribute products to customers. The process will vary from product to product, and additional questions can be asked based on need, but a fundamental criteria for product approval would greatly benefit the process and bring clarity to all of those who are involved.

Phase 1 (Product Approval) – Assess the Product’s Market Opportunity

The product approval phase identifies the product’s origin such that the company will know who it was that proposed the product. This is significant because the product managers and
senior teams want assurance that they are purchasing a product that is going to sell. One of the most significant findings of my research was that while I was directed to interview product management teams, those who are proposing new products extend well beyond those with the title product manager. For product managers and senior teams, knowing whether a contractor versus a vendor or manufacturers sales representative proposed the product is significant. Manufacturers have a vested interest in the sales of the product; thus they tend to pitch products they have done significant research for and that they feel would be of mutual benefit to both themselves and ABCO. The ability for a vendor to provide this substantive information is considered by product managers to be one of the most secure ways for ABCO to purchase a new product:

The vendor can have a tremendous effect on that based on their abilities and their relationship with the company.

In addition to vendors and contractors, sometimes product managers and senior teams propose products as a result of individual research. Each product manager is a part of a product management team. There are four different product management teams in total. The four teams are: 1) Residential HVAC, 2) Commercial HVAC, 3) Refrigeration and 4) Parts, Accessories, and Commodities. Teams 1, 2, and 3 manage systems, while team 4 manages the parts, accessories, and commodities for teams 1, 2, and 3. If the proposed product is approved, it will join the product offerings of whichever product division is most appropriate. Senior teams on the other hand hold a wide variety of positions throughout the company that have influence on the process of new product introduction though they are not formally recognized.

The ultimate approval of the product is based on the investment that the company will need in order to incorporate and sell a product. As stated above, a proposal from the
manufacturer is the most common way in which a product enters the company. A proposal will take place at a sales meeting that may include a variety of executives, product managers, and senior officials, however the one person who facilitates each meeting is the SVP and head of purchasing. Significant factors in the decision include understanding preexisting conditions with vendors or the need to negotiate new ones. In addition to the financial investment there is the investment of time and resources to create training programs and education materials that may be necessary to offer to both ABCO teams and its customers. To illustrate this point in the words of a product manager:

First of all, it depends on the product. Do we need to train people on it? Is it new to the industry? Is it, you know, a new technology? So how much information do we need to disseminate now both internally and externally out to our customers, all right? So if we’re going to sell it, we have to be able to sell it intelligently.

The ability of ABCO staff to feel confident in their ability to sell it effectively often times comes down to the relationship between the manufacturer and ABCO. What this effectively means is profitable terms and plenty of information that ABCO can use to educate and sell the product to its customers is beneficial. While no specific numbers or profit margins were ever mentioned as qualifiers for the acceptance of a product sales pitch, it was mentioned that very few decisions are made by one individual when the initial investment is over $25,000. Similar to decisions under $25,000, there is no specific structure or process for decision over $25,000, other than it including senior people. To determine whether or not to purchase the product meetings will be held to discuss the terms. The responsibility of the final decision to approve the product is in the hands of the SVP.
Phase 2 (Product Information) – Gather all Necessary Product Information

The Product Information phase includes a great deal of information gathering for internal teams. This information will ultimately be shared with varying internal and external teams such as: SKU number, ordering/stocking time, order cycles, quantity (min/max levels), pricing, vendor marketing information, application guides, installation guides, service guides, engineering guides, safety regulations, freight requirements, market opportunity (product features/benefits), with a consideration as to what accessory parts may be needed, and what training should be provided to customers and staff. The product management team that is appropriate for the product and various senior people with in the company will collect this information.

Phase 3 (Product Introduction) – Make Information Available to Appropriate People

The third phase identifies who needs to know the information which is compiled in phase two. Product managers and senior people do this by answering a series of questions such as: Do sales teams possess all the materials they need in order to sell effectively? Is information for the customers available such as marketing brochures, sales guides, engineering guides, and service manuals? And is the product large enough that inventory teams need to be contacted? Options for communicating this information included meetings, emails, conference calls, ABCOs intranet, radio advertisement, expo events, fliers, brochures, webinars, and then specific ABCO brand events and forums such as Tech Tips, Lunch and Learns, Counter Days, and ABCO University. Included in the decision of what information to disseminate is also who will do it and when. As expressed by product management the lack of a formal process affects the success of a product:
We’re making an investment in a product and then not marketing it properly, so, we’re losing money.

Because of the ambiguity in job positions it is not clear to all individuals who is responsible for disseminating what information even though everyone knows it needs to get done. Another factor that plays into the confusion over product launches is the lack of clear distinction between supersede products and new products to ABCO. The decision to purchase supersede products may be left up to any individual who is considered a senior person, and because this includes the branch levels and there is no procedure for informing the headquarters, it may go unknown for some time by product management teams that supersede products have been ordered:

If it’s a supersede item, there’s no need for any thought to be given to that, right, cause we’re replacing one with another.

Depending on the location that senior person may have a different title. It might be the branch manager, it might be the sales account manager, it might even be the engineer…you may have a manager that’s younger that maybe has 5 or 10 years experience, but the account manager might have 30 years experience…we don’t have a real strict structure. There’s good and bad to it because strict structure, everyone understands the rules and everything is defined, but there may be a lack of intellectual creativity that that type of structure prohibits.

Because of this there are difficulties with the products introduction and launch.
Phase 4 (Product Launch) – Consistency of Product Introductions

While product managers work through these phases and steps, the lack of clarity and consistency in the process affects the ability of the company to generate maximum revenue. The lack in clarity in the product introduction and evaluation process affects planning for product launches. As expressed by product managers, ability to improve this process of information gathering and dissemination will improve product launches:

An area of improvement is identifying products in specific areas or that are appropriate for the company and then launching them properly.

A key factor in successful product launches includes knowledge of a vendor’s ability to service the product. This information is stored on what are called vendor scorecards. Vendor scorecards are reports that are put together which tell companies such as ABCO when to expect various elements of service from a company as they do differ. The following quote provides an example of how ABCO would benefit in their product launches from vendor scorecards:

We get these new outdoor units in, and we don’t have the technical information for it, for – it could be 3 to 4 months by the time it gets in.

If ABCO were to create vendor scorecards they would know to routinely expect not to receive the product’s technical information for 3 to 4 months. This would either mean holding the product until the technical information comes in or discovering an alternate way to communicate the products technical information in the meantime. In comparison, from that same interview the product manager identifies another manufacturer who’s ability to supply product information is very different:

All the documentation will be there, be online, you know, on the factory website prior to anything being shipped even.
Because there already seems to be an understanding for the time it takes for manufacturers (vendors) to supply various aspects of products and their information, creating vendor scorecards will enable ABCO to have more consistent product launches. The next and final phase is product evaluation.

Phase 5 (Product Evaluation) – Measurement of Sales

After the product launch, manager concern shifts to evaluation. This is to say, how do product managers know that the product has been a success. The responses to this question greatly varied from “we don’t” to “smaller parts happen automatically, a global program…just automatically updates our min/maxes based on sales. If it’s something that’s equipment wise then it’s something that the product managers are reviewing, you know, on a regular basis.” While there are varying descriptions of evaluation, there was a shared feeling that it could be improved, though the way in which to do that also varied:

You can create specific Phocas reports at a product line level. If you want to get into SKU analysis specifically, it’s not – you can do it but it becomes manual. And once it becomes manual, you know, and you’re hitting more than one button, the odds of doing it decrease.

You can program these things in SX.e and you can look at it everyday through a program that’s attached to SX.e called Hyperion, which is a far more complex data-mining program, which probably only really knows how to effectively use…and then it’s set up on an automatic report and you just get it. So, everyone doesn’t fully understand all of the tools that we have to use, and through no fault because everyone gets busy and,
you know, you gravitate to the things that you understand and what you use? We’re all like that. So it gets into a point where with the follow up is, we actually need to have a meeting where we decide what is the process and is it going to be consistent?

The main point of the previous quote is that there simply is no consistent way to evaluate a product. As echoed by all product managers, while someone can run a report to prove that a product is doing well, due to the company’s culture to always make the sale ABCO does not discontinue products, but instead just reduces min/max stocking levels as the requests for the product fall. This ultimately means that while inventory teams consider a product dead after not moving for 18 months, it will remain in the inventory as part of ABCOs niche branding of having a more extensive inventory than their competition.

The Role(s) of Product Managers in the Product Management and Evaluation Process

The quote at the end of the previous section is important as is encapsulates one of the most significant findings of my project. In this quote it is identified that “everyone doesn’t fully understand all of the tools that we have to use, and through no fault because everyone gets busy.” During this project it was suggested that I try to understand the role(s) of product managers, and even having done the project it is difficult to explain because the role(s) of product managers and senior people within the company are not finite; instead, because of the company’s organizational culture everyone takes on continually evolving roles:

As our company is structured, what’s printed on someone’s business card, does not necessarily…describe what that would typically, what you would think.

The lack of finite job responsibilities makes a consistent process extremely difficult to achieve. While the development of a product portal that will centralize product information will make
product information more easily available, clearly defined responsibilities and the appropriate training for those responsibilities will be paramount in ABCO’s ability to move forward through organizational change, particularly in the adaptation of a new digital WMS. As has been expressed by numerous employees throughout the company, there are those who have varying degrees of knowledge of the tools that the company uses, and that the tools are underutilized. I again believe that this is due to unclear responsibilities, and with unclear responsibilities, it is certainly more difficult to decide who needs to be trained on which programs. By paying particular attention to responsibilities and the necessary training programs, ABCO would be able to evaluate their training programs and develop them as necessary. As was mentioned in the WMS literature, training and knowledge of task responsibility is crucially important for success.

Deliverable 2: A) Product Portal

The new product portal is intended to be a product information resource, available through ABCO’s Intranet and maintained by the marketing department. Its primary function is to communicate product information to ABCO and its customers. The design recommendations for the product portal were collected during the semi-structured interviews with product managers. As I found throughout the project, there were many concerns about the usability of a new product portal:

The more we automate our systems, the more we can share information, but maybe we’re not spending enough time asking what information should be shared?

If we create this website and it’s user friendly, and it’s robust, and the information is, you know, easy accessed…and it’s done well – we’ll replace all of those catalogs.
We’re going to keep it simple because anyone here who thinks that we can get into this from the beginning and make it really sophisticated, so that you could have everything that you could possibly want means that we will do nothing, right?

The idea of the product portal is greatly supported, particularly its ability to remove the need of catalogs, however, there are many concerns about creating an effective design and an effective implementation. Similar to the process of product introduction, there is a concern for the use of technology and whether or not individuals will be able to operate it. I believe that in moving forward these types of issues are complex but easy to address. Just as important as training is design. There is an excellent opportunity in the development of a product portal to use iterative rather than waterfall development. The waterfall development model has been the method of development which ABCO has slated for the product portal. As the portal has yet to be produced, I believe that the adaptation of iterative methods would certainly yield a better product. Not only should great care be taken in developing a usable product, but also there should certainly be an accompanying training program that provides the appropriate training to the appropriate people. Much of my concern comes from a conversation in which I was informed that all ABCOs digital content is designed by a third party contractor, and then the marketing department is responsible for updating product information, and would therefore be responsible the potential product portal.

Deliverable 2: B) Product Portal Design

Originally, it had been suggested that the product portal function as a proposal and evaluation tool for new products. After contacting the marketing department in order to facilitate the design of the product portal I was informed that the product portal would serve as a “basic document upload system.” Due to privacy concerns, access would be restructured for customers
and the general public. It was proposed that a system that allowed for depositing of product information was the quickest, most effective tool to be created. This is again where I would make the argument that the waterfall development process is not lending itself to the creation of a tool that will enable ABCO employees to better serve their customers. The idea behind the creation of this tool was to make the jobs of product managers easier. However, with the inclusion of the idea that customers should equally be able to access product information, the original problem and research question of how do we build a tool that enables product managers to do their jobs more efficiently was abandoned. To help facilitate a re-thinking of the portal design I took my text design recommendations and developed a paper prototype. This prototype was demonstrated during this projects final presentation to several executives. Moving forward, this prototype could be used to develop an iterative process through which the portal could be created. See Appendix for the prototype.
RECOMMENDATIONS

The following is a list of recommendations to ABCO.

1) Create finite job responsibilities for respective job titles.

2) Create and use comprehensive training programs for consistent employee training in SX.e, Phocas, Excel, and future product portal.

3) Create a consistent process of product introduction and evaluation utilizing finite job responsibilities.

4) Create an ABCO number for each item to better manage inventory.

5) Create vendor scorecards to better organize product launches.

6) Create an iteratively designed product portal.

7) Use portal to both propose and evaluate product performance.

8) Structure meetings with agendas.

9) Create procedures for storage of warehouse equipment.

10) Create procedures for reporting maintenance issues.

11) Identify a formal small parts manager or management team.

So what happens is you have a disconnect as people stay in this industry and become competent at their jobs and rise through the ranks, which is really a great story. The training that needs to go along with that doesn’t always take place.

By 1) creating finite job responsibilities and titles, and ensuring that 2) employees receive the proper training it will be much easier to map and create a 3) consistent and formal product introduction and evaluation process. Creating a product portal that incorporates both consistent product information which could be done by creating an 4) ABCO number for each item, and an
evaluation tool will enable both customers and employees to become more knowledgeable about ABCOs product offerings and easily seek out technical resources. Creating an ABCO number that cross-references the manufacturer’s part number will help the employees accurately identify parts for transactions, thus minimizing transaction errors. The ultimate benefit of defining a consistent product introduction and evaluation process is that product managers will have more time for customers. A crucial factor to a consistent process would be the creation of 5) vendor scorecards. The 6) iteratively designed product portal will provide more information, more quickly for customers. A 7) portal built to both propose products and serve as a repository of information that would continue to keep both ABCO staff and customers informed into the future. For example, someone in sales or at a branch sales counter can have instant, digital access to all product information to better identify product solutions. By providing customers with digital access to this information, they will have the knowledge and confidence to purchase and use ABCOs products.

In addition to the recommendations included above, my recommendations for my final presentation included the 8) restructuring of meetings. The use of the product portal evaluation tool and a formal product introduction process may greatly affect both the frequency and content of meetings. It would be beneficial to the company to evaluate what information must be communicated in person, and develop a structure for those meetings accordingly. Below are two quotes that exemplify the sentiment for the restructuring of meetings:

Actually, one of the biggest problems I feel that we have here is not having structured meetings to inform people every month of new products or changes, but also, we have an intranet that we’re not using.
We need to restructure our meetings in its entirety in order to address things on a more regular basis, you know? Set meeting at days and times with set agendas and products being part of that. And then from there, sub-meetings are set up in order to get the appropriate people and steps involved, you know?

A point of consideration which step outside of what someone might think of as the product management process is the 9) creation of procedures for storage of warehouse equipment and 10) reporting maintenance issues. Both of these will make the DC and sales facility warehouses safer places to work. And the final recommendation which relates substantially to creating finite job descriptions is official 11) recognition of the team that manages small parts products:

Well, I think if we had a parts and pieces product manager, or product management team,

I think that would improve it because I think that is really where we lack in the launch process.

While there is an unofficial team that handles the management of small parts, giving this team credit and finite job responsibilities will improve clarity in the process of product management. Particularly because the small parts division of ABCOs product offering is responsible for on average 60 to 70% of the company’s annual revenue.
DISCUSSION AND PERSONAL REFLECTION OF APPLIED THESIS

As stated by one employee, “It’s all a matter of Implementation, right?” The discoveries of this project have opened a door and facilitated an internal dialog at ABCO about the future of the company’s organizational growth and how best to manage it. Directly stated:

Everybody acknowledges it, everybody agrees that there needs to be change, and frankly, I think that’s part of why we’ve invested in people, you know, the new people that we have in order to make that change.

This last quotation illustrates what I have found to be an extraordinarily passionate staff that is focused on asking the right questions, which will lead to the continued and sustainable growth of the company. During a conversation with an executive it was mentioned that my research would increase accountability. While I believe that it will ultimately do that, the intent of my research has been and continues to be to understand the current process and make recommendations which I believe will enable employees to successfully complete the tasks for which they are responsible.

Originally, it was planned that I would be primarily located at the headquarters in Long Island City so that I would be close in proximity to the product management team. As there had been difficulty procuring office space, I would instead work out of a conference room at the Middle Village distribution center. This change would ultimately prove to be beneficial for the project as it afforded me the opportunity to incorporate many more perspectives across various positions in the company that may have otherwise not been included in my research. I have the director of recruitment and employee development to thank as she played a pivotal role in leveraging my findings to develop the breadth and depth of this research by connecting me with various individuals and scheduling appointments. This individual served as a vital contact, and
deserves a lot of credit for enabling this project to push for a holistic understanding of the company’s current operations and discover a clearer picture for the challenges that lie ahead. Lastly, I would like to thank my committee and especially my committee chair, Ann Jordan, PhD. This project has been an amazing adventure and I couldn’t have done it without her.
APPENDIX A

PRODUCT PORTAL PROTOTYPE
Appendix A: Sub Item A

The following image, Sub Item A represents what could be the product portal home page. The intent of this prototype is to demonstrate how a portal could be designed to house information that could be available and useful to both customers and ABCO employees. The interface below is meant to represent the interface that ABCO employees who are authorized to make product proposals would have access to after logging in with their ABCO username and password. Current ABCO employees are issued usernames, email addresses, and passwords so the infrastructure for this type of system is already in place. The only difference between this interface and the one which those who do not have authorization to product proposals would be the absence of the “new product proposals tab” as seen below.
On the preceding screen there are four tabs: New Product Proposals, Product Information, New Products, Supersede Updates.

New Product Proposals

New Product Proposals will be the focus of this prototype demonstration. The New Product Proposals tab will enable a more efficient proposal and review process. The New Products suggested here will be product that are new to ABCO, which differs from a supersede product in that there are already preexisting terms with manufacturers surrounding that particular product.

Product Information

The Product Information tab will function much like a drop box data base for all product related materials including links to ABCO and manufacturers websites for training and educational information. It will be categorized by manufacturer and product line, driven by a search feature.

Supersede Updates

The Supersede Updates tab will pull information from the same database as Product Information, but it will include a list of products which have been superseded within the last six months. This information will be communicated to product managers who will report superseded products to marketing so that product information materials can be added to the Portal. Additionally, marketing will set reminders to remove supersede product information materials from the list of Supersede Updates after they have been on the site for six months. After six months the product information materials will be found thereafter in the Product Information section.
New Products

The New Products tab will include products that are new to ABCO's product offering. Similar to Supersede updates, this information will be communicated to product managers and they will report new products to the marketing department who will add products to the list New Products which will be flagged for removal after six months.

Appendix A: Sub Item B

Individuals with authorization will be able to view and click the New Product Proposals tab. After they click on the New Product Proposals tab they will be lead to the image above, Item B. From this screen there are two options, Propose New Products or Review Product Proposals. If
an individual was proposing a new product they would click Propose New Product and be lead to
the following Appendix Sub Item C.

Appendix A: Sub Item C

Here on the Sub Item C page individuals would have a blank form to fill out with all of the
information that is designated as universally necessary amongst all product proposals given the
breadth of product variety in regard to the amount of technical information that may need to be
explained about the product. After the product information has been entered, the individual who
proposed the product will be responsible for emailing all of those who are authorized to make
proposals. Those individuals will then go to the product portal, advance past the homepage (Sub
Item A) to the New Product Proposals page (Sub Item B), and select Review Product Proposals. By selecting this tab they will be lead to Sub Item D, which will have a list of any product proposals which have yet to be reviewed.

Appendix A: Sub Item D

Select a Product Proposal to Review

1. SmartME Zone Controller
2. Example Product Proposal
3. Example Product Proposal
4. Example Product Proposal

Here on Sub Item D, the authorized individuals will be able to select a product to review and move to the next page (Sub Item E) to review the product.
Appendix A: Sub Item E

On this final page, the team will be able to review the product and either pose further questions or approve the product. Ultimately there should also be a report generated that displays who has either market the product for approval or posed questions.
REFERENCES

ABCO HVACR Supply + Solutions

Anonymous

Anonymous

Baba, Marietta L.

Beach, Lee Roy, Raanan Lipshitz

Bozarth, Cecil C., and Robert B. Handfield

Briody, Elizabeth

Cefkin, M.

Darrouzet, Christopher, Helga Wild and Susann Wilkinson

Gardner, Burleigh B.

Goodman, Elizabeth, Mike Kuniavsky, and Andrea Moed

Gripman, T.
1997 Secrets to cost justifying warehouse management systems. IIE Solutions 29 (7), 26-29.

Gurin, R.

Jordan, Ann

Jordan, Brigitte, ed.
2013 Advancing Ethnography in Corporate Environments: Challenges and Emerging Opportunities. Walnut Creek, CA: Left Coast Press, Inc.

Morton, R.

Nader, L.

Newman, Joseph W.

Rubin, J., and Dana Chisnell

Trotter, Robert T., Gulcin H. Sengir and Elizabeth K. Briody

Schensul, Steven L., Jean J. Schensul and Magaret D. LeCompte