

# Supervisory and Control Systems Disaster & Recovery analysis

## SPARE PARTS/REPAIRS

With a detailed inventory (and installed base) review it will be possible to identify potential needs. What are the parts no longer available from the manufactures as well as understand which parts have been previously repaired.

## BACKUPS & DOCUMENTS

Verify existing backups, their status as well as verify where is located the supervisory & control system documentation and if is needed create a centralized storage point.

## CRITICAL SITUATIONS

The combination of all the information acquired during a site assessment visit can help to identify possible emergency scenarios and which it could be the process to speed-up the recovery from such scenarios. Specific disaster & recovery procedures could be required based on the current condition of the control system and the technology that is used.

## REMOTE ACCESS

Analysis of the capability to setup an ON DEMAND remote access system to support critical situation scenarios.



## PREREQUISITES INFORMATION

A disaster & recovery plan is one of the natural outcomes of a site assessment visit. As consequence of that, all the information about the installed base (supervisory & control system) is supposed that have been already gathered.

## BEFORE THE VISIT

There are some basic information and documents that could be very valuable, if will be available, prior the visit not only to narrow down the scope of the on-site activities, but also to be properly prepared for the visit, minimize the time of the visit and the report preparation.

- A sort of log book of the recent system failures,
- A recent application backup (if any)
- A copy of the emergency, backup, maintenance procedures (if any)
- On-demand Remote Access capability (to be verified by client IT dept on both sides security procedures as well as the supervisory system technology).

## WHAT TO LOOK

A disaster & recovery planning is a very important step focused to restore operation after a system failure, data corruption or system damage.

For most of the end-users seems sufficient just take care of backups. In reality is a deep analysis that should focus on various aspects of the application software (application and supervisory systems), hardware (control systems) and network infrastructure.

This analysis can become more complex when the systems are based on obsolete systems where the proper spare part inventory control plays a crucial part of the recovery planning.

## MAIN BENEFITS

The main outcome of a disaster & recovery plan analysis visit is the definition of the “emergency” procedures, a centralized place where is possible to access backups, documents, procedures.

The acquisition of the information during the visit and related analysis can be used to set-up the proper maintenance plan and to identify potential risks that could lead to critical situations.

## SCOPE OF WORK

There are many areas that have to be analyzed and some of them could be specific of the application, technology and other factors below are some of the most common activities that are included in our disaster & recovery analysis.

- Fault tolerance condition review (potential need of UPS, redundancy, disk imaging, workstation cloning etc.);
- Backups validation (recent backups, presence of various versions etc..)
- System documentation review (review what is available, where is located the documentation, create an electronic version where is possible).
- Create a centralized place for backups, documentation and procedures;
- System versioning (verifications of SW, HW, FW versions to determine what is needed, what is obsolete and which tools could be helpful for the recovery phase)
- Analyze with the end-user maintenance personnel disaster scenarios to better identify the recovery procedures that could be needed.
- Gap analysis of the existing system diagnostics.
- Where is possible test disaster scenarios.