Objectives

- Learn to analyze performance
- Identify performance problems
- Understand the factors that should influence expectations
- Understand the relationship between customer satisfaction and performance analysis

Notes:
Basic Management Functions

- Planning
- Organizing
- Staffing
- Directing
- Controlling

Notes:
Activity:
Bituminous Pothole Repair

Tasks:
- Place safety devices
- Procure materials
- Prepare distressed area
- Place proper amount of material
- Compact the patch
- Clean up the area
- Remove safety devices

Notes:
Activity: *Bituminous Pothole Repair*

**Behaviors:**

- Come to work on time
- Be willing to work
- Be able to work
- Work in a safe manner
- Maintain equipment
- Produce quality work

Notes:
Performance Standards

- People need to know how they are doing and what is expected of them
- Standards allow workers to judge how they are doing
- Standards must be reasonable—not too high nor too low
Behavior Standards

- Absenteeism
- Lateness
- Complaints
- Willingness to work
- Response to call-outs

Notes:
Group Effort Exercise

What Do You Think?

Segments 1 & 2

Notes:
Performance Analysis

See “Performance Analysis Flowchart” and explanation in *Workbook*

Notes:
Performance Analysis Flowchart

1. Choose Activity
2. Gather Actual Performance Data
3. Does Actual Performance Exceed Expected?
   - yes: Are You Satisfied?
   - no: Was There Uncontrollable Events?
     - yes: Revise Strategy
     - no: Was There Organizational Constraints?
       - yes: Improve Job Management
       - no: Do Workers Have Ability, Knowledge & Skill?
         - yes: Improve Selection, Training & Assignment
         - no: Are Workers Adequately Motivated?
           - yes: Apply Motivational Techniques
           - no: Is The Performance Expectation Realistic?
             - yes: Revise Expectations
             - no: Change Methods or Technology
4. Is The Activity Complete?
   - yes: Performance
   - no: Are You Satisfied?
“PERFORMANCE ANALYSIS FLOWCHART” EXPLANATION

A supervisor must be able to tell if there are performance problems and, if there are, find their causes. The “Performance Analysis Flowchart” shown in your Workbook can help you isolate performance problems.

1. Performance

Performance is the completion of a maintenance activity within a specified time period—such as the placement of X tons of patching material in a day, or the repair of a particular bridge deck in a week. The completed units of work must provide the minimum level of service (or quality) required by the organization. It is important that performance be defined as X quality units completed within Y time period.

2. Performance Data

Traditionally, performance has been measured in terms of the resources or input (workhours) needed to produce a measurable quantity of output (tons, acres, linear feet) over a definite time period, usually a day or a week. “Performance data” has been defined as information about the completed activity, such as workhours used, elapsed time, dollars spent, lane-miles of cracks sealed, acres of grass mowed, tons of patching material placed, and so on.

Increasingly, however, today’s maintenance managers are working hard to get away from measuring “outputs” alone and instead are measuring “outcomes”—particularly in terms of efficiency, effectiveness, and citizen (“customer”) satisfaction. You might say that “outcomes equal output plus quality.” In the case of mowing, for example, an outcome-based performance will provide feedback not only on how many acres were mowed per day, but also whether the mowing was done in a timely manner and if the final result satisfies the traveling public.

For every activity, there should be a performance standard establishing the expected level of performance. The supervisor and workers carrying out the activity should know what’s expected from their efforts. For example, a pothole patching crew should know the number of tons of patching material it should place in a day and the level of service (or quality) required.

As the activity is performed, performance data are gathered to indicate how well the activity is being carried out.
3. Actual Versus Expected Performance

The analysis of performance really begins with the question, “Is the actual performance as good as or better than the expected performance?” If the answer is yes, go to step 4. If the answer is no, go to step 5.

4. Satisfaction with Performance Level

If actual performance is as good as or better than expected performance, the next question is whether or not the supervisor is satisfied with the performance. It’s possible that the expected level of performance was too easily achieved and that performance could actually have been better. If the supervisor is not satisfied, go to step 6.

5. Uncontrollable Event

There are times when things happen that cannot be controlled by the supervisor or the crew, such as bad weather or accidents. When these events happen, the supervisor must determine what can be done to return the performance to the expected level and how these events—or their effects—can be avoided in the future. If there were no uncontrollable events, proceed to step 6.

To deal with the effects of uncontrollable events, the supervisor can change the method being used, change or increase the amount of resources, and/or plan alternative activities.

6. Organizational Constraints or Problems

If the actual performance is less than expected or not satisfactory, the next question is whether or not the work is free from organization problems. Examples of organization problems are poorly maintained equipment, the wrong equipment, or mishandling of the requisition for equipment, materials, or tools. Have things happened that prevented the workers from working up to the expected level? If the answer is yes, go to step 7; but if the answer is no, go to step 8.

A delay, for whatever reason, is the most common indicator of organizational problems. Workers may be delayed by not having information, tools, equipment, materials, or instructions. For example, in one study it was shown that a pothole repair crew spent about 40 percent of the time waiting for their leader to instruct them on what to do next. So, in this instance, the source of the organization problem was the crew leader.

7. Improvement of Job Management

If there are organization problems, job management must be improved to eliminate them. Better management requires better planning, organizing, and scheduling of work-
ers, tools, materials, and equipment. The goal must be to eliminate factors that prevent a worker from working when given the opportunity to work.

8. Ability, Knowledge, and Skills

If there are no organization problems, ask the question, “Does the worker possess the necessary ability, knowledge, and skill? If the answer is yes, go to step 10; and if no, go to step 9.

9. Improvement of Selection, Training, and Assignment

If a worker is unable to perform an assigned activity or takes much longer to perform it than other workers, it’s possible that he or she doesn’t have the necessary ability, knowledge, or skill. The same is true if the worker has to redo the work many times to get it right.

In general, it’s unlikely that workers don’t have the ability; they wouldn’t have been hired if that were the case. However, because of injuries, illness, and the aging process, it’s possible for workers to lose some of their abilities.

In some cases the hiring of personnel may be beyond the control of the maintenance division. Here the ability issue may be relevant. If the worker has the ability, the role of providing knowledge and skill falls to the supervisor to provide training opportunities or on-the-job training. The worker may need to be assigned to a different activity.

10. Workers’ Incentive or Motivation

If there are no organization problems and the workers have the necessary abilities, knowledge, and skills, the next question is, “Are the workers motivated enough?” If workers have the necessary resources (there are no organization problems) and the necessary ability, knowledge, and skills, then the pace and quality of the work are determined by the workers. They determine the level of performance, which is a reflection of their incentive or motivation. If the answer to the question is yes, go to step 12, but if it’s no, go to step 11.

A lack of incentive or motivation is evident when workers take a lot of breaks, start work late or quit early, accomplish less than they should, and so on.

11. Change in Job Environment or the Job Itself

Incentive comes from the work itself or the environment or surroundings within which the work is performed. Incentive can be increased by making the job more interesting and challenging, as discussed in Chapter 6.
Job environment is everything surrounding the work: the supervisor, the coworkers, physical working conditions, reward systems, communications, and the like. Incentive can come from the job context under specific conditions. We'll examine how to improve job environment in Chapters 6 and 7.

12. Realistic Expectation

If there are no organization problems; the workers have the ability, knowledge, and skills; and are sufficiently motivated; the next question is, “Is the performance expectation realistic?” If expectations are realistic, go to step 14; otherwise, go to step 13.

If there are no organization problems; the workers have the necessary ability, knowledge, and skills; and the workers demonstrate that they are motivated by working hard—but they still cannot meet the expected level of performance—the performance expectation must be questioned.

13. Change in Expectation

If the expectation is unrealistic, it should be changed according to the process described at the end of this chapter.

When establishing the expectation, be sure that it is not so high that it is impossible to achieve or so easy that it can be reached with little effort. It should be challenging but achievable.

14. Change in Technology/Methods

If the expectation is realistic but it is not being achieved, it is necessary to change the technology and/or methods being used.
Group Effort Exercise

What Do You Think?

Segment 3

Notes:
Realistic Expectations

- All important activities should have a desired performance level

- Setting reasonable performance levels is important
  - If set too low—too easily attainable; little motivation
  - If set too high—unattainable; no one will try to achieve them

Notes:
Factors in Establishing Performance Expectations

- Nature of the task (*type of activity*)
- Workers to perform the task
- Resources available to perform the task
- Conditions under which the activity is to be performed

5.11

Notes:
Group Activity

Factors in Establishing Performance Expectations

Notes:
Goal Setting

Done by:

- Supervisor
- Worker (or workers)
- Supervisor and workers (jointly)

Notes:
Goal Setting

Goals must be:

- Expressed quantitatively
- Compared to established performance standards of the organization’s maintenance management system

Notes:
Customer Satisfaction

Who are your customers?

- Public
- Local highway agencies
- Other maintenance crews
- Management
- Anyone who relies on your “product”

Notes:
Customer Satisfaction

Satisfied customers indicate a successful:

- Crew
- Organization

Notes:
Continuous Improvement

- Performance of activities can always be improved
- Worker can best identify types of improvement needed
- Ideas must be implemented—only when risks are understood
- Not all ideas will be successful—identify the cause of failure, not the person who had the idea

Notes:
Key Points

- Unsatisfactory performance is caused by many factors; examine each situation in an orderly manner to determine causes.

- Performance standards are usually written as statewide standards; specific conditions may cause unexpected performance results.

- The focus of the continuous improvement process is on improving performance in order to improve customer satisfaction—job one.

Notes:
What You Have Learned

How to

- Analyze performance
- Identify causes of problems
- Develop expectations
- Continually improve

Notes: