



## **The Project to Manufacturing Linkage**

By definition, projects are an activity with a specified beginning and end, while manufacturing is an on going activity. Both the business community and academia treat them as separate from an organizational and educational perspective. Projects, whether internal or turnkey from an outside source, reach a point of closure at which time the customer becomes responsible after a formal hand-off. When dealing with projects involving the purchase or modification of manufacturing equipment, it is best to view this handoff as a transition from equipment installation to full production rather than a point in time.

Linking the equipment installation team with the manufacturing site team can create great synergy. The equipment manufacturer and manufacturing site leaders must be aware of the benefits each can derive from such a linkage. The equipment-supplier gains valuable info and assistance related to site issues and resources from manufacturing team representatives involved in installation. The manufacturing personnel know local procedures about site access, health, and safety requirements, etc. which can be invaluable in reducing lost time for the installation team. This higher level of cooperation helps when installation needs impact current manufacturing operations. It also facilitates resolution of unexpected installation problems when everyone's collective knowledge and resources are required. In many cases, local outside construction trades perform the installation. In such situations, the manufacturing personnel can fill a knowledge gap about basic manufacturing equipment that may be lacking in the outside construction trades. This all translates into a more efficient cost effective installation. Involving manufacturing personnel in installation builds manufacturing ownership in the equipment. This ownership causes the manufacturing personnel to actively seek knowledge on the equipment, improve their skills in operating the equipment, and be more committed to proper maintenance. As a result, the equipment start-up and buy-off process will be more efficient and acceptance will be higher which minimizes the demand for equipment supplier resources and achieves the buyoff in the shortest time possible. Improving success in these areas is significant since the installation, start up, and buy off can make the difference between a highly successful project and a big financial loss for the equipment supplier. Overall, the project and manufacturing linkage drives a higher level of customer satisfaction, potential for repeat business, and fewer warranty problems.

The project to manufacturing linkage has similar benefits for the manufacturing site as well. Lack of understanding the significance of these benefits and a reluctance to invest resources today for future success by the site-manufacturing leader are the major obstacles to establishing a cooperative project to manufacturing linkage. The project to manufacturing linkage can have even greater significant for the manufacturing site since the results can be long lasting for the on going manufacturing operation. Getting involved with the installation at the outset can insure that the installation team has made proper allowances to avoid disruptions to current manufacturing operations and conforms to the sites procedures and standards. Often times the customer is supplying the installation



manpower either from internal resources or outside contractors, so an efficient installation goes immediately to the operation's bottom line. Even if the supplier is funding the install, faster completion aids the operating site since it will begin generating the improvements expected by the project. The start up and buy off activities generally require more support from the manufacturing source thus improved efficiency here saves site cost and delivers the equipment sooner as well. Achievement of full production usually occurs some time after the equipment buyoff since it represents the performance of the entire manufacturing enterprise. Maintaining the project to manufacturing linkage during the ramp up insures the site can secure the help it needs to reach its goals.

The biggest challenge for any site with a large equipment project is integrating the completed project into the manufacturing operation as quickly and smoothly as possible. The critical factor to success is the workforce. The manufacturing team needs the necessary support environment, proper training, and desire to succeed. The project to manufacturing linkage is an enabler to acquiring these elements. Early involvement in the installation will enable the manufacturing team to define the special equipment, tools, and skills they require. Early involvement will provide free training for some of the team representatives and help define a more structured training program for the entire team. As the team gains ownership through their involvement, they will become more committed and confident in the equipment increasing their desire to succeed.

Most manufacturing operations are trying to either implement a team process or improve on the one they have to increase the effectiveness of their operations. A well-disciplined project following a structured process like that defined by the Project Management Institute that uses team concepts in its execution of the project can provide an excellent model from which to initiate or upgrade the manufacturing team process. The norms of effective project and manufacturing teams are the same. Project teams focus heavily on activity planning to meet project deadlines while manufacturing plans to meet production schedules, maintenance requirements, and process improvements. Both teams need good work place organization and visual controls. The project needs an effective change control process and manufacturing must have a structured continuous improvement process. Both teams set their goals in the areas of safety, quality, productivity, and customer satisfaction. Team members working in the right project environment will see many opportunities to transfer what they learn and experience to their production teams.

The equipment supplier or manufacturing site can initiate the project to manufacturing linkage, but it requires the commitment of both parties to succeed. In the beginning, it is lead by the supplier and heavily manned by installation personnel with small support from the site. Over time, the amount of resources and leadership shifts until the manufacturing site is leading the process as part of its continuous improvement process and the supplier is providing support on request. Whether you are the supplier or the manufacturing site the project to manufacturing linkage is an opportunity you cannot afford to pass up.

Written by: Dean A. Baker, PMP  
Team Implementers, LLC  
Copyright © 2006