

## *Teaching Case*

# Accentra Pharmaceuticals: Thrashing Through ERP Systems

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### **Abstract**

Implementing and integrating an Enterprise Resource Planning (ERP) system into an organization is an enormous undertaking that requires substantial cash outlays, time commitments, and skilled IT and business personnel. It requires careful and detailed planning, thorough testing and training, and a change management process that creates a supporting culture. In rare circumstances is a company required to implement an ERP twice in two years. This teaching case documents the business process changes and ERP system related events that occurred to a pharmaceutical manufacturing facility when it was involved in an acquisition; and then, a second acquisition in less than a three year time period.

**Keywords:** Enterprise resource planning, implementation, change management, business processes, manufacturing

### **1. INTRODUCTION**

As he awoke on a bright winter morning in January, Kyle was worried how the second launch of SAP would impact his line. Just six months prior, his line launched its first commercial batch.

Prior to that, he spent six years preparing the Dual Chambered Pen Packaging line for its debut. Through all the lessons learned and lobbying for more user participation, he wondered if he was about to experience the same result as a year ago.

"Clearly we, as an organization, have learned what not to do this time around, haven't we?" he thought to himself as he grabbed his car keys.

He was exhausted from the amount of time dedicated to this project and he was not sleeping well worrying that things would go awry again. He had little time to dwell on it now, since his drive to work was a short one, but he knew it would be a challenging day. His goal was simple, to get Packaging production up and running as quickly as possible.

## 2. BACKGROUND

Ten years earlier, Accentra Pharmaceuticals, based out of San Diego, California, committed to building a manufacturing facility in southwest Ohio, to produce a Once-Weekly GLP-1 diabetes therapy. The staff at headquarters numbered around 300 people, comprised mostly of scientists, and research and development personnel. The new manufacturing in Ohio was a mix of a pre-existing building that housed the drug manufacturing processes and a newly constructed building for offices, warehouse, and packaging operations. The underlying manufacturing process is presented in Appendices 2 and 3.

JD Edwards EnterpriseOne was chosen as the Enterprise Resource Planning (ERP) system to track inventory levels throughout the plant (raw bulk material, filling material, inspection, and packaging). Although EnterpriseOne provided additional capabilities, plant operations management decided to handle some processes manually, e.g. order scheduling across the lines. A separate warehouse execution system (WES) was integrated with the ERP to accommodate the fully automated operations. Automatic Guided Vehicles (AGV's) were staged throughout the first floor of the manufacturing building and transported pallets of materials and finished goods in and out of the warehouse racks.

EnterpriseOne was used by multiple departments: Supply Chain, Materials Management, Quality Assurance, Finance and Manufacturing (Bulk, Filling, Packaging). The plant contained hundreds of components, each one having its own dedicated item number in the EnterpriseOne system.

Approximately four years ago, Bio-Science Incorporated (BSI) purchased Accentra Pharmaceuticals. Immediately after, BSI sent a team to assess the current systems and formulate

a plan for implementing BSI systems into the Accentra plant. The following year, BSI announced that SAP would replace EnterpriseOne with a launch date in 16 months.

## 3. IMPLEMENTATION: TAKE ONE

Work began quickly to identify an Accentra Core Team that would work with BSI. BSI also hired consultants to assist in integrating SAP into the site. The Accentra team consisted of representatives from IT, Finance, Manufacturing, Supply Chain and Quality; these departments represented the bulk of the SAP implementation and where SAP would be used throughout the plant.

Due to operational goals and financial impact, the team was given a deadline to launch SAP on January 1 of the following year (at this point a one year schedule). During the first meeting of the new year, the project manager displayed "The Kübler-Ross Change Curve" for the team to view and discussed the seven phases of change: shock, denial, frustration, depression, experiment, decision and integration (see APP 1). He explained the overall scope of the project and stated that he's observed project teams and key business partners go through these exact stages in the past. During the next break Charlie Berry, a Manufacturing representative on the SAP implementation team, was overheard saying:

"I've been a part of these types of implementations in my previous company, there is no way we'll meet this deadline by the beginning of next year. If we do, it won't be a complete implementation."

The first months were spent seeking information from each of the functional departments impacted by the change to SAP. Daily team meetings were established between the on-site project team and the governing team located at BSI headquarters. The overall schedule was displayed for everyone to see and consisted of high level project tasks. By the end of the first quarter it was expected that all process flow maps would be completed (see APP 2, 3, and 4) and traced between each functional department to know how each process impacted both the manufacturing and support units.

Blank sheets of paper covered the walls of the project room as the team worked to understand all the transactions that would need to be changed in order to provide a total solution come launch time. Slowly through the first three

months, the blank sheets were transformed into detailed process flow maps.

In conjunction with the project team, the local IT group assisted the team by sending out monthly emails to the site that communicated project points of contact, key project dates and a high level status of the progress made by the team. As well as transitioning to SAP, the site was also in the midst of an IT architecture change. New hardware (laptops) and software (applications) were being distributed and installed to conform to BSI standards. Many of the applications were completely new to the Accentra group and required education and training for the end users. Needless to say it was a lofty goal for the site to achieve a total transition by the end of one calendar year.

It was expected that by the end of the second quarter that all test scripts would be developed and shared between the off-site SAP programming team and project team so that the scripts could be tested in the third quarter with training in the fourth quarter.

Unfortunately, progress was slow and test scripts were still being developed during the third quarter. Charlie Berry's statement at the beginning of the project was starting to look like reality. As the timeline and status updates were shared among the site personnel, it was apparent that training would be "accelerated," i.e. shortened, in order to meet the deadline. Key testers (end users) were identified in the second quarter, but as of the third quarter, no information had yet been shared between the programmers and end users. The end users did not yet know what the interface would look like or how they would be expected to execute normal batch transactions.

It wasn't until November (mid-fourth quarter) that training was scheduled for each of the departments. Additionally, each department would need to run test batches before the go-live date to flush out any bugs; the last week of December was set aside for each Manufacturing function to test their portion of the system. Staffing was already expected to be low Thanksgiving through Christmas and this would definitely add strain to any chance of success during the testing and cutover tasks.

The green light was given for testing at the start of December. Each department was allotted up to five days of training, but no more. For some departments, they were expected to maintain normal commercial operations during training.

Kyle recalled during training that he had no idea what they were being asked to test, no understanding of the new nomenclature and no link between how the new processes related to the old. The worst part of testing was that when something didn't work, a phone call was made to a group of coders "behind the scenes". They would fix the issue and ask the tester to pass the test script.

Two days into testing Kyle couldn't take it anymore. His boiling point had been exceeded when he was informed that testing was now considered training and that nothing more would be provided to the users. The launch date was not moved, go-live was happening the first week of the new year.

#### **4. IMPLEMENTATION: TAKE TWO**

After more than a year of implementing, training, and integrating a new IT architecture into their site; shortly before the SAP go-live date it was announced that the Accentra portfolio of products was being spun-off to another pharmaceutical company. This meant that, after completing implementation of the new SAP system, the site would immediately begin a new project to conform to the new company's software. The site personnel awoke to find a message in their email informing them that BSI was divesting its diabetes portfolio and that BETAPHARM would purchase the Accentra portion of BSI, effective in February of 2014.

The start of the year was absolute chaos. Due to missed requirements and limited functionality of the system at launch, the consulting firm (JOLF Consulting) hired for project management during the prior year was retained to help manage IT services.

Morale among the SAP Users was low and nothing seemed to work as expected. The more knowledgeable SAP users were overheard as saying:

"Even when we know what the problem is and we try to communicate the fix, no one is available to hear our issues."

There was no prioritization of the issues; it was first come, first served with the support staff.

Production was crippled across the plant. Production orders containing the bill of materials of products were incomplete. The user interface

to request materials and update inventory, PI (production information) sheets, were not functioning correctly and users were still unsure of how to use the system due to lack of training.

Standard Operating Procedures (SOPs) were useless because the deliverable for identifying and documenting procedures was deemed optional during the implementation process, and so were not completed. Information contained in the documents that did exist was incomplete and had little specific guidance for the technicians to perform the required duties. The SAP process flow that was supposed to be implemented is presented in Appendix 4.

By March, a project manager was identified to lead the new (re-configuration) implementation of SAP. In addition, although the BSI implementation was considered a disaster by many, BETAPHARM retained the services of the JOLF Consulting team; hoping they could leverage their understanding of plant processes and use the lessons learned from the previous year to improve the second ERP project, which was given a target cutover date of January 1 of the following year. This would be a chance to correct mistakes made the prior year and improve some key elements necessary for success.

Geoff Fox was unanimously voted by the Plant Leadership Team to be the face of the SWO (southwest Ohio) site mainly because he had built solid relationships across all the functional departments and for the simple reason that people listened when he spoke.

"I was overjoyed to see that Geoff was put in charge of the second implementation. This will be a tough challenge for him but he has the right demeanor and sense of humor to deal with the ups and downs in a high profile project such as this. I expect better results this time around." – Agnus Manuellson (Coworker)

His first order of business was establishing recurring meetings with each department with a goal of talking to each at least once a month. Tracking document updates and organizing the SAP training program were his other top priorities.

Geoff spent the first quarter of the year rolling out the implementation plan in a series of "town hall" meetings highlighting the organizational structure of the project team, communicating key milestones and preparing each department for the changes they would be responsible for

making. Informal discussions throughout the plant highlighted the fact that most departments were operating under incomplete work instructions as a result of the prior implementation. Some departments had no documentation to follow and were trying to follow the processes in place prior to the implementation. While most found this humorous, the lack of accountability was alarming. Geoff had his work cut out for him.

The following months produced a flurry of high-level and detail oriented meetings. Town hall meetings continued in regular intervals while smaller meetings were established to allow the project team to meet with "super" users from each department. The goal of these meetings was to identify gaps from the previous roll-out and provide more straightforward solutions for executing transactions within each business process. Process flows were reviewed again in detail and unnecessary steps were removed. Within manufacturing there were four basic user interfaces called PI sheets. These PI sheets were built specifically for each department and were meant to capture transactions performed on a daily basis. Transactions such as material produced, pallets used, and tracking movements of component pallets to name a few. These functions were previously grossly over-designed and were too complicated for users to learn and execute.

While these revisions were meant to provide hope, cynical users like Greg Houghton weren't convinced. Greg was observed as a hopeful team player during the meetings, but outside in the hallway he was overheard stating "What faith should I have that they will actually implement what they say they will? We were promised the moon the last go around and we know how that turned out." It wasn't just the normal transactions that required an upgrade, but also the hearts and minds of those damaged by a poorly executed transition the year before.

One morale booster for the general population at the site was the plan to allow all technicians' access to SAP. Previously, access was limited to only a couple of individuals in each department. Because laptops were not provided to each employee, handheld Radio Frequency (RF) units would be purchased to handle the bandwidth of users. Handheld functionality was another sore spot; roll out of these units the prior year was a disaster. Connectivity was weak and users were immediately disconnected after logging in. The network was not able to support use of the

handhelds out on the floor and they were eventually shelved in favor of using SAP via the laptop.

The fourth quarter brought the final preparations to the site. Emails and reminders were sent out each day informing everyone what the final months would look like. The training plan was unveiled which included the courses each user was expected to take to learn how to use the system to do their job. Instructor names and course times were distributed to the departments. Billboards were placed around the plant announcing the location, times, and points of contact for the SAP help room. The experts that designed and coded the system were also going to be on-site two weeks before and after the new launch. On the surface it was a good show, but was it enough for a successful launch?

## 5. CONCLUSION

The milestones were completed. Kyle was antsy on his short drive to work knowing that they would flip the switch and go-live within the next hour. He arrived to work and booted up his computer. "Now for the first test" he thought. The SAP graphical user interface came to life on his screen. A few hits on the keyboard and....success! He logged in and stared at the numerous transactions. "One hurdle down!" he exclaimed.

The next big test would be the release of the production order. Without this there would be no production. The call came in from planning. "Hey Kyle, it's Tonya. I released the order in SAP, are you able to see it? A few hits on the keyboard and there it was. "Yes Tonya, I can see it. Let me check and see if it downloaded the parts list to our Warehouse Execution System." It was in fact downloaded to WES.

Kyle's crew went through a series of batch startup procedures. It would be another hour or so until they would know the real impact of going live with the new implementation. For the next few hours the glitches and issues reared their ugly head.

Users were having issues logging on to their laptops. Connectivity with the laptops was poor. Some buttons in the PI sheet didn't work at all or were coded incorrectly and sent material to incorrect locations. User instructions were lacking. The first two production batches each took three days longer to process due to the new SAP system.

The saving grace was the accessibility and reaction time of the SAP help room. User access issues were resolved in minutes. Coding issues were resolved within hours. Functionality of the PI sheets hit 100% in about a weeks' time. Other issues such as connectivity and documentation took time to fix and were finally resolved within the first quarter of the new year.

Kyle was pleased with his team's performance and their resolve to recognize and follow through on issue resolution. It wasn't until a week after the second Go-Live that he could sit back and reflect on all that the SWO site had been through in the past few years.

## 6. DISCUSSION QUESTIONS

What factors influence an IT system implementation?

How can these factors be managed?

How did business process management (re-design) impact this project?

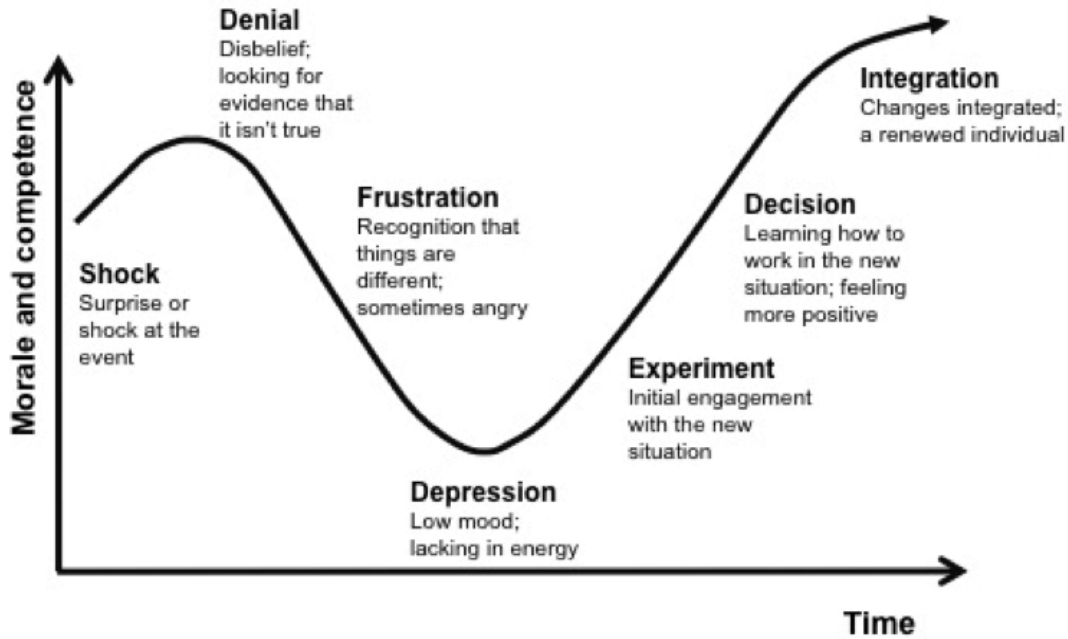
What project management best practices are present in this case? Which are missing?

Create an outline of the action plan you would recommend to ensure a successful IT systems implementation? What do you feel is most important?

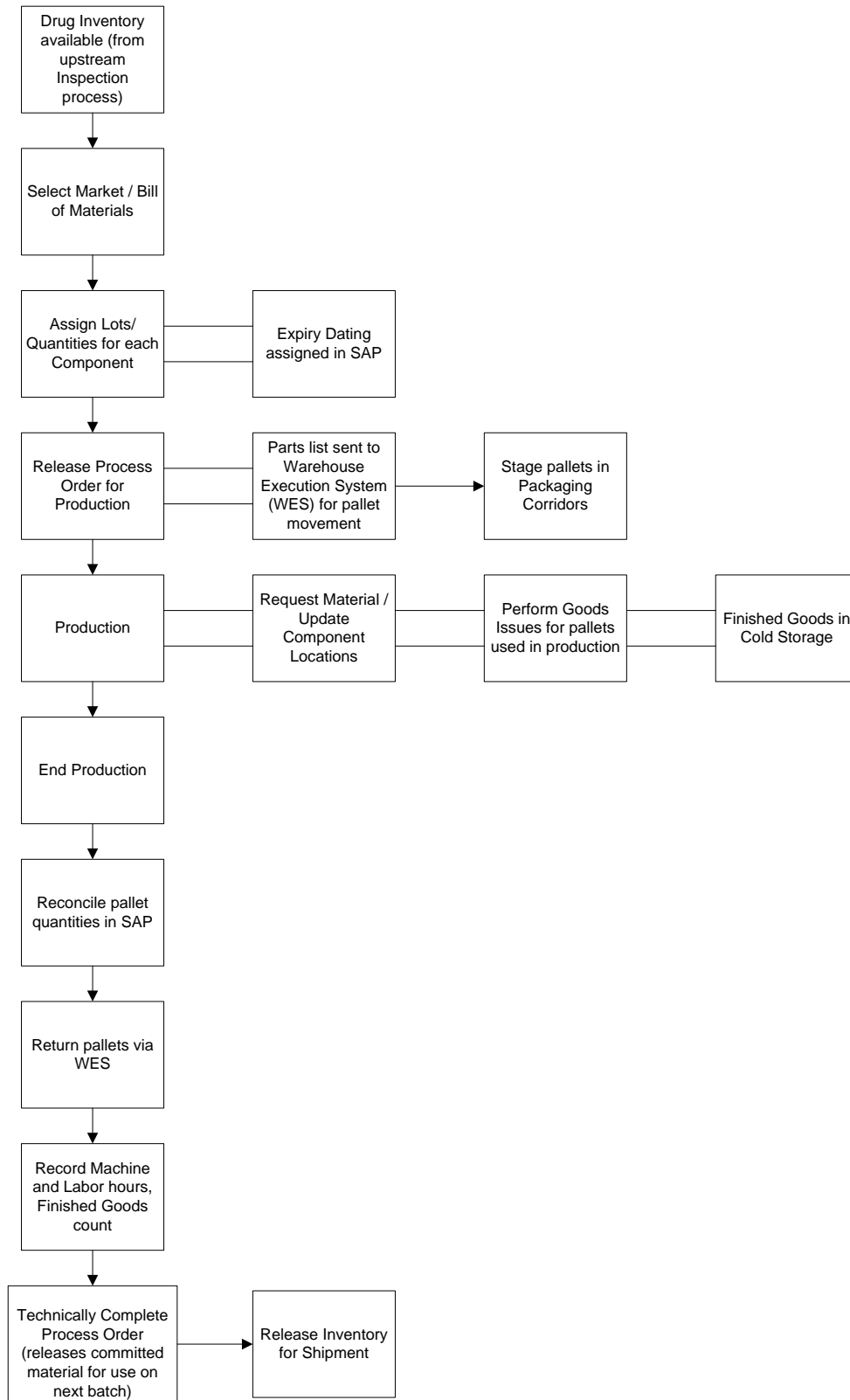
The Kubler-Ross model of changes is presented in Appendix 1. How could this model help explain the events in the case? How could it be used to help improve the chances of a successful system implementation?

**APPENDIX 1: The Change Curve**

# The Kübler-Ross change curve



## APPENDIX 2: Packaging Process Flow

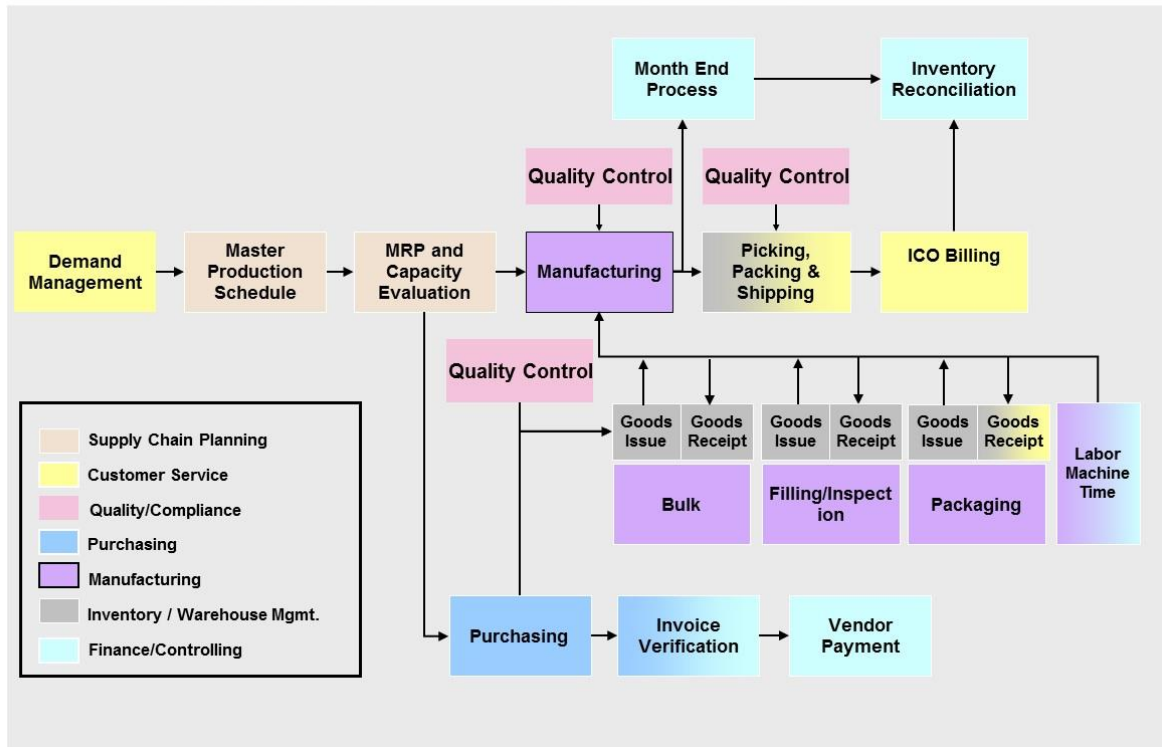






**APPENDIX 3: Plant processes**

## Manufacturing in Overall Integrated Process



**APPENDIX 4: SAP Transaction Flow**

## Material Staging, Manufacturing and Costing

