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A Case Study of ArchivesOne:
an O'Neil Strategic Partner





QUALITY AND PROCESS CONTROL

a case study of ArchivesOne, Watertown, CT

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PRISM International

The operations center controls minute-to-minute fulfillment functions of the ArchivesOne operation. Employees use handheld devices to both insure the correctness of the work they are performing, and as a device to record their individual activities.

What makes the Big Mac™ you buy in Des Moines taste like the one you buy in San Diego? What method insures that an H&R Block employee will use the same procedures to do your taxes in Seattle as she does in Bangor? What tool can a commercial information management operation use to create a corporate culture that encourages employees to respond consistently and correctly?

Process control

ArchivesOne does not isolate any specific business function, like operations. Rather,

job managing and controlling customer records while coordinating the activities of many customers and many employees over larger areas.

Facility Description

Starting with a single facility in 1991, ArchivesOne has grown to seven facilities in four states, Connecticut, New Jersey, New York and Ohio. All facilities are designed to provide the safety and security clients expect for the care of their valuable documents. Knowing when to invest in facilities expansion and improvement is a key to achieving

variable cost. "How do you create a variable cost in real estate? Go short in pieces or go long and sublease," says A.J. Wasserstein, President and Director of Customer Happiness at ArchivesOne.

The same can be said for their approach in racking out new bays. "We know from customer history what our growth is going to be like. Even though we have physical space to install new bays of racking, we wait until we're close to capacity before installing the next bay."

The third major component of cost control is human resources. ArchivesOne has evolved its own philosophy regarding the hiring of new personnel. Through the creative use of recruiting companies, ArchivesOne screens and tests candidates before hiring future employees. "We are very committed to hiring, but we will not hire until we know there is a job," adds John Pavlovich, Chief Financial Officer.

For drivers, ArchivesOne uses drug screening, insurance checks, and background checks as a part of the driver screening process. "Our drivers are our front line—they are ArchivesOne to our customers,"

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each business function is integrated into a series of processes, which in aggregate comprise a complete system. Managing this process enables the company to provide systematic and consistent service levels throughout the organization. While this method may seem cumbersome or unnecessary to some operators, ArchivesOne sees it differently. "As a rapidly growing multi-market company, the effective use of process control is essential if you want to deliver great customer service," says Jon D'Elia, Senior Vice President of Sales and Marketing.

In the ArchivesOne operation, process control began with a shift in corporate culture. This required management's deep commitment to understand how to do a great

operational efficiency and quality customer service. Their Watertown, CT facility for example, originated as a 50,000 square foot facility 20 feet high. To that facility they added a 40,000 square foot addition, 40 feet in height. The new state-of-the-art addition uses a four-level, 3 catwalk system with a vertical reciprocating conveyor to transport cartons from the upper levels.

Cost Control

Process control evolved from a corporate culture with an expectation of consistency and high performance. Similarly, cost controls are a vital component of ArchivesOne's success. A good example of this is management's success in turning real estate into a



ArchivesOne uses a monthly check list to make sure that infrequent items (such as scheduled maintenance) are performed when scheduled.

says Pavlovich. Quality checks are frequent for driver processes. This process even extends to courtesy while behind the wheel. "If we get a call that a driver has been discourteous or reckless, we use progressive discipline which can lead to termination," says Pavlovich.

Management Style

Just as there are careful screening processes in place for employees, employees of ArchivesOne can take advantage of unfettered access to management. "We've worked to create a culture where employees know they belong. The fact that any employee can talk to any member of management

each profit center is encouraged to provide continual feedback contributing to the gradual improvement of work processes, methods and procedures. "We've been fortunate to have the kind of people on our team to keep a dedicated staff," says Pavlovich.

Since part of the expansion of ArchivesOne has come through strategic acquisition, care is taken during the acquisition process to provide reassurance to existing owners, staff and customers. Jim Kallipolites, Vice President of Information Technology explains, "We go on calls to clients of the business we're acquiring and we take the current owners with us. When we meet with them we want to send one

control. The first step in transitioning a newly acquired business to standard methods is to overlay current processes in use at other business units. Next, the team attempts to improve the parts of those processes that don't make sense in the local market. "Because our acquisition strategy can provide former owners with an equity share in the business if they desire, they can remain involved and help us fulfill that promise to current customers," says Wasserstein.

Creating Work Processes & Training Staff

ArchivesOne created its original draft of processes by documenting actual activities of individual employees. An interview process was the most effective way ArchivesOne found for accomplishing this goal. "We asked each employee 'how do you do ____?' then we asked them to write down exactly what they did," says Kallipolites. This initial draft document was followed up with an interview and observation, which tried to capture any missing steps. The procedure

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This cultural environment is also vital to continual improvement of processes since

clear message—we're not taking away anything you have right now...we're adding to it." This promise is a challenge to keep, since standardization is a key element of process

was then tested to see if it could be replicated without error. "We gave the instructions to someone else and said 'try it,' then we watched to see whether we had covered all the steps. Some of the most effective testers of new procedures are from unrelated departments or are new employees. They don't know the system and they may interpret the instructions more creatively."

ArchivesOne used a numbering method to identify each step in a process so that the end result might be compared to a recipe. As each procedure was completed, it was added to the handbook for that facility. Since each location had its own set of processes, an effort is now underway to create a universal handbook for all ArchivesOne facilities. "We're using this method to try and eliminate as much human error as possible." Each handbook becomes the core element in a consistent method for training new employees in proper procedures to complete their job function efficiently, effectively and with a minimum of errors.

Customer service personnel are trained for 30 days on procedures and data entry before they are allowed to work independently. As they gain confidence, they remain closely supervised by a customer service manager to make sure that procedures are followed. The training time is one and one half weeks to two weeks for a driver. As an additional safeguard, ArchivesOne relies upon their fulfillment processes to catch any errors that might be made by new personnel.



Delivery personnel use extreme care in inspecting cartons for more than one barcode. Items are not scanned until they are placed on the cart. Because of their interaction with clients, delivery personnel are provided with incentives for identifying new business opportunities.



Items entering the center are placed on a pallet. A cone with a barcode attached to it is placed on top of the pallet and the driver's scanner is used to scan each item to this temporary location. After all items have been shelved, the cone is scanned to determine whether any cartons are still shown at that location.

Fulfillment Process Control

The fulfillment function of ArchivesOne is run from their Operations Offices. Each office is centrally located for convenience to the loading, staging, and storage areas. The operations office maintains minute-to-minute control of all fulfillment functions. Each employee responsible for carrying out fulfillment functions (retrievals, refills, preparing materials for destruction, etc.) begin their work activities by receiving a hand scanner and logging in. This login establishes accountability and tracking of the activities of an individual, (an important consideration in light of pending HIPAA regulations.)

Each hand scanner transmits information back to the computer system as it is recharging. Instructions for work orders are then uploaded into the scanner so that it then functions to guide the employee, not simply providing a record their actions, (though it also performs that function, as well). Since scanner instructions are loaded, the scanner

will also beep a warning if an incorrect box is retrieved. At the conclusion of work, the employee logs out of their scanner and places it back into the cradle. Data is then loaded back down into the computer where hand scanner activities are reconciled with the software. The software system used by ArchivesOne contains a list of some 60 reasons why reconciliation is not possible. Some examples include "bin capacity exceeded," which indicates that a box was scanned into a bin location shown as being full.

ArchivesOne uses a dynamic system in order to keep bays as full as possible. "We know that the dynamic system helps reduce errors by eliminating empty spaces that could promote misfiles when reshelving cartons," says Jim Ratliff, Senior Vice President of ArchivesOne. Bin location codes are also easy to interpret without the aid of a scanner, since each number carries the building, row and shelf data. Additionally, customer account codes are built into carton bar codes to aid in verification and accuracy.

Operations at the client site are equally thorough. "We like to borrow ideas from others and improve on them," says Ratliff. The first of two examples of "selective borrowing" is the use of Magliners as delivery carts, "A.J. brought that idea back from a PRISM conference. They are very flexible for both large and small loads." As a matter of safety, driver procedures call for no more than 20 cartons to be carried in a single load. From a fellow operator, ArchivesOne picked up another helpful tip. On the end of the carton, (on the opposite end of the space provided to the client to identify the box contents), the following words are printed: "DO NOT APPLY A BAR CODE TO THIS END OF THE BOX."

Of course, Ratliff indicates that in spite of these preventative measures, there are a number of additional steps to be taken at the client site. "All of our drivers are instructed to check the back side of the box to make sure there is no bar code there. They also check under the lid of the box to make sure the lid

is not covering a second bar code." In addition, each driver is instructed not to scan any box until it is on the Magliner. Immediately after scanning, items are then delivered to the client or taken back to the delivery vehicle.

Since most clients served by ArchivesOne do not maintain their own tracking systems, customers rely on the accuracy of the internal controls of the operation. Verification of new cartons entering and exiting the operation is a critical checkpoint. As work orders are retrieved, they are scanned. Once all items assigned to a delivery vehicle are loaded, the driver scans each carton to verify that the entire load is on the vehicle. If there is any discrepancy, the scanner beeps to warn the driver. As previously mentioned, items are scanned once more at the client site just prior to delivery.

On accessions of new cartons, the driver scans each box after it is placed on the Magliner then returns these boxes to the facility. These new boxes are placed on a skid and are scanned (using the driver's scanner,) to a temporary bin location that is

represented by an orange cone which carries a bar code. This cone rests on top of the cartons until they are shelved. Once all cartons from that temporary bin location have been scanned to a shelf location and the information has been downloaded to the computer, the cone is scanned one more time to determine if any cartons are still shown at

ance. We also use the PDT and Verification as a powerful sales tool. Customers love it." Kallipolites agrees, stating "Most of our processes are driven by software."

Reconciling daily work is an important part of the process control process. During this process there are monthly checks to determine bar codes that are out of the sys-

"Because our acquisition strategy can provide former owners with an equity share in the business if they desire, they can remain involved and help us fulfill that promise to current customers," says Wasserstein.

that location. If so, the cone is "dirty." The cartons still shown as being present in the temporary location are located and scanned into the proper bin location. This process assists in accurate tracking and as a quality check. "Every container has three scans on the way in and three scans on the way out," says Ratliff.

Software Controls

Jim Kallipolites joined the staff of ArchivesOne in 1994 to fill a newly created position focused on Information Technology. Later that year he began a process of converting from their existing system, (a 250 kilobyte dos-based system), to their present system, (O'Neil RSSQL). "We started the process by asking a few simple questions," says Kallipolites. "What do we want at the end? What information do we want in the new system? What information is in the old system?" Working from these three questions, data contained in the old system was migrated to the new system, desired optional functions were acquired in the new product, and software infrastructure was designed to accommodate desired levels of information capture.

Testing for the new system was accomplished through the use of a test database. This process left those responsible for the conversion free to manipulate dummy data and test the functions of the new system to identify and solve problems without creating a business interruption. A.J. Wasserstein emphasizes the importance of technology infrastructure to the ArchivesOne operation. "We use technology to help our staff work more efficiently. It also provides a measure of control in the order execution process. Specifically, the use of the PDTs and Verification ensure accuracy. This results in superior customer service, operational leverage, and thus enhanced financial perform-

tem. ArchivesOne folds this control into their billing procedure. Reports of transactions that cannot be reconciled are then reviewed to determine the cause, which is then corrected. Because this work can be tracked to individual employees, the need for more substantial training or supervision becomes obvious. This management oversight process is a less intrusive form of quality control, which still yields the desired results. "Production and quality are blended to a great degree in our operation. Most of the process control is done by managers at their computer terminals," says Ratliff.

Because there is increasing client demand for access to their inventory via the Internet, ArchivesOne is moving in that direction. This step is seen as an added convenience to both the customer and the ArchivesOne operation. "We anticipate that some customers will want to do their own data entry. When we do it, we are sometimes dealing with scientific jargon or unfamiliar terms—and the customer is not there to ask," says Kallipolites.

Preparing Materials For Destruction

In our industry, there are some processes that cannot be undone. Destruction of client materials is one of them. For this reason, the fulfillment staff at ArchivesOne uses extreme care and intense process control to prevent errors in this area. The first step in this process is the preparation of a destruction review report for the client to approve or modify. (Disposition dates for individual cartons are captured during the accession process from client-provided data.) Following this review by the client, the finished list is returned to the center. Two persons compare the list to note any changes made to the list by the client. Any adjustments to disposition dates are noted in the software.



ArchivesOne uses special red shrink wrap to identify items to be destroyed. This procedure used to verify each item helps to insure that no cartons are incorrectly placed on a pallet of materials slated for destruction.



Fulfillment personnel working in the original ArchivesOne building use rolling ladders and material handling equipment for retrievals and refills. In the new addition, a catwalk system provides access to higher density bays.

Following the notation of changes in the software, a work order for retrieval of materials for disposition is generated. The data for the work order is uploaded into a hand scanner and a worker is dispatched to retrieve the cartons and place them on their own skid then scan them to a cone which records their temporary location. As soon as a worker has enough time allocated to complete the balance of the operation without interruption, the cartons on the skid are scanned one final time in order to validate them. Immediately following this verification, the skid is shrink-wrapped with red-colored wrap to prevent any other cartons from being inadvertently placed on the skid. This red-colored wrap is not used by ArchivesOne for any other purpose than to identify materials to be destroyed. The materials are then shipped to a destruction facility, and a date of destruction is reported to the client for those materials when destruction has been completed.

Sales and Customer Service

The ArchivesOne sales and marketing staff creates customer relationships, typically by setting expectations and making service promises. Understanding and effectively communicating the appropriate expectations to prospects and clients is vital. Training and educating the sales team to be aware of process control methodology is a critical step. "We have to deliver what we promise," says Wasserstein. This creates special challenges in quoting and in communication with customer service and fulfillment personnel. One thing that the operation is unwilling to sacrifice is margin. "There are three logical steps to starting and growing your record center: 1) Get a revenue stream; 2) Control costs; 3) Wring out margin," Wasserstein adds. Using this formula, it is easy to see that quotation methods are critical to maintaining and maximizing margin.

Sales personnel at ArchivesOne are empowered to independently quote business, once they have been trained. The key to maintaining margin is that they maintain

constant awareness of what their quotation does to the profitability of the company. The commission of sales personnel is directly tied to profitability, not business volume or sales volume. For each quotation, sales personnel refer to a spreadsheet. The sheet allows them to plug in client-specific numbers regarding business volume. They can then add various rates they will be quoting and measure the result of those quotations. What is displayed as an end result is both the profitability of the piece of business to the company and their commission, which the spreadsheet adjusts downward as profitability falls. Armed with this information, sales personnel can quote intelligently and with the understanding that their own compensation is tied to successful maintenance of margin.

Once a piece of business is secured, a different control process takes over. The sales person involved in closing the business prepares a "Hand Off Sheet," which contains everything the customer service and fulfillment department needs to know from the client. This includes accurate directions,



The ArchivesOne facility in Watertown. The original structure is shown on the left. The higher density addition is on the right. ArchivesOne began operations in 1991.

security procedures, delivery and retrieval instructions and other special conditions that fulfillment personnel need to know in order to service the client effectively. In every case, this sheet contains accurate directions to the client site. Every future work order generated will contain those directions to the client site for the use of delivery personnel.

Following initial accession of client materials, customer service and sales personnel audit all initial bills, data reports and invoices. This helps to insure that the client receives no surprises. Following that review, and upon establishing that the client expectations are being met or exceeded, the sales person pulls back to allow the customer service personnel take over the maintenance of the account. Should situations arise, the sales person receives feedback from customer service personnel, drivers or other team members.

An important opportunity for add-on sales is recognized in the role of the driver as a front-line interface with the client. Through observation or conversation, the driver may be able to identify other business opportunities. An important point is that all drivers receive an incentive bonus if a lead turns into a sale. This incentive is important in enhancing the level of awareness of drivers in the field. Drivers and customer service personnel have also been trained to abolish the word “no,” from their vocabulary. If a

customer makes a request, they will respond with “let me check on that for you,” and then pass the request along to the appropriate department within the organization.

Measuring customer satisfaction is a critical step in gauging the effectiveness of both the customer service and fulfillment operational areas. Two times each year ArchivesOne sends surveys to their cus-

tomers. “We want to see how the customer views us,” says Kallipolites. The results of these surveys are compiled and tracked as a performance measure to judge progress. They can also be an important sales tool if the results are positive and in the hands of a sales professional. This data is also critical at the time of contract renewal, particularly if there has been a change of key contacts or familiar personnel at the client site.

Final Thoughts & Strategic Directions

There is probably no better example of process control at ArchivesOne than their use of the “Monthly Checklist.” This document exists as a single-copy paper document that resides on a clipboard in the operations

office. It incorporates approximately 70 items that range from preventative maintenance steps such as “change the batteries in the thermostat,” to quality improvement issues such as “modify the monthly checklist so that it is easier to understand.” Because this document exists only as a single copy, all responsible areas must sign off on individual items as they are completed. Following a review of all the items, the final item on the list is the creation of the Monthly Checklist for the following month. Through the use of this method, items that are not readily assigned to any single department, or are infrequent can be captured and accountability can be established.

Jim Kallipolites is optimistic about the coming year. “2001 is even more focused on customer service. We’re bringing in more products and services such as E-vaulting and destruction services. Bringing in more products and services means more points of entry for new customers.” This is significant considering the growth of ArchivesOne from no boxes in 1991 to 1.9 million cubic feet of records and over 85 employees 10 years later.

A.J. Wasserstein offers the following advice to those who are just getting started in the business. “Hire good people early. With today’s unemployment figures being so low, it’s not easy, but you need to find good people, hire them and keep them. Labor is also your highest

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cost in the business (35%). The majority of your revenue will go to labor. So good people will have a direct effect on your bottom line.”

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