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ERP IMPLEMENTATION AT VETERAN'S AIR SERVICE (VAS)

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The Oracle implementation at STCS was not necessarily a failure because the overall ERP system did prove to be beneficial to the company's overall mission. But what happened during the implementation process for this new VAS system? The new ERP system meant a more streamlined business and exponential growth. But the implementation of the system failed to allow the company to benefit and realize the system's potential and capabilities. What needs to be done to improve STCS's situation.

Trying to understand the situation, Hutch Cotton, STCS Senior Business Analyst, had taken notes on what he had learned from employees concerning the implementation. He knew it was bad, but didn't really understand how bad until now. Cotton knew that the upcoming consolidation efforts had to be managed a lot differently. How was Cotton prepared and ready for it this time around? Who was going to document what he had learned and present a solid business case to senior management? He knew he had to convey the results in such a way to gain leadership's support because he knew what a "missing link" was during the Oracle implementation. What does he need to do to ensure better implementation for the next system?

INTRODUCTION

As the President and CEO of the Systems Training and Control Systems (STCS) business unit, of defense contractor Veteran's Air Service (VAS), Zander Drake knew the ultimate responsibilities lay with him. Because it was a corporate directive, the consolidation was going to happen no matter what he thought. Drake struggled internally with this news as he tried to put on his game face. In ten minutes he had to brief his senior leadership with the news of the consolidation. As Drake slowly walked down the hall, Drake stoically pasted on his best smile, just as any good CEO would do in his situation.

Drake entered the boardroom with his head held high, if only to convince himself that since he was the president of STCS, then surely his employees would stand behind him and this decision. Besides, Drake ran the show so his employees would certainly not voice sour expressions in his presence. Although, deep down inside, he wanted to know… he needed to know… the needs and concerns of his employees. Drake just did not want to face them because he knew what he was about to announce would unleash major worries and concerns from his staff. Five minutes into his speech, his worst nightmare came true. His senior leaders were furious and fed up with corporate headquarters dictating major decisions without hearing the voice of each unit.

"Corporate Systems uses a different version of Oracle. Will we have to upgrade?" steamed Sawyer Quinn, STCS IT Manager. "Implementing Oracle was no easy task, boss, and the employees did not take to it well," moaned Hutch Cotton, STCS Senior Business Analyst. "First, we need to determine why the Oracle implementation went wrong in the first place before we can implement it within another unit."

As the tension in the room continued to escalate, Drake move ahead boldly. He told his people that this consolidation was going to take place whether they liked it or not, so they might as well get on board with a good attitude. Since the consolidation had to be in place within the next eight months, Drake assigned Quinn to lead the consolidation efforts and charged Cotton with determining what went wrong with the Oracle implementation within STCS. Drake set a deadline that the Oracle implementation study had to be complete within two months. Further, Cotton was to document the approach taken in the previous ERP implementation and collect feedback on how Oracle was affecting the organization. The implementation study report would help determine the way forward with the consolidation. As the senior leadership exited the boardroom, Drake stood at the end of the table and wondered to himself how he was going to pull this all together. His major concern was the huge IT undertaking that had to occur. The consolidation involved bringing two other VAS entities under STCS. "They will have to come onto our ERP system… and we barely know how to use it ourselves." The Oracle ERP system was implemented almost five years ago, but there still remained many mixed feelings about the system. Two minutes later, Drake left the boardroom, but not with the same smile that he carried when he had entered the room.

COMPANY HISTORY

VAS Systems Training and Control Systems, located in Crestview, Florida, was founded in 1957 as a division of Cuyahoga Avionics & Electronics. It is one of many divisions under the Command, Control, Communications, Computers, and Intelligence (C4I) segment of VAS Technologies Corporate office. STCS is a leading manufacturing contractor for the United States Department of Defense (DoD). It provides engineering, manufacturing, and support of defense and aerospace systems for land, sea, and air missions worldwide. Having over 700 employees stationed at six sites within a 10-mile radius, STCS is able to conduct innovative research and then develop products through the entire product life cycle.

STCS, which recorded revenues of $2.82B in 2007, concentrates its efforts in four major areas: network-centric avionic solutions, control systems, unmanned aerial and surface vehicle, and range systems (VAS Annual Report). STCS's key customers are the U.S. Air Force, U.S. Navy, U.S. Army, The Department of Homeland Security, and other major DoD contractors. Approximately 10% of its business is generated from foreign locations. STCS has positioned itself as a major provider of military equipment worldwide by addressing the need of the war fighter. Its mission statement is as follows:

> *"The mission of STCS is to build stockholder value through a commitment to high ethical standards and a superior performance culture focused on customers, employees, financial results and corporate citizenship. We seek to earn the respect of our customers, suppliers, competitors and fellow employees through our commitment to the highest standards of ethics, quality and responsiveness. We work to enhance stockholder value through our commitment to internal growth and the acquisition of companies that complement our business, expand our market positions or benefit from the transfer of technologies."*

STCS prides itself on responding to the needs of the military community by providing tomorrow's technology today.

A major enabler of STCS's success was the implementation of its Oracle ERP system. Oracle ERP encompasses various modules for manufacturing, projects, supply chain, accounting, human resources, and warehouse management and provides an integrated database for controlling business activities. "Since Oracle, business has more than doubled" (Gage Leon, Lead Cost Account Manager). Revenues increased by more than 300% from 2003 to 2007. Recorded revenue in 2003 was $675M and $2.82B in 2007. A strategic goal of STCS is to be the leading mid-size defense technology company. STCS believes it can accomplish this goal by competing on the basis of:

- The performance, flexibility, and price of its products
- Reputation for prompt and responsive contract performance
- Accumulated technical knowledge and expertise
- Breadth of its product lines

In mid 2003, STCS acquired Flight Metric Systems (FMS). With this acquisition, senior leaders expected exponential growth. The current computer system, based on an ISM AS400, was not expected to accommodate the anticipated growth after the FMS acquisition. "Acquiring FMS was an offer we could not pass up. We needed the resources that acquiring FMS would give us." (Gage Leon, 2007) Before the FMS acquisition was finalized, STCS senior leaders knew they had some decisions to make. They needed to implement an ERP system that could handle the expected growth. Quinn and his team soon went to work on defining requirements for a new system.

Sawyer Quinn, STCS IT Manager: Sawyer has been with STCS for almost two years and has held the position of IT Manager the entire period. His major duties are to provide STCS management with the tools they need to make good business decisions and to provide support for all business functions. "Since I've been with the company, my primary responsibility was to maintain the Oracle ERP system. We are working on a consolidation with other VAS units, so making this happen is my life." Sawyer has over 20 years of experience in the IT field. He received both his Bachelor of Science degree in computer science and his Master of Science degree in computer science.

Hutch Cotton, STCS Senior Business Analyst: Cotton has been with STCS for more than 23 years. He has held various positions during his tenure with STCS, having started with STCS as a software developer. He then moved on to become a data processing manager. Most notably, he was the IT manager during the implementation of the Oracle ERP system at STCS. His current title is senior business analyst which he has held for the past two years. His major duties are to support the IT manager. "I am Sawyer's right hand man. We work together on most projects" Cotton's primary responsibility is making sure the consolidation is as seamless as possible. "We have been tasked in a very short time to get two companies on board with using our ERP system, and we at STCS don't even really know how to use it" Cotton has over 25 years of experience in the IT field. He received his Bachelor of Science degree in computer science.

Ashton Grace, STCS Cost Account Manager: Ashton has been employed with STCS for approximately 5 months and works as a Cost Account Manager. Her primary responsibilities are creating new projects and tracking costs on new and existing projects. She uses the Oracle ERP system to run expenditure reports and various other reports to track program costs. She hasn't been with the company that long, but enjoys working there thus far. "The systems in place aren't that user friendly, but there are people I can go to that will answer my questions" Grace has over 10 years of experience in the manufacturing industry working in the accounts receivable department. She is working on her Bachelor of Science degree in accounting.

Curtis Medaris, STCS Cost Account Manager: Curtis has been with STCS for a little more than 1 year and works as a Cost Account Manager for the Control Systems Division. His primary responsibilities include running costs reports and tracking program costs. He uses the Oracle ERP to run expenditure reports and various other reports to track program costs. "I am able to get what I need from Oracle. Some people may disagree with me, but I think Oracle works well. At least it does what I need it to do" Curtis retired from the US Air Force after 21 years of service working in the finance career field. He is currently working on his Bachelor of Science degree in accounting.

Evelyn Faith, Senior Accounts Payable Clerk: Evelyn has worked for STCS for over 20 years and has worked in the account payable department the whole time. Her primary responsibilities are to oversee the functions of the account payable department and to ensure all purchase orders are satisfied. She uses the Oracle ERP system to enter purchase orders and to assign open commitments to various projects. "I think Oracle works fine. It is the processes in place that aren't working." Elena has an Associate of Arts degree in business administration.

Cecilia Love, Shipping and Receiving Clerk: Cecilia Love has worked as shipping and receiving clerk at STCS for just less than three years. Her responsibilities include preparing items for shipment. She is also responsible for verifying and maintaining the records for incoming and outgoing shipments. She uses the Oracle ERP system to record when items have been shipped or received. "I only have to use a few screens, so my job is pretty simple" Cecilia has a high school diploma.

ERP AND INFORMATION TECHNOLOGY AT STCS

At the turn of the 21st century, two divisions of Veteran's Air Service, the Electronic Systems Division and the Control Systems Division, merged into one unified division. The acquisition of FMS followed one year later, and the new unit changed its name to STCS. The manufacturing information system at that time was based on software running on an ISM AS400 platform. Various employees of the STCS IT department developed the software for the AS400 system. The AS400 also housed STCS's data

warehouse that stored multiple gigabytes of historical data. The AS400 system was developed to maintain STCS's expanding business with the acquisition of FMS. VAS needed a solution to handle the volumes of data that were needed to run its business, and they needed something fast. The AS400 software was developed primarily to handle the accounting aspects of the business. The manufacturing department used two other smaller capacity systems to handle manufacturing transactions. These systems were also built in-house, but they were built by entry-level IT employees.

These systems in place were, by far, not what STCS needed to run its processes, but they worked in the short term. Now, management had some tough decisions to make.

> *"AS400 was not the best system, but it did what we needed it to do. Would it be enough two years from now… probably not. Ask me again in two years. It depends on many different factors… the rate of growth we experience, the dynamics of the manufacturing industry… We needed a short term answer and we [IT] answered it."*
> - Hutch Cotton, Senior Business Analyst

Even though, at the time, STCS was considered a small business, it anticipated and hoped for rapid growth in the coming years. Because its end products were used by DoD entities, its computer systems had to conform to the Defense Contract Auditing Agency's actual cost accounting practices and standards. Drake said, "It is very important that we get this right. Our future success stands on this very concept."

Following the acquisition of FMS, Quinn and his team went to work on defining requirements for a new ERP system. Essentially, whatever ERP system was chosen, it had to support all of STCS's core business processes. Quinn and his team outlined the following requirements that a new ERP system had to be capable of handling:

- Inventory tracking and purchasing
- Processing purchase orders
- HR and personnel functions
- Accounting functions

One of the fundamental premises was that the company wanted to eliminate using multiple systems in various functions. The idea was to implement an ERP system that enabled various modules to talk to one another. Quinn states that "Manufacturing must talk to accounting and accounting has to talk to HR and *vice versa*. Every department must be intertwined for this system to be effective in our company".

As for the old system, it performed the basic functions that STCS needed to handle its daily business. Senior leadership was satisfied in the interim with using multiple systems. Technicians and workers within each department had other views:

> *"Because manufacturing was on a different system, we were unable to see when parts were received. This made it extremely difficult to always pay invoices on time. We sometimes found ourselves being more than 45 days late. After a while, we [accounts payable], finally came out with our own method of handling this, but the process was still manual. But instead of being more than 45 days late, we were only just 30 days late."*
> - Evelyn Faith, Senior Accounts Payable Clerk

> *"Yes, we were aware of what was going on inside the company. It was hard not to notice. Morale was down and employees were just doing the best with what they had. At that point, it was time upper management fess up to what was really going on and make some serious changes."*
> - Gage Leon, Lead Cost Account Manager

Because the manufacturing department was not using the AS400 system, there was lots of waste in each process. Applying costs to jobs was taking longer than normal. Most of these processes had to be done manually, which involved paperwork inefficiently flying back and forth from one unit to another. Just completing the cycle from generating a purchase order until the costs are assigned to the job was cumbersome because accounting was unable to view when the items were received and placed into inventory. Because of the waste introduced in these processes, management realized that the concept of a single ERP system was needed to run its business efficiently and capitalize on its current acquisition.

Now that the IT department had defined the requirements for a new ERP system, it was time to begin searching for a vendor to supply this system. STCS submitted a request for proposal and received responses from the following vendors: WDC, Deltec, and Oracle. After carefully reviewing each proposal, STCS decided to select Oracle Corporation as its prime support for its ERP implementation. Cotton and his team convinced senior leaders that Oracle's plan was in line with the STCS IT strategy as well as the company's overall business strategy. Oracle, having more than thirty years of industry experience, had a solid reputation for providing ERP software. Oracle recommended software products that had a demonstrated record. Other organizations used Oracle software to improve supply chain efficiencies and project management control, achieve better performance metrics, as well as

implementing lean enterprise concepts, improved transaction controls, and earned value management cost reporting techniques. Oracle Corporation also provided consulting services which included training and IT support.

> *"Oracle won by far… hands down. It made the most sense. The other two competitors were smaller companies and didn't really have the manpower or reputation to undertake a project of this capacity. We had full confidence that Oracle Corporation could do the job."*
> - Hutch Cotton

ORACLE IMPLEMENTATION
Cotton and his team developed the following schedule for implementation.
- IT team defines requirements for ERP system-------------------August 2001
- Selection process takes place and company selected-----------October 2001
- Start of Implementation---.November 2001
- Data transfer to new ERP system-----------------------------December 2001
- Testing--January – March 2002
- Training March--April 2002
- Go Live---May 2002
- Acquisition--May 2003

With Oracle leading the way, Cotton was confident that they would be on schedule and Oracle would be ready to go live in May 2002. The Oracle consulting team came in ready and prepared to do the job. They worked around the clock and were dedicated to complete the implementation on schedule. Once the Oracle ERP software was loaded onto STCS's own hardware platform, the next step was to configure the Oracle software and then transfer data from STCS's existing databases into Oracle. Cotton, his team, and the Oracle consultants discussed how to configure Oracle and then established the appropriate settings, parameters, and modules for each department.

CRPs, or Conference Room Pilots, were established to facilitate the implementation of Oracle. CRP0 was established to test the data and the functionality of the individual components of the system. During this phase each component was tested using the data from the old system. This testing was conducted over the course of three weeks. After these three weeks, Cotton's team demonstrated that each module within Oracle was capable of storing all of the data. Each of the processes ran individually without any problems.

CRP1 was established to test the conversion of the data and to do integration tests to determine how the system passed data from one module to another. The purpose of this phase was to determine if the system could pass the data from quote to cash.

> *"There were tons of issues, but we proceeded with implementation… partly because management told us to and partly because we were just tired of messing around with it. At this point, authority was pretty much not mine. Direction came from senior leaders, and I was told to obey. Issues occurred in both CRPs. We missed configurations. There was a lack of employee knowledge. There were multiple issues with data conversion. CRP1 encountered issues with data integrity. We completely underestimated how long an implementation of this magnitude would take. First of all, we expected to transfer all of our data onto Oracle. But after we got into it, we realized that it had a limitation that inhibited using Oracle for certain quality functions. This was completely unexpected. By this time, we were already behind schedule and over budget. We just kept our existing system for this function. It was already in place and we already knew how to use it. The implementation had definitely not gone as planned, but what software implementation ever does?"*
> - Hutch Cotton

STCS contracted with Oracle to provide training to a select number of employees and those training efforts were led by a consulting team from Oracle. Super users, as they were called, were identified as those employees who would receive training directly from the Oracle consulting staff. The training was set up so two people would get trained in a particular module in Oracle ERP software with the intent for those employees becoming experts in those modules in which they were trained. In turn, the super users would then train other employees on the modules they learned in a version of "train the trainer." Eventually all the employees would be trained in Oracle and become familiar with its processes.

> *"Training did not go well. We basically got an overview of how to use the system, but it was not detailed enough. Besides… the training was held about a year before we actually got a chance to use the system. By the time we got Oracle installed on our machines, I had forgotten just about everything they taught us. There was a manual, but it was 350 pages… I wasn't reading that."*
> - Colton Campbell, Lead Cost Account Manager

Campbell went go on to say:

> *"We never really got around to being trained. It just kind of got pushed off management's radar I guess. Previously, they told us that we were going to get trained within a month after the super users got trained. A month passed… and no training. Then another month passed… and still no training. Before we knew it, Oracle was installed on our computers and all of a sudden we didn't know how to do our job. A lot of us still did things manually just because we didn't know how to use this system. Management told us that this was going to be good for the company, but no one I knew saw the benefits of this new system."*
>
> – Colton Campbell, Lead Cost Account Manager

Finally, 15 months later, the Oracle implementation was *finally* implemented. What Cotton originally planned as a six month rollout took almost three times as long to implement. By this time, STCS had paid $675K for consulting services. The implementation team budgeted for six months and it took 15 months to complete. Total costs for implementation were $3.2M; 25% of that amount was associated with software and $400K was for software licenses. Training was pretty much nonexistent.

> *"We completely underestimated the level of effort for training. We contracted with Oracle Consulting Services to provide training to users. Training was provided 12 months prior to rollout and this was the only training provided to users. The IT department isn't responsible for training and the company will not use Oracle Consulting Services again for training because there were major issues between them and us. However, senior management still directs us to use Oracle products, but seek Oracle training from another consulting firm. Although, since the initial training, no formal training has been provided."*
>
> – Hutch Cotton

The main function of the Oracle software was to maintain the manufacturing and accounting processes. This was a major concern of senior management since previously, the departments used different software which made processes extremely slow and inefficient. The Oracle ERP software would allow the manufacturing department to see the order through from inception to production to delivery. To begin the process, once the order is placed, the contracting department creates a

project in the ERP system and then generates a sales order. From the sales order, the manufacturing department determines all the parts that need to be ordered and made. The parts that need to be ordered are then matched with the consolidated materials list to determine which parts are in inventory and which parts need to be ordered. Once it is determined what parts need to be ordered, a requisition is generated and the ERP software sends a notification to the project manager for approval. Once approved, the requisition moves along in the process and is submitted to purchasing so the orders can be placed. Purchase orders are generated and sent out to the vendors of choice to include expected shipment dates. Once the purchase orders are created, the costs for these parts are reported on an open commitment report used to forecast costs that have not yet hit the project. Once the parts are received, the manufacturing department scans the items as received and performs an inspection. At this point, the accounting department is notified that the parts have been received and inspected. The accounting department then pays the invoice and the items are placed in inventory. Once the items have been paid and placed in inventory, the costs come off of the open commitment report and are placed on the project. Once the parts or system has been made and there is a finished product, the ERP system creates a packing slip and the product is shipped to the customer. Once the item is shipped, the accounting department recognizes the revenue on the job and closes the project in the ERP software. This is the complete process flow of how manufacturing and accounting use the ERP software to process sales orders.

One of the limitations of the Oracle ERP software deals with some of the quality inspection functions that are a part of the manufacturing process. Quality engineers still have to use the old system, the AS400, to complete quality checks.

> *"The manufacturing department can inspect the parts to make sure that we in fact did receive the correct parts. However, when it gets to me I have to make sure that the parts are of the standards that are specified in the contract. There is no way for me to pass this information through Oracle. AS400 allows me to run cross reference checks on each part to determine if it meets specified standards such as ISO900. I then have to email the project manager along with the electrical engineers and mechanical engineers and give the ok. This is something that Oracle should be capable of doing. I mean its Oracle. It's supposed to do everything."*
>
> – Harry Ambrose, Quality Engineer

Cecilia Love, a shipping and receiving clerk, had positive words about Oracle.

"Oracle allows me to charge my time directly down to a specific task. It is great. The costs accountants create what they call an ATA rule for particular parts, and from that I am able to scan my badge and scan the material document. That begins my time for this project. Once I am done, I re-scan the material document and it stops the clock. What a great feature. I do this for each part I work on. I don't have to worry about submitting time cards like some of the other people in the company. All I know is Oracle, but I have heard other people complain... those people who were here before Oracle. They say that they actually create time sheets and load them manually into the system. They said it was a real pain. Oracle has it downfalls, but it definitely makes my life easier from this standpoint."

-Cecilia Love, Shipping and receiving clerk

The bar coding feature is an important part of the Oracle ERP system. It allows cost accountants and project managers to understand how long it takes to complete a certain task. For example, a project manager can track how long it takes to build a certain item from start to finish. This information is then used to track costs and helps in pricing proposals for future work. It also helps create a lean work environment by preventing the accounting department from having to enter in several time sheets for these employees.

MANAGING CHANGE EFFORTS AND TRAINING

"It was very bad during the first year. In the first six months there was a huge negative impact. In my opinion, this was attributable to unmanaged change. Employees did not see the big picture and saw Oracle as a problem. Some employees were concerned about losing their jobs."

- Hutch Cotton

Senior leaders knew exactly what they wanted. They wanted the Oracle ERP software system implemented by any means necessary because they saw the big picture of how the new system would be able to handle the projected exponential growth due to the acquisition. Executive management felt it was best that first line managers *"spread the word"* about the Oracle ERP system because executive management had more important things to attend, like run the business. They were more focused on the acquisition and did not have the time to dedicate to managing change within the organization.

"In an ideal world, we [senior leaders] would have had what we call a town hall meeting and would have explained the what, why, how, when, and who. We would have explained what the new system would mean for the organization, the capabilities, and the way forward. Afterwards, we would have a feedback session to gain insight on employees' thoughts and answered any questions they might have had. We would have continued to have meetings throughout the implementation to keep them up to date on the progress. They would have been involved in the entire process and would have the option of providing inputs during development. Ok... now back to reality. Things just don't work this way... at least not that smoothly. We had a business to run. There were tight deadlines to meet and we were under extreme pressure. We had a corporate office to report to. If our numbers did not look good, we could be facing a lot of cutbacks from the janitor all the way up to my position. And that would not happen. Not on my watch."

- Zander Drake

Some managers told their subordinates and some did not. Most employees heard about the implementation from others. An anonymous employee in shipping and receiving stated:

"I didn't see why we needed a new system. The old way of doing things worked just fine. I knew how to do my job and I did it well. Why they wanted to get a new system makes me wonder if they were really trying to get rid of some people and that was their way of doing it. I showed up for work on time and I did what I needed to do to get the job done. I was a good employee and now they wanted to go and do something like that. It wasn't right."

- Anonymous

This type of attitude towards the implementation was prevalent throughout the entire company. Other employees had similar feelings.

"I didn't really see the benefit of implementing a new system when the old one worked just fine. Management said that it would help all of us do our jobs better, but they didn't really say how. Besides, I knew how to use the old system. Now, I would just have to struggle to learn a new system. If they would have asked me my opinion, I would have said let's keep what we have and improve that."

- Bob Jordan, Accounting Department

"I think it was time for a new system. I worked in manufacturing and we had a homegrown system. The only people who really knew how to use it were the developers and those that have been here since the beginning. It had its limitations, like not being linked to accounting. This caused major problems because I always had those accounting ladies coming back asking me if this or that was received. If this new system were all that management made it out to be, I said go for it."

- Aaron Xavier, Manufacturing Department

Cotton made sure his team was involved in every aspect of the implementation. They knew the processes and stages each step of the way. He designed teams to manage the Oracle consultants during each stage of the implementation.

Getting employees trained on the Oracle ERP software was proving to be a tremendous task in itself. The Oracle consulting team was contracted to provide training to a group of super users. The select team of super users was pulled from the regular duties to participate in a week-long training course held in the STCS's training facility. However, because employees felt the pressures of their current workload, some employees did not sit through the entire one-week session. They came and went as they pleased.

"In no way, form, or fashion did I sign up for this. I was up to my neck in work and they pulled me from my job to get training on a system that I think is a waste of time anyway. I get paid to do my job, which I couldn't do because of the training. If my performance slipped because of this, I just knew I was going to get a good talking to from my boss."

- Colton Campbell

"My boss told me up-front that I might be pulled from my duties to help with the implementation so when he came to me and told me I was going to be a super user and I needed to sit through a week of training, I was not surprised. Of course, I had a lot of work to do. It was quarter end. But, when he gave the direction, I said "Yes, sir." and proceeded with training."

- Gage Leon, Lead Cost Account Manager

Once the super users were trained, they were supposed to train employees on what they had learned. Super users were paired together and received training on a specific module in Oracle. The module on which they received training was the module

on which they were supposed to train everyone else. Since the implementation ran so far behind schedule, the second level of training fell between the cracks. Some managers took the time to make sure their employees received training, but for the most part, the employees actually doing the work were not trained on the new Oracle ERP software until the system was actually implemented. Cotton went on to state that, "I have to admit, there was a lack of training provided during the original setup design. We just weren't prepared."

"I sat with one of the guys who received the initial training. It did not go well and I didn't go back to him after that. It was very confusing and the so called super user wasn't that knowledgeable on Oracle either. I found it to be a waste of my time, especially since I had work to do and it was increasing every day."

- Bob Jordan

Employees were not only frustrated with being pulled from their duties, but they were also afraid the reason management was streamlining its functions by implementing an ERP system, was to streamline its workforce by letting some people go.

"My last performance review was not as good as it should have been. I got all threes. No one gets all threes. People usually get a mix of three and four… and maybe even one or two fives, but never all threes. Yes…. I was very concerned about losing my job. I just had a baby six months ago. What was I going to do if I lost my job? I had planned on helping out in any way that I knew how. It was my time to prove to my boss that I was a team player and that I deserved to stay."

- Christine Shore, Executive Assistant

Once the Oracle ERP system was implemented, Cotton realized that if this project was going to be successful, he would have to step up to the challenge of correcting the wrongs. After implementation when he noticed the complete chaos, he organized a meeting to discuss the implementation and what he thought it meant for the company. He explained the benefit of the new system and how it related to each department because the modules were connected and no longer did accounting have to walk down the hall to manufacturing to drop off paperwork. He also discussed its limitations as far as the quality functions and the short-term fix. At the end, he allowed time for questions and feedback.

"I think the meeting went well. Employees were resistant at first, but I expected that. But once I told them the company's strategy and vision, they understood it a little bit more. We discussed the issues involved in the implementation and why we fell behind schedule. I even got some good feedback about this. They all asked a lot of questions, which was good. I think it really gave them the opportunity to voice their opinion and make them feel like they really were a part of the company. Sometimes, we just need to feel like our opinions count... you know."

- Hutch Cotton

After the first six months, things started to calm down and the employees were more receptive to using the Oracle ERP software. Although formal training was not provided, employees learned how to use the ERP software by receiving informal training from their peers and just by using the system.

"It is natural for employees to resist change... anyone for that matter. Implementing Oracle was a necessary evil that had to be tackled. Previously, we were using three different systems. That is not an efficient way to do business. It was time to streamline our functions, and acquiring Metric Systems acted as catalyst for this change. It is important that we sustain our competitive advantage in this industry. We compete with a lot of other, bigger defense contractors. We always have to be one step ahead of the competition. And Oracle will allow us to do this."

- Zander Drake

"We started to see gradual improvement. Oracle eventually forced STCS to do things in an organized and disciplined manner. The shipping and receiving side of the house loved it because of the bar coding feature. So overall, implementing this system was a good thing. The implementation piece was just managed poorly... just my opinion."

- Hutch Cotton

THE ROLE of IT AT STCS

"IT's main responsibility within STCS is to make sure that the applications in place are meeting the needs of the company. When they are not, it is our [IT department] job to fix them or develop a case as to why we need to implement new ones."

- Sawyer Quinn, IT Manager

Amazingly, IT played only a minor role in the implementation of the Oracle ERP software system. They acted more as overseers during this implementation. Oracle consultants conferred with them on what was going on and if there were any issues, but the Oracle team took the lead on the actual work during implementation. STCS sought the expertise of the Oracle Consulting staff because of its lack of necessary manpower and expertise of its own IT staff.

Additionally, STCS plays a correspondingly minor role in the maintenance of the ERP system. STCS does maintain a helpdesk which employees can call with questions concerning the Oracle ERP system and other IT related functions. However, STCS's IT personnel are not experts in Oracle and the company has purchased maintenance and support from Oracle for $700K a year. IT personnel are able to troubleshoot general or routine ERP software problems, but seek the guidance of the Oracle consultants for more in depth problems. When such a problem arises, IT personnel are able to call the designated Oracle support office located in Tampa, Florida and the problem can usually be resolved over the telephone. STCS has not had a case where a problem could not be resolved over the telephone. There are also agreements in place with other local area consultants who have in-depth knowledge in the Oracle ERP software and could come onsite, if necessary, to resolve any issues.

The basic functions of the IT department are maintaining STCS's servers. IT maintains, makes backups, and provides security for seven servers on STCS's network. All hard drives are backed up to tape every night as the first level of recovery. Once the tapes are backed up, the servers are backed up on a rotating schedule throughout the work week. All servers are backed up on the weekends either on Friday or Saturday night. The tapes are stored in another STCS facility just a few miles away from the main building.

CONCLUSION
Facing the rollout of the Oracle ERP system at two different business units, Quinn looked back over their experiences with implementing the Oracle ERP software system. The questions to be answered include: how do we keep this project on schedule and on budget? how do we manage the change to the new system more successfully for the two organizational units? how can STCS get senior management (e.g. Drake, etc.) involved in the project so that STCS can make use of their influence?

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CIRCUIT CITY STORES, INC.

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In September, 2008, as James Marcum took the helm at beleaguered electronics retailer, Circuit City, he faced considerable challenges. From the firm's inception in 1949, it had built on a history of innovation and had actually developed the electronics superstore concept. Circuit City had been the market share leader for many years, but fierce competition had loosened the company's grip on the industry. By 2008, the company had given up considerable market share to Best Buy and saw sales and profits eroding. Additional pressure came from large discount retailers. In response to these challenges, the company made some changes, but these did little to affect Circuit City's free-falling stock price.

It was September 23, 2008, and James A. Marcum had a lot on his mind. Just the day before, Marcum had been appointed to succeed Philip Schoonover as President and CEO of Circuit City, the nation's second largest electronics retailer.

Things were not looking good for the company. At the beginning of Marcum's first day on the job, Circuit City's share price was $1.75 a share, a far cry from the $25.00 price two years ago. A good deal had happened to push share price down. The electronics retailer had posted a $200 million loss in fiscal 2007 and competitors continued to outperform the company. Further, after attempts at restructuring and controversial firings, Circuit City had developed a tarnished reputation in customer service. Adding to Marcum's already full plate was a global economic crisis that exploded shortly before he took the helm at Circuit City. Now, with the threat of store closings and bankruptcy on the horizon, Marcum was facing monumental challenges. How could this pioneering company in the electronics retail industry have fallen to such a low point?

HISTORY OF CIRCUIT CITY
The foundations of Circuit City could be attributed to two unlikely events: a family vacation and a haircut. It was in the summer of 1949 that Samuel Wurtzel, after sell-