

## **HOPE'87 Equipment Management Overview**

*Equipment management is one of the essential elements of a quality management system. Proper management of the equipment is necessary to ensure accurate, reliable, and timely delivery of works.*

The benefits of a good equipment management program are many:

- helps to maintain a high level of work performance;
- lowers repair costs, as fewer repairs will be needed for a well-maintained equipment;
- lengthens equipment life;
- reduces interruption of services due to breakdowns and failures;
- increases safety for workers and users;
- produces greater beneficiaries satisfaction.

### **Program considerations**

A great deal of thought and planning should go into equipment management. As HOPE'87, i.e. HQ or CO, puts an equipment management program in place the following elements should be considered:

- **Selection and purchasing** - When obtaining new equipment what criteria should be used to select equipment? Should equipment be purchased, or would it be better to lease?
- **Installation** - For new equipment, what are the installation requirements, and who will install the new equipment?
- **Calibration and performance evaluation** - What is needed to calibrate and validate that the equipment is operating correctly? How will these important procedures be conducted for both old and new equipment?
- **Maintenance** - What maintenance schedule is recommended by the manufacturer? Will a new equipment need additional preventive maintenance? Are current maintenance procedures being conducted properly?
- **Troubleshooting** - Is there a clear procedure for troubleshooting for new equipment?
- **Service and repair** - What is the cost? Can HQ or the CO obtain the necessary service and repair in its geographical area?
- **Retiring and disposing of equipment** - What must be done to dispose of old equipment when it needs to be replaced?

### **Oversight**

It is the responsibility of the Country Representative (or at HQ the General Secretary) to:

- oversee all the equipment management systems;
- ensure that all persons who will be using the equipment have been appropriately trained and understand how to both properly operate the equipment and perform all necessary routine maintenance procedures.

Equipment management responsibility may be specifically assigned to an expert in the CO/HQ. In many offices there is a person who has good skills with equipment maintenance and troubleshooting. Giving this person the role of oversight of all equipment is recommended.

Oversight of an equipment management program includes:

- assigning responsibilities for all activities;
- assuring that all personnel are trained on operation and maintenance;
- monitoring the equipment management activities;
- review all equipment records routinely;
- update maintenance procedures as necessary;
- ensure that all procedures are followed.

Everyone who uses the equipment should be trained in calibration and daily maintenance.

### **Selecting equipment**

Selecting the best items is a very important part of equipment management. Some criteria to consider when selecting equipment are listed below.

- Why and how will the equipment be used? The instrument should be matched against the service to be provided.
- What are the performance characteristics of the equipment? Is it sufficiently accurate and reproducible to suit the needs of the work to be done?
- What are the facility requirements, including the requirements for physical space?
- Will the cost of the equipment be within the CO's (HQ's) budget?
- Will spare parts be readily available?
- How easy will it be for staff to operate?
- Will instructions be available in a language that is understood?
- Is there a retailer for the equipment in the country, with available services?
- Does the equipment have a warranty?
- Are there any safety issues to consider?

### **Acquiring equipment**

Is it better to purchase, rent or lease equipment? When making this decision, it is a good idea to factor in repair costs. The initial cost of equipment may seem reasonable, but it may be expensive to repair. Also consider savings that could be negotiated if the CO (HQ) needs more than one piece of equipment.

The manufacturer should provide all of the necessary information to operate and maintain the equipment.

#### **Before purchasing ask if:**

- computer software information, a list of parts needed, and an operator's manual are provided;
- the manufacturer will install the equipment and train staff (covering travel expenses as necessary) as part of the purchase price;
- the warranty includes a trial period to verify that the equipment performs as expected;
- the manufacturer's maintenance can be included in the contract and if so, whether maintenance is provided on a regular basis.

Determine if the CO (HQ) can provide all the necessary physical requirements, such as electricity, water, and space. There must be adequate room to move the equipment into the CO (HQ); consider door openings and elevator access.

### **Installing equipment**

Before equipment is installed, verify that all physical requirements (electrical, space, doors, ventilation, and water supply) have been met. Other things to consider are:

- The vendor's responsibilities for installation should be confirmed in writing prior to beginning the installation process.
- A checklist of the expected performance specifications should be developed, so that

- performance can be quickly verified as soon as the equipment is installed.
- Whenever possible, it is best to have the manufacturer install the equipment; this will likely improve the conditions of the warranty, and also may ensure that the installation is done properly and quickly.

If equipment is installed by staff of the CO (HQ):

- check that the package contents contain all of the parts;
- make a copy of any software that is part of the system;
- do not allow the equipment to be used before it is completely installed,
- performance is verified, and testing personnel are trained.

### **After installation**

After equipment has been installed, the following details need to be addressed before putting the equipment into service:

- assign responsibility for performing the maintenance, calibration and operation programs;
- develop a system for recording the use of parts and supplies
- provide training for all operators; only personnel who have been trained specifically to properly use the equipment should be authorized as operators.
- designate those authorized to use the equipment and when it is to be used.
- follow the manufacturer's directions carefully when performing the initial calibration of the equipment.

### **Performance evaluation**

- evaluate the performance of new equipment to ensure it is working correctly with respect to accuracy and precision.

### **Preventive maintenance**

Preventive maintenance includes measures such as systematic and routine cleaning, adjustment, and replacement of equipment parts at scheduled intervals.

Manufacturers generally recommend a set of equipment maintenance tasks that should be performed at regular intervals: daily, weekly, monthly, or yearly. Following these recommendations will ensure that the equipment performs at maximum efficiency and will increase the lifespan of the equipment.

### **Equipment inventory**

Each CO (HQ) should keep an inventory log of all equipment. The log should be updated with information on new equipment, as it is added, and include documentation of when old equipment is retired.

### **Recordkeeping**

Equipment documents and records are an essential part of the quality system.

The policies and procedures for maintenance should be defined in appropriate documents, and keeping good equipment records will allow for thorough evaluation of any problems that arise.

Each major piece of equipment will have its own equipment maintenance document. Smaller, commonly used equipment may be managed with an equipment maintenance document or manual that deals with all such equipment.