

Implementation Planning – From the Sale to Final Training

Quite often the service department is asked for some guidelines on what to expect once the system is purchased until the installation and training are finally completed. Questions about whose responsibility are certain things, and questions about who should be involved are often asked. This document is intended to answer some the majority of those questions and provide some guidelines when considering the timeframe of installation and training. You've purchased the system, now what can be expected.

Once the configuration of the system is finalized and the system is ordered, a number of things need to take place in order that an efficient and timely installation occur, and training take place. Probably the most important aspect from the customer's standpoint is the assignment of a project coordinator, someone the Mattec installation and training team can turn to when problems occur. That person may or may not be the Mattec Administrator once the system is commissioned, but there must be a single person assigned to project manage the project, a person with the authority and accountability to get the tasks completed on their end, resolve any issues that crop up during the commissioning phase, and plan and coordinate the training schedule for all involved, including operators on multiple shifts.

Task Discussion

Task 1: Pre-site visit Responsibility: Mattec

The first task is for the installation project leader from Mattec to visit the customer's plant and, working with the customer project leader, discuss the installation and training phases of the project. Items discussed are:

Miu Location and Mounting. Normally the operators and maintenance personnel of the plant assist in making this decision. Things to consider include wiring distances, wiring methods, easy accessibility for the operator, mounting location, power and potential power problems, communications wiring, and machine signal location(s). All of these must be taken into account when determining the best location for the MIU.

Mattec Server. Normally the IS department works with the project leader to determine the best location for the server and discuss any network issues.

Plant Layout. The Mattec Project Leader will request a plant layout in order to determine the best routing for the communications lines and determine the wire distances involved. This information will help determine the quantity of needed materials. In addition, national electrical codes and any local or internal wiring codes will be discussed. In the case of hard conduit, it is normally the customer's responsibility to get that phase of the installation completed

Machine Prints. The Mattec Project Leader will discuss the availability of machine prints as well as identify the maintenance personnel necessary to get the installation completed in a timely fashion.

Auxiliary Equipment. The Mattec Project Leader will discuss the availability of auxiliary equipment such as high lifts.

Schedule. During this phase of the project, a tentative project schedule will be discussed that includes the installation start date, expected installation completion, schedule of initial training and proposed schedule of follow up training. In addition, any other outstanding issues and concerns will be identified

Personnel. During the pre-site visit the Mattec Project Leader and the Customer Project Leader will discuss the suggested plant personnel that need training. Those positions of responsibility will be defined to the Company Project Leader and it will be his responsibility to put names to the positions.

Task 2: Prepare the Project Schedule Responsibility: Mattec /Customer

Using software tools that the customer is familiar with, the Mattec Project Leader will develop a schedule based on the discussions during the pre-site visit. This schedule will be quite detailed, and will be presented to the customer. The customer must then review the schedule and agree to it prior to materials being ordered. This may require much iteration, but this is one of the most important tasks in the project. Software tools normally used for this task include MS Projects and MS Excel, with MS Projects being the standard.

Task 3: Order and Ship Material Responsibility: Mattec

The Mattec Project Leader prepares the list of materials to be ordered and shipped to the customer site. This list includes only the materials required for the installation, since the Mattec Server Computer, MIU's, and Client Software are already included with the order.

Note: Depending on vendor deliveries, the project schedule may need to be modified. This is discussed with the Customer Project Leader.

Task 4: Identify the Machine Signals: Responsibility Customer

During the time period between the pre-site visit and the actual start of the installation, thought must be given to the machine interface signals. Mattec Corporation has certain requirements for these machine interface signals. These must be identified prior to starting the installation, and are typically determined by the maintenance department. Therefore machine prints for each piece of equipment must be located for reference. In addition, some thought must be given to the installation of discrete sensors and PLC interfaces if part of the order, and the machine electrical prints will help.

Task 5: Identify the Mattec System Personnel: Responsibility Customer

It is highly recommended that during the time period between the pre-site visit and the start of the installation that the Customer Project Leader identify the personnel that will be assigned to administer the system. This can include operators, production-planning personnel, IS personnel, maintenance personnel, etc. The appropriate system documentation is located on the Mattec web site, and should be reviewed if possible before training. The Mattec web site is www.mattec.com

Task 6: Installation Phase Responsibility: Mattec /Customer

The installation phase will include a number of tasks, of which some are noted below. Calendar time required will depend upon the length and difficulty of the wiring runs, conduit requirements, the ability to shut down the machines for power supply, signal and sensor installation.

- Mount MIU's and MIU power supplies as defined in the pre-site visit
- Wire the MIU power supply AC Input power. This includes the addition of seal-tight if required.
- Wire the MIU DC power. This includes the addition of seal-tight if required.
- Wire the "home runs" as determined by the server location and MIU loop configuration. This includes the addition of seal-tight if required.

Note: Rigid conduit is normally the customer's responsibility and must be complete prior to starting the installation.

- Wire the daisy chain wiring for all machine communications. Includes and seal-tight installation
- Terminate the communications wiring at each MIU and verify the MIU addresses.
- Working with maintenance personnel, identify the machine cycle time signal, using flexible conduit if required
- Recheck and verify the power wiring and communications wiring at each MIU.
- Commission the system. This will involve some level of configuring the machines in the Mattec Server. After the Server is powered up and the MIU's are configured, check each communications with every MIU.
- Install sensors and PLC interfaces if required.
- Verify with the Mattec Project Leader and the maintenance department that the installation is complete.

Task 7: Training Phase

Responsibility:

Mattec /Customer

During this phase, the Mattec trainer will be on site to help set up the system, getting all the preliminary software tasks completed, and training the appointed customer personnel in setting up and using the system, including data entry and reporting. All of the proper personnel should have been identified by this time and the training schedule determined.

Task 8: Follow Up Training Phase

Responsibility:

Mattec /Customer

Approximately 2 months after the initial system installation, commissioning and training, the Mattec trainer will return to verify the operation of the system, making sure that the customer is using the system properly, re-train if necessary, point out areas of improvement and resolve any other issues.

Final Comments

This document is not intended to be a project schedule; rather it is meant to provide a general guideline to a typical installation. In general, a typical 20 MIU system with sensor installation requires about 3 weeks of calendar time, depending on travel distances, number of sensors per machine (if any), and other roadblocks that may occur. Consequently, from the time the system is purchased until completion of Task 7 (first training phase) will require roughly 6 to 8 weeks of calendar time. It is very important to have a good understanding of the responsibilities on both sides. However, the most important part of any successful installation is the complete support of management, including the assignment of a competent Customer Project Leader. And for continuing success the most crucial item is the assignment to the system of a Mattec System Administrator, whose sole responsibility (if possible) is the operation and continued maintenance of the Mattec System. The second most important item is continued training, not only for new operators and personnel that have changed job responsibilities, but as refreshers to everyone else, including management.