XCO Corporation - Situation Analysis – New Product Development – HiPower Example

Investigation Stage – Situation Analysis ~ Perceptions and Wants from Data Gathered

October 2, 2011

Current State (Perceptions)	Desired State (Wants)
Results 1. HiPower has $10 to $13 million current potential revenue for XCO ~ current P.O.s total $3 million. 2. If XCO loses HiPower, $4 million in costs will need to be cut. 3. 80% of XCO business ($30 million) is from 2 major customers. 4. XCO consistently delivers quality, on-time established products. 5. No new customer product launch has been successful in 13 years. 6. There is a lot of costly expediting and no assessment or accountability for the financial impact. 7. Yields are in the 60% range. 8. On-time shipments for the fiscal year are in the 70's %.	**Results** 9. XCO is profitable (> 10% profit). 10. Customer expectations for quality, completeness and timeliness are met 95%+ of the time. 11. Cost competitive, quality products are delivered on time. 12. Specs are formulated quickly ~ so customers can get custom products on the shelf sooner. 13. Yields and capacity keep improving. 14. Rework, scrap, & unnecessary expenses are rare.
Direction, Objectives and Goals 15. Many people believe that XCO is a contract manufacturer but most cannot state what the core competencies are currently. 16. Each department has different objectives. 17. The main objective is to sell and bring in new customers, whether we can deliver or not. 18. We need to get product out by June 30th ~ all else is secondary. 19. The executive team doesn't seem to be on the same page. 20. Everything is a priority. 21. There are so many fires, people run from one to another. 22. People own activities not results.	**Direction, Objectives and Goals** 23. Have a strategic focus. 24. Everyone in the organization is aligned with the company direction and common objectives. 25. The main focus is on increasing throughput in manufacturing. 26. Get real efficiencies by managing the competing goals of time, cost, and quality. 27. The priorities are clear to all. Actions are aligned with the priorities. 28. People at all levels own the results.

Current State (Perceptions)	Desired State (Wants)
Attitude and Skill Development 29. People have 'legacy' thinking ~ we've always done it that way. 30. We can't do that because of . . . GMP, TGA, R&D, Quality, etc. 31. There is a lot of negative thinking ~ "I can't do this." 32. Some people are resistant to change – "We've always done it this way." "If we did that we would have to do more work." 33. If we get a new customer ~ people say 'oh, no'. 34. Usually there is 1 person in each department with a sense of urgency, most lack a sense of urgency. 35. Many of the dedicated, knowledge people with little experience in the company don't understand the ramifications of their decisions. 36. People do what they want and whatever they do is OK (and if too extreme they are fired with little warning). 37. Long-term employees fear ownership and "do their best to avoid work." 38. 60% of the work force does only what they need to do to survive and 'stay under the radar'. 39. If push back, you may be fired or lose opportunities. 40. People are scared so they always say yes vs. challenge. If told to do something, they do it and are scared they will do things wrong. 41. There are a lot of defending, justifying and protecting behaviors. 42. People are promoted without education, experience or skill to handle the job.	**Attitude and Skill Development** 43. 'Can do', 'what will it take' attitude (w/ realistic thinking and data to make good decisions). 44. Be proactive to get the job done. 45. Flexible thinking ~ what do we need to do now and what will work. 46. People are excited about new orders ~ get involved and help create a plan that will work. 47. Everyone has a sense of urgency and does what it takes to move projects forward. 48. People receive feedback on what is OK and what's not OK. 49. Pushing back is part of making good decisions. 50. People have the training, skills and thinking to be successful in their roles.

Customer Management	**Customer Management**
51. XCO known for producing quality products and for delivering new products late. 52. Customer expectations are different than internal performance. No one can answer the question of when XCO can realistically get a new product to a customer. 53. There is a frantic process to get an answer now, then usually don't get feedback on what happens. 54. More time is needed on the front end to deliver quality on time. 55. Jethro is the main contact for HiPower. 56. People on the floor call the customer to get info. 57. Dates given to the customer early on are not based on what the organization can actually deliver. 58. XCO does not want to push back on the customer for fear of losing the sale ~ says YES to whatever the customer wants. 59. Just when XCO is ready to commit to a delivery date, HiPower changes the formula. 60. HiPower is very responsive to requests for information from R&D. 61. HiPower dictates certain vendors and the vendor does not often provide information on their test procedures or material. 62. HiPower is uninformed from a component stand point. They want production without doing a pilot. 63. HiPower registers product that does not meet the claim on the label. 64. When problems are identified, some are solved quickly; some drag on and keep reoccurring without resolution. 65. We should fix problems internally before we air our dirty laundry to the customer.	66. What is promised to the customer is what XCO can deliver. 67. Clear expectations are set with the customer in the initial visit and the whole process is clearly defined, including the impact of changes requested at different points in the process. 68. XCO and customer mutually agree on requirements and timelines and what is a successful launch. 69. XCO evaluates customer requests to determine if the opportunity is good for the business. 70. The whole supply chain is involved upfront in discussing new business. 71. All the appropriate departments are involved upfront to develop a successful product plan. We sit up-front w/ the customer to review challenges, solutions, & the impact on cost, time and quality. 72. The customer provides previous QC & QA testing methods used by previous contract manufacturer. 73. We test to ensure that raw materials are useable. 74. XCO has a clear baseline of what we can do & can plan and forecast for the next 3 – 6 months out. 75. Customers have confidence in us (that we can deliver what we say we can) and we have confidence in the customer (they will give us the orders they say they will). 76. Customers and everyone at XCO has visibility into the whole process. Clear expectations are set. 77. XCO finds timely solutions to issues and keeps the customer up and running. 78. There is regular ongoing communication with the customer w/ a lot of front end communication. 79. XCO has the appropriate level of contact with the customer ~ providing information that doesn't keep changing.

Current State (Perceptions)	Desired State (Wants)
Quality and Process Improvement 80. 80% of the HiPower product is a deviation from the documented process. 81. There is a high likelihood of using or running the wrong formula/deviation if the person who has the right info isn't making the decisions (i.e. Marketing registered an old formula and ordered labels that ended up being scrapped). 82. XCO is 'over testing' ~ doing tests that are not necessary. 83. We "Band-Aid" and avoid the process to do it faster. 84. Information from suppliers and customers is often incomplete or inaccurate. 85. There is no clear policy on how to handle quality issues. 86. New raw materials and samples often do not meet specs. 87. We only have one raw material supplier on custom projects. 88. Raw material specifications are done manually. 89. Raw materials vary from lot to lot ~ each lot may be out of spec. 90. On HiPower, Raw Materials hears of purchase orders via rumor, rather than informed by reviewing the purchase order. 91. Anyone can challenge product requirements (w/o data). 92. Up to 5 – 6 people review a decision and can change their mind with no basis behind the change. 93. XCO is committed to being and is compliant with the FDA. 94. All locations are clean and present well to customers. 95. There is a hole somewhere between R&D and purchasing, what is ordered doesn't match up with what is received. 96. Raw materials are ordered before specs are complete. 97. Production is ordered before formulas and testing is complete. 98. Document Control is a bottleneck – too many touch points. 99. We use a "Qualify on the Fly" approach to raw materials. 100. We spend a lot of time getting suppliers to "jump through hoops", fail to use them, then they are alienated and lose interest.	**Quality and Process Improvement** 101. The new product process is documented and followed. 102. Deviations are reduced, analyzed to make process improvements. Full DCR when deviations are signed off. 103. The run formulas are clear to all and well documented. 104. Appropriate testing is clear to all. Everyone looks at the same data with one method for testing. 105. Testing for each country is standardized place with one place for test criteria for each country. 106. The process for quality issues is known & used. 107. Decisions are based on data. 108. Review and approval for decisions is helpful, effective and timely. 109. Everything is done once ~ without rework or duplication of effort. 110. Document Control has a streamlined, efficient process. People input the formulas in a timely way. Decision making authority is clear and efficiently routed for signatures. 111. R&D information and packets are trusted. 112. Pilot projects in manufacturing are completed in a timely manner. 113. People understand & follow the raw material SOP's. 114. We are compliant with GMP. 115. The Quality Dept. has a risk assessment process to evaluate adjustments when there is a competition between delivery time, cost, and quality. 116. Raw materials are qualified in advance of need. 117. R&D knows what part of the process can be shortened to quality raw materials in order to meet delivery dates. 118. The product development phase is distinguished from the maintenance.

Current State (Perceptions)	Desired State (Wants)
Cross-Functional Teamwork 119. There is a lack of understanding of what other departments do and who does what. 120. A cross-functional team developed a plan to deliver a new product, NeuProd, with a timeline of 9 weeks. 121. Sales and other people lack understanding of the process. 122. There is trouble with personalities between departments, they all need more knowledge of others areas of knowledge. 123. Daily meetings between manufacturing, QA, planning are working well to communicate information, R&D and project management join the meeting 1 time per week also. 124. Planning and client services meet 1/week and talk frequently to convey information if there are any issues. 125. It is possible to get information if you are proactive. 126. After meetings, each person present goes off and does their part ~ not necessarily coordinated. 127. Decisions are made and not communicated to those who could take action, which causes delays. 128. People find out information about what is happening from the production meeting, from tidbits of info picked up & by SURPRISE. 129. Getting information to resolve issues is sometimes hard because people within the company do not respond quickly. 130. People are copied on many email communications, receiving information they don't need & not getting information they need. 131. People offer suggestions that are not heard or used ~ so they stop offering ideas. 40% have given up trying to get heard. 132. R & D informs a few people of decisions and others are left out. 133. It is not hard to get info from internal or external customers and you have to sort thru and it is often not complete. 134. People are getting defensive & protecting time to do their own jobs. 135. People take things personally and talk about other people and	**Cross-Functional Teamwork** 141. There is a customized strategic plan in place with timeline, clear lead times, due dates, and who executes which action items. 142. People, from all departments, work together to identify what it takes to deliver quickly. 143. There is a cross-functional product implementation team with clear responsibility, accountability and authority to deliver. 144. People in all areas understand the whole process and their impact on others. 145. There is effective communication between departments about new opportunities. 146. Meetings are effective for working issues, building cohesion, & driving efficiencies & goals. 147. People collaborate across boundaries to share information with all who need to know when they need to know it. 148. There is an MRB group email for HiPower project to ensure everyone is informed. 149. Everyone is aware of what is going on day to day. 150. People make clear requests for what they want, what they believe should happen and to get the information that they need. 151. People talk directly with someone with whom they have an issue. 152. The needs of the business are more important than individual comfort in addressing issues. 153. XCO personnel work cooperatively (sharing information and learning) with suppliers to capitalize on their expertise in buying raw materials.

departments 'behind their back'. 136. Some people avoid 'difficult' people, even if it is there job to work issues with the 'difficult' person. 137. There were turf wars between operations & other departments. 138. The 'blame game' is alive and well (i.e. R&D blames manufacturing for people not trained, machines not running well and manufacturing blames R&D for creating or approving formulas that aren't runnable). 139. 2 – 3 departments may be doing the same work (duplication of effort) and don't know because they don't talk. 140. Meetings are used to solve issues that could have been solved with cross-department communication.	154. When there are issues, people discuss them face-to-face and figure out how best to resolve them. 155. Who does what is clear across functions, so work gets done once with no duplication of effort. 156. Issues are resolved between departments prior to the group meeting.
Current State (Perceptions)	**Desired State (Wants)**
Project Management 157. No one knows where we are on HiPower. 158. Several people have put together tracking systems to follow what is going on with HiPower products & materials. None are used by all and some are no longer used. Spread sheets of the project are "the last to do in a crisis." A couple of spread sheets have been tried on share point and they have been ineffective. 159. Each department has data and a piece of the overall puzzle. Some people are proactively working with other departments to coordinate their actions (i.e. client services and planning). 160. There is no follow up on projects. Things are started & expected to continue with no further action (which often doesn't happen). 161. Everyone works on what they see to do, no coordination. 162. When agreements are not kept, people move on without being addressed, resulting in no change in behavior. 163. There is a lack of project management skills in the organization.	**Project Management** 164. There is one tracking system to know what is happening with each order. 165. People are accountable for using the one central spreadsheet for HiPower. 166. There is one point person, a champion, who knows the details of the process and can put together a plan that will work and follow up to make it happen and ensure customer requirements are met. 167. Action items are tracked consistently and follow-up on agreements is the norm. 168. Project managers have the skills to coordinate efforts and manage projects.

Capability	**Capability**
169. People at XCO are "phenomenal clutch players." They can pull together on a project at the last minute and get it out the door. Data may indicate that they do one customer per month on this basis and neglect others. 170. XCO can't follow their current processes and meet customer expectations. 171. XCO does not have processes in place to deliver new products on the timing they commit to their customers. 172. People at XCO are smart and know their area of the business. 173. Knowledge is stored in people's heads ~ not possible or not easy to find elsewhere. 174. Decisions are based on current knowledge (not data) without practical application (i.e. will the product run in large quantities). 175. It's hard to make a decision on what can be done to cut corners. 176. We don't know who has what authority to make what decisions, except Randy can override all decisions. 177. People are unclear about the decisions they own and what decision others own. 178. There are conflicts between what's "right" and what's fast. 179. While working on the latest customer request ~ other work gets delayed and people are then in catch up mode & always behind. 180. Existing customers may not get their paperwork in a timely manner due to time to deal with the HiPower deviations manually. 181. We have a policy to pay bills to suppliers after the product is released, leaving us on credit hold with many vendors. 182. Purchasing spends time dealing with accounting issues, such as invoices that have no purchase order number. 183. Due to heavy workload, planning is not able to get all the work done and impacts other functions (i.e. if could get all work done, information to QA might get there a week earlier). 184. Some people are working 11 - 12 hours days consistently at a very fast pace ~ and mistakes are made in their effort to keep all	196. We have a point person who can do a risk assessment of what can be adjusted re time, quality, or cost to expedite orders and meet deadlines when new information arises. 197. Current processes are clear and are based on capacity. 198. Critical knowledge is documented and easily accessible. 199. Decisions are based on data and practical application. 200. Who makes what decisions is clearly understood across the organization. 201. Customer priorities are clear and followed. 202. We have a standard data-base of formulas, which manufacturing can efficiently run, that can be sold to customers and/or used as XCO's own brand. 203. New products are engineered appropriately to meet quality specs and run effectively. 204. Forecasting is accurate and clear. 205. Workloads are reasonable, with a high level of extra effort required at times vs. all the time. 206. Work gets done in a timely manner. 207. Operators understand and follow the SOP's. 208. Equipment is well maintained & calibrated. 209. Manufacturing data is used to learn and help R&D create 'runnable' products. 210. Purchasing has a good reputation internally and with vendors and customers. 211. Have definitive R&D standards. 212. There is a company representative for training on regulatory issues and a policy for what they can and cannot do. 213. Knowledge of anticipated future products is shared and used to plan the purchase of equipment.

the fires from growing too large. 185. XCO is good at manufacturing hard goods, not effective with liquids, and limited capability with tapes. 186. 90% of operators in manufacturing do not have the language skills or education to understand what they need to know. 187. ESL, G.E.D. & SOP classes are held to improve operator skills. 188. Manufacturing equipment has not been maintained or calibrated. 189. A preventive maintenance system is being developed. 190. Manufacturing data is available and there is no time to analyze and learn from all the data collected. 191. At times XCO over-engineers new products. 192. R&D does not have time to engineer properly. 193. Many R&D people are sensitive to the quality of their work and are perfectionists. 194. Supervisors are so focused on fighting fires that they ignore their people responsibilities. 195. Performance reviews were not done this year. They have been done in past years.	

Current State (Perceptions)	**Desired State (Wants)**
Technology 214. We have an Access Data Base in R& D and it is unclear how it connects to SAP & the operating systems for manufacturing. This Access Data Base is only used by R&D to check the details on a pilot batch to confirm if materials are there. 215. SAP runs sequentially and can't run consecutive activities. (That's why people work around the system). 216. People work consecutively by "fooling the system", which works and creates problems. 217. A SAP consultant comes in to look at the problems and R & D and nothing changes. 218. We can't produce and acknowledge an order until the formula is in and the CCB committee and Document Control have it signed off. People work around this. 219. We can't approve a batch unless BMR to BAR on all items, which is done manually in Documentation. 220. Different numbers are used by different departments – e.g. QA uses a lot #, Planning uses a batch #, Clients Services uses a Sales Order #. 221. We are working on validating ERP in SAP to meet GMP standards. It's not validated to perform process controls.	**Technology** 222. The systems are capable of supporting efficient throughput.

The Situation Analysis shown above is typical of the work we do up front in working with culture change and process improvements. This Situation Analysis is for a light manufacturing company specializing in contact manufacturing.